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**Economists' Tunney Act Reply Comments on the DOJ's
Proposed Remedy in the Sprint/T-Mobile Merger Proceeding**

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* The Networks, Electronic Commerce, and Telecommunications (“NET”) Institute, <http://www.NETinst.org>, is a non-profit institution devoted to research on network industries, electronic commerce, telecommunications, the Internet, “virtual networks” comprised of computers that share the same technical standard or operating system, and on network issues in general.

Economists' Tunney Act Reply Comments on the DOJ's Proposed Remedy in the Sprint/T-Mobile Merger Proceeding

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Abstract

Following up on our initial comments at the Tunney Act proceeding of the proposed merger between Sprint and T-Mobile, we discuss DOJ's criticisms of these comments, explaining why these criticisms are baseless. Moreover, using evidence from the NY v. Deutsche Telecom trial, we provide new arguments showing that the DOJ proposed remedy will fail to restore the ex ante competitive conditions in the affected antitrust product markets to the detriment of users of mobile phones in the United States.

Classification-JEL: L1, L4, L5, L9

Keywords: Telecommunications; Merger; Tunney Act; Sprint; T-Mobile; Dish; DOJ

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

UNITED STATES OF AMERICA,
Department of Justice, Antitrust Division
450 5th Street, N.W.
Washington, D.C. 20530

STATE OF KANSAS,
120 S.W. 10th Avenue, 2nd Floor
Topeka, Kansas 66612-1597

STATE OF NEBRASKA,
2115 State Capitol
Lincoln, Nebraska 68509

STATE OF OHIO,
150 East Gay Street, 22nd Floor
Columbus, Ohio 43215

STATE OF OKLAHOMA,
313 N.E. 21st Street
Oklahoma City, Oklahoma 73105-4894

and

STATE OF SOUTH DAKOTA,
1302 E. Highway 14, Suite 1
Pierre, South Dakota 57501-8501

Plaintiffs,

v.

DEUTSCHE TELEKOM AG,
Friedrich-Ebert-Allee 140
Bonn, Germany 53113

T-MOBILE US, INC.,
12920 SE 38th Street
Bellevue, Washington 98006

SOFTBANK GROUP CORP.
1-9-1 Higashi-shimbashi, Minato-ku,
Tokyo, Japan 105-7303

Case No.: 1:19-cv-02232-TJK

and

SPRINT CORPORATION
6200 Sprint Parkway,
Overland Park, Kansas 66251-4300

Defendants.

**MOTION FOR LEAVE TO FILE AMICI CURIAE BRIEF BY NICHOLAS
ECONOMIDES, JOHN KWOKA, THOMAS PHILIPPON, ROBERT SEAMANS, HAL
SINGER, MARSHALL STEINBAUM, AND LAWRENCE J. WHITE
IN SUPPORT OF PLAINTIFFS**

Pursuant to the Court’s January 10, 2020 Order and Local Civil Rule 7(o), Nicholas Economides, John Kwoka, Thomas Philippon, Robert Seamans, Hal Singer, Marshall Steinbaum, and Lawrence J. White (the “Proposed Amici”) respectfully move for leave to file the accompanying Amici Curiae Brief in support of Plaintiffs. In support of their Motion, Amici state as follows:

1. Proposed Amici are seven economists with significant experience in competition and regulatory matters. The Proposed Amici affiliations are as follows: Nicholas Economides, Professor of Economics, NYU Stern School of Business; John Kwoka, Neal F. Finnegan Distinguished Professor of Economics, College of Social Sciences and Humanities, Northeastern University; Thomas Philippon, Max L. Heine Professor of Finance, NYU Stern School of Business; Robert Seamans, Associate Professor of Management and Organizations, NYU Stern School of Business; Hal Singer, Managing Director at Econ One, Adjunct Professor at Georgetown McDonough School of Business; Marshall Steinbaum, Assistant Professor, Economics Department, University of Utah; and Lawrence J. White, Robert Kavesh Professor of Economics, NYU Stern School of Business. Each of the Proposed Amici are scholars and experts in competition, industrial organization, and the economic analysis of antitrust issues.

2. Proposed Amici have a special interest in the issues raised in this litigation and can offer their unique perspective as scholars in this field as the Court considers key economic issues. Proposed Amici seek to ensure that this Court proceeds based on a correct understanding of the economic, competitive effects flowing from the proposed merger of Sprint Corporation (“Sprint”) and T-Mobile US, Inc. (“T-Mobile”) (the “Merger”), as recognized by the United States Department of Justice’s (the “DOJ”) Complaint¹ and inclusive of the DOJ’s proposed remedy (in the DOJ’s “Proposed Final Judgment”). Accordingly, Proposed Amici submit this Amici Curiae Brief to explain how the Merger—even with the remedy that the DOJ has advanced in its Proposed Final Judgment—will have unambiguous anticompetitive effects.

3. Proposed Amici’s position is not adequately presented by any party. As economists, Proposed Amici are uniquely positioned to set forth a position in support of Plaintiffs on important questions of antitrust law raised in this case, and to describe the consequences of the Court’s disposition of this matter for the United States economy and competition in the United States.

4. Proposed Amici have previously filed an amici curiae brief before another federal court in a related case. *See, e.g. State of New York et al. v. Deutsche Telekom AG et al.*, Case No. 1:19-cv-05434-VM (S.D.N.Y. June 11, 2019). Proposed Amici have also previously addressed the competitive effects flowing from the Merger in Comments that were filed with the DOJ on October 10, 2019.²

¹ Department of Justice Complaint, *United States et al v. Deutsche Telekom AG, T-Mobile Us, Inc., Softbank Group Corp., and Sprint Corporation*, No. 1:19-cv-02232, at 3 (D.D.C. July 26, 2019) (the “DOJ Complaint”).

² Nicholas Economides, John Kwoka, Thomas Philippon, Robert Seamans, Hal Singer, Marshall Steinbaum, and Lawrence J. White, Economists’ Tunney Act Comments on the DOJ’s Proposed Remedy in the Sprint/T-Mobile Merger Proceeding, filed with the U.S. Department of Justice, October 10, 2019; available as Exhibit 12 in <https://www.justice.gov/atr/case-document/file/1215711/download>.

5. In light of the magnitude of the unique insight and perspective Proposed Amici can offer the Court, granting Proposed Amici leave to file an amici curiae brief would not unduly delay the Court's ability to rule on any pending matters.

6. Counsel for Proposed Amici were unable to contact counsel for the Plaintiffs and Defendants in this Action before the filing deadline set forth by the Court. Counsel for Proposed Amici will continue to attempt to contact counsel.

7. The Amici Curiae Brief that Proposed Amici requests the Court consider is attached as Exhibit 1, along with supporting materials.

For the foregoing reasons, Proposed Amici respectfully request that their Motion for Leave to File Amici Curiae Brief be granted. A proposed Order is attached as Exhibit 2.

Dated: January 24, 2020

New York, New York

Respectfully submitted,

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Amici Curiae

CERTIFICATE OF SERVICE

I certify that on this day, I filed the foregoing Motion for Leave to File Amici Curiae Brief with the Court via its Electronic Case Filing (ECF) system, which will send notification of filing to the counsel of record as identified on the Notice of Electronic Filing (NEF).

/s/ Jonathan G. Axelrod
Jonathan G. Axelrod

**UNITED STATES DISTRICT COURT
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UNITED STATES OF AMERICA,
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450 5th Street, N.W.
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2115 State Capitol
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STATE OF OKLAHOMA,
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Oklahoma City, Oklahoma 73105-4894

and

STATE OF SOUTH DAKOTA,
1302 E. Highway 14, Suite 1
Pierre, South Dakota 57501-8501

Plaintiffs,

v.

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SPRINT CORPORATION
6200 Sprint Parkway,
Overland Park, Kansas 66251-4300

Defendants.

**BRIEF OF AMICI CURIAE NICHOLAS ECONOMIDES, JOHN KWOKA, THOMAS
PHILIPPON, ROBERT SEAMANS, HAL SINGER, MARSHALL STEINBAUM, AND
LAWRENCE J. WHITE IN SUPPORT OF PLAINTIFFS**

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2.IDENTITY, INTERESTS, AND AUTHORITY TO FILE OF AMICI

As economists with significant experience in competition and regulatory matters, Nicholas Economides, John Kwoka, Thomas Philippon, Robert Seamans, Hal Singer, Marshall Steinbaum, and Lawrence J. White (the “Amici”) are scholars and experts in competition, industrial organization, and the economic analysis of antitrust issues.¹ Each of the Amici are scholars and experts in competition, industrial organization, and the economic analysis of antitrust issues.

Amici have a special interest in the issues raised in this litigation and can offer their unique perspective as scholars in this field as the Court considers key economic issues. Amici share a professional, economics-principles-based interest in seeing that this case—and the merger that is the basis for this case—has an outcome that maintains competition in the relevant markets for wireless services. Amici draw on decades of experience—in academia, in practice, and in government—studying mergers and their competitive effects.

Pursuant to Local Rule 7(o), Amici affirm that no counsel for a party authored this brief in whole or in part, no party or counsel for a party contributed money that was intended to fund preparing or submitting this brief, and no person other than Amici or their counsel contributed money that was intended to fund preparing or submitting this brief. Amici submit this brief to the Court pursuant to the Court’s granting of Amici Motion for Leave to File Amici Curiae Brief.

¹ The Amici affiliations are as follows: Nicholas Economides, Professor of Economics, NYU Stern School of Business; John Kwoka, Neal F. Finnegan Distinguished Professor of Economics, College of Social Sciences and Humanities, Northeastern University; Thomas Philippon, Max L. Heine Professor of Finance, NYU Stern School of Business; Robert Seamans, Associate Professor of Management and Organizations, NYU Stern School of Business; Hal Singer, Managing Director at Econ One, Adjunct Professor at Georgetown McDonough School of Business; Marshall Steinbaum, Assistant Professor, Economics Department, University of Utah; and Lawrence J. White, Robert Kavesh Professor of Economics, NYU Stern School of Business.

3.ARGUMENT

Amici previously provided Comments to the United States Department of Justice (“DOJ”) explaining why the proposed remedy of the DOJ (the “Proposed Final Judgment”) flowing from the proposed merger of Sprint Corporation (“Sprint”) and T-Mobile US, Inc. (“T-Mobile”) (the “Merger”), as recognized by the DOJ Complaint,² would not plausibly and predictably resolve the competitive concerns raised by the Merger.³ The DOJ has filed a Response to Public Comments on its action,⁴ a response that in a number of places specifically takes issue with Amici comments.

This brief aims to address the DOJ’s responses to Amici comments, explaining why each of its responses is not supported by the facts and in several instances is directly contravened by evidence from *State of New York et al. v. Deutsche Telekom AG et al.*, Case No. 1:19-cv-05434-VM (S.D.N.Y. June 11, 2019) (the “States’ Case”). This brief provides further evidence concluding that the DOJ’s remedy in its Proposed Final Judgment⁵ fails to resolve the central issue of the DOJ Complaint: the anti-competitive nature of the Merger, and thus the need to restore the level of pre-Merger competition in wireless markets.

² *United States et al v. Deutsche Telekom AG, T-Mobile Us, Inc., Softbank Group Corp., and Sprint Corporation*, No. 1:19-cv-02232 (the above-captioned action), ECF No. 1 at 3 (D.D.C. July 26, 2019) (the “DOJ Complaint”).

³ Nicholas Economides, John Kwoka, Thomas Philippon, Robert Seamans, Hal Singer, Marshall Steinbaum, and Lawrence J. White, Economists’ Tunney Act Comments on the DOJ’s Proposed Remedy in the Sprint/T-Mobile Merger Proceeding, filed with the U.S. Department of Justice, October 10, 2019, *U.S. et al. v. Deutsche Telekom AG et al.*, ECF No. 42 ECF No. 42-1 at 123 (Ex. 12) (the “Economics Professors Comment”).

⁴ Response of Plaintiff United States to Public Comments on the Proposed Final Judgment, *U.S. et al. v. Deutsche Telekom AG et al.*, ECF No. 42 (the “DOJ Response”).

⁵ *U.S. et al. v. Deutsche Telekom AG et al.*, ECF No. 2-2.

A. Replies to the Department of Justice’s Response to the “Economics Professors Comment”

Public remarks from T-Mobile’s Chief Executive Officer (“CEO”) admitted that the DOJ’s remedy would not reduce T-Mobile’s expected post-Merger profits.⁶ In its response, the DOJ takes issue with Amici interpretation of the CEO’s remarks, noting that “[t]he relevant question for the Court is not how these two competing effects net out for T-Mobile, but rather whether [DISH Network Corporation (“Dish”)] will introduce new competition into the marketplace that will benefit consumers.”⁷ What the DOJ misses, however, is that in fact the absence of any impact of the DOJ’s remedy on T-Mobile’s expected post-Merger profits strongly supports the Amici claim that Dish will *not* replace the lost competition from Sprint. If the DOJ’s remedy strengthened competition, it would be detrimental to T-Mobile, as Dish’s competitive gains would come at the expense, at least in part, of T-Mobile’s profits. And, given the tight oligopoly in wireless, the post-Merger reduction in competition would harm not only T-Mobile customers but also those of AT&T Inc. (“AT&T”) and Verizon Communications Inc. (“Verizon”).

Additionally, Dish’s prior warehousing of spectrum was a good indicator of Dish’s likely future behavior with additional spectrum.⁸ The DOJ counters that Dish’s spectrum inventory is proof that it will have an ability and incentive to enter the market.⁹ In reality, Dish’s history shows that it has chosen warehousing spectrum rather than building in the past, and accepted

⁶. Economics Professors Comment ¶25 (citing T-Mobile’s CEO John Legere on Q2 2019 Results - Earnings Call Transcript, Seeking Alpha, July 29, 2019, *available at* <https://bit.ly/2m38U4o>).

⁷. DOJ Response at 27.

⁸. Economics Professors Comment ¶20 (citing Letter from Nancy Victory to Marlene Dortch, In Re Notification of Written Ex Parte Presentation Applications of T-Mobile US, Inc. and Sprint Corporation for Consent to Transfer Control of Licenses and Authorizations, WT Dkt. No. 18-197, Mar. 11, 2019, at note 3, *available at* <https://bit.ly/2kVbOrI>).

⁹. DOJ Response at 21 (“Dish’s spectrum assets provide it with the ability to compete more quickly and more effectively than another entrant could.”).

penalties for failing to build out its network, precisely when it is more profitable to do so, just as might well be the case here. Indeed, while Dish has had this spectrum trove for years, it has yet to enter the wireless marketplace as a facilities-based carrier. It is logical to question why is: this spectrum infusion would be any different. The DOJ points to Dish's planned Internet of Things ("IoT") network as evidence of experience in the wireless industry.¹⁰ Yet an IoT network merely connects electronic gadgets such as refrigerators and parking meters to the Internet. Because IoT has nothing to do with operating a customer-oriented mobile broadband network, Dish's IoT network is clearly not a substitute for a Sprint-like experience in the wireless industry.

Because the coverage requirement in the DOJ's remedy is denominated in terms of population, not geography, certain parts of the country will lose out relative to Sprint's existing coverage, even if those targets are met.¹¹ In response, the DOJ asks this Court to accept Dish's commitment as a "floor," arguing that Dish might have incentives to do more: "DISH may ultimately have business incentives to provide substantially broader coverage and faster speeds than the minimums required to meet its network build commitments. By focusing on the floors set by the [P]roposed Final Judgment rather than the likely effects of the divestiture, these commenters miss the relevant inquiry."¹² As a matter of merger analysis, this is precisely the kind of pure speculation that Amici, as economists, are not supposed to rely on. In any event, the DOJ cannot count on market forces solving this problem, especially when Dish is strongly incentivized *not* to build out the spectrum, but instead to sell or lease the spectrum to a wireless incumbent.

¹⁰. *Id.* at 22 n.46 ("In connection with its NB-IoT plans, DISH had established relationships with vendors, leased towers, and acquired equipment for a core network.").

¹¹. Economics Professors Comment ¶24.

¹². DOJ Response at 32.

Moreover, the DOJ’s remedy would not address harms in the wireless wholesale market.¹³ In response, the DOJ takes the position that because it did not technically define a wholesale market in the DOJ Complaint—even though the DOJ Complaint acknowledged merger-related harms in the wholesale segment¹⁴ of the wireless marketplace—its remedy need not address those harms: “The [DOJ] Complaint alleges only one relevant product market: the market for retail mobile wireless services. It does not, however, allege the existence of a distinct wholesale market.”¹⁵ This is an untenable position. It would mean that the DOJ could avoid addressing a known or likely merger-related harm by simply not defining the market in which that harm occurred. The very point of the Tunney Act review and Congressional intent is to consider carefully the basis for the DOJ’s decision, not simply to replicate the analytical framework of the agency.

The DOJ’s Response also suggests that Amici comments are “internally contradictory” when it comes to the competitive impact of wireless resellers or mobile virtual network operators (“MVNOs”).¹⁶ In these comments, Amici cite the Federal Communications Commission’s (FCC) 20th Annual Wireless Competition Report for the proposition that MVNOs do not constrain the pricing of facilities-based carriers.¹⁷ That we also acknowledge that MVNOs allow facilities-based carriers to price discriminate—and thereby extract more consumer surplus than they

¹³. Economics Professors Comment ¶¶7-8.

¹⁴. DOJ Complaint ¶22 (“Competition between Sprint and T-Mobile to sell mobile wireless service wholesale to MVNOs has benefited consumers by furthering innovation, including the introduction of MVNOs with some facilities-based infrastructure. The [M]erger’s elimination of this competition likely would reduce future innovation.”).

¹⁵. DOJ Response at 40 n. 117.

¹⁶. DOJ Response at 41 n. 119.

¹⁷. Economics Professors Comment ¶10 n. 25.

otherwise would under uniform pricing—is not “championing the competitive benefits” of MVNOs,¹⁸ as the DOJ asserts. MVNOs are merely resellers of the major carriers.

Any Dish investment in towers and other facilities would not add value to the most likely buyers of the spectrum, as evidenced by the sharp drop in the stock valuation of 1&1 Drillisch AG (“Drillisch”), a German telecommunication service provider, when it started to invest in spectrum to build out its own network in Germany.¹⁹ The DOJ responded by noting that Drillisch purchased 70 MHz of spectrum in June 2019, citing a Reuters article on how its stock “soared” thereafter.²⁰ Although Drillisch’s stock did rise modestly after the auction,²¹ it has since fallen by a third from its October 2019 high, and it is now at a six-year low.²² If anything, the experience of Drillisch is a stark warning to Dish that it could lose significant market value if it were to build out its network.

In its response, the DOJ claims that the standard employed to measure the efficacy of a remedy—namely, restoring *ex ante* competitive conditions—is not appropriate for a Tunney Act proceeding.²³ This is a peculiar critique, as the DOJ’s own 2011 and 2004 Guide to Merger

¹⁸. DOJ Response at 41 n. 119 (“Later, in going on to attack the settlement for not doing more to help MVNOs, the comment champions the competitive benefits that MVNOs provide, including allowing carriers in effect to offer the same service at different price points under a different brand, and enabling cable companies to compete in wireless.”) (emphasis in original).

¹⁹. Economics Professors Comment ¶21.

²⁰. DOJ Response at 31 n.75 (citing Reuters, *Shares in 1&1 Drillisch soar after Germany 5G auction*, June 13, 2019).

²¹. Reuters, *Shares in 1&1 Drillisch soar after Germany 5G auction*, June 13, 2019, <https://www.reuters.com/article/germany-telecoms/shares-in-11-drillisch-soar-after-germany-5g-auction-idUSS8N22R022> (“Shares in 1&1 Drillisch, until now a ‘virtual’ mobile player, rose 9.4% at 0754 GMT. United Internet, which controls 1&1, *surged 5%*.”) (emphasis added).

²². As of January 17, 2020, Drillisch’s stock closed at 22.66 EUR. The last time the stock was at this level was January 17, 2014. See ETR: DRI, *available at* <https://bit.ly/36chtvq>.

²³. DOJ Response at 16 n. 22.

Remedies articulate this as the proper standard.²⁴ The current DOJ's Deputy Assistant AG also states what constitutes an acceptable remedy.²⁵ The DOJ appears to assert that its own guidelines and statements simply do not describe its decision process here and so cannot inform how a court should judge the proposed merger remedy. Acceptance of that position would render this review process moot.

Finally, the DOJ claims without citation to any economics literature that a marginal-cost savings from enhanced network capacity, which is purportedly a “well-understood economic phenomenon,”²⁶ was overlooked. The DOJ cites the Federal Communication Commission's (“FCC”) merger order for this economic proposition,²⁷ but an inspection of the cited paragraph in the FCC order reveals that the FCC merely said that it agreed with the merging parties, who have a litigation-inspired interest in arriving at this result. And FCC Commissioner Jessica Rosenworcel, who dissented from the order, has asserted that T-Mobile fed the FCC staff favorable data on marginal-cost savings.²⁸ Indeed, Commissioner Rosenworcel stated that key

²⁴. Economics Professors Comment ¶2 n.7.

²⁵. *Id.* ¶1 n.5.

²⁶. DOJ Response at 18 (“In fact, the relationship between an increase in capacity and a reduction in marginal cost is a *well-understood economic phenomenon* in industries with capacity constraints. In the market for mobile wireless services, the marginal cost of an additional customer on a capacity-constrained network includes the costs of the congestion caused by adding that customer to the network.”) (emphasis added).

²⁷. *Id.* at 18 n.31 (citing FCC Order ¶236).

²⁸. *Dissenting Statement of Commissioner Rosenworcel*, Applications of T-Mobile US, Inc., and Sprint Corporation For Consent To Transfer Control of Licenses and Authorizations, Applications of American H Block Wireless L.L.C., DBSD Corporation, Gamma Acquisition L.L.C., and Manifest Wireless L.L.C. for Extension of Time, WT Docket No. 18-197, at 3, *available at* <https://docs.fcc.gov/public/attachments/FCC-19-103A5.pdf> (“Significant parts of the initial draft decision were rewritten in the eleventh hour and behind closed doors to suggest less harm to competition and prices than initially found; adopt the merging companies’ arguments in place of more balanced discussion about where those arguments were unconvincing; and even replace the underlying data used to analyze marginal cost efficiencies with more merger-friendly data supplied by T-Mobile.”). Further, during the States’ Case December 2019 Bench Trial, Dr. Fiona Scott Morton, one of the states’ economics experts,

parts of the FCC's order originally written by staff were reworked to soften the competitive harms of the Merger.²⁹

B. Evidence Uncovered During the States' Case Confirms That the Department of Justice's Proposed Final Judgment Fails Under the Tunney Act

Evidence uncovered as part of the States' Case shows that Dish is unlikely to replace Sprint as a facilities-based fourth rival for a number of reasons. To begin, there is evidence that Dish has gamed the regulatory system and does not have incentives to build-out its own network.³⁰ Sprint CEO Marcelo Claure testified under cross examination that Dish's business plan was to warehouse spectrum.³¹ Discussing the termination of Sprint's prior negotiations with Dish, Mr. Claure testified at his DOJ deposition that Dish connected just enough IoT devices to satisfy the FCC's buildout requirements:

Again, Charlie Ergen, his plan, I think he's basically somebody who holds spectrum for the value to continue to go up, and he'll build—I think his latest thing, he's going to spend a billion dollars to build a nationwide network so that he can claim he has a network. As long as he connects one or five devices or ridiculous amounts of low devices, then he's out of—he's out of trouble with the FCC.³²

T-Mobile Director Thornsten Langheim similarly testified that, as late as June 2019, the view of the T-Mobile executive team was that “they were very skeptical that much [of Dish's]

testified that the marginal costs that the merged entity would achieve would be quite similar to what the two merging parties could achieve as standalone firms. Excerpts of relevant portions of the transcript from the December 2019 Bench Trial showing relevant testimonies are attached to the accompanying Declaration of Jonathan G. Axelrod in Support of Brief of Amici Curiae (“Axelrod Decl.”) as Exhibits A-F. Axelrod Decl. Ex. A at 2198:13-16.

²⁹. *Dissenting Statement of Commissioner Rosenworcel*.

³⁰. Other evidence uncovered as part of the States' Case revealed that Dish repeatedly missed FCC milestones with respect to satellite launches. The FCC issued orders in 2010 and 2011 finding that Dish's Echostar affiliate had an established pattern of missing non-terrestrial (satellite) deadlines. Axelrod Decl. Ex. B at 1681-84.

³¹. Axelrod Decl. Ex. C at 1346:19-21. (“I’m sure he’s going to find—his latest trick is to build this really, really thin network to say he’s built a network.”).

³². *Id.* at 1347:14-21.

network would be built.”³³ He acknowledged that “the result of [his] team’s impact analysis at that time was that Dish was not likely to build its own wireless network,”³⁴ and that if Dish “would build out more than 50 percent of the United States, it may have a negative [net present value].”³⁵ His team observed that “unless the MVNO taker [Dish] finds a significant lever to improve network economics, the outside end view doesn’t provide a lot of rationale for substantial buildout.”³⁶ When modeling the cash flows associated with Dish’s buildout scenario, the T-Mobile team found “this case very unlikely. Buildout not realistic.”³⁷ One member of the T-Mobile team, Joe Boorman, reasoned that “it’s economically illiterate to argue he [Ergen] actually builds it. . . .In the end, Dish might build something the lawyers can use, but not something customers can use.”³⁸ In another analysis, Mr. Boorman observed that “Even assuming the assumptions are right, Dish burns 15 billion over ten years, and they have horribly negative terminal value. You need tens of billions of subs to justify it.”³⁹ T-Mobile’s team concluded that “Charlie is mostly interested in resolving his milestone issue, gain two to three years, keep his status as a poker player, and be a seller when spectrum becomes scarce.”⁴⁰

Timotheus Höttges, the CEO of Deutsche Telekom, testified as part of the States’ Case that a U.S. carrier would need more than 80 million subscribers to compete successfully against

³³. Axelrod Decl. Ex. D at 319:17-23.

³⁴. *Id.* at 326:20-24.

³⁵. *Id.* at 327:9-10.

³⁶. *Id.* at 328:7-11.

³⁷. *Id.* at 329:23-25.

³⁸. *Id.* at 333:1-9.

³⁹. *Id.* at 335:11-13.

⁴⁰. *Id.* at 340:12-17.

incumbents such as AT&T and Verizon.⁴¹ Under the DOJ’s remedy, Dish will acquire and seek to maintain a small prepaid business with roughly nine million customers—or about one tenth of what Mr. Höttges believes is needed to compete effectively as a facilities-based carrier. According to testimony from Dr. Carl Shapiro, one of the states’ economic experts, according to Dish’s own plans from September 2019, only two percent of Dish’s subscribers would be on their own network during 2020, and only ten to twelve percent of Dish’s subscribers would be on their own network during 2021.⁴²

Still other evidence in the States’ Case highlighted entanglements that will likely prevent Dish from succeeding as a facilities-based carrier. For example, Judge Victor Marrero asked Dish’s Charlie Ergen about the inherent conflict of interest built into the DOJ’s remedy, under which “T-Mobile will be trying to steal customers from Dish.”⁴³ Judge Marrero asked Mr. Ergen if T-Mobile will “work competitively within the rules to try to push [Dish] out of business,” to which Mr. Ergen responded “I think they’ll try.”⁴⁴ In response to Dr. Shapiro testifying that Dish “won’t have autonomy and independence” in its relationship with New T-Mobile, Judge Marrero asked Shapiro “[y]ou’re saying there is a built-in conflict of interest?”⁴⁵ To which Dr. Shapiro replied, “[y]es, exactly, to which I translate as muted incentives to compete because I am thinking about competition.”⁴⁶ This exchange highlights the contradiction inherent in the DOJ’s

⁴¹. Axelrod Decl. Ex. E at 206:21-25 – 207:1-2 (“Q: And when you said that you only had 80 million customers, you were saying that wasn’t sufficient scale, correct? A: Yes. Q: So you think that a national wireless carrier in the U.S., to successfully compete, needs to have more than 80 million customers? A: That’s correct, yes.”).

⁴². Axelrod Decl. Ex. F at 712:17-21.

⁴³. Axelrod Decl. Ex. B at 1716: 13-14.

⁴⁴. *Id.* at 1721:23-25 – 1722:1.

⁴⁵. Axelrod Decl. Ex. F at 714:21-24.

⁴⁶. *Id.* at 714:25 -715:1.

Final Proposed Judgment: the merging parties’ incentives and the DOJ’s hopes for Dish’s eventual emergence as a full-fledged competitor are at odds with each other.

2.CONCLUSION

The DOJ-brokered access arrangement, as acknowledged by T-Mobile’s lawyer in his closing argument in the States’ Case, is for Dish the “most advantageous wholesale arrangement in the history of the industry.”⁴⁷ It is not clear how awarding Dish such a generous access arrangement would nudge Dish in the direction of building out its spectrum; if anything, it could do the opposite, giving Dish an added incentive *not* to build out. Nor would it solve the “conflict of interest” identified by Judge Marrero.

The conclusions of Amici in the initial Comment to the DOJ—that the DOJ’s proposed remedy in its Proposed Final Judgment cannot reasonably be expected to restore the level of pre-merger competition in wireless markets—remain valid and are further strengthened by evidence that has appeared in the States’ Case. Amici urge this Court to consider this disconnect between the serious competitive concerns expressed in the DOJ Complaint and the Proposed Final Judgment. Amici respectfully request this Court to reject the latter as not plausibly adequate to remedy those concerns.

Dated: January 24, 2020
New York, New York

Respectfully submitted,

BEINS AXELROD

/s/ Jonathan G. Axelrod

⁴⁷. Capitol Forum, *T-Mobile/Sprint: States, Carriers Clash on Caselaw, Efficiencies, Dish Remedy During Closing Arguments*, Jan. 16, 2020, available at <https://thecapitolforum.cmail19.com/t/ViewEmail/j/D8412D3DEB2594BA2540EF23F30FEDED/A39F287382D2114516B21F2806CB3AEB> (quoting T-Mobile’s attorney in closing arguments).

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Amici Curiae

CERTIFICATE OF COMPLIANCE WITH RULE 32(g)(1)

I certify that on this day, the foregoing Amici Curiae Brief complies with applicable rules and orders because it does not exceed 20 pages in length and contains 3,604 words, as determined by the word-counting feature of Microsoft Word.

/s/ Jonathan G. Axelrod
Jonathan G. Axelrod

CERTIFICATE OF SERVICE

I certify that on this day, I filed the foregoing Amici Curiae Brief with the Court via its Electronic Case Filing (ECF) system, which will send notification of filing to the counsel of record as identified on the Notice of Electronic Filing (NEF).

/s/ Jonathan G. Axelrod
Jonathan G. Axelrod

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

UNITED STATES OF AMERICA,
Department of Justice, Antitrust Division
450 5th Street, N.W.
Washington, D.C. 20530

STATE OF KANSAS,
120 S.W. 10th Avenue, 2nd Floor
Topeka, Kansas 66612-1597

STATE OF NEBRASKA,
2115 State Capitol
Lincoln, Nebraska 68509

STATE OF OHIO,
150 East Gay Street, 22nd Floor
Columbus, Ohio 43215

STATE OF OKLAHOMA,
313 N.E. 21st Street
Oklahoma City, Oklahoma 73105-4894

and

STATE OF SOUTH DAKOTA,
1302 E. Highway 14, Suite 1
Pierre, South Dakota 57501-8501

Plaintiffs,

v.

DEUTSCHE TELEKOM AG,
Friedrich-Ebert-Allee 140
Bonn, Germany 53113

T-MOBILE US, INC.,
12920 SE 38th Street
Bellevue, Washington 98006

SOFTBANK GROUP CORP.
1-9-1 Higashi-shimbashi, Minato-ku,
Tokyo, Japan 105-7303

and

Case No.: 1:19-cv-02232-TJK

SPRINT CORPORATION
6200 Sprint Parkway,
Overland Park, Kansas 66251-4300

Defendants.

**DECLARATION OF JONATHAN G. AXELROD IN SUPPORT OF BRIEF OF AMICI
CURIAE NICHOLAS ECONOMIDES, JOHN KWOKA, THOMAS PHILIPPON,
ROBERT SEAMANS, HAL SINGER, MARSHALL STEINBAUM, AND LAWRENCE J.
WHITE IN SUPPORT OF PLAINTIFFS**

I, Jonathan G. Axelrod, having personal knowledge of the facts stated herein, hereby
declare as follows.

1. I am a partner in the law firm of Beins Axelrod, counsel to Amici Curiae Nicholas
Economides, John Kwoka, Thomas Philippon, Robert Seamans, Hal Singer, Marshall
Steinbaum, and Lawrence J. White.

2. I submit this Declaration in support of the foregoing Brief of Amici Curiae.

3. True and correct copies of the following documents are attached hereto:

a. **Exhibit A:** An excerpt of the relevant portions of Fiona Scott
Morton's Testimony from the Transcript of the Court's Bench Trial held on December 20, 2019.

b. **Exhibit B:** An excerpt of the relevant portions of Charles Ergen's
Testimony from the Transcript of the Court's Bench Trial held on December 18, 2019.

c. **Exhibit C:** An excerpt of relevant portions of Marcelo Claude's
Testimony from the Transcript from the Court's Bench Trial held on December 16, 2019.

d. **Exhibit D:** An excerpt of relevant portions of Thornsten
Langheim's Testimony from the Transcript from the Court's Bench Trial held on December 10,
2019.

e. **Exhibit E**: An excerpt of relevant portions of Timotheus Höttges' Testimony from the Transcript from the Court's Bench Trial held on December 10, 2019.

f. **Exhibit F**: An excerpt of relevant portions of Carl Shapiro's Testimony from the Transcript from the Court's Bench Trial held on December 11 and 12, 2019.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on January 24, 2020

/s/ Jonathan G. Axelrod
Jonathan G. Axelrod

EXHIBIT A

1 UNITED STATES DISTRICT COURT
2 SOUTHERN DISTRICT OF NEW YORK
-----x
3 STATE OF NEW YORK, *et al.*,

4 Plaintiffs,

New York, N.Y.

5 v.

19 Civ. 5434 (VM)

6 DEUTSCHE TELEKOM AG, *et al.*,

7 Defendants.
-----x

8 December 20, 2019
9 9:05 a.m.

10 Before:

11 HON. VICTOR MARRERO,

12 District Judge

13 APPEARANCES

14
15 MUNGER, TOLLES & OLSON LLP
Attorneys for Plaintiffs State of California
16 BY: GLENN POMERANTZ
KURUVILLA JOSEPH OLASA
17 KYLE W. MACH

18 STATE OF CALIFORNIA
Department of Justice
19 Office of the Attorney General
Attorneys for State of California
20 BY: PAULA L. BLIZZARD

21 STATE OF NEW YORK
Office of the Attorney General
22 Attorneys for State of New York
BY: ELINOR R. HOFFMANN
23 BEAU W. BUFFIER

JCKTSTA1

Scott Morton - Direct

1 discuss with your Honor that I think we agree -- Mr. Gelfand
2 and I agreed we should defer that until after we get the
3 witnesses on and off the stand and then take up these other
4 issues afterwards.

5 THE COURT: Sure.

6 MR. POMERANTZ: Your Honor, we call Professor Scott
7 Morton as our next witness.

8 FIONA SCOTT MORTON,

9 called as a witness by the Plaintiffs,

10 having been duly sworn, testified as follows:

11 DIRECT EXAMINATION

12 BY MR. POMERANTZ:

13 THE COURT: State your name and spell it for the
14 record.

15 THE WITNESS: Fiona Scott Morton, F-I-O-N-A S-C-O-T-T
16 M-O-R-T-O-N.

17 THE COURT: All right. Mr. Pomerantz, yesterday you
18 gave us an estimate of your time with this witness, can we have
19 your reconsidered estimate?

20 MR. POMERANTZ: Shorter. I hate to predict, but I
21 think it will be shorter than the estimate I gave.

22 THE COURT: Thank you, proceed.

23 MR. POMERANTZ: May I approach, your Honor?

24 THE COURT: Yes.

25 Q. Good morning, Professor Scott Morton.

JCKTSTA1

Scott Morton - Direct

1 A. Good morning.

2 THE COURT: Mr. Pomerantz, as has been the practice to
3 date with expert witnesses, the plaintiffs have submitted the
4 curriculum vitae for Professor Scott Morton. I have reviewed
5 it very closely, and I am persuaded that the witness should be
6 permitted to testify as an expert for the areas in which she
7 has been presented. Is there any objections from defendants on
8 this score?

9 MR. GELFAND: Yes, your Honor, we object not because
10 of the qualifications, Professor Scott Morton is clearly a
11 qualified economist, but based on the reports that were
12 submitted and what we have learned through deposition and then
13 what we see in the slides that were provided yesterday, it
14 seems clear to us that the areas that she's going to testify
15 about are not really expert areas that she's qualified to talk
16 about. So that's point one.

17 Point two is that a piece of it, really half of it, so
18 I think they're proffering her to talk about a critique of our
19 efficiency calculations, and her opinion about that is based
20 entirely -- well, not entirely, there are a couple of pieces
21 that are not, but mostly on the testimony of Dr. Kolodzy who
22 testified yesterday. Dr. Kolodzy testified that he did
23 sensitivity analyses that you could think about maybe the model
24 could have done this or could have done that, but every time he
25 was asked a question is this going to happen, what is your

JCKTSTA1

Scott Morton - Direct

1 opinion about whether this value is correct or not, do you know
2 the right value, is this technology going to be employed by the
3 parties, every time he was asked that question, your Honor, he
4 said I don't know, I'm simply presenting scenarios or
5 possibilities, however he worded it, and he gave no opinion as
6 to any of these technologies being employed by the companies,
7 what the values of those technologies would be, whether there's
8 going to be any spectrum available.

9 And I'm sure Professor Scott Morton will readily admit
10 she's not an expert in engineering or in wireless networks, she
11 has to rely on Dr. Kolodzy. But given Dr. Kolodzy's waffling
12 and inability to make any predictions, I don't think it's a
13 proper basis under Rule 703 for Professor Scott Morton to rely
14 on. So that's going to be half of our objections.

15 The other half is I believe she's going to testify
16 unless the examination has been modified, about the likelihood
17 that DISH is going to be successful and reach a certain amount
18 of competitiveness or something like that. That's really not
19 in her bailiwick, your Honor, she has no experience reviewing
20 business plans and predicting whether a business plan and
21 wireless industry is going to succeed or not. She hasn't done
22 any analysis of cash flow or net present value or anything like
23 that.

24 I think she is going to give her views, I have no
25 doubt about that, that DISH has got risks, maybe they won't do

JCKTSTA1

Scott Morton - Direct

1 this, maybe they won't do that, but that's in the Court's
2 realm, your Honor, that doesn't help the Court to give opinions
3 to the Court about how you can think about, for example, the
4 fact that DISH has in the past supposedly missed a deadline or
5 two when they were dealing with the FCC on other licenses.

6 So I apologize for the long speech, your Honor, I just
7 want to make clear that we don't agree that any of the
8 testimony that's about to be provided is either within her
9 expertise or is supported by a valid basis under Rule 703.

10 THE COURT: Thank you.

11 Mr. Pomerantz, briefly.

12 MR. POMERANTZ: Yes. I think what your Honor will see
13 is that what Professor Scott Morton is doing is responding
14 precisely to what Professor Katz did in his efficiencies
15 analysis. Professor Katz takes inputs from engineering people
16 at T-Mobile, and particularly Mr. Kapoor, and then he does some
17 additional analysis with those inputs to come up with his
18 calculations of efficiencies. Professor Scott Morton will
19 directly respond to that by taking alternative inputs that she
20 received from Dr. Kolodzy and then responding to what Professor
21 Katz did.

22 In addition, she will look at some of the assumptions
23 that Professor Katz had to rely upon to reach his efficiencies
24 calculations and assess whether those were reasonable or not in
25 view of: Are they the kind of assumptions that economists

JCKTSTA1

Scott Morton - Direct

1 would reasonably rely on? This is directly responsive to what
2 Professor Katz testified to, and there is as similar a
3 relationship between Professor Katz and Mr. Kapoor as there is
4 between Professor Scott Morton and Dr. Kolodzy. So I think
5 what your Honor will find is this is directly responsive and
6 appropriate testimony from a trained economist.

7 With respect to DISH, I think your Honor will see that
8 we have a very narrow set of questions that are designed only
9 with respect to what an economist would view the potential
10 entry of a company like DISH into this particular market, and
11 the kind -- the way that an economist would look at a remedy
12 that creates the kind of entanglements that we see here.

13 A lot of things that Mr. Gelfand was referring to are
14 not part of this examination. And I would ask that we be
15 allowed to proceed, if he has an objection to a particular
16 question or to a particular exhibit or demonstrative, we could
17 take it up at the time, but I think your Honor will find that
18 this is directly responsive to what they did.

19 THE COURT: All right. Thank you. Let's proceed with
20 the examination. I already indicated yesterday that I have
21 some skepticism about some of the proffered testimony as it
22 relates to DISH. To the extent that they are based on economic
23 considerations and properly within the scope of economists, I
24 have no problem with that. To the extent it goes into
25 speculations and predictions about whether or not DISH will be

JCKTSTA1

Scott Morton - Direct

1 operationally successful, I think that that would cross the
2 line, so let's proceed.

3 MR. POMERANTZ: Thank you, your Honor. I think you
4 will find, by the way, if this goes 90 minutes or so, about 80
5 of those minutes will be on topics other than DISH and ten
6 minutes or less will be on DISH.

7 THE COURT: Whether it's only ten minutes, if it's
8 inappropriate, it's still inappropriate.

9 MR. POMERANTZ: Fair point, and accepted.

10 BY MR. POMERANTZ:

11 Q. Professor Scott Morton, in preparing for your testimony
12 today, did you create some slides to help describe your
13 opinions?

14 A. Yes, I did.

15 Q. So let's go to the next slide.

16 Could you briefly describe to the Court what is are
17 reflected on this slide.

18 A. Yes. My assignment today is to evaluate Professor Katz's
19 efficiency claims, and these fall into three buckets: Network
20 costs -- that's the cost of building the network -- speed, and
21 a small bucket of non-network costs. I'm also going to
22 evaluate the competitive impact of DISH's proposed entry as a
23 facilities-based carrier.

24 Q. And what are your bottom line conclusions?

25 A. My bottom line conclusions are that Professor Katz's

JCKTSTA1

Scott Morton - Direct

1 efficiency claims are neither merger specific nor are they
2 verifiable, that Professor Katz's estimate of how much
3 consumers value additional speed is unreliable, and that DISH's
4 entry would not be, under the merger guidelines description of
5 timely, likely and sufficient to replace the competitive
6 significance of Sprint.

7 Q. Now in analyzing the various information you considered to
8 come up with these opinions, did you prepare reports of your
9 analysis and opinions?

10 A. Yes, I did, two reports, they're quite lengthy, and I am
11 happy to say we won't be going through most of that material
12 today.

13 MR. POMERANTZ: Your Honor, I have placed the reports
14 in front of Professor Scott Morton in the event she needs to
15 refer to them during my examination or Mr. Gelfand's. I think
16 your Honor has a copy of them as well. We're not offering them
17 into evidence, I think they're there to assist the examination.

18 Q. We're going to go through some of your analysis in a little
19 bit of detail, but at a high level, what framework did you
20 apply to reach the opinions you reached in this matter?

21 A. At a high level what we're interested in in efficiencies is
22 whether the efficiencies are cognizable. Under the merger
23 guidelines, efficiencies have to be cognizable, which means
24 they're verifiable and merger specific, in order to offset any
25 anticompetitive harm.

JCKTSTA1

Scott Morton - Direct

1 Q. What information did you rely upon to in order to reach
2 your opinions?

3 A. The information I relied upon was my own training and
4 experience in conducting economic analysis in both the public
5 and private sector, the academic literature in this area, the
6 record in the case, of course I relied on Dr. Kolodzy for some
7 engineering inputs. And as my charge was to evaluate Professor
8 Katz's efficiencies, I spent a good deal of time with his
9 model.

10 Q. When you say reviewed the record in this case, did you
11 review documents created by T-Mobile or Sprint that were
12 created during the ordinary course of their business
13 activities?

14 A. Yes, I did.

15 Q. And are those kinds of documents helpful to an economist in
16 evaluating something like efficiencies?

17 A. Yes, they are.

18 Q. Why are they?

19 A. They're helpful because they're in some sense market
20 tested, they're reflective of behavior that the firm has
21 actually carried out in the marketplace, and therefore, it's
22 possible to see that that's a reliable way of understanding
23 competition or the industry practices.

24 Q. Now sometimes parties that want to merge create documents
25 for purposes of regulatory review or on occasion court

JCKTSTA1

Scott Morton - Direct

1 proceedings. Would an economist typically rely on those as
2 well?

3 A. Yes, an economist would. When the document or model that's
4 been created in the course of regulatory review comes up, it's
5 subjected to more scrutiny because it hasn't been market
6 tested. And so an economist needs to look to see whether it is
7 consistent with ordinary course documents, it's consistent with
8 economic principles and so forth.

9 MR. GELFAND: Objection, your Honor, this is exactly
10 what I was talking about. Your Honor knows how to look at
11 documents that were created in different contexts and evaluate
12 their credibility. Professor Scott Morton's entire report was
13 created with the idea with this litigation in mind. It is not
14 within the purview of an economist to tell the Court how to
15 judge the credibility of documents that were created with a
16 merger in mind versus ordinary course business documents. So
17 that would be an example where I just don't think the testimony
18 is of assistance to the Court.

19 THE COURT: Thank you. Overruled.

20 MR. POMERANTZ: Your Honor, if you want me to respond.

21 THE COURT: No, let's proceed. But the Court
22 acknowledges that there are going to be lots of areas here
23 where the testimony is going to be close to the line, just be
24 aware that I am aware.

25 MR. POMERANTZ: Thank you, your Honor.

JCKTSTA1

Scott Morton - Direct

1 BY MR. POMERANTZ:

2 Q. Let's turn to efficiencies. From an economist perspective,
3 what is an efficiency?

4 A. An efficiency is something that the merging parties can do
5 that enhances competition and helps consumers.

6 Q. And so the merger guidelines that the Court has seen on a
7 number of occasions from both sides' experts discuss
8 efficiencies. How does an economist evaluate merger
9 efficiencies?

10 A. As I mentioned before, and this document details,
11 cognizable efficiencies, those that are allowed to offset the
12 anticompetitive harm, are merger specific, that arise from the
13 merger itself, and they have to be verifiable.

14 Q. What does an economist mean when he or she says that an
15 efficiency is merger specific?

16 A. Professor Katz covered this also. It has to be an
17 efficiency that is achievable through the merger itself and not
18 something that the standalone firms can do on their own.

19 Q. And are benefits that arise due to technological
20 developments, are those merger specific efficiencies?

21 MR. GELFAND: Objection vague, lack of foundation.

22 THE COURT: Lay a foundation. Clarify the question.

23 Q. Can technological developments be merger specific
24 efficiencies?

25 A. Merger specific efficiencies have to occur because of the

JCKTSTA1

Scott Morton - Direct

1 merger and not something that would happen anyway. So if
2 technological developments are occurring and they're not caused
3 by the merger, standalone firms will have them also. So a
4 merger specific efficiency, in terms of technological
5 developments, has that to be caused by the merger.

6 Q. And how do you determine whether an improvement or benefit
7 is merger specific in an industry where technology is
8 constantly improving?

9 A. I think I have a demonstrative for that. It's again
10 something that Professor Katz covered. The issue is not
11 whether you look at the standalone firms today and the combined
12 firm tomorrow. If technology is moving along, then you need to
13 look at apples-to-apples comparison, which is the firms
14 tomorrow and the combined firm tomorrow.

15 Q. So I think what you are referring to, and I was a little
16 slow on the uptake here, is this slide and the next slide. So
17 if you could explain to the Court what is happening here.

18 A. Yes, we could look at T-Mobile and Sprint today, and they
19 have certain speeds and capacity and technology. And if we
20 compared that to new T-Mobile in the future, new T-Mobile in
21 the future will be much better, it will have 5G and different
22 kinds of handsets and capabilities, but that would not be the
23 appropriate way to think about efficiencies. What we really
24 need to do is move T-Mobile and Sprint into the future also so
25 we're comparing apples to apples; all three entities have

JCKTSTA1

Scott Morton - Direct

1 access to the same technology and are in the same year with the
2 same state of technology.

3 Q. So we have just discussed merger specificity. Now you also
4 said that efficiencies have to be verifiable. Again, what does
5 an economist mean when he or she says that an efficiency has to
6 be verifiable?

7 A. As the horizontal merger guidelines say, efficiencies can't
8 be vague or speculative, we have to be able to verify them by
9 reasonable means using our economist tool kit and available
10 evidence.

11 Q. So now let's turn to the efficiencies that Professor Katz
12 has claimed in this matter. Could you briefly explain, using
13 this chart, what efficiencies are claimed by Dr. Katz in his
14 testimony?

15 MR. GELFAND: Your Honor, we object to this for the
16 following reasons: We looked at this last night. We can't
17 figure out what it is. It cites to three different tables in
18 Dr. Katz's report which have a variety of numbers, some are low
19 bound of efficiencies, some high bound of efficiencies.
20 Plaintiffs put no numbers on this graph. We have no way to
21 determine whether this is the low bound, the upper bound, the
22 middle bound. We just can't figure it out. And it certainly
23 does not reflect the information in a fair way that is in the
24 tables that are cited.

25 I also point out this was never presented in Professor

JCKTSTA1

Scott Morton - Direct

1 Scott Morton's report, it's been produced for the first time
2 for us yesterday, and therefore, we think it's a meaningless
3 demonstrative exhibit that's of no assistance.

4 THE COURT: Mr. Gelfand, you will have sufficient
5 opportunity during your cross to examine all of these
6 questions. And I think if you object now to every item that is
7 going to be coming up, we're going to be here all day, so I
8 think it's better if you reserve your concerns for your
9 cross-examination. Again, I'm sensitive to the issues that you
10 raise. To the extent you have questions about what the
11 document means, the witness is here to explain, and you will
12 have your chance to challenge.

13 MR. GELFAND: I appreciate that, your Honor, but I do
14 think I need to point out to the Court when we're objecting as
15 the documents come up. I will keep them short.

16 BY MR. POMERANTZ:

17 Q. What efficiencies has Professor Katz claimed in his
18 analysis and testimony here in this courtroom?

19 A. These are the efficiencies that Professor Katz has
20 calculated. They fall, as I said, into three buckets, speed,
21 cost of the network, and non-network cost efficiencies, and he
22 calculated them over time through 2024.

23 Q. Did you and your team put together this chart?

24 A. Yes, we added up the numbers from Professor Katz's report.

25 Q. Based on your review of Professor Katz's reports and the

JCKTSTA1

Scott Morton - Direct

1 tables cited, do you believe that these graphs accurately
2 reflect both the time period in which Professor Katz predicts
3 the efficiencies will occur and the amount of the efficiencies
4 divided up into three categories?

5 MR. GELFAND: Object to question, your Honor. It
6 doesn't make any sense. It can't possibly reflect it when the
7 tables that are cited have different values. It doesn't say
8 what values are being used. I apologize, your Honor.

9 MR. POMERANTZ: Your Honor, that is exactly what
10 cross-examination is all about.

11 THE COURT: I agree. Let's proceed.

12 Q. Do you remember the question?

13 A. I think it was about accuracy. I believe these were taken
14 from Professor Katz, and it was his number I'm reflecting here.

15 Q. Now the little red bar down at the bottom which refers to
16 non-network cost efficiencies, do we have any plans of going
17 through that today?

18 A. We do not.

19 Q. All right. So are the efficiencies that Professor Katz has
20 claimed the same every year across the five-year period that he
21 examined?

22 A. No, they grow over time.

23 Q. Is it relevant to your analysis when the efficiencies are
24 predicted to occur?

25 A. Yes, it is. It is relevant because, as the merger

JCKTSTA1

Scott Morton - Direct

1 guidelines say, delayed benefits from efficiencies are given
2 less weight. Why is that? They're further in the future, and
3 they're inherently more difficult to predict, they're
4 inherently more speculative as we go out in time.

5 Q. So I want to first focus on the network cost efficiencies
6 component of Professor Katz's testimony here. Does Professor
7 Katz provide a model with a calculation of these efficiencies?

8 A. Yes, he does.

9 Q. What is that model based on that?

10 A. That model is based on, originally, T-Mobile's 4G
11 congestion planning model, augmented. I believe Professor Katz
12 and Compass Lexecon helped T-Mobile build a 5G module and
13 include some Sprint analysis.

14 Q. And did you evaluate the economic results of Professor
15 Katz's model?

16 A. Yes, I did.

17 Q. So let's turn to the next slide. What does Professor
18 Katz's model predict regarding the economics of the standalone
19 firms and the merged firm?

20 A. What his model predicts is that the standalone firms will
21 have dramatically higher per subscriber per month cost of
22 marginal cost of capacity relative to the combined firm.

23 Q. And I am not sure if we have it on this slide, but is this
24 for a particular year that Professor Katz analyzes?

25 A. I believe so.

JCKTSTA1

Scott Morton - Direct

1 Q. And do you recall if that's 2024?

2 A. I think so, yes.

3 Q. And so for T-Mobile, he predicts that the marginal costs
4 for the standalone and T-Mobile will be about 25 times greater
5 than the merged firm?

6 A. That's correct.

7 Q. And for Sprint he predicts it will be -- the standalone
8 Sprint will have about 11 times greater marginal costs than the
9 merged firm?

10 A. That's correct.

11 Q. Now we heard a lot of testimony about Sprint's current
12 situation, financially and competitively, compared to
13 T-Mobile's. But Professor Katz predicts that the standalone
14 T-Mobile will have much higher network costs in the future than
15 standalone Sprint. Do you understand why Professor Katz
16 reaches that result?

17 A. Yes, I do. Sprint doesn't have a capacity problem, they
18 have less coverage. That's the reason that people are
19 concerned about, well, how their competitive position is
20 described. T-Mobile needs access to more capacity. And this
21 model generates, in my opinion, a very unrealistic path forward
22 for T-Mobile.

23 MR. GELFAND: Objection, your Honor, there's no
24 foundation for her to give an opinion about whether that is
25 unrealistic or not. This is outside her area of expertise.

JCKTSTA1

Scott Morton - Direct

1 THE COURT: Overruled.

2 Q. So let's look at the T-Mobile side of this chart. What is
3 driving the difference in cost between new T-Mobile and
4 standalone T-Mobile? Is there a big drop in new T-Mobile's
5 costs after the merger?

6 A. The primary factor that's creating this enormous difference
7 is the rising cost of standalone T-Mobile.

8 Q. I think Professor Katz covered this in some detail, so I
9 don't think we need to, but could you briefly describe how
10 Professor Katz arrives at the numbers we see here for new
11 T-Mobile, T-Mobile and Sprint?

12 A. Yes, he takes his congestion model and he has a baseline of
13 what the network looks like, he expands to 90 percent of demand
14 and then again to 100 percent of demand. The engineers give
15 him the solutions for 90 and 100, and he subtracts, takes the
16 difference, and values that. That gives him an economic
17 measure of the marginal cost of the network capacity, and I
18 agree with Professor Katz that that is a good way to think
19 about marginal costs.

20 Q. So I take it that your testimony is going to be that there
21 is some flaws in the analysis we see that are reflected on the
22 screen right now?

23 A. That's correct.

24 Q. And those flaws primarily relate to the large costs for the
25 standalone firms.

JCKTSTA1

Scott Morton - Direct

1 A. That's correct.

2 Q. So let's go and look at those flaws. We heard some
3 testimony yesterday from Dr. Kolodzy about the way the model
4 works on a site-by-site level. Did you read that or hear that?

5 A. Yes, I did.

6 Q. So I want to focus on the economic implications of that.
7 Let me go to the next slide.

8 What does this slide describe about the economic
9 implications of the model that the defendants are relying on
10 for their efficiencies defense here?

11 A. What it shows is that the choices that a carrier has to
12 give itself more capacity are only partially reflected in the
13 model. Dr. Kolodzy described what the model recommends in the
14 top half of this demonstrative, spectrum overlays, small cells,
15 cell splits, that kind of thing. The model does not have as a
16 choice that the standalone firm can go out and purchase new
17 spectrum, that they could deploy new technology, that they
18 could increase the amount of refarming of spectrum over from 4G
19 to 5G, that they could develop partnerships like the one Sprint
20 has with Altice, none of these options are contained in the
21 network congestion model.

22 Q. And why do these kinds of restrictions or limitations on
23 the model matter from an economic perspective?

24 A. They're very important from an economic perspective because
25 limiting the standalone firms from, for example, buying

JCKTSTA1

Scott Morton - Direct

1 spectrum or using new technology in a dynamic industry
2 essentially freezes them. So they're stuck with what they have
3 in 2019 and they aren't able to go through to 2024 and buy
4 spectrum or deploy new technology. And this is not an
5 economically sensible approach because in the ordinary course,
6 we see that indeed firms do that.

7 Q. How does freezing the standalone firms affect costs that
8 are then generated by the model, that's that skyrocketing cost
9 that we saw on the prior slide.

10 A. Because the model only gives standalone firms to access to
11 about half of the options that they need, they're constrained,
12 and that means that their costs go up in a very dramatic way
13 because they do not have access to other less costly options.

14 Q. So I want to go first to the first restriction that the
15 defendants have placed on their model, the restriction about
16 the standalone firms not being able to purchase new spectrum.
17 I don't want to go into the factual predicate for that, several
18 witnesses have done that, including Dr. Kolodzy yesterday. Did
19 you evaluate what happens from an economic perspective if you
20 actually added spectrum to the standalone firm's options?

21 A. Yes, I did. If you add spectrum to the standalone firm's
22 options, their marginal cost of capacity drops dramatically.

23 Q. In this particular area, what analysis did Dr. Kolodzy do
24 that you relied upon to make these economic calculations?

25 A. Dr. Kolodzy took spectrum and he added it to the congestion

JCKTSTA1

Scott Morton - Direct

1 model and calculated the solutions that would be needed to meet
2 demand with that extra spectrum in place. What I am doing is
3 taking Professor Katz's economic model and using those
4 solutions and valuing them to obtain the marginal covelets of
5 increased capacity.

6 Q. So if you could use this slide that I just put on, slide 15
7 here, to explain your part of that analysis. What did you do
8 with the information that had been provided to you?

9 A. So Professor Katz's economic model lets him take the output
10 from the engineers and calculate this marginal cost of
11 capacity. And you see that the blue bars represent his
12 answers. When I take Dr. Kolodzy's engineering solutions and I
13 place them in that same economic model, you can see that the
14 marginal costs of capacity drops dramatically. The light green
15 is adding 10 megahertz of spectrum and the gray is adding 30
16 megahertz of spectrum.

17 Q. Let's take one example so we're clear what this chart
18 reflects. Let's take 2022. Could you go through the three
19 bars in 2022 and explain to the Court what this chart reflects?

20 A. Yes. So the \$6.21 again is Professor Katz's output, what
21 he calculates from Mr. Kapoor's solutions. Then if we add 10
22 megahertz of spectrum and give that to standalone T-Mobile, we
23 imagine that they bought it, for example, then Dr. Kolodzy
24 calculates what congestion release solutions would be needed,
25 and I put that in the model and I get \$1.60 as the marginal

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1 cost per subscriber per month. If you increase that to 30
2 megahertz, you see the marginal costs difference drops
3 dramatically down to 40 cents.

4 Q. And from the materials that you have reviewed, is 10
5 megahertz of spectrum a lot of spectrum for a wireless carrier
6 like T-Mobile?

7 A. Well, I know that T-Mobile has 100 megahertz today, so
8 that's about a ten percent increase.

9 Q. Now as an economist, does this slide reveal a problem with
10 the way that Professor Katz has calculated marginal costs and
11 his efficiencies?

12 MR. GELFAND: Objection, your Honor. There's no basis
13 to say there's a problem because there's no evidence in the
14 record that either the 10 megahertz or the 30 megahertz
15 scenarios are realistic, and there's no evidence in record
16 about what that is or how that should be involved.

17 THE COURT: If you have any questions, Mr. Gelfand,
18 you can put that in your bucket of questions for the witness.

19 MR. GELFAND: It's an ever-increasing bucket, your
20 Honor.

21 BY MR. POMERANTZ:

22 Q. Do you have the question in mind, Professor Scott Morton?

23 A. I think do. This is a fundamental problem with the
24 economic model because it rules out ordinary business decisions
25 that we see in the real world.

JCKTSTA1

Scott Morton - Direct

1 Q. Could you give us an example to explain why this is a
2 problem?

3 A. Suppose you ask me to model Starbucks going forward to
4 2024, but you told me that I had to eliminate the possibility
5 that Starbucks could build new stores. Now more people want
6 coffee, and we get long lines at the Starbucks stores because
7 I'm not allowed to let Starbucks build more stores. And this
8 is something that is contradicted by what Starbucks is actually
9 doing, and that is important to include in an economic model
10 what the firms are actually doing.

11 Q. And do economists look at what firms are actually doing in
12 order to try to model what they might do in the future?

13 A. Yes, they do.

14 Q. So I don't want you to go over this document at all,
15 because this is something that I believe both Professor Katz
16 reviewed in his testimony and that Dr. Kolodzy reviewed in his.
17 Is this a document that you did rely on in your evaluation of
18 Professor Katz's economic analysis?

19 A. Yes, it is.

20 Q. Why did you find this document informative?

21 A. Because it shows an ordinary course pattern of T-Mobile
22 purchasing spectrum over many years.

23 Q. Now the Court has heard T-Mobile witnesses come in and
24 testify about other sources of spectrum. Have you either heard
25 or read some of that testimony?

JCKTSTA1

Scott Morton - Direct

1 A. Yes, I have.

2 Q. Let me put one example on the screen, this is Mr. Höttges.
3 Does Professor Katz's economic analysis allow for the
4 possibility that T-Mobile could lease spectrum from anyone,
5 whether it be DISH or anyone else?

6 A. No, it does not.

7 Q. And let me put another document on here. This is a
8 document that you relied on in your analysis of Professor
9 Katz's model. How did this document inform your analysis of
10 the reliability of Professor Katz's efficiencies analysis?

11 A. Well, we have seen this kind of assumption of no ability to
12 get spectrum before. This is a document from the AT&T/T-Mobile
13 merger where again the parties say we're going to assume we
14 can't get any spectrum and that's the reason that we have to
15 merge.

16 Q. And what actually happened after this 2011 merger? Did
17 AT&T and T-Mobile obtain more spectrum?

18 A. Yes, they did.

19 MR. POMERANTZ: And for the record, that's
20 Exhibit 211.

21 Q. So now let's turn not to the assumption about no spectrum
22 for the standalone firms but to other assumptions that are in
23 Professor Katz's model. Did you test Professor Katz's analysis
24 to see how it reacts to changes in these other assumptions that
25 we put on the screen?

JCKTSTA1

Scott Morton - Direct

1 A. Yes, I did.

2 Q. And you've divided the assumptions into two different
3 categories, is that right?

4 A. Yes, one category is assumptions about the kinds of
5 technology that the standalone firms could deploy, could they
6 deploy dynamic spectrum sharing, millimeter wave, spectral
7 efficiency, this kind of thing.

8 The other category is demand assumptions, how quickly,
9 for example, will people purchase 5G handsets.

10 Q. Where did Professor Katz get his inputs that fed into the
11 these assumptions?

12 A. I believe he obtained his technology inputs from
13 Mr. Kapoor.

14 Q. And did you use alternative inputs to test these
15 assumptions?

16 A. Yes, my inputs for these assumptions come from Dr. Kolodzy
17 again.

18 Q. So when you use the alternative assumptions that were
19 provided to you by Dr. Kolodzy, does this chart reflect what
20 you found?

21 A. Yes, it does.

22 Q. Could you briefly explain what this chart reflects.

23 A. Yes. You can see, your Honor, in the solid bars for both
24 Sprint and then T-Mobile the output of Professor Katz's
25 calculations, what the marginal cost of capacity would be for

JCKTSTA1

Scott Morton - Direct

1 the standalone firms, and then in black we have the combined
2 firm.

3 If you change the assumptions to those that
4 Dr. Kolodzy talked about yesterday in terms of access to
5 technology and adoption of 5G, and you can calculate the
6 marginal cost of capacity again, you get the hashed bars, and
7 you will notice that they are considerably lower than the solid
8 bars. So Sprint's marginal costs drop by a lot and T-Mobile's
9 drop really dramatically.

10 This means that if we were to look at the efficiencies
11 from the merger and we were to use the hashed bars, we would
12 see that the combined firm has very low marginal cost and so
13 does T-Mobile, and Sprint's are a little bit bigger. So the
14 difference between the combined firm and the standalone firm
15 has really shrunk because the hashed bars are close to the same
16 height.

17 MR. GELFAND: Sorry, your Honor, I know I'm trying the
18 Court's patience, but this came from Professor Scott Morton's
19 report, it reflects a lot more than what Dr. Kolodzy testified
20 to yesterday, I will talk about that in cross-examination, but
21 we object to this demonstrative as not accurately reflecting --

22 THE COURT: You want to do your cross-examination now,
23 it may save some time?

24 MR. GELFAND: Thank you, your Honor.

25 THE COURT: Yes.

JCKTSTA1

Scott Morton - Direct

1 BY MR. POMERANTZ:

2 Q. So you just testified about the difference between the hash
3 lines for standalone Sprint and standalone T-Mobile versus the
4 hash lines for new T-Mobile over on the right side of the
5 screen.

6 A. That's correct.

7 Q. Does the difference between the new T-Mobile hash line
8 boxes and the standalone ones, does that matter to an
9 efficiencies analysis?

10 A. It does, because the point of a merger-specific efficiency
11 is something that the merged firm can obtain uniquely and the
12 standalone firms cannot. But if the standalone firms have
13 access to spectrum and technology and the other things that
14 Dr. Kolodzy analyzed, then they actually can achieve quite a
15 lot of efficiencies as standalone firms.

16 Q. And we previously discussed spectrum in the earlier part of
17 this examination. Does this chart that's in front of the Court
18 right now, which is figure 39 from your rebuttal report, slide
19 20, does this make any assumptions about spectrum availability?

20 A. No, it does not. The first chart we looked at was solely
21 about adding spectrum and what that would do to the claimed
22 efficiencies. This chart is other technologies and demand
23 assumptions. And so the two are actually not overlapping.

24 Q. Now are the numbers you present in this graph a corrected
25 efficiencies number that the Court should accept?

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Scott Morton - Direct

1 A. No, this is actually not correct efficiencies because, for
2 example, Professor Katz's model is not designed to go out this
3 far. And it's inherently asking the wrong question because
4 it's leaving out partnership with Altice and leaving out things
5 like the combination of partnerships with Altice spectrum and
6 all the technology improvements that you would want to do
7 together in a good model.

8 Q. Do your conclusions about the model that defendants have
9 offered in this case depend on Dr. Kolodzy's revised inputs for
10 technology and spectrum?

11 A. I'm using them to illustrate that the model is very
12 sensitive, so the answer to the model gives you is really
13 different if you put in spectrum or put in the technology
14 changes. I am not taking a position that one of these is the
15 right answer, that's something nobody can know in 2024, but if
16 we're thinking about how reliable are the efficiencies and are
17 they speculative, it's important to understand whether they
18 change a lot when the inputs change. And what my graph shows
19 is when you change the inputs, you get a really big change in
20 the efficiencies.

21 Q. All right. Now the way this process worked in this case is
22 that the merging parties came up with their explanation of
23 efficiencies then you analyzed that and responded. Is that a
24 common approach for antitrust economists who evaluate mergers?

25 MR. GELFAND: Objection, your Honor, that's asking a

JCKTSTA1

Scott Morton - Direct

1 for a legal conclusion about how these cases are litigated.

2 THE COURT: Rephrase the question.

3 Q. Let me go to here. We're on the horizontal merger
4 guidelines. Does an economist approach an analysis of merger
5 efficiencies by first trying to find out what the merging
6 parties plan to do with the merged assets?

7 A. Yes. As you can see from the horizontal merger guidelines,
8 the standard practice is it's incumbent upon the merging firms
9 to substantiate the efficiency claims. And that is just
10 logical because it's only the merging firms who know what they
11 plan to do; they know if they plan to close a factory or
12 produce a new product. They have some plans of how they're
13 going to use the assets that they're getting.

14 Q. I want to turn to a different subject. I put on the screen
15 testimony from Professor Katz about whether the model that he
16 is using is a part of the ordinary course of the company's
17 business. Do you see that?

18 A. I do.

19 Q. Let's first focus on why we're even talking about whether
20 this model is or is not in the ordinary course. Why does that
21 matter?

22 A. It matters to an economist, again, because ordinary course
23 documents, models, whatever they may be, are market tested. If
24 they're actually being used by companies, then we know that
25 they reflect the industry and competition. When they're not

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Scott Morton - Direct

1 ordinary course, if they're developed just for regulatory
2 review, then they're subject to a higher degree of scrutiny
3 because we don't know that the market has tested them. We're
4 going to compare them to ordinary course documents, we're going
5 to compare them to economic analysis.

6 Q. And I've put on the screen section 10 from the merger
7 guidelines. Is the principle that you just articulated set
8 forth in the merger guidelines themselves?

9 A. Yes, it is. It's not that efficiencies sort of brought
10 forward in the merger process are disregarded, they're regarded
11 by an economist, but they're viewed more skeptically because
12 they have not met that market test of actually being used in
13 practice.

14 Q. And why does it matter in this particular case whether
15 T-Mobile's model is used in the ordinary course in the same way
16 that Professor Katz and the defendants are using it in this
17 case?

18 A. Well, the economics of the model really depend -- you saw,
19 your Honor, that the efficiencies went out to 2024. In the
20 ordinary course, this network congestion model that T-Mobile
21 had for LTE was not used to make network improvements five
22 years in the future. Mr. Kapoor and others have said the model
23 is rerun every year and it's a short-run model. So this is one
24 of the reasons why an economist would not want to use a model
25 that was not actually functioning as a long-run model to

JCKTSTA1

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1 calculate long-run efficiencies.

2 Secondly, that model wasn't used for 5G at all, and
3 here we have a major shift in the industry toward 5G, and the
4 model is predicting 5G in 2024 and it's never been used for
5 that.

6 Q. And has T-Mobile itself previously described this model as
7 not being an ordinary course model?

8 A. Yes, they have.

9 Q. And could you explain to the Court what's on the screen.

10 A. Yes. This is a letter that T-Mobile sent to the Department
11 of Justice explaining that the 5G engineering model was not
12 developed in the ordinary course by T-Mobile because they
13 didn't have any 5G network so they didn't need a model to plan
14 congestion on it. And in particular, the T-Mobile counsel say
15 that any model created in the ordinary course would not have
16 attempted to model as far into the future, and that makes
17 sense, given what we heard from Mr. Kapoor.

18 Q. So this letter from T-Mobile's counsel to the Department of
19 Justice makes exactly the two points that you made, that the
20 model was not used for 5G and it was not used to model that far
21 out in the future?

22 A. That's correct.

23 MR. GELFAND: Objection, your Honor.

24 THE COURT: I think that went over the top,
25 Mr. Pomerantz.

JCKTSTA1

Scott Morton - Direct

1 Q. From your perspective as an economist, why does it matter
2 that the model used by Professor Katz was not used in the
3 ordinary course at T-Mobile either for 5G or to predict four to
4 five years out in the future?

5 A. Because then we need to understand -- he has these very
6 extreme assumptions that generate really high costs for the
7 standalone firms, and if this is not an ordinary course model,
8 then there needs to be some economic explanation for why those
9 assumptions are a good idea, why they're reasonable.

10 Q. So we have been focusing on T-Mobile, let's talk about
11 Sprint. Could you talk about the testimony from Mr. Saw in his
12 deposition and how that relates to your considerations of the
13 ordinary course use of this model.

14 A. Yes. Professor Katz is using the model for Sprint's
15 congestion, but Sprint did not have a congestion model because
16 they didn't have a congestion problem. And we can see here
17 that Mr. Saw from Sprint says we don't have plans to use a
18 model like this because we don't have a congestion challenge.
19 So the model is not representing Sprint's ordinary course
20 activities.

21 Q. So what is your conclusion about Professor Katz's model
22 that he uses to analyze network efficiencies?

23 A. The model is not reliable. It does not address what the
24 standalone firms could do. It artificially constrains the
25 standalone firms, and therefore the results are neither merger

JCKTSTA1

Scott Morton - Direct

1 specific nor are they verifiable.

2 Q. All right. So now let's turn to the other component of
3 efficiencies that Professor Katz addresses, which is network
4 speed efficiencies. Did you also analyze this claim?

5 A. Yes, I did.

6 Q. To make sure we're all on the same page, what improved
7 speeds are we talking about here?

8 A. We're talking again about the merger-specific improved
9 speeds. Professor Katz's model gives him speeds for the
10 standalone firms and speed for the combined firms, and the
11 merger-specific increase is the difference between those two.

12 Q. So let's look at the components of Professor Katz's
13 analysis. How does Professor Katz go about calculating the
14 network speed efficiencies in this case?

15 A. Two inputs. One is the additional speeds that I just
16 mentioned predicted by the model as comparing the standalone
17 firms and the combined firm, and then he needs a way to figure
18 out how much consumers value that additional speed, and he uses
19 an estimate from research article in the economics literature
20 to do that.

21 Q. Now you were just previously describing the model that he
22 used and the concerns you have about whether the mergers are --
23 the efficiencies are merger specific or verifiable. Is it the
24 same model that he uses to take his input on additional speeds?

25 A. That's correct. Congestion and speed are closely related

JCKTSTA1

Scott Morton - Direct

1 in that model, so if you have higher congestion you have lower
2 speed, and that's the model that is generating the speeds used
3 here.

4 Q. And the concerns that you just raised in your prior
5 testimony, are those same concerns raised with respect to speed
6 as well?

7 A. They are.

8 Q. So let's now go to the second box at the bottom here, which
9 is the value of additional speed, and you say from the Nevo
10 article. Do you see that?

11 A. I do.

12 Q. That's Professor Katz's contribution to the calculation of
13 network speed efficiencies, correct?

14 A. He's going to use information from that article to attempt
15 to value the merger-specific speed increases, yes.

16 Q. Do you believe he has placed a reasonable value on that
17 speed difference?

18 A. No.

19 Q. And why not?

20 A. He is taking a setting with very low speeds and
21 extrapolating out really far in a way that I think is not
22 economically appropriate.

23 Q. So let's step back. Do you think that mobile wireless
24 consumers value faster speed?

25 A. Yes, but they value the speed insofar as it lets them do

JCKTSTA1

Scott Morton - Direct

1 something. So it's not that consumers value speed per se, they
2 value user experience, they value the thing they want to do.
3 And if speed lets them do that thing, then the speed is
4 valuable.

5 Q. And is there a term in economics for the principle you just
6 articulated?

7 A. Yes, it's called derived demand.

8 Q. Can you briefly explain the related principle of
9 diminishing marginal returns?

10 A. Yes, diminishing marginal returns is a very common economic
11 concept, and it goes to the idea that a consumer gets less
12 value the more they have of something. So suppose I were to
13 give you a shirt, you might value that; the second shirt
14 perhaps a little bit less. By the time I gave you the 12th or
15 13th or 14th shirt, your value for that shirt is starting to go
16 down because you have so many of them. This is true of almost
17 all goods. It's just the way consumers behave.

18 Q. So let's go to our favorite analogy in this case, and
19 that's cars and roads. Can you tell us what this chart is
20 showing about diminishing marginal returns and derived demand?

21 A. Yes. So let's imagine that I was driving to work in the
22 first lane on this chart. There's congestion on that lane and
23 I'm only driving 25 miles an hour. Let's imagine I'm offered a
24 chance for there to be a second lane, how much would I pay for
25 that second lane on the road? Well, the second lane lets me go

JCKTSTA1

Scott Morton - Direct

1 at 65, that's pretty great, and I'm willing to pay to go at 65.

2 Now I'm going close to speed that I want to be
3 traveling at, and we could ask: Does the consumer want to pay
4 for a third or fourth lane of traffic? And that's the bottom
5 chart. And the answer is well, what would happen I'm going
6 pretty close to the speed I would like to travel at, maybe the
7 additional lanes lets me get up to 68. That's a relatively
8 small improvement in my experience, I therefore have a
9 relatively low willingness to pay for incremental lanes of
10 traffic. So the first lane is very valuable, the second, third
11 and additional lanes are less valuable. That's diminishing
12 returns.

13 (Continued on next page)

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JCKPSTA2

Scott Morton - Direct

1 Q. And how does this car-and-lane analogy translate to
2 wireless speed for mobile phones?

3 A. Well, let's go to the next chart. Probably the most
4 popular use case that requires speed with a mobile phone is
5 watching video. High definition video streaming requires a
6 certain speed, and if the user wants to stream high definition
7 video, then she's going to be happier and happier as her speed
8 goes up to that level that she needs to watch the movie.

9 If the speed is slow, the movie is buffering, it's
10 going the way it's supposed to, and the experience is not very
11 good. But as the speed gets faster, the movie plays like it's
12 supposed to and that's valuable to the consumer.

13 Once the consumer is watching the moving like it's
14 supposed to play, additional speed becomes less valuable,
15 perhaps not valuable at all. The consumer experience is
16 unchanged. She is watching the movie, that's all good. And
17 speeds above the level needed to watch the movie no longer have
18 much value to the consumer. That's diminishing returns.
19 Again, you can see the shape of the curve here.

20 Q. Now, we've heard a lot about video streaming in this case
21 already. What kind of speeds are needed for standard
22 definition video that one may watch today?

23 A. Three megabits per second.

24 MR. GELFAND: Objection, your Honor, lack of
25 foundation. She's not an expert on network speeds and

JCKPSTA2

Scott Morton - Direct

1 applications.

2 MR. POMERANTZ: You Honor, this information comes
3 directly from Professor Scott Morton's report. We're not
4 making it up here. She looked into this in order to assess the
5 very principle that she's raising here, which is, at what point
6 do consumers value speed and at what point does that become
7 less of a value to consumers. It's exactly that point.

8 THE COURT: Overruled.

9 BY MR. POMERANTZ:

10 Q. If you could explain this chart and start with the standard
11 definition and high definition video on the left?

12 A. So today, there are two levels of video watching that are
13 common and popular in that standard definition, and the more
14 fine, high definition video, more pixels, and the speeds needed
15 for those are three and six megabits per second.

16 We've heard a little bit in this case about a video
17 format that is not popular now but might be in the future.
18 That's 4K video. The speed required for that is about 25
19 megabits per second.

20 Q. And if I recall, I think it was Mr. Kapoor who testified
21 about the number of T-Mobile users who, right now, had the
22 ability to access 4K video; do you recall his testimony?

23 A. Yes. I think he said there were 10,000 handsets out of 80
24 million that could look at 4K video.

25 Q. All right. Now, according to Professor Katz, what kind of

JCKPSTA2

Scott Morton - Direct

1 speeds will be available through the standalone firms in the
2 future?

3 A. Here, I show Professor Katz's projected 5G speeds. We see
4 that in 2021, he's predicting standalone T-Mobile will be at
5 127 megabits per second, and Sprint at 210 megabits per second,
6 on average.

7 I did skip over current speeds, which are themselves
8 already well above high definition video, the video format that
9 is popular today. Those speeds are 31 and 24 and that, as I
10 said, is considerably bigger than six.

11 Q. Okay. So what Professor Katz predicts is that by 2021,
12 standalone T-Mobile's speed will be 127?

13 A. Yes.

14 Q. And standalone Sprint's will be 210, correct?

15 A. Yes.

16 Q. Okay. And what do the two bars on the right reflect?

17 A. This is the combined firm in 2021 and then again in 2024,
18 where Professor Katz's model predicts that speeds will be 380
19 megabits per second and then 660 megabits per second.

20 Q. Let's stay with 2021, since we have the comparables from
21 Professor Katz. So we have standalone T-Mobile at 127,
22 standalone Sprint at 210, and new T-Mobile at 380, correct?

23 A. Yes.

24 Q. Has Professor Katz identified a reliable way to measure the
25 difference in value to consumers between the standalone Sprint

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1 and T-Mobile numbers and the new T-Mobile number?

2 A. No, he has not because these are very high speeds beyond
3 anything anybody is using today.

4 Q. All right. So now, let's go to this chart. This is a
5 chart that looks at the analysis that Professor Katz did
6 relating to the Nevo article, correct?

7 A. Yes, it is.

8 Q. And can you explain to the Court what this is reflecting,
9 starting with the left and moving your way right?

10 A. Yes. Your Honor, what is happening in the Nevo article is
11 that those authors have a dataset of home broadband use from
12 2012; so these are people at home, watching Netflix or similar
13 activities. And what that paper does is it looks at the value
14 those people place on additional speed.

15 Now, on the chart, what I've shown is that the average
16 speed in his dataset is 15 megabits per second; so that means
17 only some people are below, some people are above, but the
18 average speed is 15 megabits per second. And this is a time
19 when multiple devices might be streaming in a household, and
20 the value of speed around 15 could be substantial and, indeed,
21 Dr. Nevo finds evidence that people value speed.

22 What's then happening is that Professor Katz has
23 standalone Sprint and standalone T-Mobile out here at 222 and
24 285 in the year 2024, and he is extrapolating the estimate from
25 the 15 megabits per second for home broadband in 2012 to the

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1 difference between the standalone firms and new T-Mobile,
2 which, as you can see, are enormously bigger. Right? That's
3 just a whole different category of speed out there.

4 Q. And do you believe that that extrapolation by Professor
5 Katz, the way he relied on the Nevo article, is reasonable?

6 A. No, I do not.

7 Q. And why not?

8 A. Because we don't know -- consumers have diminishing returns
9 to speed. They're able to watch -- the current use case is
10 video. They're able to watch video at much slower speeds than
11 this. So it's just unclear how you would value what a consumer
12 would do with the difference between 285 and 660.

13 We don't know what they're going to do. It's far in
14 the future. We don't have any data, and what Professor Katz is
15 doing is taking a 15 megabits estimate and saying, oh, I'll
16 just apply it out here, and I think that there's no economic
17 foundation for doing that.

18 Q. And to bring it back to our favorite analogy, where we're
19 looking at the cars and the lanes and you put up a slide, which
20 I won't go back to, but which had speeds at 25 and then 65 and
21 68, using that analogy, how does that relate to what Professor
22 Katz is doing with the Nevo article?

23 A. Suppose that -- so the Nevo paper, article is about the
24 consumer driving at 25 and feeling congested and valuing going
25 up to 65 miles an hour. And that's, as I said, a valid

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1 exercise, and the consumer does appreciate going from 25 to
2 65 miles an hour.

3 When you extrapolate it, however, it's like the
4 consumer is on a 20-lane highway already, and we're going to
5 ask whether the consumer values having another 20 lanes to the
6 20-lane highway. And if she's on the 20-lane highway driving
7 70 already, it's not clear why -- how do you value the
8 additional 20 lanes beyond that.

9 Q. And is it fair to say that what Professor Katz failed to do
10 is to consider diminishing marginal returns?

11 A. Yes, that's correct.

12 THE COURT: Let me interject here for a moment.
13 Beyond the question of whether or not there is an economic
14 model to explain what might happen in the future, what about
15 looking at the reality of what has been transpiring in
16 telecommunications over the last 10, 15 years?

17 If you go back to the time when a mobile phone was a
18 brick, could you have conceived at that time that that brick,
19 10 years out, would be showing movies, getting internet,
20 shopping?

21 THE WITNESS: Right.

22 THE COURT: Do you take that into account?

23 THE WITNESS: Yes, I take your point, your Honor. I
24 think that as time goes forward, this is a dynamic, fast-moving
25 industry, with lots of innovation and something will happen.

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1 There's a lot of reason to think that these speeds will be
2 useful. A lot of the time in commercial applications,
3 factories, autonomous vehicles and things like that are
4 applications that we've all read about, but that's different
5 than saying I've got an anticompetitive merger, and I'm going
6 to find some cognizable efficiencies.

7 I have to be able to grasp those. I have to be able
8 to say what they are and how much consumers value them today in
9 order to say, well, we're sure we're getting this. The kinds
10 of innovation we're going to get tomorrow is we don't know what
11 it is. I mean, it will probably be exciting, but could anybody
12 predict exactly what it will be, whether it will be in this
13 market or a market like autonomous vehicles, I think we don't
14 know.

15 MR. POMERANTZ: And I'm sorry, your Honor, were you --

16 THE COURT: Well, we don't know, but in this field,
17 again, you could look at science fiction and make a prediction
18 that ideas that would have been fiction five years ago are now
19 reality. You probably don't know about the Dick Tracy watches.

20 THE WITNESS: I am a little young for that, your
21 Honor, you're right. But, yes, I take your point, and I do not
22 disagree with the idea that there will be innovation here. The
23 question is, we've got a relevant market of retail wireless
24 communications and what's going to happen to the consumers in
25 that market, and those consumers are the ones that we're

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1 worried about. And innovation could occur literally anywhere
2 in any way because it's so uncertain, the future.

3 BY MR. POMERANTZ:

4 Q. Professor Scott Morton, I want to follow up on the Judge's
5 questions with this chart in front of us, chart 33. So the
6 standalone Sprint and standalone T-Mobile companies, they might
7 innovate in some unknown way in the future, correct?

8 A. Absolutely.

9 Q. And the new T-Mobile might innovate in some unknown way in
10 the future, correct?

11 A. That's right. In my answer to the Court I did not talk
12 about merger specificity. So, your Honor, one of the things
13 that is really important, that Mr. Pomerantz has reminded me
14 of, is while fantastic innovations will happen in the future,
15 no doubt there's an important question about whether we need
16 this merger to get them or whether Verizon by itself and
17 T-Mobile by itself is going to be able to innovate just as
18 well.

19 Q. And that's the merger specificity part of the efficiencies
20 analysis.

21 Verifiable, why does the -- why do economists look to
22 verifiability, and how does that relate to the Judge's
23 question?

24 A. Verifiability says, look, you can't assert an efficiency by
25 itself. You have to back it up with some means that a third

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1 party can verify that it's true and give some quantification so
2 that we know how to compare it to potential harms from a
3 merger.

4 And here, saying that there's going to be innovation
5 in the future is, as your Honor pointed out, undoubtedly true,
6 but if we don't know who it's going to benefit, what type it
7 is, it might not even be speed, it might be the latency that
8 turns out to be really important to innovation, I have no idea.
9 But that means that we don't have a verifiable situation here.
10 We have just a lot of uncertainty and speculation.

11 Q. And here in this case, the defendants didn't come in and
12 just say we innovate a lot and we're in a dynamic industry.
13 They actually presented a model that you evaluated, correct?

14 A. That's correct.

15 Q. All right. Let's go to the last subject that you're going
16 to -- that we're going to be discussing today, and that's the
17 proposed DISH remedy. And let me put up Professor Katz's
18 testimony in which he was asked about whether he had reached
19 any conclusions about the competitive effects of the
20 transaction before the Court, and he specifically references
21 then that the transaction will facilitate the entry of DISH.
22 Did you see or read this testimony?

23 A. Yes, I did.

24 Q. All right. Did you also consider the competitive impact of
25 the potential entry of DISH into the market, like Professor

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1 Katz did?

2 A. Yes, I did.

3 MR. GELFAND: Objection, your Honor. Professor Scott
4 Morton did not do a competitive effects analysis in this case.
5 She testified that she deferred to Professor Shapiro on that.
6 So basically, what she's done with DISH is she said, well, I
7 don't think it's going to be as big a competitor as Sprint.

8 But just to be clear, the question I believe that
9 Mr. Pomerantz just asked is, did you look at its competitive
10 significance, which is outside the scope of her report and
11 outside the area that she's offering here.

12 MR. POMERANTZ: Your Honor, actually, she has offered
13 significant testimony, both through her reports and in
14 depositions, about the -- whether the entry of DISH into the
15 market would be timely, likely and sufficient, which is the
16 standard set forth in the merger guidelines and in some case
17 law. And I'm just following up on that in the similar way that
18 the defendants addressed this issue with Professor Katz.

19 THE COURT: All right. Overruled.

20 BY MR. POMERANTZ:

21 Q. So what framework would you use, as an economist, in order
22 to analyze whether the entry of a competitor can resolve the
23 competitive concerns of a merger?

24 A. As you alluded to, we used the framework from the
25 horizontal merger guidelines. Entry is -- it's necessary that

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1 entry is timely, likely and sufficient in its magnitude to
2 counteract the competitive effects of concern in the
3 transaction.

4 Q. And in order to do the analysis that you just testified to
5 and that's reflected in section nine of the merger guidelines,
6 do you have to do a comparison?

7 A. A comparison of -- yes. So let's say your transaction
8 involves a reduction in competition, then you would want to
9 compare the entrant to that lost competition. The goal of the
10 entry is to restore the lost competition; so if the transaction
11 has resulted in less competition, you want the entry to be of
12 sufficient magnitude and character to restore that lost
13 competition.

14 Q. And so what is the comparison that would need to be done in
15 this case?

16 A. The comparison here is whether -- since we're losing Sprint
17 as an independent competitor, whether DISH would come in and
18 replace the competitive impact of Sprint.

19 Q. And based upon your analysis of the evidence that was
20 provided to you during the course of this proceeding, what is
21 your bottom-line opinion on whether entry by DISH would be
22 timely, likely and sufficient in its magnitude, character and
23 scope?

24 MR. GELFAND: Objection, your Honor. There is no
25 foundation. She has not testified as to any analysis of what

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1 the competitive significance of Sprint is in the market and, in
2 fact, she's deferring to Professor Shapiro for that analysis.
3 So she can -- I think what she's really testifying to is
4 whether DISH is going to look like Sprint in terms of some
5 metric, like number of subscribers.

6 She did not do a competitive analysis of Sprint in the
7 market. She was very clear at her deposition, and I believe
8 it's clear in her report that she defers to Professor Shapiro
9 for that. So I do object for lack of foundation, outside the
10 scope of her expert report.

11 MR. POMERANTZ: Your Honor, I think that's a mistake
12 as to what Professor Scott Morton has done, but I'll bring that
13 out as to lay a foundation.

14 THE COURT: Proceed.

15 BY MR. POMERANTZ:

16 Q. Professor Scott Morton, did you analyze the entry of -- the
17 potential entry of DISH as a potential new competitor in the
18 market as part of your work in this matter?

19 A. Yes, I did.

20 Q. And did Professor Shapiro also analyze that?

21 A. Yes, he did.

22 Q. And what's the difference between what the two of you did?

23 A. Professor Shapiro looked at the short-term entry of DISH as
24 an MVNO, and my assignment was to look at the longer-term entry
25 of DISH as it built out its facilities.

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Scott Morton - Direct

1 Q. And what kind of evidence did you rely upon to do that kind
2 of analysis?

3 A. I relied upon DISH's business plan, upon my analysis of the
4 industry, entry barriers, and what's needed to compete in that
5 industry, and also, I relied upon the competitive impact of
6 Sprint.

7 Q. And based upon your consideration of that evidence, what
8 opinion did you reach about DISH's likely entry into the
9 market?

10 MR. GELFAND: Objection, lack of foundation, your
11 Honor.

12 THE COURT: Overruled.

13 A. I concluded that DISH's entry is neither timely, likely nor
14 sufficient in magnitude to counteract the competitive loss.

15 Q. All right. One last topic. This is a section of the
16 antitrust division policy guide to merger remedies. You're
17 familiar with this guide, aren't you?

18 A. Yes, I am.

19 Q. And the first sentence here refers to the merged firm's
20 incentive not to promote competition with itself; do you see
21 that?

22 A. I do.

23 Q. And there's other provisions in this section. And this
24 concerns how economists look at remedies for a merger that
25 might be anti-competitive, correct?

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1 A. That's correct.

2 Q. All right. And as an economist, is it relevant to your
3 analysis of DISH's entry into the market whether DISH will be
4 an independent competitor from T-Mobile?

5 A. It absolutely does. Your Honor, this is a really key
6 point, that DISH is not going to be an independent competitor.
7 And the remedies guidelines are very skeptical of a situation
8 where the entrant is tied to the incumbent firm because of just
9 what it says here, the merged firm's incentive not to promote
10 competition with itself.

11 And so competitors who rely on the merged firm for key
12 inputs are likely to be disadvantaged in the long term, and
13 that's a kind of a harm to competition that doesn't occur when
14 competitors are completely independent and are able to choose
15 prices, decide on their costs and their strategies in an
16 independent way.

17 MR. GELFAND: I'm sorry, your Honor. Professor Scott
18 Morton just contradicted herself just a few minutes ago.

19 THE COURT: You can bring that out in your
20 cross-examination, Mr. Gelfand.

21 Q. One last slide. What does this slide reflect regarding
22 your concerns about the remedy in this case?

23 A. The remedy in this case lasts for seven years, and during
24 that time, DISH and T-Mobile -- new T-Mobile are entangled in a
25 way that is very difficult for them to compete independently.

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1 So, for example, DISH gets the quality that T-Mobile
2 chooses to give to its Metro plan. DISH gets the wholesale
3 cost that's half of what T-Mobile chooses to charge for its
4 most popular unlimited plan. So prices and quality between the
5 two are really tied together in a way that stops them from
6 running independently.

7 Q. Now, there's been testimony in this case that the kind of
8 entanglements that you're talking about will be completely
9 resolved by the appointment of a monitor to monitor the
10 agreements that the parties have reached with the Department of
11 Justice and the FCC.

12 How do you view whether a monitor can resolve the
13 competition problems that arise from the relationship between
14 DISH and T-Mobile going forward?

15 MR. GELFAND: Objection, outside the scope of economic
16 expertise.

17 THE COURT: Sustained.

18 MR. POMERANTZ: All right. No further questions, your
19 Honor.

20 THE COURT: Why don't we take the morning break at
21 this point.

22 MR. GELFAND: Thank you, your Honor.

23 (Recess)

24 THE COURT: Thank you. Be seated. All right.
25 Mr. Gelfand, now you can begin.

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Scott Morton - Cross

1 MR. GELFAND: Thank you, your Honor. I'm grateful for
2 that.

3 Before I begin with my questioning, I'd like to
4 introduce the Court Tobias Kraft, one of the lawyers in our
5 firm who's been assisting with the case.

6 THE COURT: Okay.

7 CROSS-EXAMINATION

8 BY MR. GELFAND:

9 Q. Professor Scott Morton, before the break, a few minutes
10 before the break, you had mentioned a division between you and
11 Professor Shapiro, where Professor Shapiro looked at the
12 competitive effects, I think in what you called the short term,
13 and your analysis was of DISH as a facilities-based competitor.
14 Do I remember that right, or correct me if I've got it wrong?

15 A. Yes, we divided it essentially by MVNO versus a
16 facilities-based carrier, that's right.

17 Q. So he had responsibility for looking at the competitive
18 effects while this MVNO agreement was in place?

19 A. Well, the MVNO agreement lasts for seven years; so that's
20 not quite right. But DISH's plan, of course, is to transition
21 to building its own facilities within that seven years, and
22 that's the part that I am tasked with analyzing.

23 Q. And the last part of your testimony, when you mentioned, I
24 think, some guideline that says sometimes it's a concern when
25 there's this entanglement, that was intended to apply to the

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Scott Morton - Cross

1 MVNO agreement, correct?

2 A. As I said, the MVNO agreement lasts for seven years, and so
3 that is a significant entanglement, yes.

4 Q. Okay. But any impact that that would have on competition
5 in the next couple of years, that would be in Professor
6 Shapiro's division of responsibilities?

7 A. I'm not quite sure what you're driving at. It's a long
8 MVNO agreement, seven years, and there's some distinction
9 between just the immediate impact when the Boost customers ride
10 on the T-Mobile network, as I understand it.

11 And my responsibility was to think about whether DISH
12 was entering as an independent competitor and, of course, that
13 requires them to build facilities if they're going to be an
14 independent competitor.

15 Q. Okay. But just to be clear on this, the part where it's
16 the short-term DISH competing as an MVNO, that would be in the
17 short term, that would be Professor Shapiro's responsibility,
18 correct?

19 A. Yes.

20 Q. Okay. Thank you.

21 Now, I want to just make sure, for the Court, that we
22 have a clear idea of what you did and didn't do in this case.
23 You've testified that you looked at efficiencies, but you did
24 not analyze the relevant product market, for example, correct?

25 A. That's right.

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Scott Morton - Cross

1 Q. And you did not analyze what the relevant geographic market
2 is?

3 A. I relied on Professor Shapiro for that, yes.

4 Q. You did not analyze what the competitive effects of the
5 transaction would be, correct?

6 A. The issue of competition is throughout my report; so I
7 would say broadly. I mean, that's my area of research
8 interest; so competition is definitely included in my report.

9 Q. Did you do any analysis of unilateral effects in your
10 reports?

11 A. No, I did not.

12 Q. You relied on Professor Shapiro for that?

13 A. For unilateral effects, I relied on Professor Shapiro, yes.

14 Q. And you didn't do any analysis of coordinated effects,
15 correct?

16 A. Of coordinated effects?

17 Q. Yes.

18 A. No, I did not.

19 Q. You relied on Professor Shapiro?

20 A. Yes, that's correct.

21 Q. And you didn't do any analysis of market share, correct?

22 A. No. The market share analysis was not part of my
23 assignment.

24 Q. And you didn't do any analysis of diversion ratios?

25 A. That's correct.

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Scott Morton - Cross

1 Q. You didn't do any analysis of the competitive significance
2 of any particular player in the retail mobile wireless industry
3 as of today, correct?

4 A. That's not quite right because I analyzed the question of
5 whether DISH would replace Sprint as an independent competitor
6 and restore the lost competition, and that necessarily involved
7 looking at the role of Sprint and the potential role of DISH.

8 Q. What analysis did you do of the role of Sprint in the
9 current market? Did you analyze any diversion ratios between
10 Sprint and other competitors?

11 A. No. I read Professor Shapiro's report to learn about those
12 things.

13 Q. All right. Did you analyze whether Sprint is a price
14 constraint on any other competitors?

15 A. Price -- use price constraint? I'm not sure I understand
16 the question.

17 Q. Did you analyze whether Sprint's activities in this market
18 constrain the pricing of any other retail mobile wireless
19 players?

20 A. In general, yes, this will be true in an oligopoly, like
21 this one, where you have only four competitors and they're
22 competing on price to get consumers, yes.

23 Q. I didn't ask whether it would be true in general. I just
24 want to know whether, in your reports, you did any analysis of
25 the particular role Sprint plays as a competitive constraint in

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Scott Morton - Cross

1 the market?

2 A. As I said, comparing Sprint and DISH, I have to look at
3 Sprint's role, and this is a very standard setting for firms, a
4 relevant market, their competing price and quality, and that
5 general principle is throughout my report, as I said.

6 Q. The general principle throughout your report. Is there any
7 part of your report that we can turn to and say here's the
8 analysis of the competitive significance of Sprint in today's
9 market?

10 A. I think the section of my report where I compare Sprint and
11 DISH would be the place to look.

12 Q. And you're not an engineer?

13 A. That's correct.

14 Q. So you rely on Dr. Kolodzy for the engineering information?

15 A. That's correct.

16 Q. I asked you at your deposition how many matters you have
17 worked on in your career involving the mobile wireless
18 industry, and you said two, right?

19 A. Yes, the AT&T, T-Mobile merger and this one, that's
20 correct.

21 Q. And do you recall also telling me that, because of all the
22 changes in the market, the circumstances of AT&T, T-Mobile in
23 2011 are not relevant to today's situation?

24 A. I wouldn't say that they're not relevant. The facts have
25 changed; so, of course, if we're thinking about whether there

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Scott Morton - Cross

1 are cognizable efficiencies, then those would need to be
2 updated to reflect current technology and standards and so
3 forth. It is the same market. It is the same retail wireless
4 market, with the same general price and quality competition.

5 Q. Can we go to slide 11 from Professor Scott Morton's
6 presentation, please.

7 Okay. Professor, this is a slide you showed to the
8 Court, and you testified that this slide, which was -- do I
9 have it correct that this was taken directly from your report?

10 A. That's correct.

11 Q. Okay. And you testified that this slide represented the
12 changes that would occur to the various cost calculations if
13 you were to inject into the model the sorts of things that
14 Dr. Kolodzy had told you could be injected into the model. Do
15 I have that right?

16 A. His engineering inputs, that's correct.

17 Q. Okay. And do feel free, if you wish, to turn to paragraph
18 186, page 109 of your rebuttal report, if you wish.

19 A. Sorry, was that paragraph?

20 Q. Paragraph 186.

21 MR. POMERANTZ: Your Honor, may I just go get my copy
22 of the report?

23 THE COURT: Yes.

24 MR. GELFAND: These are your copies? Now I've got to
25 get my copies.

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Scott Morton - Cross

1 THE WITNESS: Okay.

2 BY MR. GELFAND:

3 Q. Okay. Are you there?

4 A. Yes.

5 Q. All right. And in that paragraph, you say: "I now combine
6 my adjustments to 5G spectral efficiency, 5G congestion
7 thresholds, mmWave offload factor, DSS implementation and 5G
8 forecasted data usage and device penetration, to show the
9 impact of Professor Katz's estimates when these assumptions are
10 considered jointly. Correct?

11 A. Yes, that's correct.

12 Q. So if we go back to the slide -- slide 11 I think it was,
13 Mr. Klein -- that reflects all of those adjustments, correct?

14 A. That's right.

15 Q. All right. Let's take those one by one. The first one was
16 spectral efficiency. Dr. Kolodzy did not testify about
17 spectral efficiency yesterday, did he?

18 A. I read his testimony, and I don't recall. But he included
19 it in his analysis, and it's included in my report.

20 Q. The Court did not hear any analysis from Dr. Kolodzy about
21 spectral efficiency, correct?

22 A. I don't know.

23 Q. You don't know of any measurement of spectral efficiency
24 that was provided by Dr. Kolodzy yesterday?

25 A. I don't know.

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Scott Morton - Cross

1 Q. Okay. Now, let's take the next item from your report,
2 which was 5G congestion thresholds, and if we could pull up the
3 trial testimony from Dr. Kolodzy at page 2141, starting at line
4 25 and going to the end of the page and carrying over. Thank
5 you, Mr. Klein.

6 And starting at line 25, we see a question:

7 "Turning to congestion thresholds, you testified that
8 you did a sensitivity analysis on the congestion thresholds
9 T-Mobile applied in its 5G model, correct?"

10 And he said: "That is correct."

11 "Q. And for that analysis, you were just running sensitivities
12 to show how sensitive the model is to changes in the congestion
13 thresholds, right?"

14 He said: "That is correct."

15 "And you're not covering any opinion today on what
16 congestion criteria standalone T-Mobile would, in fact, use for
17 5G, correct?"

18 And he said: "I am not offering opinion as to the
19 exact value, but I was offering an opinion that I thought the
20 value that was selected seemed to be too high, given the state
21 of what the usage of the 5G network might be and the
22 applications that might be out there."

23 So Dr. Kolodzy did not offer any particular value of
24 the congestion threshold, correct?

25 A. I'm sorry, do you mean value in dollars, or value in terms

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Scott Morton - Cross

1 of the level that he was proposing?

2 Q. What value did you take from Dr. Kolodzy when you prepared
3 your adjusted slide 11 that you showed the Court?

4 A. I took his engineering outputs when he applied a lower
5 level, and I -- and then I took those and put them into the
6 economic model to calculate the network marginal costs.

7 Q. So when he gave you a value for that, do you remember what
8 the value was?

9 A. So I think I'm not supposed to talk about congestion
10 threshold numbers in open court, but in particular, what he
11 gave me --

12 Q. I appreciate that. Thank you.

13 A. -- was all the solutions, the remedies to congestion, that
14 those are, of course, many, sales blitz, radio and different
15 things, and then those get put into the economic model; so it
16 isn't one number that he's giving me.

17 Q. Okay. But you found some numbers to put into your model,
18 correct?

19 A. Well, I got them from Dr. Kolodzy. I didn't find them.

20 Q. Fair enough. But you got the numbers from Dr. Kolodzy, and
21 Dr. Kolodzy testified that he's not making a prediction that
22 any of those numbers will, in fact, apply to standalone
23 T-Mobile; isn't that right?

24 A. That's correct. What he says in the portion you
25 highlighted is that it seemed like a rather extreme assumption

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Scott Morton - Cross

1 to him, that's a technology assumption.

2 I'll say, from the economics side, the assumption the
3 standalone firm is using is extremely costly to it, and so you
4 would want to see, in the ordinary course, some benefit to
5 doing that. And I believe Dr. Kolodzy was questioning whether
6 the benefit was really there.

7 Q. The next item from your report was mmWave offload factor.
8 That's millimeter wave offload factor, correct?

9 A. Yes.

10 Q. And, in fact, Dr. Kolodzy did not testify about that factor
11 yesterday, correct?

12 A. I don't recall.

13 Q. All right. Do you know if he provided any value to the
14 Court that could be used in looking at the millimeter wave
15 offload factor?

16 A. I don't know.

17 Q. Okay. The next one is DSS implementation, correct?

18 A. Yes.

19 Q. Okay. And if we could pull up the trial transcript at
20 2137, lines 3 to 15, Mr. Klein.

21 And there Dr. Kolodzy was asked:

22 "And you're not offering any opinion on what, in fact,
23 standalone T-Mobile would do in the real world, are you?"

24 And his answer was: "Well, I can't comment on what
25 they're going to do in the real world. All I was doing was

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Scott Morton - Cross

1 saying they could do something on this order, and it would make
2 an impact.

3 "Q. But you don't have sufficient information to provide such
4 an opinion, correct?

5 "A. Provide such an opinion as to if a real network was
6 deployed and they used -- put down in the spectrum what the
7 impact would be, is that the question?

8 "Q. Whether what T-Mobile, as a standalone company, will in
9 fact do in the real world."

10 And he said: "I can't predict what the company is
11 going to do."

12 correct?

13 A. I see that.

14 Q. And you took one of his values for how this DSS impacts the
15 model, and you plugged it into your analysis when you did that
16 slide that appeared at slide 11, correct?

17 A. I did because the economic model that Professor Katz
18 developed makes the assumption that there is no DSS. It's not
19 that the firm optimizes by choosing the lowest-cost solutions
20 and chooses not to use DSS. They're not allowed to consider
21 it. It's eliminated from the model. So that's a bias.

22 I mean, the firm might or might not use DSS, but it
23 should be in a model because it's a real technology that's
24 being brought forward now and that firms have already announced
25 that they're going to use. So it's not -- we don't know what

JCKPSTA2

Scott Morton - Cross

1 T-Mobile is going to do, but we do know that zero and
2 eliminating it is not the correct answer.

3 Q. Okay. Professor, I just want to be clear, since you have a
4 long answer there, that you took a value from Dr. Kolodzy and
5 plugged it into the model to get your adjusted values on slide
6 11, correct?

7 A. That's correct.

8 Q. All right. Thank you. And then you also talked about 5G
9 forecasted data usage and device penetration, right?

10 A. Yes.

11 Q. And that's something that you looked at to adjust the
12 marginal cost numbers that appear on slide 11, correct?

13 A. Again, Dr. Kolodzy takes values, puts them into the
14 engineering model. The engineering model gives me outputs that
15 I put into the economic model and come out with the marginal
16 costs.

17 Q. And data usage would be a reflection of consumer demand; is
18 that right?

19 A. Of consumer demand, did you say?

20 Q. Yes.

21 A. Yes, in part, and competition.

22 Q. Okay. And if we could go to trial testimony at page 2145,
23 lines 3 through 9, please, Mr. Klein.

24 MR. POMERANTZ: Is this Dr. Kolodzy?

25 MR. GELFAND: I'm sorry, Dr. Kolodzy.

JCKPSTA2

Scott Morton - Cross

1 MR. POMERANTZ: No, that's fine. If you can tell us
2 who the witness is.

3 MR. GELFAND: That was Dr. Kolodzy's testimony. I'm
4 sorry.

5 BY MR. GELFAND:

6 Q. Okay. And in that portion of Dr. Kolodzy's testimony he
7 was asked:

8 "I want to be clear. You don't have expertise in
9 evaluating consumer demand, do you?"

10 And he said: "No"

11 "And you aren't offering any opinion on what consumer
12 demand will be in the future, are you?"

13 "No, I am not."

14 Are you aware of Dr. Kolodzy's testimony on that
15 point?

16 A. I didn't recall it, but I see it there.

17 Q. Okay. Thank you.

18 And I'm just going to do one more, if I could, from
19 Dr. Kolodzy trial transcript at 2126, lines 18 to 21. If you
20 could bring that up, Mr. Klein.

21 "Q. And you're not offering any opinions today on whether the
22 standalone firms will pursue the strategies reflected in your
23 sensitivity analysis, correct?"

24 And he said: "No, I am not."

25 Are you familiar with that testimony from Dr. Kolodzy?

JCKPSTA2

Scott Morton - Cross

1 A. I don't recall it. The economic version of that is a
2 little bit different because the way the model --

3 Q. Professor, professor, please.

4 MR. POMERANTZ: Your Honor.

5 Q. Do you recall the testimony?

6 MR. POMERANTZ: He shouldn't be interrupting the
7 witness' answer.

8 THE COURT: Did the witness answered the question?
9 What was the question?

10 MR. GELFAND: I'm sorry, your Honor?

11 THE COURT: What was the question?

12 BY MR. GELFAND:

13 Q. The question is: Were you aware that Dr. Kolodzy gave this
14 testimony yesterday?

15 A. I don't recall it.

16 Q. All right. Thank you.

17 Let's talk about spectrum acquisitions. So one of
18 your criticisms of the modeling work that was done is that it
19 doesn't incorporate the acquisition of any new spectrum in the
20 standalone companies, correct?

21 A. That's correct.

22 Q. And you're not an expert on spectrum, can we agree on that?

23 A. I'm not as an engineering matter, no.

24 Q. And you've never worked on any spectrum auctions?

25 A. That's correct. Auctions is not my area.

JCKPSTA2

Scott Morton - Cross

1 Q. You've never worked on any project relating to the
2 acquisition of spectrum, correct?

3 A. Both the AT&T, T-Mobile merger and this merger involve the
4 question of a wireless carrier buying inputs, and spectrum is
5 possibly the most important input for a wireless carrier. So
6 this is an economic point that definitely applies to spectrum,
7 as it would apply to any input.

8 Q. That's fair. Other than those two matters that we've
9 discussed, though, you haven't worked on any matters involving
10 spectrum acquisition?

11 A. I don't recall any.

12 Q. And you're not offering any actual opinion on how much
13 spectrum Sprint or T-Mobile are likely to acquire if they
14 remain standalone companies, correct?

15 A. No, I'm not predicting the future like that, definitely.

16 Q. All right. And are you aware that Dr. Kolodzy acknowledged
17 that there is no low-band spectrum coming up for auction in the
18 foreseeable future?

19 A. I don't recall.

20 Q. Well, let's just show it for a moment. I won't do this too
21 many more times, but if we could go to the trial transcript at
22 2133, starting at line 25, please.

23 And again, this is Dr. Kolodzy:

24 "Q. And there are no low-band spectrum options."

25 I have to confess. I don't know whether he said

JCKPSTA2

Scott Morton - Cross

1 "options" or "auctions." I think either one works, but --

2 "There are no low-band spectrum options anticipated at
3 all?"

4 And he answered: "That is correct."

5 "So whether T-Mobile or Sprint could acquire any
6 low-band or mid-band spectrum at auction is speculative,
7 correct?"

8 And he said: "Yes, it is speculative."

9 Were you aware of that?

10 A. They could get low-band spectrum other places, but in terms
11 of whether I'm aware of it, I see it there.

12 (Continued on next page)

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JCKTSTA3

Scott Morton - Cross

1 BY MR. GELFAND:

2 Q. And low band spectrum is the spectrum that Sprint
3 desperately needs to improve its coverage, correct?

4 A. I don't know about the desperate part. I certainly read
5 documents that said Sprint would like that spectrum, yes.

6 Q. If we could go to figure 19 on page 76 of your rebuttal
7 report.

8 MR. GELFAND: If you could pull that up, Mr. Klein.

9 Q. Do I have that right, page 76, figure 19?

10 A. I don't think so.

11 Q. Page 68, I apologize.

12 This was a table that you included in your report. Do
13 you recall that?

14 A. Yes, I do.

15 Q. It was an attempt to catalog the spectrum auctions that
16 have taken place over the last ten years, right?

17 A. That's correct.

18 Q. If you look at the column titled "Sprint," Sprint won none
19 of those auctions, correct?

20 A. That's correct.

21 Q. You included a sensitivity, and you even showed a slide, I
22 don't recall what the slide number was. I will try to figure
23 that out quickly here. It showed the scenarios where the
24 standalone companies could buy -- I think standalone T-Mobile
25 could buy 10 megahertz or 30 megahertz. Do you remember that?

JCKTSTA3

Scott Morton - Cross

1 A. Yes.

2 Q. Do you happen to remember what slide number it was?

3 A. No, sorry.

4 MR. GELFAND: I think they're unnumbered. Your Honor.
5 We'll go with the screen.

6 Q. You presented this slide to the Court?

7 A. It says 7 in the little corner of my screen.

8 Q. Okay, thank you. So slide 7, thank you. Adding spectrum.

9 And the sensitivities you did were around 10 megahertz
10 and 30 megahertz, correct?

11 A. Yes, that's right.

12 Q. What kind of spectrum was that in those scenarios? Was it
13 millimeter wave spectrum?

14 A. I think it was mid band spectrum.

15 Q. Do you know which part of the mid band?

16 A. No.

17 Q. It wasn't low band spectrum?

18 A. As far as I recollect, it was not.

19 Q. And these numbers of 10 megahertz and 30 megahertz were
20 selected just to be illustrative?

21 A. I think they are of a magnitude that's important, but not
22 so large as to be -- I mean they're 10 percent and 30 percent
23 of T-Mobile's current spectrum holdings. That seems like, for
24 the next five years, a reasonable range to consider.

25 Q. Do you have any idea how much it would cost to acquire, for

JCKTSTA3

Scott Morton - Cross

1 example, 30 megahertz of mid band spectrum?

2 A. Well, what is really important is that the model doesn't
3 let the firm figure out that cost. The model doesn't have a
4 cost for spectrum in it because spectrum is ruled out. If
5 spectrum costs were known, they could be in the model and
6 compared to very expensive cell splits. The very expensive
7 cell splits, because they occur everywhere in the country,
8 might --

9 Q. We're getting off track now.

10 Do you have any idea how much 30 megahertz of spectrum
11 would cost a wireless carrier in today's market if it were even
12 available?

13 A. I do not, but I also think there's a lot of qualifications
14 on the type of other aspects of that spectrum that would create
15 some variation around what that number would be.

16 Q. Would it surprise you if it costs tens of billions of
17 dollars to acquire 30 megahertz of spectrum?

18 A. Certainly I have seen documents from the standalone firms
19 that are in the 5 to 10 billion range. That's how much we
20 expected to spend on spectrum, so that sounds reasonable.

21 Q. You expect to spend on 30 megahertz of spectrum?

22 A. Looking forward to satisfy spectrum needs, that's the kind
23 of document I'm talking about, reference those levels of
24 numbers.

25 Q. Do you recall what documents you saw that said satisfying

JCKTSTA3

Scott Morton - Cross

1 spectrum needs would cost 5 to \$10 billion?

2 A. I believe these are confidential documents, so I'm not sure
3 I should -- I do recall, but I'm not sure I should say it.

4 Q. I'm grateful for that.

5 And you are not offering an opinion to how much
6 spectrum is available on the secondary market, correct?

7 A. No, I'm relying on Dr. Kolodzy.

8 Q. Do you know what Dr. Kolodzy said about spectrum available
9 on the secondary market?

10 A. I remember he talked about DISH and the upcoming C band and
11 CBRS action, and something about a new initiative of Chairman
12 Pai to get yet more spectrum out there.

13 Q. You talked a little bit about the efficiencies framework
14 that is set forth in the merger guidelines. Do you remember
15 that?

16 A. Yes, I do.

17 Q. And would you agree that one of the ways to verify
18 efficiencies is to look at prior transactions that are
19 comparable or similar in nature?

20 A. That's one possibility, but I would say to the extent that
21 the prior transactions are not a pattern or that they did
22 differ in their scope or nature, then they become less helpful
23 to that inquiry.

24 Q. So did you -- were you aware T-Mobile previously acquired a
25 company called Metro PCS?

JCKTSTA3

Scott Morton - Cross

1 A. Yes, I'm aware of that.

2 Q. Actually I think it was a merger.

3 You did not do any analysis of whether the
4 T-Mobile/Metro PCS merger resulted in a cognizable
5 efficiencies, did you?

6 A. No, that was not part of my assignment.

7 MR. GELFAND: I would like to put up a slide, if I
8 could. Mr. Klein, could you put up the demonstrative that we
9 sent to the other side yesterday, please.

10 Oh, we did not?

11 I apologize, we're not going to use that. Sorry, your
12 Honor, we plead sleep deprivation.

13 Q. Let me ask you this, Professor. I want to understand -- I
14 want the Court to understand very clearly what your role was
15 here. I will ask you the following question: The network
16 model that has been presented to the Court by my client, it
17 does a couple of things, tell me if you agree with this or not.
18 It looks at what the future new T-Mobile is going to look like
19 in terms of capacity, speed, marginal cost, so that's one thing
20 it looks at. Can we agree on that?

21 A. I wouldn't say that -- it goes through a process of
22 calculating congestion solutions and proposing answers of
23 technology or other solutions, and it goes out five years. But
24 that's not a prediction, the model wasn't used to predict the
25 firm five years out, it was used to figure out what to deploy

JCKTSTA3

Scott Morton - Cross

1 next year. So I don't actually think that it predicts the
2 future, that's the whole problem.

3 Q. That's a helpful clarification of your view. But it does
4 calculate or model what a possible new T-Mobile would look like
5 over the next five years in terms of capacity, speed, marginal
6 cost, correct?

7 A. I think I have the same answer. I think in the short term
8 the LTE portion of this model that was used in the ordinary
9 course does tell us what capacity solutions the firm is likely
10 to choose the next year. But once we start going out five
11 years in the future, technology is going to change, spectrum
12 positions might change, demand might change, it might be a
13 whole range of things that cause the model to not be doing in
14 2024 what it's predicted to do in 2019, because in the ordinary
15 course it was reestimated every year.

16 Q. I understand that. But it does have a calculation of what
17 that company is going to look like in 2024, correct?

18 A. So how about the following: We agree it has a calculation.
19 You think it's what the company looks like, I don't think it's
20 what the company would look like.

21 Q. That's fair. But in the analysis that you have done, you
22 don't have an analysis like you did with the standalone
23 companies to do the sensitivity on the standalone companies, do
24 you, or do you?

25 A. I think I don't understand your question, because we just

JCKTSTA3

Scott Morton - Cross

1 went through the sensitivities as applied to the standalone
2 firms and the merged firm. So if we're talking about the
3 graphs that we just reviewed, all of them compare the
4 standalone firms and the merged firm.

5 Q. And in doing that, when you put into the model these
6 various things that you got from Dr. Kolodzy, are you putting
7 them into just the standalone part of the model or are you also
8 putting them into the new T-Mobile part of the model?

9 A. I see your question. So the standalone firms -- I'm just
10 putting them into the standalone firms, for example, spectrum,
11 because the combined firm has an enormous amount of spectrum
12 that it just obtained from Sprint. So in fact, the combined
13 firm does not have very much congestion, and therefore, giving
14 the combined firm more spectrum doesn't accomplish anything
15 compared to giving it to the standalone firms. And indeed, the
16 model is asymmetric because in merger gives the combined firm
17 this enormous trove of spectrum, and that costs \$26 billion,
18 but the standalone firms don't get to spend billions of dollars
19 buying spectrum, which is what they would normally do. As we
20 discussed, in a standalone case they would go and spend
21 billions of dollars also getting spectrum. So the model is
22 asymmetric and I'm fixing that asymmetry.

23 Q. I'm trying to get it in terms that we can all agree on,
24 because it's important in my view for the Court to understand
25 what the comparison is here. And I apologize for what might be

JCKTSTA3

Scott Morton - Cross

1 a repeat question, but if I understand your answer correctly,
2 and maybe without giving all the rationale for why you did it,
3 but if I understand your answer correctly, when you do the
4 Kolodzy adjustments, if I can call them that, you only do the
5 Kolodzy adjustments to the part of the model that is looking at
6 the standalone firms, you don't do the Kolodzy adjustments to
7 the part of the model that is looking at in you T-Mobile,
8 correct?

9 A. Because new T-Mobile has so much spectrum, I am trying to
10 fix that asymmetry, and yes, I only give it to the standalones.

11 Q. Thank you. Then would you agree with me that the way this
12 model works is it has these two paths, what do the two
13 standalone firms look like going into future and what does new
14 T-Mobile look like going into the future, and the fundamental
15 logic of the model is to compare the costs of those two future
16 worlds, right?

17 A. That's correct.

18 Q. Okay. And if there's a big difference and in the marginal
19 cost from one to the other, then that is potentially a
20 cognizable efficiency. If there's not much of a difference,
21 it's not much of an efficiency.

22 A. If the model were a verifiable model doing the things
23 that -- fixing the things that I pointed out, and if the inputs
24 were correctly specified so that every firm had a choice of all
25 the available ordinary course choices, then your statement is

JCKTSTA3

Scott Morton - Cross

1 exactly right, yes.

2 Q. All right. And the reason you think these efficiencies are
3 not cognizable is because when you do the Kolodzy inputs on the
4 standalone companies, the difference at the end of the day
5 almost disappears between the two in terms of marginal cost.
6 That's the basic logic of what you're saying, correct?

7 A. When combined for using spectrum they almost disappear for
8 T-Mobile, and they're substantially smaller for Sprint.

9 Q. But still not zero for Sprint.

10 A. For Sprint I believe if you look at the charts will see the
11 hash bars are positive. Much smaller, but not zero.

12 Q. So I do want to -- well, I want to ask you about quality,
13 if I could, for a couple of minutes.

14 You talked about the value of quality, and you used
15 the lanes of traffic, which is a metaphor we have been using.

16 A. Speed.

17 Q. Speed. To be clear, when you were giving that example and
18 it went from one lane to two lanes and then to four lanes, you
19 kept the same number of cars?

20 A. That's correct.

21 Q. So that analogy that you were drawing there didn't take
22 into consideration the possibility that as a result of having a
23 four lane highway, maybe people would drive more often and
24 there would be more cars on the road?

25 A. That's a more complicated model, what you're describing.

JCKTSTA3

Scott Morton - Cross

1 I'm asking the question: Does a particular consumer -- so I'm
2 driving to work in my car, does that person value an additional
3 lane? And to do that, we'll hold everything else constant,
4 because that's the narrow question we're asking.

5 Q. I think you testified, but I want to make sure we
6 understand this, that this diminishing marginal return concept
7 that you had, that what I think you testified -- I wrote it
8 down that what matters is how much consumers would value that
9 today. Is that what your testimony was?

10 A. If it was about shirts or traffic, then there's no time
11 element, I'm giving you a 12th and a 13th shirt, and at some
12 point your value of those shirts is diminishing.

13 Q. But to do a proper analysis, which I think we all agree
14 this merger analysis exercise is looking at the future world
15 when there are more cars on the highway or more apps on the
16 phone or new technologies that are consuming more and more data
17 and going faster and faster, you would agree with me, would you
18 not, that what matters is not how a consumer today who just
19 likes to watch Star Wars on her phone, that's not what matters
20 so much, what matters is how is the consumer of the future is
21 going to value that additional speed. You would agree with
22 that, right?

23 A. You have said very well, Mr. Gelfand, the exact problem
24 with Professor Katz's analysis. He is taking that person
25 watching Star Wars and applying it to the future at 300

JCKTSTA3

Scott Morton - Cross

1 megabits per second, when you correctly point out we would want
2 a long look at the future; what is the consumer doing, how much
3 data does she consume, what are the use cases, how could we
4 evaluate the value she is getting from incremental speed from
5 250 to 300, for example.

6 Q. So we agree on that, and you disagree that Professor Katz's
7 model can capture that in any way. You have not endeavored to
8 place any value on additional speed, right, you're not offering
9 your own empirical work to say that speed in the future is
10 going to have some particular value?

11 A. No, as I discussed in my direct testimony, it's the role of
12 the merging parties to bring forward what it is they're going
13 to do, and therefore, why it's enhancing competition and
14 helping consumers.

15 Q. So I'm not asking so much how the Court process works, I'm
16 just asking you: You have not attempted in any empirical way
17 or economic analysis, or you haven't done anything to figure
18 out what the value of that additional speed might be in the
19 future, right?

20 A. No, the previous answer was an economic answer, that the
21 economist in my position is waiting to hear from the merging
22 parties what it is that their plans are, what the economics of
23 that is, how they're going to deploy their new assets, and then
24 it is my role to evaluate that to see if it's a cognizable
25 efficiency. So no, I'm not one putting forward the model.

JCKTSTA3

Scott Morton - Cross

1 Q. But you acknowledge there is going to be some value to
2 additional speed, right?

3 A. I think, as the Court pointed out, almost certainly there
4 will be, but the issue is: Is it, for example, merger
5 specific? If speeds get faster and all kinds of fantastic
6 things get invested and we have four wireless carriers and we
7 have a lot of choice, that's terrific, and enormous consumer
8 value is created, but it's not because of the merger. So we
9 have to learn somehow that this merger is going to give
10 consumers value, and that both means we need merger specific
11 speed increases and then something to do with those speed
12 increases, and neither of those have come forth in the record
13 in a verifiable way.

14 Q. So I would like to go to one of your slides, and I think
15 it's the paragraph with the different speeds for the standalone
16 companies.

17 A. Figure 41?

18 Q. Which one?

19 A. Figure 41 from my report?

20 MR. POMERANTZ: 32 in our deck.

21 MR. GELFAND: Slide 32 in Professor Scott Morton's.

22 Thank you. I'm not going to get high grade on the
23 smoothness of the transition there.

24 Q. I want to look at this slide for a moment. Now you had
25 testified about this hypothetical user who wanted to watch Star

JCKTSTA3

Scott Morton - Cross

1 Wars, do you remember?

2 A. Yes.

3 Q. And that hypothetical user only needed six megabits per
4 second to watch Star Wars, correct?

5 A. About that, yes.

6 Q. That's not a representative user in today's world, is it?

7 A. I don't know the distribution between standard definition
8 video and high definition video, so I couldn't tell --
9 certainly high definition is popular, they're both popular, so
10 in terms of video use cases in the mobile setting, I think
11 those two would be my leading examples.

12 Q. In your slide here you have the current speeds of T-Mobile
13 and Sprint, which are average speeds, I assume.

14 A. Yes.

15 Q. And T-Mobile is at 31 megabits per second, correct?

16 A. That's right.

17 Q. And Sprint is at 24 megabits per second, correct?

18 A. That's correct.

19 Q. So those two companies have invested the money needed to
20 create a network that would operate at significantly higher
21 speeds than 6 megabits per second, correct?

22 A. That's right.

23 Q. And they wouldn't invest in that if the speed had no value
24 to consumers. Would that be an economist prediction?

25 A. My understanding here is going to veer into the lay

JCKTSTA3

Scott Morton - Cross

1 understanding of how the engineering works, but if you take
2 these speeds and then you interact them with perhaps things
3 like the nature of the back haul of the user, the kind of
4 server the user is getting the video from, the location of that
5 server, that sort of stuff, that you might end up with a speed
6 that is not as high as the one that T-Mobile is delivering. So
7 watching the video depends on more than what T-Mobile is doing,
8 it depends on a lot of other things, and the possibility of
9 something going wrong might cause T-Mobile therefore to invest
10 above what the video speed is in order to try to help the user
11 experience to some degree.

12 Q. So you can't look at something like, well, video takes six
13 megabits per second, so a user who just wants to watch video,
14 they won't value any additional speed. That wouldn't be a fair
15 to do it in light of what you just said.

16 A. It is diminishing, and I believe the increment needed above
17 let's say six to have a good quality video does not require
18 going up to 200. I'm talking about relatively modest increases
19 over the level that the technology requires.

20 Q. Now over to the right we have a standalone T-Mobile in the
21 year 2021, and that's at 127 megabits per second, correct?

22 A. I see that.

23 Q. And we have a standalone Sprint, which is at 210 megabits
24 per second, correct?

25 A. I see that.

JCKTSTA3

Scott Morton - Cross

1 Q. And then the network model that Professor Katz relied on
2 has new T-Mobile at 380 megabits per second in that period,
3 correct?

4 A. Yes.

5 Q. So the network model that Professor Katz has relied on
6 makes calculations saying that standalone T-Mobile and
7 standalone Sprint are going to be at those lower speeds, and
8 new T-Mobile is going to be at that higher speed, correct?

9 A. That's right, and that's related to the congestion.
10 Congestion slows down speeds. Because Professor Katz's model
11 has a lot of congestion that the firms can't resolve in a cost
12 effective manner, it's going to have slower speeds.

13 Q. That's excellent. So if we look at the standalone
14 companies in that model, what you have done to criticize
15 Dr. Katz is you say well, the standalone models, we're going to
16 let them do all the things that Dr. Kolodzy says maybe they
17 could do, correct?

18 A. So here we're talking about speed, and you just shifted
19 gears to the marginal cost of expanding the network.

20 Q. Actually talking about speeds right now.

21 A. Okay.

22 Q. And part of what you're saying is that Dr. Kolodzy -- well,
23 let me ask you that question then. Would the Kolodzy inputs,
24 if applied to the standalone companies, would they bring the
25 speed up to the speed that Professor Katz has calculated for

JCKTSTA3

Scott Morton - Cross

1 the new T-Mobile?

2 A. I have not done that calculation in my report. They would
3 bring the speeds up definitely, because there's less
4 congestion, but I don't know to exactly what number.

5 Q. So you have no sensitivity analysis to suggest that that
6 gap in speeds could be closed with any of the Kolodzy inputs,
7 you just haven't done the analysis?

8 A. It would close it by logic, but I have not provided a table
9 or a chart in my report about that, that's correct.

10 Q. And you haven't done any analysis to suggest whether
11 standalone T-Mobile or standalone Sprint, if left to their own
12 devices without this merger, would continue to invest and
13 improve these speeds and get faster and faster, you have not
14 done that analysis, have you?

15 A. Well, I have in the sense at that it's very important that
16 competition drives investment, and so if you have got more
17 competition, you're likely to have these firms investing in the
18 network and investing in speed. So all else equal, I would say
19 that competition would get us faster speeds, to the extent
20 they're valued in the marketplace, of course.

21 Q. Well, that's a big qualification at the end there, a very
22 big qualification. Do you have a view as to whether they would
23 be valued in the marketplace such that companies in the
24 standalone world would invest and try to create those faster
25 speeds? Do you have a view on that?

JCKTSTA3

Scott Morton - Cross

1 A. I think that my view is divided into two buckets. There
2 are many applications I read about that seem to be business
3 applications that are not in our relevant market here. And
4 there may be great value to those that I haven't studied, so
5 autonomous vehicles and factories and things like that,
6 Internet of Things.

7 In terms of consumer applications, I have heard only a
8 couple of words like augmented reality, but no business that is
9 doing that with data that you could assess to see whether
10 consumers would value it. So I have an opinion, as the court
11 has pointed out, that someone is going to invent things in the
12 future that are marvelous, that I'm pretty confident about, but
13 as to whether we could specify those and measure them today, I
14 don't think so, not in the consumer wireless side.

15 Q. It was interesting what you just said. So you think that
16 on the business application side of this industry there could
17 be demands for higher and higher speeds, correct?

18 That's what you just said.

19 A. I'm just saying the record -- I have read more examples or
20 speculation about businesses adopting technology that requires
21 low latency, it's not really about the speed, it's about the
22 latency, but those are outside the market so I have not been
23 spending time thinking about that.

24 Q. But it's the same network, right?

25 A. I don't know.

JCKTSTA3

Scott Morton - Cross

1 Q. So if Verizon, for example, were using the same network to
2 satisfy its business enterprise customers as well as its retail
3 wireless services customers and they had a demand to increase
4 speeds in order to satisfy the enterprise side of the business,
5 they would end up delivering those higher speeds on consumer
6 sides as well, right?

7 A. It would depend on competition and demand. If consumers
8 didn't demand it, maybe they would throttle the consumers to a
9 level that let consumers do what was valuable to them and save
10 the capacity for higher value uses.

11 Q. I think you mentioned autonomous cars. Those are used by
12 consumers, right?

13 A. Well, my understanding of the way this proceeding works is
14 that we have a relevant market, and those are the consumers
15 with their handsets, and the autonomous vehicles aren't in it.
16 But as you pointed out earlier in my cross-examination, that
17 wasn't part of my analysis, so I should probably stop there.

18 Q. I asked you a question and you mentioned autonomous cars.
19 These are autonomous cars that would be used by the same
20 consumers who might have handsets, right?

21 MR. POMERANTZ: Objection, your Honor, relevance.
22 There's nothing about autonomous cars that's relevant in this
23 case.

24 THE COURT: Sustained.

25 MR. GELFAND: Your Honor, might I have a moment to

JCKTSTA3

Scott Morton - Cross

1 consult with my colleagues?

2 THE COURT: Sure.

3 MR. GELFAND: Thank you.

4 (Pause)

5 MR. GELFAND: Your Honor, I have no further questions,
6 thank you.

7 THE COURT: Thank you.

8 MR. POMERANTZ: Your Honor, I have no further
9 questions for Professor Scott Morton.

10 THE COURT: Thank you, you're excused. You may step
11 down.

12 THE WITNESS: Thank you, your Honor.

13 MR. POMERANTZ: Your Honor, I have two exhibits to
14 offer into evidence, Exhibit 211 and Exhibit 75.

15 THE COURT: Mr. Gelfand?

16 MR. GELFAND: Could I reserve on that, your Honor? I
17 will say no objection now and I will come back if we have
18 anything. We may have a relevance objection to both of those
19 documents, your Honor. May I come back to that?

20 THE COURT: You may. Do you have any documents,
21 exhibits to offer?

22 MR. GELFAND: I do not.

23 THE COURT: All right. Thank you.

24 Next, Mr. Pomerantz.

25 MR. POMERANTZ: Your Honor, we call Professor Carl

JCKTSTA3

Shapiro - Direct

1 Shapiro as our next and last witness.

2 CARL SHAPIRO,

3 called as a witness by the Plaintiffs,

4 having been duly sworn, testified as follows:

5 DIRECT EXAMINATION

6 BY MR. POMERANTZ:

7 MR. MACH: May I approach, your Honor?

8 THE COURT: Yes.

9 MR. POMERANTZ: May I approach, too, and provide
10 Professor Shapiro with his reports?

11 THE COURT: Yes. Mr. Pomerantz, what's your estimate
12 of the time for this witness?

13 MR. POMERANTZ: I think I'm still in the same range I
14 was yesterday, probably in the 45 minute range, give or take.

15 THE COURT: All right. Proceed.

16 BY MR. POMERANTZ:

17 Q. Good morning, Professor Shapiro.

18 A. Good morning, Mr. Pomerantz.

19 Q. Have you had an opportunity to review the testimony of
20 Professor Katz in this case?

21 A. Yes, I have.

22 Q. And have you had a chance to consider responses to some of
23 the specific testimony that Professor Katz offered?

24 A. I have.

25 Q. And we're going to take some time this morning to go

JCKTSTA3

Shapiro - Direct

1 through a few of those items of testimony by Professor Katz and
2 get your response. Is there anything in the testimony that you
3 heard or read from Professor Katz or any other testimony from
4 this case that you have read or heard about that that has
5 caused you to revise any of your opinions in this matter?

6 A. No, the bulk of what Professor Katz testified to was not a
7 surprise because we had back and forth already, so my opinions
8 remain unchanged.

9 MR. POMERANTZ: And do we have the slide ready to go?

10 Q. So this is testimony from Professor Katz on the subject of
11 CMAs and whether they are a relevant geographic market in this
12 case. Have you had an opportunity to review this testimony?

13 A. Yes, I have.

14 Q. And while Professor Katz at the top discusses the fact that
15 competition does take place at the local level, he disagrees
16 with your opinion that CMAs are an appropriate market. Do you
17 see that?

18 A. I do.

19 Q. What is your reaction?

20 A. Well, I think it's helpful in terms of focusing the
21 differences between us on his acknowledgment that competition
22 takes place at the local level. I've emphasized when I was
23 here before, the network quality and investment, the retail
24 stores and local promotions as examples of that, but I stand by
25 my view that look, and therefore, I think it's very important

JCKTSTA3

Shapiro - Direct

1 to define some local market to capture that competition, and so
2 the issue is really are CMAs acceptable or reasonable or is
3 there some problem with them. That's how I see the issue.

4 Q. And you just said that you felt that it was important that
5 in some way it would capture the competition that is happening
6 locally. Why is that important?

7 A. Well, if we didn't define local markets at all, then we
8 would miss, for example, areas such as New York City where the
9 two firms have particularly high market shares and high
10 diversions. We would be just missing important dimensions of
11 competition by looking at the national market shares, so I
12 think that would be a mistake.

13 Q. So why did you pick CMAs as the relevant geographic market
14 to capture local competition?

15 MR. CARY: Your Honor, I object. This is not rebuttal
16 testimony, this is the exact same testimony that he gave in his
17 opening.

18 THE COURT: Sustained.

19 Q. During Professor Katz's testimony the judge asked Professor
20 Katz about whether any work had been done to compare CMAs to
21 some other region, such as counties or congressional districts.
22 Did you include such an analysis in your report?

23 A. Yes, I did.

24 MR. CARY: Your Honor, I object. Again, we're going
25 back over the same ground that he covered originally, and if he

JCKTSTA3

Shapiro - Direct

1 wanted to amplify on it originally, Professor Katz could have
2 responded, but he's repeating the prior testimony.

3 THE COURT: Sustained.

4 MR. POMERANTZ: Your Honor, just to be clear, this is
5 not repeating prior testimony. Your Honor asked a very
6 specific question. Dr. Katz said to you I don't know -- he
7 knew that Professor Shapiro had done the analysis at a county
8 level and that he had not. He did not tell you that Professor
9 Shapiro had done that analysis. When I had Professor Shapiro
10 on the stand at the outset of this case, he did not offer you
11 the results of his analysis at the county level. That only
12 came up in response to your Honor's question. I would like
13 your Honor to at least have that information as you consider
14 the issues in the case.

15 THE COURT: My recollection is that Dr. Shapiro
16 testified that you could have the competition even at a block
17 level or a zip code, so I don't don't see that there's any
18 material difference between zip codes, block by block, election
19 district or a county. As far as I'm concerned, he testified to
20 this issue.

21 MR. POMERANTZ: The difference is that he has done HHI
22 calculations at the county level, not at those other levels,
23 and that's not in the record right now.

24 When your Honor asked is there a difference if you
25 looked at it at the county level, the relevant question here

JCKTSTA3

Shapiro - Direct

1 is: Is there a difference in the concentrations such that you
2 might come to a different conclusion as to, for example, the
3 presumption in this case. Professor Shapiro has actually done
4 the HHI calculations at the local level, the county level, one
5 the regions your Honor selected, and all we're trying to do is
6 to make sure the evidence in this case provides the answer at
7 the HHI level to the question that your Honor posed and that
8 Professor Katz did not answer.

9 THE COURT: All right. Since I posed the question,
10 let him answer it.

11 MR. POMERANTZ: Thank you, your Honor.

12 MR. CARY: Your Honor, I would like to point out one
13 other fact, and then of course Professor Shapiro should answer,
14 this is exactly the problem with trying to backfill their case
15 in rebuttal. There has been work done at various levels.
16 Professor Asker looked at zip code data, he noticed that there
17 were wide variations of HHIs in zip codes, counties, CMAs, et
18 cetera. If this was going to become a centerpiece of Professor
19 Shapiro's analysis, perhaps we would have called Professor
20 Asker. Again, the only point is this should be rebuttal, not
21 backfilling the case.

22 THE COURT: Your objection is noted, let's move on.

23 BY MR. POMERANTZ:

24 Q. Professor Shapiro, I put on the screen a slide that I know
25 you created. Could you just explain to Court what this slide

JCKTSTA3

Shapiro - Direct

1 reflects?

2 A. Certainly. Your Honor, so this is the top ten CMAs in the
3 country within the plaintiffs' states by number of subscribers.
4 The blue bars are at the CMA level. So that is what I showed
5 you last time I was here, this is the HHI level, and the main
6 point was that in all ten of these heavily populated CMAs, the
7 post-merger would be well above the 2500 threshold.

8 Now the question that has arisen is if you looked at
9 counties, how would it come out? So what I did is I looked at
10 the county level -- so take New York, I looked at the county
11 level, the green bar is a bit higher than the blue bar. What
12 did I do? I looked at each county and calculated the HHI in
13 that county, and then you have to add up a bunch of counties
14 within the New York CMA. So I did that, counting the counties
15 that had more people more heavily, which is weighting by
16 population.

17 So in this case, New York, I see that while, when you
18 break it down more narrowly, the level of Hirfindahl is
19 somewhat higher when you break down to the county level, that
20 depicted on the green bar being taller than the blue bar. Then
21 if you look at all ten of these, I think maybe nine or all ten,
22 the green bar is a bit higher than the blue bar.

23 So the conclusion here is that when one does look at
24 the county level, which we can do with these data, you also
25 find very highly concentrated markets after the merger in these

JCKTSTA3

Shapiro - Direct

1 CMAs.

2 Q. All right. And then the next slide here, if you could
3 briefly explain what this shows.

4 A. So this is exactly the same type of analysis, looked at the
5 county level with the green bars rather than the CMA level with
6 the blue bars, same ten CMAs, but it's on the vertical axis
7 here we're measuring the increase in Hirfindahl. Last time I
8 was here I told you we could see these are very large increases
9 in the Hirfindahl in all ten of these, that was the blue bar,
10 they're all 800 or more. And if you break it down to the
11 county level, again you see it's slightly larger increases in
12 the Hirfindahl.

13 So my overall point here is that it's not critical to
14 my analysis of market concentration, I want to look at the CMA
15 level. One could look more narrowly, I have done that, and the
16 same issues arise as I already reported at the CMA level.

17 Q. Now still sticking with the local geographic markets,
18 Professor Katz testified that there was no statistically
19 significant relationship between average speed, number of
20 company-owned stores and save desk offers on the one hand and
21 HHIs at the CMA level on the other hand. What is your
22 response?

23 A. So as I believe -- well, in my view, this methodology --
24 these are a number of progression analyses that Professor Katz
25 ran, and I believe this methodology is inappropriate and

JCKTSTA3

Shapiro - Direct

1 uninformative for the purposes at hand, the question for the
2 Court, which is to evaluate the effect of a merger that
3 increases the Hirfindahl. This is a well-recognized problem in
4 the economics literature, and I believe reading Professor
5 Katz's trial testimony that he acknowledged that with the
6 caveat that there are serious limitations to this type of
7 analysis for reasons that I said have been very well developed
8 in the economics literature, particularly over the past 25 or
9 30 years.

10 I could illustrate those with an example. Suppose
11 that we observe that Verizon decides to -- as a market leader,
12 decides to build out their network in a particular area, and
13 they already have a big market share and they decided to build
14 on strength by adding to their network in a certain city, and
15 they gain share because of that. That's pro-competitive.

16 What Professor Katz will see in his data is that the
17 Hirfindahl will go up when the Verizon gains share. When the
18 number one firm gains share, the Hirfindahl goes up. So he
19 will see this city, let's say, or CMA, that the Hirfindahl will
20 be high and speeds will be high. And so he says look, a high
21 Hirfindahl goes along with high speeds, what is the problem
22 with high Herfindahl? But that is a completely different
23 exercise than asking: In that same CMA, in that same
24 circumstance, what if Sprint and T-Mobile were to merge? It's
25 a completely different question, and his observations do not

JCKTSTA3

Shapiro - Direct

1 address that question. So they are not informative regarding
2 this merger.

3 Q. All right. Let's turn now to MVNOs. You read Professor
4 Katz's testimony regarding MVNOs?

5 A. I did.

6 Q. And you read that Professor Katz disagreed with you about
7 how to treat MVNOs for the purposes of measuring market shares,
8 correct?

9 A. Yes, we disagree about that.

10 Q. He said that the MVNOs should be assigned their own market
11 shares, correct?

12 A. That is correct.

13 Q. What is your response?

14 A. So just to compare to make sure we understand the
15 difference, for a subscriber -- an MVNO subscriber I attributed
16 that subscriber to the company that's being -- network operator
17 who is actually providing the network services. So I think
18 that I strongly disagree with Professor Katz's view on this,
19 and I believe he's departing from a core principle, which is
20 the market shares should measure the independent ability of
21 firms to compete, and he has not following that principle.

22 Q. So let's look at some testimony that Professor Katz
23 provided on the issue of MVNOs. He stated yes, they buy
24 wholesale services from somebody else, but almost every firm
25 ends up buying inputs from somebody else. Do you recall

JCKTSTA3

Shapiro - Direct

1 reading that testimony?

2 A. I do.

3 Q. And what's your response?

4 A. Well, it really matters who you are buying your inputs
5 from. He says "somebody else," but let's talk about who that
6 somebody is. Let me give an example. Suppose I am running a
7 railroad, trying to serve people with a railroad, and I need to
8 buy railroad cars, passenger cars. There are a number of
9 suppliers, so I'm dependent on that input. Yes, I buy that
10 input. Suppose your Honor, if I may, that you are also running
11 a railroad -- maybe I'm getting into trouble, Mr. Pomerantz is
12 running a railroad, and we each have to buy railroad cars, of
13 course.

14 Now suppose that Mr. Pomerantz owns the track, and I
15 don't have have track, and if I'm going to serve people I have
16 to run my railroad cars on his track. That's a whole different
17 matter than buying railroad cars. I'm dependent on him, and in
18 the way that you described when I was last here, your Honor,
19 he's going to have a conflicts of interest, he's going to want
20 to make money on his own customers. If he makes his track
21 available to me, he will only do that if that serves his
22 interest, and that's not independent competition. So it really
23 matters who you are buying the inputs from, and the MVNOs are
24 getting the track the network from the MNOs, they are not
25 independent.

JCKTSTA3

Shapiro - Direct

1 Q. Is Professor Katz's approach to MVNOs consistent with how
2 the FCC has treated MVNOs when the FCC has studied this
3 industry?

4 MR. CARY: Your Honor, I object. During Professor
5 Katz's testimony we saw the plaintiffs pull out a document from
6 another aspect of FCC review, and that was the spectrum screen
7 that they used in local markets. We're now getting another
8 quote randomly from an FCC document and asking this witness to
9 talk about the FCC. Unlike Professor Katz, who was chief
10 economist at the FCC, this witness was not at the FCC, this
11 document is irrelevant, and this, again, is part of their
12 relitigating their case trying to backfill their arguments.

13 MR. POMERANTZ: Your Honor, first of all, to be
14 continually accused of backfilling is just totally
15 inappropriate here. Professor Katz took a position. Rebuttal
16 is to rebut what he said. This particular statement by the FCC
17 is something that Professor Shapiro cited in his reports.

18 MR. CARY: Exactly, your Honor.

19 MR. POMERANTZ: This is a direct response to it. The
20 fact that it's in his report but we didn't bring it out, now
21 that we have Professor Katz's testimony, this rebuts what he
22 said because the FCC expressly disagrees with Professor Katz,
23 and this is something that an economist typically would rely
24 upon because Professor Katz relied upon it -- sorry, Professor
25 Shapiro relied upon it here.

JCKTSTA3

Shapiro - Direct

1 THE COURT: All right. Overruled. To the extent the
2 testimony goes to rebuttal of Professor Katz, I will allow it.
3 A. Well, I think the quote is powerful, actually, informative,
4 because it says following widespread industry practices, the
5 commission generally attributes the subscribers of MVNOs to
6 their host facilities-based service providers, including when
7 it calculates markets concentration metrics.

8 And I should add that this is in the annual report
9 from the FCC that analyzes competitive market conditions in --
10 I guess they're calling it mobile wireless, including
11 commercial mobile services. So I think it's meaningful. The
12 expert agency is taking this view, and I think Professor Katz's
13 view is not only inconsistent with the fundamental economic
14 principle I described a moment ago, but is an outlier in terms
15 of how this industry has been analyzed in the past.

16 Q. And Professor Shapiro, has T-Mobile itself attributed MVNO
17 subscribers to the host MVNOs in a way that is inconsistent
18 with what Professor Katz testified to in this case?

19 A. So yes, they have. I see you pulled up the next exhibit.

20 MR. CARY: Your Honor, I'm going to object again.
21 This is a document which shows T-Mobile tracking usage on their
22 network, wholesale and retail. This case is about retail. The
23 fact that they tracked in wholesale categories who is riding on
24 their network is irrelevant to the question of this case, which
25 is in the retail market, and it's again backfilling and trying

JCKTSTA3

Shapiro - Direct

1 to get new evidence in on a point where they had the burden and
2 they had the case in chief. I object.

3 MR. POMERANTZ: Your Honor, first of all, that could
4 be brought out in cross-examination. Secondly, they were the
5 ones who actually elicited testimony from Professor Katz about
6 the wholesale market because it relates to the retail market.
7 And in fact, that's their position here, that these MVNOs are
8 actually competing down at the retail level. So this testimony
9 and this document, which is a document that Professor Katz
10 relied on in his examination, this is not just something that
11 we pulled out from some file box, this is something they used
12 in his examination, and I think it's proper rebuttal.

13 THE COURT: Overruled.

14 A. So just to be clear what document we're talking about, this
15 is, as it indicates, T-Mobile market planning model. This is
16 something that Professor Katz relied upon in his analysis. And
17 the point is -- it's a specific point that it's highlighted
18 here for the year 2018 on the display, and particularly over on
19 the right-hand side, which has been made in larger image, that
20 the T-Mobile in this planning document ends up calculating the
21 subscriber shares for the MNOs, and they have included in those
22 calculations of shares the subscribers who are MVNO
23 subscribers. They also in this case included some additional M
24 to M, so it doesn't exactly line up with the market, the
25 relevant market, but it makes the point.

JCKTSTA3

Shapiro - Direct

1 Q. Now I want to turn to Altice. Do you recall reading or
2 reading this testimony from Professor Katz, "If you look at an
3 MVNO that is also a cable MSO, so you look at someone like
4 Altice or Comcast, they bring a lot to the table."

5 Do you see that?

6 A. I do.

7 Q. How do you respond?

8 A. So first, I think it's useful, your Honor, to distinguish
9 these types of MVNOs, the cable ones, which has really
10 historically been Comcast, Charter, and then a slightly
11 different creature, Google Fi, from the other MVNOs like
12 TracFone who don't have these types of facilities like the
13 cable company.

14 In terms of market shares, the total market share of
15 these cable-type companies as MVNOs, including Google, is only
16 around one percent of the market. So whether you -- if you
17 want to treat them somewhat differently or think of this
18 somewhat differently, because they do have some facilities that
19 bring some things to the table that TracFone does not, it would
20 not matter in terms of concentration, because that group
21 collectively is about slightly over -- I think it's
22 1.2 percent.

23 So in terms of the importance in terms of subscriber
24 count of the MVNOs, they're relatively small, and it's TracFone
25 and the other MVNOs that have the real numbers. So I agree

JCKTSTA3

Shapiro - Direct

1 that they do bring something more to the table because they
2 have some facilities and can offer some bundled deals for
3 customers, with their cable customers in their footprints, but
4 they are still heavily dependent on the MVNOs.

5 Q. So Professor Katz is offering a view that Altice should be
6 viewed as an independent competitor of let's say Sprint who it
7 has a deal with, correct?

8 A. Yes, that seems to be his view. Certainly he wants to
9 attribute their subscribers to them as -- attribute that to
10 their own market share rather than to Sprint, which is carrying
11 their traffic.

12 Q. I want to focus on Altice, and I want to look at whether
13 they really should be viewed as an independent competitor to
14 Sprint.

15 MR. CARY: Your Honor, I'm going to object to this
16 document and this line of inquiry. This is demonstrative of
17 the prejudice that we are undergoing here. Dr. Shapiro
18 testified in his initial testimony about the irrelevance of
19 MVNOs in calculating his market shares. We have had testimony
20 here from Altice, we have had testimony here from Sprint that
21 have addressed this relationship. They're now pulling one fact
22 out of the contract which is tens of pages long to try to make
23 the point. Had they made it originally we could have had the
24 Sprint witnesses and the Altice witnesses address it. They
25 chose not to make it initially, they're now bringing it in to

JCKTSTA3

Shapiro - Direct

1 substantiate their case, and we object. We think it's unfair.

2 MR. POMERANTZ: Your Honor, Professor Katz was fully
3 aware of this contract when he offered his testimony about
4 Altice. Because he offered his testimony about Altice that
5 they should be treated as an independent competitor, we have
6 every right to come in here and show that, in fact, Professor
7 Katz had access to evidence that shows they're nothing close to
8 an independent competitor. What this provision provides, and
9 what Professor Shapiro would explain if permitted, is if Altice
10 were to take a customer from Sprint or Sprint were to take a
11 customer from Altice, they had to pay each other money.

12 MR. CARY: Your Honor, I object to Mr. Pomerantz doing
13 his closing argument.

14 MR. POMERANTZ: I would rather have Professor Shapiro
15 testify to it.

16 THE COURT: Overruled.

17 A. So I think the question is to explain what's on the slide
18 here.

19 Q. Yes, please.

20 A. I lost track. Your Honor, this is from, as you could see,
21 master wireless wholesale agreement between Altice and Sprint.
22 And what I'm doing here is highlighting a provision, as
23 Mr. Cary points out in that agreement, and I'm going to read it
24 just so we all get it.

25 For each Sprint subscriber -- purchaser, that's

JCKTSTA3

Shapiro - Direct

1 Altice --

2 Q. Carl --

3 A. I'm not supposed to do that?

4 MR. POMERANTZ: Could we take this down from the
5 public screen?

6 MR. MACH: It's not on the public screen.

7 Q. The Court can see the text, so testify without giving
8 specifics.

9 A. Without the specific numbers?

10 Q. Yes.

11 A. Let me -- the idea that's in here, and your Honor can read
12 it, is the arrangement specifies that -- so Altice is planning
13 to launch, and they did launch a couple months ago, so when
14 they launch, if they get a subscriber that ports from Sprint,
15 then they are required to pay an amount of money shown here to
16 Sprint. That's what Sprint negotiated with them. And
17 furthermore, after some period of time, that arrangement would
18 be reciprocal, that is to say, if the subscriber ended up going
19 back in the other direction, the money would go from Sprint to
20 Altice.

21 So I guess I want to make two points about that.
22 First, it very explicitly is an example of how the MNO, in this
23 case Sprint, can control and influence the ability of the MVNO
24 to compete by imposing this cost. And of course what Sprint, I
25 would think, is trying to do is they're happy if Altice gets a

JCKTSTA3

Shapiro - Direct

1 customer from Verizon because then Sprint gets their profit
2 margin on that customer. But they don't want to lose their own
3 customers to Altice, so they put in this fee. So it's a type
4 of steering, and they're partners, as they describe it.

5 The other thing that I think is worth noting is that
6 we have a situation where the companies agree to pay each other
7 if they get business from each other. If they were genuine
8 competitors of each other, that would be a blatantly
9 anticompetitive customer allocation agreement. But they are
10 partners here, they are not direct competitors.

11 Q. Let's turn to Professor Katz's calculations of HHIs. He
12 offered testimony, which you probably saw, which calculated
13 HHIs at the national level and came up with a post-merger HHI
14 of under 2500. Do you recall that?

15 A. I do.

16 Q. So I will skip two slides here and skip this one to this
17 one. Can you explain to the Court what this chart is.

18 A. Yes, I can. First, your Honor, you will see from the
19 source this is taken from Professor Katz's rebuttal report, the
20 one where he responded to my original work, and, as indicated,
21 it's revenue shares and concentration measures.

22 And the key thing is that there are two rows here, and
23 let's start with the second row, which is MVNOs as independent
24 entities. So this is what Professor Katz put in his report.
25 And he's using, remember -- I should back up. The title,

JCKTSTA3

Shapiro - Direct

1 Revenue Shares, his preferred measure of market shares is to
2 use revenues. I've reported both to you, but I explained why I
3 thought the subscriber counts were somewhat better, but he
4 likes revenue shares, and that's what he put here.

5 So using revenue shares -- and he likes MVNOs as
6 independent entities, that's his point, that's where we
7 disagree. That's the second row. Using the measure in the
8 report he found that the post-merger Hirfindahl was 2611 and
9 the increase in Herfindahl was 313. He was contrasting that
10 with the row above that, which is using -- what I think is
11 using the correct method of MVNOs attributed to MNOs, which led
12 to a higher increase in Hirfindahl and a higher-post merger
13 Hirfindahl and higher combined shares. But by his own
14 preferred approaches, namely using revenue shares and treating
15 MVNOs as an independent entity, he also finds, again,
16 post-merger Herfindahl 2611, increase in Herfindahl of 313.
17 This is from his report.

18 (Continued on next page)

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25

JCKPSTA4

Shapiro - Direct

1 Q. So to be clear, I want to make sure it's clear what
2 happened here in the courtroom. Professor Katz came into this
3 courtroom and only offered concentration measures based on
4 subscribers, correct?

5 A. Well, the -- what I know -- what I have in my mind and
6 remember, he has very colorful demonstratives with pie charts
7 that showed market shares with subscriber counts.

8 Q. But in his report, he didn't do it that way; he only did it
9 by revenue share, correct?

10 MR. CARY: Object as asked and answered and leading,
11 your Honor.

12 THE COURT: Overruled.

13 A. So this table was based on his preferred metric of revenue
14 shares. I can't recall, there might have been some backup
15 materials where he calculated by subscriber shares. It wasn't
16 in the table that I'm remembering from his main body of his
17 report.

18 Q. All right. So if we calculate HHIs by revenue share, but
19 treat MVNOs as Professor Katz treats them, then the post-merger
20 HHI is 2611 and the change is 313, correct?

21 A. Yes, that's what I said. That's correct.

22 Q. Now, do Dr. Katz's testimony in trial here about market
23 shares and HHIs change your views on how the merger will change
24 market concentration?

25 A. No, not fundamentally. You know, there's, obviously, some

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1 back and forth about the specific metrics. In the end, I
2 think, if you kind of pull back from that a little bit, your
3 Honor, it's a four-to-three merger among nationwide carriers in
4 this country, and that is inherently troubling for reasons I've
5 talked about. And nothing Professor Katz said has caused me to
6 alter that view.

7 Q. All right. Let's move on to another topic, a related
8 topic, and this concerns how to view Sprint's market share in
9 making market share calculations. I've put up on the slide
10 here the testimony from Professor Katz about Sprint's
11 performance; do you see that?

12 A. I do.

13 Q. And does this testimony -- by the way, the testimony comes
14 from transcript page 1841, lines 19 to 24.

15 Does this testimony by Professor Katz change your view
16 about whether the elimination of Sprint will harm consumers?

17 A. No, it does not. I stand by my view that Sprint has been a
18 disruptive influence, a maverick I called them. They've been a
19 low priced -- they've offered low prices, and I expect that to
20 continue, if the merger does not go forward, and I did myself
21 projections to support that conclusion that Sprint would
22 continue to be a significant competitive influence if this
23 merger does not take place.

24 Q. All right. So Professor Katz testified that Sprint is
25 going to have a limited ability to compete in the future,

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1 correct?

2 A. He did.

3 Q. And he then tried to project out, or he at least tried to
4 project out, some market shares based upon that decline,
5 correct?

6 A. He offered some share projections and revenue projections,
7 yes.

8 Q. And you looked at that issue in connection with your
9 report, correct?

10 A. Yes, I did.

11 Q. Could you please explain to the Court what this slide
12 reflects?

13 A. Yes.

14 MR. CARY: I need to object again. This is a slide
15 that Professor Katz had submitted at the FCC using projections
16 from Sprint's business plans in early 2019. They don't reflect
17 current data.

18 If Professor Katz were here, he could explain exactly
19 what this was. They chose not to cross-examine him with his
20 own work but to, instead, get it in through the back door,
21 through Professor Shapiro, when we don't have an opportunity to
22 bring Professor Katz in to explain exactly what these numbers
23 represent.

24 Professor Katz has shown you the actual data during
25 the relevant period and used Professor Shapiro's technique to

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1 project further. To go back into an early report at the FCC
2 and come up with new numbers at this stage, we believe, is
3 beyond the scope of rebuttal and inappropriate, and we object.

4 MR. POMERANTZ: Your Honor, this information was set
5 forth in Professor Shapiro's report. Nothing was hidden from
6 the other side. They chose to have Professor Katz come in here
7 and testify to predictions about Sprint's market share going
8 forward that they knew were inconsistent with what he had said
9 to the FCC earlier in the review process.

10 If they want to cross-examine Professor Shapiro about
11 that, they can. If they wanted to clarify that with Professor
12 Katz, they could have, but it doesn't deprive us of showing
13 through rebuttal testimony to rebut what they did in this
14 courtroom. They provided an estimate from Professor Katz of a
15 decline in revenue share that is inconsistent with what he had
16 previously told the FCC.

17 MR. CARY: Your Honor, that's exactly the point. This
18 draft or this table was in Professor Shapiro's initial report.
19 He didn't present it. Therefore, there was no reason for
20 Professor Katz to go through things that were not in dispute
21 and talk about them.

22 Had he presented it, Professor Katz would have made
23 the point that these were just projections from Sprint's plan,
24 and he was attempting to be conservative.

25 THE COURT: Thank you. Overruled. Mr. Cary, you'll

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1 have the opportunity to cross-examination Professor Shapiro,
2 and you can bring these matters out at that time.

3 MR. CARY: Thank you, your Honor.

4 A. So what this slide depicts is -- I'll just read the title,
5 Sprint's projected subscriber share based on submissions that
6 Professor Katz made to the FCC in connection with this merger,
7 and these went out from -- until 2021, and I would just
8 basically say stable.

9 I should note for the record, so there's no confusion,
10 these shares are smaller than the ones that I am putting
11 forward, and I believe that's because Professor Katz has
12 attributed the -- has given MVNOs -- he has a different way of
13 measuring the shares with the MVNOs in particular. So my point
14 is, not about the level. It's about the stable Sprint share,
15 as projected, as shown here, and this is consistent with the
16 projections for subscriber share that I produced and presented
17 to the Court last week.

18 Q. All right. So let's now move on to coordinated effects.
19 You have read Professor Katz's testimony about coordinated
20 effects, correct?

21 A. Yes, I have.

22 Q. And I've put up on the screen here some of that testimony
23 by Professor Katz; do you see that?

24 A. I do.

25 Q. And he talks about how difficult it would be to coordinate

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1 in this industry because of complexity; do you see that?

2 A. I do.

3 Q. How do you respond?

4 A. I guess I just go back, your Honor, to what I've seen in
5 the documents, which is -- well, I should say I agree there's a
6 fair bit of complexity here. You look at the plans and the
7 features. So we agree about that, but I've seen in the
8 documents a lot of competitive intelligence activities, and as
9 I -- and I would emphasize that the companies monitor each
10 other closely on a high-frequency basis, daily or weekly.

11 They're watching each other, and because it's a
12 consumer market, the companies can see what they're each
13 offering to consumers. So there is complexity, but there's
14 close monitoring. And I am concerned -- would be concerned
15 about coordination or pulling punches on a number of
16 dimensions. You know, it doesn't have to be all of them.

17 I kind of got the impression from Professor Katz's
18 testimony that he thought, well, if they tried to restrict
19 competition on one dimension, it would just come out somewhere
20 else. He didn't say it this way; so admittedly, this is my
21 interpretation, that somehow it wouldn't matter very much or it
22 wouldn't be successful. And I don't think that's consistent
23 with the monitoring activities here and what we see in other
24 industries, where there is successful coordination or even
25 collusion, even on some dimensions, even when companies compete

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1 on many.

2 Q. And have you seen examples of coordination in complex
3 industries in your economic work?

4 A. So, yes, this does come up. We see it. Coordination, it's
5 hard to know exactly when it's happening, to be honest, or for
6 us to measure it. But for cartel cases, real hard core cartel
7 cases, we see coordination even in industries that are very
8 complicated.

9 There was a cartel in the air cargo industry, where
10 they agreed to fix fuel surcharges, one component of -- while
11 they competed on many dimensions. So this is something that
12 happens in other industries, and companies find it profitable.

13 Q. So did you create a couple of slides to try to explain how
14 the merger might affect the coordination and how that compares
15 to complexity in the marketplace?

16 A. Yes, I did.

17 Q. All right. So let's look at those. So what are you trying
18 to depict here?

19 A. I'm simply trying to depict that if the firms are
20 monitoring each other and watching each other, there is some
21 complexity. If there's four companies, they each have to keep
22 an eye on three, and the arrows here depict watching each other
23 in both directions.

24 Now, traditionally, markets with a few firms like this
25 have always been a concern to industrial organization

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1 economists. And four is -- so this just sort of gives a sense
2 of the complexity of monitoring with four companies.

3 Q. So if there's a merger, and there's only three companies,
4 how does that affect your concerns about coordinated effects?

5 A. So the number of arrows has gone down quite a bit,
6 actually. If there's three companies, you only need to keep an
7 eye on two of them. I mean, it's, I think, a straightforward
8 point, but it relates to complexity and monitoring.

9 THE COURT: Let me ask, Mr. Shapiro, because this
10 raises an obvious question that DISH might ask. What are we,
11 chopped liver?

12 THE WITNESS: I believe I get your reference. Right.
13 So I, in my analysis and discussion of coordinated effects, I
14 have not been thinking that DISH would be part of this club, if
15 it were -- if they were coordinating.

16 So the question then arises, that I've addressed and I
17 know you all have to as well, your Honor, is if DISH is not
18 playing along, will this coordination still be profitable and
19 still harm consumers? And I think the answer is yes.

20 And one reasons is DISH, starting off, at least for
21 the first couple of years, they're starting off with a
22 3 percent market share with Boost, about nine million
23 subscribers, and it's all in prepaid. Now, they're going to
24 grow that over time. So you know, the combined market share of
25 these three firms is well into the 90s, and so even if they

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1 lose some sales to DISH, because they're not competing as hard,
2 if they make more money on the 90-plus percent of subscribers
3 that they serve, that's still going to pay.

4 So we tend to think if you have a small firm, who's
5 not part of a coordinating group, if they're small, unless they
6 can grow enormous, really quite dramatically, they probably
7 will not restrain or defeat that coordination; so that's how I
8 think about DISH.

9 THE COURT: But I think implicit in what you're saying
10 is what you've also suggested, unless they grow dramatically.
11 Are you discounting that as a possibility?

12 THE WITNESS: Okay. So when I said unless they grow
13 dramatically, if we think of coordination, let's think first of
14 a one-year time frame, say. If there were some less
15 competition among these three big firms, for DISH to grow from
16 3 percent to 5 percent, for example, you know, it might very
17 well not make that coordination unprofitable. That wouldn't
18 document as dramatic growth.

19 So if we're thinking -- I sense in your question, we
20 think about DISH growing over a multiyear period as they built
21 out their network, that is not the growth that would be
22 relevant for the question I was addressing, which is: Could
23 they take advantage of this coordination in a shorter period of
24 time?

25 So, yeah, so one could ask, over a longer period of

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1 time, well, I would be concerned then about harm to consumers
2 for several years from the coordination when DISH would grow
3 some but not very much, and then we'd get into Professor Scott
4 Morton's territory about the longer-range effects of DISH.

5 BY MR. POMERANTZ:

6 Q. Maybe if we can follow up on that immediately. Could you
7 switch us to slide 21.

8 So this is -- we were going to address this in a
9 different segment, but I think it's directly responsive to the
10 questions posed by the Court.

11 Does this comparison of Sprint and DISH, I want you to
12 focus more on the DISH side of this. Does this help to explain
13 why or whether DISH is likely to grow dramatically in the short
14 term in order to -- and would counteract the risks of
15 coordinated effects?

16 A. So, yes, it's comparing Sprint and DISH, just to be clear.
17 This slide was prepared for that purpose. And for a number of
18 reasons, you know, DISH is not going to look anything like
19 Sprint anytime soon, in terms of its subscriber shares and it
20 has these higher costs.

21 So this means that DISH will be less -- much less able
22 to discipline coordination among AT&T, Verizon and T-Mobile
23 than Sprint has been doing in the -- recently. And so from
24 that point of view, which again is -- the relevant issue in the
25 merger is will DISH replace Sprint, in this case, in terms of

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1 discipline and coordination by the other three, and I don't
2 believe it will, certainly for the next few years.

3 Q. Could you bring us back to slide 16.

4 Okay. This is testimony by Professor Katz when he was
5 discussing coordinated effects, and he compared it to sitting
6 on a balloon; do you recall that?

7 A. Yes, I do, and yes, I see this.

8 Q. All right. And have you seen examples of this in this case
9 that relate to Dr. Katz's point he's making here using the
10 balloon example?

11 A. Yes. I guess I have seen examples where there was
12 communication or signaling on specific dimensions of
13 competition that was going on.

14 Q. All right. So just to give one example, could you explain
15 to the Court how this relates to the coordinated effects
16 concerns that you have and that Professor Katz disagreed with?

17 A. Certainly. So this is an e-mail. They were talking about
18 having an end date on the promotion of the iPhone, and it says:
19 "to signal our competition, that it was really just our turn to
20 run our promo." So this is a signaling.

21 And I think in terms of Professor Katz's quote, let's
22 suppose this was successful in terms of limiting that
23 promotion. So it, as I said that, it wouldn't last for a
24 longer period of time, and they said so they wouldn't panic was
25 their word. So if it was successful -- so my view would be if

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1 that was coordination, or we had this after the merger, same
2 idea, then consumers might have gotten the promotional rate on
3 the iPhone for a week, or whatever it was, rather than a month
4 or a longer period of time, and that would constitute harm,
5 that would cause harm to consumers notwithstanding that --
6 well, I guess Professor Katz, with his balloon analogy, is
7 suggesting at least, well, don't worry about it very much
8 because they'll be competing on some other dimension, and I
9 just don't think that fits with this evidence.

10 THE COURT: Mr. Cary?

11 MR. CARY: Yes, your Honor. I was going to object and
12 move to strike this last testimony. Again, this was the
13 subject of the direct original testimony. We had Mr. Sievert
14 and others that are on this e-mail chain who could testify and
15 explain this, if Professor Shapiro brought it up in time. And
16 therefore, I object to the use of the document and move to
17 strike the testimony.

18 THE COURT: Mr. Pomerantz?

19 MR. POMERANTZ: Yes. Okay. Two things. Mr. Mach
20 just whispered to me that he actually questioned Mr. Sievert
21 about this document; so we actually do have Mr. Sievert's
22 response on this document.

23 But what we were trying to do was use this document to
24 explain why Professor Shapiro disagrees with the testimony of
25 Professor Katz that he used by using the balloon example. And

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1 what he was looking at is a specific example in this case that
2 is inconsistent with what Professor Katz was saying.

3 THE COURT: All right. Overruled.

4 MR. POMERANTZ: And for the record, that was
5 Exhibit 777.

6 BY MR. POMERANTZ:

7 Q. Let's turn to unilateral effects. Now, you heard, or you
8 read, Professor Katz had a variety of criticisms about your
9 unilateral effects analysis?

10 A. Yes, I did. I read that.

11 Q. And among other things, he criticized your diversion ratios
12 and how you used them in your unilateral effects analysis; do
13 you recall that?

14 A. I do.

15 Q. So if you could use this pricing example from the record to
16 explain why Professor Katz is wrong in the way he analyzed your
17 unilateral effects analysis, and why you still have concerns
18 about unilateral effects?

19 A. Okay. So let's talk about T-Mobile's pricing incentives
20 and the unilateral pricing incentives. And again, we're asking
21 how will those change because -- when they're facing Sprint as
22 a competitor, compared to after they acquire Sprint.

23 So here, we have T-Mobile is in the middle here in the
24 pricing. Let's look at the top row, the two lines per month
25 price, \$120. Before the merger, or now or in recent years, it

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1 might be reasonable for them to say, well, maybe we should
2 lower our price because we're not the lowest. Sprint is lower
3 and that will -- if we don't lower it, we might lose customers
4 to Sprint. And if we do lower it, maybe we'll get some of
5 their customers. So that's part of the calculus of lowering
6 that price, and that can happen over time.

7 Of course, AT&T is also in the picture. I'm not
8 ruling them out, but we want to focus on what's changing from
9 the merger, which is Sprint is going to go away here. So as I
10 said, they might be very well tempted to lower their price to
11 either capture customers from Sprint or avoid losing customers
12 to Sprint, who's lower priced.

13 Now, after the merger, we basically take away the
14 Sprint column and the calculus changes. For T-Mobile, they go,
15 well, if we lower our price, it's not like we're going to get
16 customers from Sprint. We own them. They're not there
17 anymore. We still might get some customers from AT&T, but it's
18 just less attractive to do so.

19 So that's the guts of it and the diversions that we're
20 talking about here. So it's very important, then, when they
21 lower their price, how many of the customers they would be
22 picking up from Sprint or keeping from going to Sprint, and
23 that's what we've measured.

24 And the diversions I've calculated fit with a lot of
25 the other evidence here, which is that Sprint and T-Mobile are

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1 quite close competitors, closer than you would think, just
2 looking at their market shares. And so that's why this whole
3 diversion and upward pricing pressure way of measuring things,
4 I think, is both well suited to unilateral effects and adds a
5 lot to what we get from the other main metric, namely, the
6 Herfindahl measurement.

7 Q. Okay. And just so that we're clear, this is completely
8 separate from whether AT&T and Verizon might have an increased
9 risk of coordinating with T-Mobile, correct?

10 A. Yes. I thought we were just talking about unilateral
11 effects here. So I am aware in that analysis, AT&T is in the
12 market, Verizon is in the market, but I'm taking their prices
13 as given and just focusing on eliminating Sprint.

14 Q. Now, Professor Katz says that you failed to make an
15 adjustment using the Facebook data when you calculated
16 unilateral effects. Did you read that testimony?

17 A. Yes. This goes specifically to the diversion ratios that I
18 just talked about.

19 Q. Okay. So what's your response to Professor Katz's
20 testimony about your use of Facebook data?

21 A. So there's two responses I'd like to give. First, and this
22 is in my -- clearly stated in my reply report, that I do not
23 believe any such adjustment is needed. I stand by the
24 calculations I gave, and I explained in detail the basis for
25 that view in my reply report.

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1 We had had a back -- exchange on this, but I also then
2 went further in the reply report. It's now cited here by this
3 demonstrative to show that there's really very little at stake
4 in this particular back and forth between me and Professor
5 Katz. So what -- again, straight out of my reply report, your
6 Honor.

7 This is the brand-level diversions, which we had to do
8 it at the brand level to properly account for Boost. And the
9 first column here, where it just says "Facebook," those are the
10 numbers I used in my analysis that I presented to the Court.
11 If one makes the adjustments that Professor Katz has been
12 advocating, then you would use the second column.

13 I should be clear. What's being reported here is the
14 upward pricing pressure. That's how the divergence gets used
15 to ultimately measure these concerns about higher prices, and
16 these are small differences. Again, I don't think this
17 adjustment was necessary, but if you made it, it would not in
18 any significant way change the results of my analysis or my
19 opinion.

20 Q. All right. Let's turn to DISH. This is testimony from
21 Professor Katz about DISH, and he testified that DISH does not
22 have to fully replace Sprint for the deal to strengthen
23 competition and benefit consumers; do you see that?

24 A. I do.

25 Q. What's your response?

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1 A. So I think it's just to crystalize where we agree and where
2 we disagree. I understand him to be saying that the reasons --
3 he is counting on efficiencies. I think he's saying
4 ultimately, look, the deal is going to create a bunch of
5 efficiencies, and he says that here and between that and the
6 DISH, it's good enough to protect consumers, or maybe more than
7 good enough. I don't want to characterize. He's putting the
8 two together.

9 And so I think my part of this analysis is to look at
10 DISH and what its impact will be on competition in the near
11 term, especially. And so there's -- and my point is simply
12 DISH falls far short of replacing Sprint for the next few
13 years, and so if you -- in order to conclude that consumers
14 will be protected during that period of time, despite Sprint's
15 absence, you would need to have significant efficiencies.

16 Q. And this is a slide that we looked at previously when we
17 were discussing coordinated effects. How does this relate now
18 to your response to Professor Katz about DISH?

19 A. So it's this point about falling far short. I just --
20 DISH, during the next two, three years, certainly two years, is
21 going to be predominantly serving customers over its own
22 network. I gave the data. Only 2 percent of their subscribers
23 will be on their own network in 2020. They will have higher
24 costs.

25 This is a -- the prepaid segment that they're starting

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1 with those subscribers tend to churn much more quickly than
2 post-paid; so they're going to have to run to stay in place, as
3 it were. They have to deal with that. And they're still
4 heavily dependent on T-Mobile's network. So this is -- this is
5 nothing -- they don't look anything like Sprint. I understand
6 that they've got these plans to build out, and I'm not looking
7 at the longer term. But I'm concerned about consumers and the
8 impact in the near term.

9 Q. All right. One more topic.

10 The Court asked Professor Katz a question about what
11 you are predicting about what will happen to prices in the
12 future, and Professor Katz did his best to explain what he
13 thought your position was about prices in the future.

14 I wanted to give you a chance to answer the Judge's
15 question about what you believe will happen to prices in the
16 future because of this merger.

17 And I thought it would be helpful for you, in
18 explaining your answer, to have an example of a current
19 T-Mobile program that's being offered in the market right now.
20 If you could explain what's going to happen, using this as an
21 example?

22 A. Okay. Thank you. So first, what is this? We just pulled
23 this off the web yesterday or the day before. It's just meant
24 to illustrate the type of plan that T-Mobile is offering.
25 "Magenta," it says, "our signature unlimited plan packed with

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1 benefits," and it's \$35 per line. So that's where we are now.

2 My view, expectation, hope, your Honor, is that if we
3 don't have the merger, we continue to have the four companies
4 compete vigorously. That T-Mobile will, because of competitor
5 pressure, offer even better terms to consumers in the future.
6 And so one way that could happen is they might lower this \$35 a
7 line to 30. I'm not -- that's not a specific prediction. It's
8 just an example of how competition can lead to real benefits
9 for real consumers and real households.

10 So harm would arise that because of the merger, they
11 stay pat at \$35 because they don't have to face Sprint, and all
12 the other reasons I've given. Consumers are losing that \$5 a
13 month. They would have gained that lower price, and they don't
14 get it. That's real harm. So that would be a price -- just in
15 terms of price, that would be a harm to consumers resulting
16 from the merger and loss of competition, and I'm definitely
17 concerned about that.

18 There's also a non-price side to it. Let me just give
19 an example based on this, their plan now. So they say Netflix
20 on us, basic, one screen in standard definition, SD. So that's
21 a nice goody. I like Netflix. Particularly, as usage goes up,
22 you know, people like -- Professor Scott Morton was talking
23 about high definition. It seems to me the type of thing the
24 competition can deliver for consumers in the future would be
25 extra goodies, maybe. Again, not a specific prediction. Just

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1 an example.

2 Competition would press them to offer two screens or
3 high definition, okay, as part of their package and the
4 companies pull their punches. Maybe it's coordinated effects
5 and they don't offer that, that would be a form of consumer
6 harm because quality would not go up. It would stay where it
7 is. So those are tangible things that I'm concerned about that
8 will hurt consumers as a result of this merger.

9 THE COURT: Let me ask Professor Shapiro. You're
10 concerned that in the post-merger world, that T-Mobile will
11 sort of pull -- you used "pull their punches," in the realm of
12 possibilities. Is it also possible that rather than pulling
13 their punches, they may go out in the ring, like Rocky, and
14 say: Come on out?

15 THE WITNESS: Well, look, I think that's --

16 THE COURT: Essentially, that's what Mr.~Legere said
17 in his testimony, that he is looking forward to being out there
18 in the ring with the two big guys.

19 THE WITNESS: Right. Well, he's already in the ring.
20 It's just as scrappy No. 4. Look, I understand T-Mobile's
21 basic point here, which is, they're claiming they will become a
22 stronger competitor to go after the big guys. Okay?

23 The way antitrust economists think about these things,
24 and it's certainly it's used through all of my testimony, the
25 merger guidelines, decades of research, for that matter, is we

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1 tend to think, and we have empirical basis for this, that when
2 we go from four to three -- well, when we go from six to five
3 to four, as we start to slim down the number of competitors,
4 we're more concerned, generally concerned competition will
5 lessen. And that's why economists worked on this for decades
6 that ultimately lead to the Philadelphia National Bank
7 Presumption, actually, in the law. This is where it started in
8 the '50s.

9 So that's our sort of bedrock principle. Now, but we
10 understand that that might not apply in every case, and if a
11 company is going to achieve a lot of efficiencies because of
12 this deal, that might be the exception, and those things
13 happen.

14 THE COURT: Let me ask you. That's precisely my
15 point. Are you aware of specific instances in the last, let's
16 say, 20, 30 years, where four-to-three mergers have produced
17 sufficient benefits to justify their merger?

18 THE WITNESS: You mean in any industry?

19 THE COURT: Yes, just generally.

20 THE WITNESS: That's a tough one. I think, yes, there
21 would be some. I would say there would be some. I don't have
22 things off the top of my head, but, you know, there's sometimes
23 where it is a struggling firm -- I mean, the types of things
24 that T-Mobile is arguing, those are not crazy concepts in
25 general. Those happen. Okay? I'm not denying that. It's a

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1 question about this case.

2 THE COURT: All right. I think that I saw in one of
3 the briefs there was a footnote that listed a dozen or so
4 four-to-three mergers that have been approved, or not objected
5 to, and the suggestion was that there's nothing inherently
6 wrong about going from four to three, and that there may be
7 some instances, again, in the realm of possibilities where four
8 to three could produce efficiencies sufficient to justify the
9 merger.

10 THE WITNESS: Again, it can happen. What the economic
11 research has been showing the last 10 years or so, your Honor,
12 is that mergers, unfortunately, in the United States have
13 generally been too lax; so there's a lot of evidence that
14 mergers have gone through, hospital mergers, for example,
15 airlines mergers, other industries, not this one, where -- a
16 beer I mentioned, actually did come up already, where it's -- I
17 think there's a growing view, not a consensus yet, that merger
18 enforcement has been too lax, and so there's a lot of studies
19 of mergers.

20 Some four-to-threes have worked out fine. A lot of
21 them have not as well, and so we have the presumptions that are
22 based on our empirical work, generally. We have evidence from
23 this industry, as well in other countries that I won't refer
24 to, but you know, we're in uncharted territory with the
25 four-to-three of the nationwide carriers here. So I think we

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1 need to fall back, to some degree, on our presumptions, but I
2 haven't entirely done that. I've looked at the effects in
3 detail as well.

4 THE COURT: Thank you.

5 Mr. Pomerantz.

6 BY MR. POMERANTZ:

7 Q. So one of the reasons why a four-to-three merger may not be
8 anti-competitive is because of efficiencies, correct?

9 A. That is correct. That would be the primary reason.

10 Q. And an economist would only credit those efficiencies if
11 they were both merger-specific and verifiable, correct?

12 A. That is correct.

13 Q. And so to the extent that this merger is being justified
14 based upon efficiencies, you'd have to look at those kinds of
15 issues, at least from an economist's perspective, correct?

16 A. Yes, and that's exactly what Professor Scott Morton did
17 earlier this morning.

18 Q. Now, another reason why a four-to-three merger may be --
19 may not be a problem for competition is if one of the two
20 parties that are merging is so weak that they would be an
21 irrelevant competitor, a meaningless competitor in the future,
22 correct?

23 A. That's correct.

24 Q. And there is a very high test that economists apply before
25 they would ever credit that kind of a defense, correct?

JCKPSTA4

Shapiro - Direct

1 A. Well, we -- antitrust economics is a practical area. We
2 basically do economics to try to -- I think you were referring
3 to the failing firm defense. So that's something economists at
4 the antitrust division, for example, look and see whether those
5 stringent requirements are met.

6 But more often, in my experience at least,
7 particularly when I was with the antitrust division, is it's
8 more of something called a flailing firm defense, that they're
9 just weak. And that's one reason I looked at the projected
10 market share, to see how much there is behind that argument.

11 Q. And if you didn't have the kind of efficiencies that
12 economists recognize, or a flailing or failing firm, then what
13 do economics teach us about four-to-three mergers?

14 A. Well, and this is what I was trying to explain to the
15 Judge, that we have decades of experience that, as a general
16 principle, we see four to three as definitely in the zone that
17 is worrisome, in terms of loss of competition and that
18 underlies the market share thresholds, which have been in the
19 merger guidelines since 1968. Changed a bit, but it's because
20 of that deep empirical work in the field that that has been
21 translated into practice, at least at the agencies through
22 these structural presumption, the Herfindahls, and so that's
23 based on, basically, the knowledge in my field.

24 MR. POMERANTZ: No further questions, your Honor.

25 THE COURT: Thank you. Mr. Cary, how long do you need

JCKPSTA4

Shapiro - Direct

1 with the witness?

2 MR. CARY: 45 minutes, your Honor.

3 THE COURT: All right. Let's take the lunch break
4 then.

5 (Luncheon recess)

6 (Continued on next page)

JCKTSTA5

Shapiro - Cross

AFTERNOON SESSION

(1:30 p.m.)

THE COURT: Welcome back, Mr. Cary.

MR. CARY: Thank you, your Honor.

Your Honor, we went back and took advantage of the lunch break to go through the questions that were asked and compared them to the earlier trial testimony, and I'm hoping that I will be able to shorten this examination relative to my prediction.

THE COURT: That's good, thank you.

CROSS-EXAMINATION

BY MR. CARY:

Q. Professor Shapiro, good afternoon.

A. Good afternoon, Mr. Cary.

Q. I will ask you a series of questions, and so we can all get out of here, given the last day of trial, I request that you stay very closely to my question, if that you would be okay with you.

A. Yes, sir.

Q. Thank you. I would like to start by asking you whether you calculated Sprint's revenue share to be 13.8 percent at the end of the year 2018 in your report, correct?

And I can put on the screen a demonstrative or the report to help you speed through this.

MR. POMERANTZ: What page?

JCKTSTA5

Shapiro - Cross

1 MR. CARY: This is Shapiro reply report, page 171,
2 figure 37.

3 Q. Do you see where it shows Sprint's retail share at 13.8?

4 A. I do.

5 Q. And this is for the end of the year 2018, correct?

6 A. December 2018.

7 Q. And in your report you also made a prediction that Sprint's
8 revenue share would be 11 percent by the end of the year 2020,
9 is that correct?

10 I refer you to Shapiro initial report figure 34, tab
11 4, page 294. Do you see that?

12 A. I do.

13 Q. Is that in your report? Was that your projection?

14 A. This looks correct. Are you showing me figure 34 from my
15 first report?

16 Q. Yes, sir.

17 A. I'm not disputing it's there. If you pull out, I could
18 confirm.

19 Yes, that looks correct.

20 Q. Thank you very much. I would like to refer you to the
21 slide that you put up with respect to Altice in your direct
22 testimony today.

23 MR. CARY: Mr. Klein, if you could get to tab 31, page
24 9.

25 Not public, please.

JCKTSTA5

Shapiro - Cross

1 MR. POMERANTZ: Your Honor, just to be clear, I made
2 one error and Professor Shapiro made one error in terms of
3 saying something on the record that should not have been on the
4 record, so I ask after the proceeding to work with counsel and
5 the court reporter to have that portion deemed under seal.

6 THE COURT: All right, granted.

7 Q. So Dr. Shapiro, you explained through this demonstrative
8 that the Altice-Sprint contract has a clause that penalizes
9 Altice when it takes a Sprint customer, is that correct?

10 A. Correct.

11 Q. Isn't it true that there are many MVNO contracts that do
12 not include such a clause?

13 A. I think that's correct, yes.

14 Q. In fact, this clause is pretty unusual, is it not?

15 A. I have not done a survey, I can't speak to the frequency
16 with which this type of clause occurs.

17 Q. Altice has -- well, let me put it this way, your report did
18 not contain any analysis of how prevalent this is, correct?

19 A. I think that's correct.

20 Q. Altice has an incentive to compete with Verizon, doesn't
21 it?

22 A. Well --

23 Q. It has to get its customers somewhere, right, Professor?

24 A. Sorry, what?

25 Q. It has to get its customers somewhere, and Verizon has a

JCKTSTA5

Shapiro - Cross

1 lot of customers, right?

2 A. Certainly, yes, that's true.

3 Q. And if Verizon responds to competition from Altice by
4 lowering its prices generally, that might harm Sprint, correct?

5 A. I think your logic is correct.

6 Q. And Altice would not take into account the impact of
7 Verizon's price reduction on Sprint, would it?

8 A. Well, they're not the same company as Sprint, I'm not quite
9 sure what they would take into account.

10 Q. Fair enough. As a separate company they would not have a
11 particular interest in watching out for Sprint.

12 You said Boost's incentives would change in two ways
13 post-divestiture. Do you remember that testimony?

14 A. Why don't you tell me specifically what you're referring
15 to, please.

16 Q. When you spoke you said the first post-merger Boost in the
17 context of DISH would have an incentive to decrease price,
18 because unlike the premerger Boost, it would not internalize
19 the value of sales lost by Sprint when the Boost price is
20 lowered, right?

21 MR. POMERANTZ: Your Honor, was that stated today?

22 MR. CARY: No, I'm sorry that was in Professor
23 Shapiro's initial report at paragraph 258.

24 MR. POMERANTZ: Your Honor, I want to make sure that
25 it's responsive to something that Professor Shapiro said today,

JCKTSTA5

Shapiro - Cross

1 because that's all that he should be asking about.

2 THE COURT: Thank you.

3 Mr. Cary?

4 MR. CARY: Well, Professor Shapiro testified to the
5 various incentives of MVNOs, and he testified to the incentives
6 of DISH post merger, so I'm pursuing it.

7 THE COURT: All right.

8 MR. POMERANTZ: Your Honor, I don't see the
9 connection, but if maybe he will follow up and we'll see the
10 connection.

11 THE COURT: Subject to connection.

12 THE WITNESS: I'm supposed to answer it?

13 THE COURT: Yes.

14 THE WITNESS: Thank you.

15 A. So I see this paragraph. This is part of the analysis of
16 upward pricing pressure.

17 Q. Right. So again, to repeat the question, the post-merger
18 Boost would have an incentive to decrease price, because unlike
19 the premerger Boost, it would not internalize the value of
20 sales lost by Sprint when the Boost price is lowered. Is that
21 right?

22 A. That's correct. You read that correctly.

23 Q. So before the divestiture, when Boost is owned by Sprint,
24 they will take into account the effects of their pricing on the
25 rest of Sprint, correct?

JCKTSTA5

Shapiro - Cross

1 MR. POMERANTZ: Your Honor, this is specifically
2 looking at Boost. This was not all the subject of the
3 examination here today.

4 MR. CARY: The examination was about DISH. DISH will
5 be Boost, boost will be DISH post-divestiture. That's what the
6 divestiture is all about. So he was asked about DISH's
7 incentives to coordinate and to compete. DISH will be
8 competing through Boost, your Honor.

9 THE COURT: All right. Overruled.

10 A. I agree that -- if I remember the question -- that Boost
11 will not go to be part of Sprint, and therefore the same direct
12 internalization of the cost of capturing Sprint subscribers
13 would not apply to Boost in DISH's hands.

14 Q. After the divestiture when Boost/DISH is an MVNO, they won't
15 take into account the effects of their pricing on the rest of
16 Sprint, correct?

17 A. That's correct. That's the point of this. This is one
18 side of the balancing here in this paragraph, that's correct.

19 Q. That is one difference between Boost being a division of
20 Sprint and Boost being owned by DISH and being an MVNO,
21 correct?

22 A. Correct.

23 Q. And in your view, the post-merger Boost would have a
24 separate incentive, you say, to increase price because it would
25 have higher marginal cost as an MVNO reselling new T-Mobile's

JCKTSTA5

Shapiro - Cross

1 network than Boost did, right?

2 A. That is correct.

3 Q. But you did not account for any change in the post-merger
4 Boost business model or business strategy, such as operating at
5 lower margins in your UPP analysis, correct?

6 A. The UPP analysis studies the effect of the merger on price
7 incentives, so I don't know what you're referring to about
8 lower margin. That's what the analysis is about, pricing and
9 margins.

10 Q. Right. But you did not -- in applying your UPP analysis,
11 you did not take into account any changes in post-merger
12 Boost's business model or business strategy, such as operating
13 on lower margins, correct?

14 A. The analysis shows exactly what would happen to the
15 margins, and that's what I put in my analysis.

16 Q. You did not take into account the fact that MVNOs operate
17 on much thinner margins than MNOs in doing your upward price
18 calculation, correct?

19 A. The upward pricing -- excuse me, the upward pricing
20 pressure analysis is designed to isolate the effect of the
21 change of ownership, and so that takes other things as given,
22 and that's what I did.

23 Q. And the other thing it took as given was the Boost margins
24 would remain where they were.

25 A. No, I did not take Boost margins as given. The whole

JCKTSTA5

Shapiro - Cross

1 analysis is about the pricing, which given the costs, which I
2 also accounted for, showed in the margins. The margins are
3 endogenous in that sense.

4 Q. Let me be more precise. You did not take into account the
5 fact that MVNOs operate on much thinner margins than MNOs when
6 you calculated your UPP.

7 A. This is simply about Boost. The whole methodology is about
8 Boost and how price incentives change as a result of ownership
9 changes, and that's exactly what I did.

10 Q. Could you answer my question, please.

11 A. I don't understand what you mean. Taking into account some
12 other firm's pricing incentives, that's not what the analysis
13 does.

14 Q. You did not attribute the typical margin for an MVNO to
15 Boost when you calculated the upward pricing pressure.

16 A. That's correct. I looked at the margins, how they would --
17 excuse me, the pricing, how it would be affected by the merger.
18 That's what this methodology does.

19 Q. To be clear, the answer to my question was, "That's
20 correct."

21 THE COURT: Asked and answered.

22 Q. Is that right?

23 THE COURT: Asked and answered.

24 Q. And you also did not account for the possibility that
25 post-merger DISH would set its prices based on marginal costs

JCKTSTA5

Shapiro - Cross

1 and the projection it will have in the future, correct?

2 A. My calculations did not include that element of pricing,
3 but I addressed it in some detail in my reply report because
4 Professor Katz brought it up in his report, and I explained why
5 that did not change my results.

6 Q. Your results are only for one year in your UPP analysis,
7 correct?

8 A. I think we covered this last time I was here, and I don't
9 think of there being a particular time frame --

10 Q. Professor Shapiro, could I please ask, we're all trying to
11 get out of here, is it correct that your UPP analysis only
12 accounted for one year?

13 MR. POMERANTZ: Your Honor, I did not ask any
14 questions that this question would be relevant to.

15 MR. CARY: Your Honor, he asked him a series of
16 questions about unilateral effects, so I'm responding to his
17 questions on unilateral effects.

18 MR. POMERANTZ: Your Honor, I asked specific questions
19 about unilateral effects, and they had nothing to do with the
20 questions Mr. Cary asked.

21 THE COURT: Subject to connection.

22 You can answer.

23 A. Okay. The UPP analysis -- the elements are based on
24 diversions margins and prices. Necessarily we need to use
25 historical data for that purpose, which is what I did. So it's

JCKTSTA5

Shapiro - Cross

1 not keyed to any particular time frame, so I don't know what
2 else to say in response to your question about one year.

3 Q. Your analysis of coordinated effects was limited to just a
4 year or two, correct?

5 A. Well, I think generally I find it more difficult to predict
6 effects going out many years, but the overall nature of the
7 problem that I identified about coordinated effects is more
8 long lasting because it goes to the underlying structural
9 change in this industry.

10 Q. Professor Shapiro, do you recall that we had a deposition
11 and I asked what the time frame was for your analysis, and you
12 testified that the coordinated effects analysis, I think of it
13 as a year or two out.

14 Do you recall that?

15 A. Yes, and that's what I was trying to say in my previous
16 answer, which is the specifics of the analysis are based on the
17 market as we see it now. Three years, four years out, it's
18 harder to tell exactly what would happen, but the underlying
19 structure analysis is a longer-term thing.

20 Q. And you talked in response to Mr. Pomerantz's questions
21 about coordinated interaction, correct?

22 A. We addressed coordinated interaction.

23 Q. Is it correct that where there is bundling of products,
24 let's say wire line from AT&T and wireless from AT&T, that that
25 could be a way for AT&T to lower prices in wireless in a

JCKTSTA5

Shapiro - Cross

1 non-transparent way?

2 A. Well, I think it could be less obvious or visible, the
3 price reduction, if it occurred that way, but if it's known to
4 consumers, I would expect it still to be observable to the
5 competitors with their competitive intelligence units.

6 Q. Would you agree that since the price of the bundle is
7 usually less than the sum of the component prices, a bundle of
8 two products is effectively a way of offering to customers a
9 discount who would buy the other at a small incremental price
10 than the standalone prices?

11 A. I didn't actually understand the structure of your
12 question, but I will say that I think it's immediate that if
13 they offer -- if a company offered a bundle, and the bundled
14 price is less than the sum of let's say two component prices,
15 one could think of that as a discount in comparison with buying
16 the products à la carte.

17 THE COURT: Mr. Cary, let me ask Professor Shapiro a
18 question concerning the issue of the timing of any coordination
19 in the real world of cutthroat competition. If there's going
20 to be coordination of price, let's say, in the context of a
21 transaction like this one, is it more likely that companies
22 would act in the long term rather than in the short term?

23 In the short term there will be a lot of focus and
24 attention and interest of the public and regulators and
25 everybody that will be concerned about reputation and promises

JCKTSTA5

Shapiro - Cross

1 made. What are the chances that they're not going to do
2 anything in the short term?

3 THE WITNESS: Well, I certainly agree with all the
4 attention, and you asked a similar question when I was here
5 last time about wouldn't it be odd if T-MO raised the price
6 next week after the merger.

7 So I think there is scrutiny, there's public relations
8 issues, and those are heightened following the merger, for
9 sure. Let me give the example of how consumers could be harmed
10 if T-Mobile does not lower the price from 35 to \$30 for the
11 magenta line. I will use that as an illustrative example.
12 That doesn't require them to do anything. They just sit at 35.
13 So if we're losing out the benefits of the \$30 deal, that will
14 happen soon, and it wouldn't create any of these public
15 relations issues that you raise.

16 THE COURT: Mr. Cary.

17 BY MR. CARY:

18 Q. Would you agree with me that the presence of DISH under the
19 advantageous MVNO agreement with T-Mobile reduces the benefits
20 of coordination among the three MNOs?

21 A. Yes, I agree.

22 Q. Professor Shapiro, you're not purporting to quantify the
23 extent to which coordination will be a greater danger after
24 this merger than before, correct?

25 A. I am not quantifying that, that is correct.

JCKTSTA5

1 MR. CARY: I have no further questions, your Honor.

2 THE COURT: Thank you.

3 Mr. Pomerantz?

4 MR. POMERANTZ: No further questions, your Honor.

5 THE COURT: Thank you, you may step down, you're
6 excused.

7 THE WITNESS: Thank you, your Honor.

8 THE COURT: Mr. Pomerantz.

9 MR. POMERANTZ: I think we have a handful of matters
10 to clean up before we all depart. I think Mr. Mach has a few
11 and then I might have one or two.

12 THE COURT: Mr. Mach.

13 MR. MACH: Thank you, your Honor.

14 Your Honor, as my colleague mentioned, the parties
15 together have talked about and tried to identify open items
16 that exist that your Honor should be aware of. If history is
17 any guide, the parties will think of even more before we walk
18 out the door today. I hope I can speak for everyone, we will
19 work to resolve those as efficiently as possible, ideally
20 without burdening the Court in any respect, but certainly to
21 the most minimal degree.

22 The first item that is still open that we wanted to
23 make sure that your Honor is aware of is that even though trial
24 is over, there will be some additional evidence coming into the
25 record through deposition designations. The deposition

1 designations come in, in some instances, with documents that
2 weren't used in the trial, but will be put in the record
3 through those designations. The parties I think have agreed to
4 submit those next Friday. We will work to limit the objections
5 on the designations and the documents to the greatest degree
6 possible in the course of negotiating those down.

7 The second item is that there are a handful of
8 documents that the parties are actively negotiating on certain
9 discrete issues. There is, for example, the declaration of
10 Mr. Boubazine, there are some documents where there are
11 redactions to make, things of that nature. I think we can
12 resolve those shortly and get those documents into the record
13 before your Honor.

14 The third item is that the plaintiffs would like to,
15 just for clarity of the record, formally offer the documents
16 that were subject to the two motions that were briefed before
17 the Court. Those five documents that I think were subject to
18 those letters are 1034, 339, 329, 800 and 802, and I tried to
19 pull those numbers directly from the letter briefs in order to
20 identify what the documents are.

21 THE COURT: All right.

22 (Plaintiffs' Exhibits 1034, 339, 329, 800 and 802
23 received in evidence)

24 MR. MACH: We also have two documents from the
25 examination of Professor Katz that are subject to objections

1 that we were not able to resolve. Those were documents that I
2 used with Professor Katz in his examination. I understand that
3 the defendants have objections to Exhibit 1296 and
4 Exhibit 1263. I will, with your Honor's permission, hand the
5 podium to them to raise whatever objections that they have, and
6 with your permission we would like to argue those issues before
7 you at this moment.

8 THE COURT: All right.

9 MR. CULLEY: Good afternoon, your Honor, Daniel Culley
10 for Deutsch Telekom.

11 On Exhibit 1296 that Mr. Mach mentioned, this was
12 comments that -- a declaration that Dr. Katz filed on behalf of
13 AT&T in an FCC matter about spectrum, and we object on hearsay
14 ground to that declaration. Mr. Mach told me that he intends
15 to offer this statement as an inconsistent statement of a
16 declarant witness, but there is nothing inconsistent between
17 the statement that Dr. Katz made in that declaration and the
18 statements that he made on the stand; one was about the
19 spectrum purchase market, the other is about the retail market,
20 and Mr. Mach laid no foundation whatsoever to connect those two
21 during his examination of Dr. Katz.

22 And even if it were a prior inconsistent statement,
23 only the very specific statements that Mr. Mach read, which are
24 already in the transcript and in the record, would be
25 admissible, not the entire document as a whole.

JCKTSTA5

1 THE COURT: Thank you.

2 Mr. Mach?

3 MR. MACH: Thank you. My colleague is correct, we
4 think that the statements that were made under oath by
5 Professor Katz are a prior inconsistent statement admissible
6 under 801(d)(1). And I see that the focus of the issue is
7 whether they were indeed inconsistent. We believe they were
8 clearly inconsistent because your Honor will recall that
9 Dr. Katz testified that CMAs are not an appropriate level at
10 which to address competition in court in this matter. In that
11 declaration he testified that CMAs not only were possible but
12 were in fact the appropriate place to address competition.

13 I do not expect that the parties will reach agreement
14 on the substantive implication or the degree of contradiction
15 within those documents, but the way that issue is resolved
16 under the rule is through cross-examination of Dr. Katz, both
17 parties have had the opportunity to examine him, and the
18 document is simply not hearsay under 801(d)(1) on account of
19 the at least facial contradiction on the document, and no more
20 is required to get the document in under that exception.

21 THE COURT: Thank you.

22 Anything else?

23 MR. CULLEY: I note again, your Honor, even if it was
24 the case that Mr. Mach asserts they're inconsistent, only the
25 specific statements that he asserts are inconsistent and

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1 already in the trial transcript should be admitted and not the
2 entire document.

3 THE COURT: All right. Thank you. I'm inclined to
4 allow the document to be admitted. I think there is facial
5 inconsistency. However, the problem is that the context in
6 which the statements were made were not part of the testimony
7 initially. So if we take them in isolation, they are
8 inconsistent, but if you give the explanation of the context,
9 perhaps they're not. And I think rather than engaging in a
10 mini trial on that issue, it is best to follow the same rule
11 that I indicated this morning, in bench trials the Court should
12 err in the direction of admitting documents rather than
13 excluding.

14 (Plaintiffs' Exhibit 1296 received in evidence)

15 MR. MACH: Thank you, your Honor. We also have the
16 document 1263.

17 MR. CULLEY: On Exhibit 1263 again we're objecting on
18 hearsay grounds, your Honor. It's the 2011 AT&T presentation
19 to the Department of Justice regarding the AT&T/T-Mobile
20 merger. It was a presentation submitted by AT&T. In that
21 merger, AT&T had control of the antitrust strategy, and the
22 plaintiffs have not laid any foundation about what input, if
23 any, that T-Mobile had into that presentation. It is a
24 third-party statement about the document. And Professor Katz
25 said he had not seen the document, it was during the

1 examination of Professor Katz, and in fact, Mr. Cary objected
2 to the use of the document, and I believe your Honor said we
3 should move on. So that was the resolution of that document
4 during the course of the examination.

5 THE COURT: Thank you.

6 Mr. Mach?

7 MR. MACH: Just for the assistance of the Court,
8 Mr. Nikels, could I ask you to bring up the cover page of 1263.

9 Your Honor, this is a familiar issue now, and that's
10 the standard of proof that's required to satisfy Federal Rule
11 of Evidence 901. Federal Rule of Evidence 901 gives a variety
12 of different ways that a party can establish that something is
13 what they purport it to be. And here we have a variety of
14 different ways to do that.

15 As your Honor mentioned this morning, of course, there
16 is also Second Circuit precedent that tells us that
17 circumstantial evidence is sufficient to meet that burden. And
18 the facts that the Court should be aware of here are, first,
19 facially the document is presented by AT&T and T-Mobile. This
20 is something that appears page after page after page on this
21 document. We also have a history with this document from the
22 investigation phase of this case, and that is that, in the
23 investigation phase of the case, the defendants were asked to
24 provide materials that were submitted to the Department of
25 Justice on behalf of a party -- on behalf of this party, this

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1 is T-Mobile, in the transaction that is at issue in this slide
2 deck. This slide deck specifically was provided and
3 specifically identified as one of those documents that was
4 provided on behalf of T-Mobile at that time in the
5 investigation phase of the case.

6 So this is evidence that clearly meets the standard.
7 And on questioning with Dr. Katz, Dr. Katz acknowledged that he
8 had a role in reviewing presentations that were submitted to
9 the Department of Justice, and he did not hesitate in agreeing
10 that the positions shown here were presented to the Department
11 of Justice at that time. I think that the minimal burden to
12 get the document in is easily satisfied here.

13 THE COURT: Thank you.

14 MR. CULLEY: So Mr. Mach raised the logos on the front
15 of the document. I don't know how much experience Mr. Mach has
16 in merger advocacy, but that is a common technique that the
17 parties use simply to present who is merging. And I don't
18 think we can draw any inference from that as to what
19 contributions, if any, were made by each of the parties to a
20 presentation that was submitted by AT&T.

21 On the document request that Mr. Mach mentioned,
22 that's not my recollection of the document request, which were
23 broad all document requests related to the specific things.
24 And in any event, the fact that the merging parties did not
25 extremely narrowly construe their responses to discovery in an

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1 event to be amicable and move the matter along and not raise
2 unnecessary objections should not be used against them here to
3 try to admit specific documents in evidence.

4 THE COURT: All right. Thank you. On this document,
5 again, I will follow the rule of allowing admissibility. If
6 there are any objections on the content, they go to the weight.

7 (Plaintiffs' Exhibit 1263 received in evidence)

8 MR. MACH: Thank you, your Honor. I think that
9 addresses the items on my list. My colleague, Mr. Pomerantz,
10 has a few open items.

11 THE COURT: Thank you.

12 MR. PARKER: Your Honor, Mr. Mach offered some
13 documents that were in the letter that you ruled on this
14 morning but I don't believe you ruled on, so I would like at
15 some point an opportunity to object to those documents; not
16 revisiting the one that you ruled on, but the other three
17 documents.

18 THE COURT: I understand. In fact, there was on my
19 open list I did not make specific reference to Exhibits 339,
20 800 and 801, although it was my intent to indicate that to the
21 extent the documents are related, my ruling would apply not
22 only to 329 but to the other three as well.

23 MR. PARKER: The others were not used with a witness
24 in court, and I thought that was a criterion. I understand
25 what you're saying on the testimony underlying it, but 329 was

1 used in court, the others were not. I think that's
2 disqualifying.

3 THE COURT: Mr. Mach?

4 MR. MACH: As I mentioned at the top of the clean-up
5 items, your Honor, the parties have a stipulation that was put
6 on the record in the pretrial conference that in order to enter
7 the record a document doesn't have to be used in court, it
8 could also be used in a deposition designation, and the
9 documents that we raised in the letter I think were used in the
10 depositions of people like Mr. Ewens, Mr. Langheim and
11 Mr. Wittig, and they could come in that way, they don't have to
12 meet the standards that counsel is raising.

13 MR. PARKER: And those folks basically knew nothing
14 about the documents except they thought it was a McKinsey
15 document. I am sorry, I didn't realize that testimony has been
16 designated, but I think the record is at least highly ambiguous
17 and does not meet the standard your Honor has been applying of
18 control and adoption. I don't think it's anywhere close.

19 THE COURT: Thank you. I made the ruling on this and
20 given the indication for the reasons why.

21 Anything else, Mr. Pomerantz?

22 MR. POMERANTZ: Not relating to that issue, different
23 issues.

24 THE COURT: All right.

25 MR. GELFAND: Your Honor, I do have two exhibit

1 issues, if I might. There two were two exhibits Mr. Pomerantz
2 tried to move into evidence at the end of Professor Scott
3 Morton's testimony, and I reserved on those. We went back and
4 looked, Exhibit 211 we had not raised an objection, and
5 therefore I have no objection to the admission of that document
6 into evidence.

7 THE COURT: Admitted without objection.

8 (Plaintiffs' Exhibit 211 received in evidence)

9 MR. GELFAND: Exhibit 75 is a letter from counsel
10 about a legal privilege issue. We think it's irrelevant, and
11 therefore we have a relevance objection to that document.

12 MR. POMERANTZ: Your Honor, as your Honor has seen in
13 the evidence, whether the complete model that the defendants
14 used to try to prove their efficiencies was used in the
15 ordinary course or not is a matter of relevance in this case,
16 under the guidelines and otherwise.

17 That letter was a letter sent on behalf of the
18 defendants to the Department of Justice and very specifically
19 takes the position that the model was not created in the
20 ordinary course for precisely the reasons that Professor Scott
21 Morton addressed in her testimony, that is, that it addresses
22 5G, which is not part of the ordinary course model, and that it
23 is used to project four or five years out in the future. This
24 is not Professor Scott Morton or us saying it, it's the
25 defendants themselves saying that to the Department of Justice.

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1 I think it's not only relevant but highly relevant to one of
2 the factors that it is to be considered under the merger
3 guidelines.

4 MR. GELFAND: Briefly, your Honor, there is no dispute
5 about the facts about how that model was created, and the way
6 it's characterized by counsel in exchange for a third party is
7 not relevant.

8 THE COURT: Thank you, Mr. Gelfand. You know that the
9 rules of relevance under the federal rules are fairly ample,
10 and I'm inclined to rule that if your objection is based solely
11 on relevance, I will overrule.

12 (Plaintiff's Exhibit 75 received in evidence)

13 MR. POMERANTZ: Thank you, your Honor. I want to
14 formally move into evidence various slides or demonstratives
15 that we used during the course of the proceeding that we have
16 not yet moved into evidence with exhibit numbers. I will put
17 these on the record. I would like to have the opportunity to
18 leave to my colleagues the chance to double-check it, and if
19 they think that anything is incorrect, first raise it with us
20 and we'll probably resolve it; if not, we could come back, but
21 I think they're agreed to.

22 If I may, for Professor Scott Morton I went over these
23 with Mr. Gelfand beforehand, we're going to mark them as
24 Exhibit 1319, and they are the following slides as we presented
25 them, slide 13, slide 15, slide 20, slide 32, and slide 33.

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1 MR. GELFAND: No objection, your Honor.

2 THE COURT: All right. Admitted without objection.

3 (Plaintiffs' Exhibit 1319 received in evidence)

4 MR. POMERANTZ: Then with respect to Professor Shapiro
5 during his case in chief testimony the following exhibits --
6 the following slides I believe have already been agreed upon
7 without objection on the record. We'll give Mr. Cary a chance
8 to review this after this proceeding. We have now marked them
9 as Exhibit 1258, and they are the following slides: 15, 16,
10 17, 18, 19, 20, 21, 22, 23, 24, and 25.

11 Separately, the very last slide that we used was a
12 slide that had a couple of figures on it that were
13 confidential, and therefore Professor Shapiro was not able to
14 testify to them in court. I would ask -- I showed this to
15 Mr. Cary if he wants a chance to go back and review it, but we
16 would mark that slide, slide 69, separately as Exhibit 1322.

17 MR. CARY: Your Honor, consistent with Mr. Pomerantz's
18 reservation of our rights to do due diligence, no objection.

19 THE COURT: Admitted without objection.

20 (Plaintiffs' Exhibits 1258 and 1322 received in
21 evidence)

22 MR. POMERANTZ: With respect to the testimony today of
23 Professor Shapiro, I would offer as exhibits demonstratives
24 Exhibit 1320, the two slides related to county level HHIs,
25 which are slides 2 and 3, the page from Professor Katz's

1 report, which has been mark as slide 10, the prior submission
2 by Professor Katz to the FCC related to Sprint's projected
3 market shares, slide 12.

4 MR. CARY: On that one I think we would object, your
5 Honor. Again, Mr. Pomerantz could have laid the proper
6 foundation for that slide with Professor Katz. He chose not to
7 do that. At this point it's just a random slide without any
8 explanation to what it is or what it isn't, more importantly,
9 so I would object to that one.

10 MR. POMERANTZ: And your Honor, I think Professor
11 Shapiro addressed that in his subsequent testimony today
12 regarding where it came from and why he was relying upon it.

13 MR. CARY: Right. He testified that it came from an
14 FCC filing, but he didn't explain where the data came from.

15 THE COURT: Sustained as to this one.

16 MR. POMERANTZ: One more on this one, which is the
17 comparison of the Facebook data with the adjustment, without
18 the adjustment, and how it relates to upward pricing pressure.

19 MR. CARY: No objection to that one.

20 MR. POMERANTZ: And that's slide 19.

21 THE COURT: All right.

22 MR. POMERANTZ: From Dr. Kolodzy's testimony, these
23 are the slides that we're seeking to admit, I think this has
24 been agreed among counsel but in case it hasn't been fully
25 agreed upon, but I think I was told it was, slides 1, 2, 3, 4,

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1 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 and
2 29.

3 MR. CARY: No objection.

4 THE COURT: Admitted without objection.

5 (Plaintiffs' Exhibits 1320 received in evidence)

6 THE COURT: From Mr. Solomon's testimony, we'll mark
7 as Exhibit 1315 slides 5, 6, 7, 16, 17, 18 and 25.

8 MS. LENT: Your Honor, I think we agreed to this
9 yesterday, and there's a new exhibit that's been entered. I
10 don't know the exhibit number off the top of my head, but these
11 were marked as Exhibit 1315.

12 MR. POMERANTZ: Yes.

13 MS. LENT: Okay.

14 MR. POMERANTZ: We're getting the exhibit number. I
15 think it's on the record which slides were agreed upon, but
16 this is on an exhibit number so the record is clear. And last,
17 Dr. Kolodzy's CV is Exhibit 1316.

18 (Plaintiffs' Exhibits 1315 and 1316 received in
19 evidence)

20 MR. POMERANTZ: One other issue before we get to the
21 schedule going forward is I know I speak on behalf of Mr. Cary
22 and everyone here, your staff is terrific. They made our lives
23 a lot easier over the last two weeks. The court reporters have
24 suffered through a lot of fast talkers, your clerk really
25 helped us out a lot. And it was a really stressful two weeks,

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1 and your staff made it a lot less stressful, so we jointly
2 thank you.

3 MR. CARY: Absolutely, your Honor.

4 MR. PARKER: The one I have, your Honor -- sorry, your
5 Honor, I got two things, one was my own mistake. After
6 Mr. Ergan's testimony I offered Exhibit 8141 but misspoke and
7 said it was 4141, it is in fact 8141. It was certainly my
8 error.

9 THE COURT: All right.

10 (Defendant's Exhibit 8141 received in evidence)

11 MR. PARKER: One other point, not to belabor, but
12 document 339 is a hundred page document, and I don't have any
13 record it was used in the deposition at all. That was the
14 point I was making.

15 MR. MACH: We'll go and confirm the status of 339 and
16 we can resolve that. I don't have that record in front of me,
17 your Honor.

18 MR. PARKER: That's fine, your Honor.

19 THE COURT: Let me come back to that issue because I
20 may have misspoken when I addressed this issue. I believe I
21 said Exhibit 801, and it's really 802.

22 MR. MACH: Thank you, your Honor.

23 THE COURT: Mr. Gelfand?

24 MR. POMERANTZ: Apparently when I gave you the slides
25 from Dr. Kolodzy's examination I didn't give you the exhibit

1 number for those slides, and that is Exhibit 1314.

2 (Plaintiffs' Exhibit 1314 received in evidence)

3 MR. GELFAND: Your Honor, two other things. First of
4 all, obviously I join in Mr. Pomerantz's thanks to the Court
5 and the courtroom personnel. I also want to acknowledge the
6 very large team of people who worked on the defense effort as
7 well. And as your Honor knows, the most important among them
8 are the legal assistants, and we have two of them in the
9 courtroom today that I will like to introduce your Honor to,
10 Alicia DeLalla and also Korinna Garfield. I would like to
11 acknowledge their tremendous effort in working with the Court
12 and keeping things organized and clean.

13 THE COURT: Thank you.

14 MR. GELFAND: The other thing that we need to do is a
15 housekeeping matter but a very important one, your Honor. I
16 just seek your Honor's guidance. There are some exhibits in
17 this case that are very confidential and contain
18 forward-looking strategic and competitively sensitive
19 information, both for the parties and for third parties. We
20 made tremendous efforts, and I think we accomplished a lot even
21 pretrial with the help of Magistrate Judge Lehrburger and just
22 working together most of those issues were resolved, but there
23 are still some documents that will eventually be in the record
24 of this case that we will need to have confidentiality sealing
25 protections for, and I would just ask your Honor to provide us

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1 guidance on how you would like us to do that.

2 THE COURT: To the extent they're subject to the
3 protective order, submit them either to myself or to Magistrate
4 Judge Lehrburger and they will be marked as confidential and
5 sealed, and they will be entered into the record as sealed
6 documents.

7 MR. GELFAND: Thank you very much, your Honor.

8 MR. POMERANTZ: Just a couple more points. Usually at
9 the end of most trials I thank my colleagues on the other side,
10 but this time I really mean it. They have been terrific to
11 work with as adversaries, and I hope I find myself on the same
12 side of the case someday with all of them. They have really
13 been wonderful to work with. I also want to thank my
14 colleagues from New York and California and the other states
15 for inviting me and my colleagues from our firm on this
16 venture. It's been quite a ride.

17 So to end is the schedule going forward. I don't
18 think that we have an agreement on a couple of things, so I
19 will state our position and let someone from the other side
20 address it.

21 What we would propose is that written submissions be
22 filed the week of January 6 and that we hold closing arguments
23 the week of January 13.

24 In terms of written submissions, your Honor made clear
25 at the outset that you did not want post-hearing briefs, and if

JCKTSTA5

1 the way this case has gone over the last two weeks has not
2 persuaded you otherwise, I will not try to argue otherwise
3 here. We would like the opportunity, but if your Honor doesn't
4 feel that you need a brief from each side, then we respect
5 that.

6 We also discussed proposed findings and conclusions,
7 and your Honor did indicate at the outset that was something
8 you were more open to consider. What we did at the outset of
9 this case is we asked your Honor to defer the submission of
10 findings, which your rules typically would require in advance
11 of trial, and we asked to defer that until after the trial so
12 that we could put evidentiary citations in with the findings of
13 fact.

14 So to the extent that we'll not have any briefing, we
15 would request the opportunity to submit proposed findings and
16 conclusions to your Honor, and we thought it might be helpful
17 for you to have those at least a few days in advance of
18 whenever the closing arguments are. For that reason, plus some
19 holiday vacations that some of us have planned, including
20 myself, what we would ask for is that whatever written
21 submissions your Honor would permit would be the week of
22 January 6 and the closings would be the week of January 13.

23 THE COURT: All right. Mr. Gelfand?

24 MR. GELFAND: Thank you, your Honor. We discussed
25 this in the defense group, and it is abundantly clear to us

1 that your Honor heard a great deal of evidence over the last
2 two weeks and has a full appreciation and understanding of the
3 record. We propose no post-trial written submissions of any
4 sort, including no findings and no conclusions. And we would
5 ask, given the importance of this transaction and the fact that
6 it has been pending for an extraordinarily long time, that we
7 have post-trial arguments the week of January 6 and not wait
8 until later in January, and we would suggest two hours per
9 side. Thank you, your Honor.

10 MR. POMERANTZ: The transaction has been pending since
11 April 29 of 2018. I don't think one week is going to make a
12 difference here. I think it would be helpful and healthy for
13 all of us to have a little bit of time to give your Honor
14 something in writing that your Honor can use as a guide in
15 whatever form your Honor would like. And I think in terms of
16 my personal schedule and other schedules, I think the week of
17 January 13 is a somewhat better week so we are prepared to
18 present your Honor with cogent closing arguments.

19 THE COURT: All right. Thank you.

20 Coming back to the question of briefs and briefing, my
21 problem with a case like this is that the word "brief" is an
22 oxymoron. And consequently, if we want to move things along
23 and get an expeditious resolution, it would be best to forego
24 that process and follow the Court's inclination to have oral
25 arguments. Two hours each is acceptable to both sides, I will

JCKTSTA5

1 be glad to accommodate that. I would have no problem with the
2 parties submitting proposed findings of fact and conclusions of
3 law a week before the closing arguments, and in terms of time,
4 I think the second week in January would probably be more
5 realistic.

6 MR. POMERANTZ: I appreciate that. Two hours is fine
7 with us. We're fine with the two hours. And I just I guess in
8 terms of the timing here, I would propose the findings and
9 conclusions be due sometime in the middle of the week of
10 January 6, and that the closing arguments be sometime in the
11 middle of the week of January 13.

12 THE COURT: Mr. Gelfand.

13 MR. GELFAND: That schedule is fine, your Honor. We
14 propose a page limit on the findings and conclusions so we
15 don't end up with telephone books, and our suggestion would be
16 30 pages for findings of fact and 20 pages for conclusions of
17 law, double spaced, of course.

18 MR. POMERANTZ: We're fine with that, your Honor.

19 THE COURT: I would ask that you have 30 pages
20 combined for both findings of fact and conclusions of law each.
21 Anything else?

22 MR. POMERANTZ: Just the dates.

23 THE COURT: Let's look at the calendar.

24 LAW CLERK: January 8 for the findings, and
25 January 15.

1 MR. POMERANTZ: That's fine for the plaintiff states,
2 looking down here.

3 MR. BUFFIER: Yes.

4 THE COURT: January 8 and January 15.

5 MR. GELFAND: That's acceptable, your Honor.

6 THE COURT: All right. Given the amount of time that
7 each side has spent on the trial, let me give you a final
8 tally. The plaintiffs used up roughly 29 hours and the
9 defendants roughly 25. So the defendants ended up with fewer
10 hours of trial, but Mr. Gelfand, if you wish to even the score,
11 you are free to do a self-evaluation on the efficiency and
12 quality of your presentations.

13 MR. GELFAND: Thank you, your Honor, I think I can
14 complete that self-evaluation within the four hours allotted.

15 THE COURT: Thank you all very much. I would also
16 want to express my appreciation to both sides for the
17 extraordinarily high level of cooperation and professionalism
18 that you all have displayed which enabled us to conclude the
19 trial within even less than the time allotted and without going
20 into the extra days that we had indicated at the beginning of
21 trial might be possible. So for that, I thank you all and wish
22 you all the very best for the holidays, and we will see you in
23 January.

24 MR. POMERANTZ: Thank you, your Honor.

25 (Adjourned)

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PLAINTIFF EXHIBITS

Exhibit No.	Received
1034, 339, 329, 800 and 802	.2316
1296	.2319
1263	.2322
211	.2324
75	.2325
1319	.2326
1258 and 1322	.2326
1320	.2328
1315 and 1316	.2328
1314	.2330

DEFENDANT EXHIBITS

Exhibit No.	Received
8141	.2329

EXHIBIT B

JCITSTA1

1 UNITED STATES DISTRICT COURT
2 SOUTHERN DISTRICT OF NEW YORK
-----x
3 STATE OF NEW YORK, et al.,

Plaintiffs,

New York, N.Y.

v.

19 Civ. 5434 (VM)

5 DEUTSCHE TELEKOM AG, et al.,
6
7 Defendants.
-----x

8 December 18, 2019
9 8:30 a.m.

Before:

HON. VICTOR MARRERO,

District Judge

APPEARANCES

15 MUNGER, TOLLES & OLSON LLP
16 Attorneys for Plaintiffs State of California
17 BY: GLENN POMERANTZ
KURUVILLA JOSEPH OLASA
KYLE W. MACH

18 STATE OF CALIFORNIA
19 Department of Justice
Office of the Attorney General
Attorneys for State of California
20 BY: PAULA L. BLIZZARD

21 STATE OF NEW YORK
22 Office of the Attorney General
Attorneys for State of New York
23 BY: ELINOR R. HOFFMANN
BEAU W. BUFFIER

JCIPSTA2

Ergen - Cross

1 Q. Okay. And if I could pull up the transcript, page 1615,
2 this is the transcript from yesterday, lines 16 through 25.
3 And the court asked you: "There's been a lot of testimony in
4 this trial on this issue of DISH's commitments to the FCC, and
5 allegations that DISH has made commitments to the FCC which it
6 has then either backed away from or not implemented in good
7 faith. What is behind that, and what is your answer?"

8 And you responded: "Maybe we'll go into more detail
9 on that, but the short answer is that we've never missed a
10 final milestone commitment from the FCC for a terrestrial
11 build-out, and we've met the ones we've needed to."

12 Do you see that?

13 A. Yes, I do.

14 Q. So let's focus for the minute on this word "terrestrial,"
15 which you mentioned several times yesterday and was on your
16 slides. Do you see that?

17 A. Yes.

18 Q. Okay. Now, you added the word "terrestrial" repeatedly
19 because you have, in fact, missed final satellite deadlines;
20 isn't that correct?

21 A. That's true.

22 Q. Can I see Plaintiff's Exhibit 1303, please.

23 So this is a Memorandum and Opinion Order from the FCC
24 dated July 29th, 2010, issued by the International Bureau; do
25 you see that?

JCIPSTA2

Ergen - Cross

1 A. Yes.

2 Q. And if you look at the first paragraph, in the middle, it
3 says that, the second sentence: Applicants have an established
4 pattern of missing satellite implementation milestones as
5 defined by section 25.159(d), are prohibited by that rule from
6 filing applications for new satellites until they rebut the
7 presumption that they acquired one or more of their licenses
8 for speculative purposes.

9 Do you see that?

10 A. Yes.

11 Q. In an almost three-year period, from December 2006 through
12 September 2019, EchoStar did not implement five of its licensed
13 satellites. Further, EchoStar currently has five authorized
14 but unbuilt satellites. Under these circumstances, EchoStar
15 cannot file additional applications until it rebuts the
16 presumption that it engaged in speculative activity.
17 Because -- and EchoStar, in fact, has not rebutted the
18 presumption and it is prohibited -- I was reading the next
19 sentence above, but that's okay -- it is prohibited from filing
20 additional applications for new satellites at this time.

21 Do you see that?

22 A. Yes.

23 Q. And when the FCC was referring to "speculative activity,"
24 that was getting licenses or permissions from the FCC, not
25 acting on them and reselling them later; is that right?

JCIPSTA2

Ergen - Cross

1 A. Not exactly.

2 Q. Would some people call it hoarding? Is it different from
3 hoarding spectrum?

4 A. No, it's in the -- in the satellite -- terrestrial
5 build-out, the reason we use terrestrial build-out is that the
6 terrestrial rules at the FCC are materially different than the
7 satellite rules.

8 The satellite licenses, it's based on the -- the
9 terrestrial, in auction you pay billions of dollars for the
10 right to spectrum. In satellites, in this time frame, it's a
11 first-come, first-serve basis; so companies tend to apply for
12 licenses because it's first-come, first-serve.

13 And then you have obligations to meet, or you will
14 lose those licenses. And that's what happened to DISH, or
15 EchoStar, which is our sister -- which is a sister company.
16 That's what happened here, which is, EchoStar applied for
17 licenses and didn't ultimately built those satellites, and so
18 they -- normally, you would just give those licenses back. You
19 just give those licenses back, and that's generally what we did
20 here.

21 Q. Let's look at another FCC order. Can we turn to
22 Plaintiff's Exhibit 1305, please. This is another order from
23 the FCC. This one is dated another year later, July 16th,
24 2011. And if I look at the first paragraph of this one, in the
25 middle, it says "EchoStar did not meet license conditions

JCIPSTA2

Ergen - Cross

1 requiring it to complete its critical design review two years
2 after grant and to complete construction of the satellite
3 within four years of grant."

4 Do you see that?

5 A. Yes.

6 Q. Okay. "Instead, EchoStar decided not to construct the
7 authorized new satellite, but rather, seeks to use the
8 eight-year-old, in-orbit EchoStar 8 satellite to meet the
9 milestone deadlines."

10 Do you see that?

11 A. Yes.

12 Q. And the FCC denied your request for a waiver of the
13 completing construction milestone, correct?

14 A. Correct.

15 Q. Thank you. Let me turn to the next page, page 2, paragraph
16 4. At the top line it says "Now, in its third milestone date
17 completing construction, EchoStar states that it has changed
18 its business plans."

19 Do you see that?

20 A. Yes.

21 Q. So you changed your business plans and decided, instead,
22 not to finish and meet the construction milestone, correct?

23 A. That's correct.

24 Q. Okay. Now, I want to turn to some other testimony from
25 yesterday. If I could pull up the transcript again from page

JCIPSTA2

Ergen - Cross

1 1617, lines 18 and 19. You were talking about companies
2 criticizing DISH, and you were referring to them -- sorry, do
3 you have it? There you go. Okay.

4 You were talking about -- noting again that, of
5 course, you had not, in your view, you have not missed any
6 terrestrial build-out dates or milestones, but that the FCC had
7 approved the merger. And they approved the merger because they
8 believe it's in the public interest, and they don't believe
9 DISH is a bad company, as some people might want to whisper.

10 Do you see that?

11 A. Yes.

12 Q. And you were talking about companies who were whispering
13 quietly about DISH's bad behavior to the FCC; that's what you
14 thought was going on, right?

15 A. I don't know that that's exactly right, but we're a pretty
16 small company compared to the incumbents, and they do not want
17 us in the business, just like the cable companies did not want
18 us in the television business, and so they know that we'll
19 provide real competition.

20 And one of the ways that these companies try to stop
21 you is they try to pass laws to stop you. They try to use
22 regulatory agencies against you, and it is not beyond them, as
23 I said yesterday, to be sneaky about it. Sometimes they
24 normally -- they may use third parties to do it.

25 It's a tough business, but the fact is, we haven't

JCIPSTA2

Ergen - Cross

1 missed a terrestrial final milestone at the FCC, that I'm aware
2 of, from a license perspective. The fact is that in this
3 merger, the FCC found DISH to be a credible and financially and
4 savvy enough company to -- "savvy" may not be the right word,
5 but a company that can compete in this business.

6 So the good news is that some of those sneaky
7 campaigns weren't factual and didn't work.

8 Q. Can I get Plaintiff's Exhibit 1306. I'm not interested, at
9 the moment, in talking about sneaky campaigns. Let's talk about
10 Chairman Pai. This is a statement of Commissioner Ajit Pai --
11 he was a commissioner at the time; he's now the Chairman of the
12 FCC -- on abuse of the designated entity program. And this is
13 not a whisper, is it, Mr. Ergen?

14 A. This is a statement by the Commissioner.

15 Q. Yes. Now the Chairman, right?

16 A. That's correct.

17 Q. In fact, what he states is that this designated entity
18 program, in the second paragraph, "The discounts that were
19 received came through the FCC's designated entity program,
20 which is intended to make it easier for small businesses to
21 purchase spectrum and compete with large corporations. DISH,
22 however, has annual revenues of almost 14 billion, a market
23 capitalization of over 32 billion and over 14 million
24 customers. Its participation makes a mockery of the designated
25 entity program."

JCIPSTA2

Ergen - Cross

1 Do you see that?

2 A. Yes, I do.

3 Q. You would agree with me that that's not a whisper by some
4 third party, right? That is the Chairman of the FCC
5 criticizing DISH for abuse of the designated entity program,
6 correct?

7 A. That is a statement by the then-Commissioner Pai.

8 Q. And if you look down a little farther, in fact,
9 commissioner, then-Commissioner Pai, refers to DISH's actions
10 as shenanigans; do you see that?

11 A. I see the word "shenanigans," yes.

12 Q. Do you doubt that he's referring to DISH's actions with
13 respect to this designated entity program?

14 A. He's talking about giant corporations. I read that to --
15 giant corporations, we're probably not a giant corporation;
16 so -- but it's certainly corporations. So I read that that
17 he's talking about several companies. Perhaps DISH was one of
18 them.

19 Q. All right. Let's go back up.

20 A. It's logical that DISH was one of them.

21 Q. It's logical that DISH was one of them?

22 A. When I read it, he talks about giant corporations. The
23 Commissioner, obviously, did not like the designated entity
24 program, which was passed by Congress and the FCC, and he
25 thinks that giant corporations engaged in some kind of

JCIPSTA2

Ergen - Cross

1 shenanigans, and perhaps it's logical, given the context that
2 DISH was one of the giant corporations he was referring to.

3 Q. And he says: "The American people should be outraged by
4 this. I certainly am." Do you think he's talking about
5 anybody other than DISH right there?

6 MR. GELFAND: Your Honor, I object to this line of
7 questions as hearsay, it's five years old, it has no probative
8 value. It's a different issue. It seems to be some kind of
9 404 evidence, and I object to the line of questioning, your
10 Honor.

11 THE COURT: Overruled.

12 MS. BLIZZARD: Thank you, your Honor.

13 THE COURT: I understand part of the purpose of the
14 questioning to be impeachment and not necessarily substance.

15 MS. BLIZZARD: Thank you, your Honor.

16 THE WITNESS: Can you repeat the question? I'm sorry.

17 BY MS. BLIZZARD:

18 Q. There's no question pending, Mr. Ergen.

19 A. Okay.

20 Q. So after DISH's shenanigans, the FCC did a thorough
21 investigation of how DISH had set up shell companies to
22 fraudulently participate in the designated entity program,
23 correct?

24 A. That is not correct.

25 MR. GELFAND: Your Honor, I object.

JCIPSTA2

Ergen - Cross

1 A. That is not correct.

2 MR. GELFAND: If the purposes is impeachment, he did
3 not testify about this particular program. The impeachment is,
4 apparently, of testimony about not missing terrestrial
5 deadlines. That would be the impeachment.

6 THE COURT: At this point, sustained.

7 MS. BLIZZARD: Your Honor, if I may?

8 THE COURT: Yes.

9 MS. BLIZZARD: He did testify that the FCC thought
10 they were, quote, a good company, and I can bring that one up,
11 if you would like also, your Honor. But that was his
12 testimony, and I think I'm entitled to bring in testimony that
13 the FCC has very serious concerns about DISH's behavior.

14 THE COURT: Proceed.

15 MS. BLIZZARD: Thank you, your Honor.

16 BY MS. BLIZZARD:

17 Q. Can I bring up Plaintiff's Exhibit 1308. So this is a
18 memorandum opinion and order from the FCC from August 2015
19 evaluating this designated entity dispute.

20 I need to see what page I need to go to. And let me
21 actually jump to -- this is the actual memorandum and opinion
22 and order, which is very lengthy, but let me jump to the
23 statement by Chairman Pai, which would be Plaintiff's Exhibit
24 1309, because he summarizes here the findings.

25 So this is the statement of Commissioner Pai that was

JCIPSTA2

Ergen - Cross

1 attached to that order, and he says, in the second paragraph:
2 "Having completed that investigation, my colleagues and I now
3 conclude that the two companies, Northstar Wireless and SNR
4 Wireless, are controlled by DISH and, thus, are ineligible for
5 any small business discounts. They now owe the U.S. government
6 \$3.3 billion."

7 Do you see that?

8 A. Yes, I do.

9 Q. And then if you go down, there's a paragraph that says,
10 here's what the FCC found, here's what the staff found. "DISH
11 maintains an extensive level of control over SNR and Northstar,
12 thus, eliminating any possibility that they are independent
13 small businesses."

14 Do you see that?

15 A. Yes.

16 Q. Okay. To begin, SNR and Northstar are deeply indebted to
17 DISH. Combined, the two companies generated revenues of zero
18 dollars leading up to the FCC spectrum auction. As a result of
19 their spectrum purchase, now owe DISH approximately 10
20 billion."

21 Do you see that?

22 A. Yes.

23 Q. Okay. And, in fact, Chairman Pai notes in this order that
24 the behavior appeared to be bid rigging and suggested that the
25 antitrust division look into it; do you recall that?

JCIPSTA2

Ergen - Cross

1 MR. GELFAND: I object, your Honor. This is getting
2 even farther afield. This, apparently, is some kind of
3 commissioner statement that went along with an FCC decision.
4 It seems to be out of context, seems to be now drifting into a
5 different subject matter. We've not had an opportunity to
6 question the witness about this. I just think this is really
7 far afield from what we're talking about.

8 THE COURT: You can question the witness on your
9 redirect.

10 MS. BLIZZARD: Thank you, your Honor.

11 BY MS. BLIZZARD:

12 Q. If I could now turn to Commissioner O'Reilly that was
13 attached to this and part of the same FCC order. This is part
14 of Exhibit 1310.

15 And Commissioner O'Reilly is still a commissioner on
16 the FCC, right?

17 A. He is.

18 Q. And in the middle of that first paragraph, it talks
19 about -- it also describes the strategic bidding strategy
20 employed not only by the DISH designated entities, but also
21 DISH's wholly owned subsidiary, American AWS 3 Wireless; do you
22 see that?

23 A. Yes.

24 Q. And Commissioner O'Reilly's concern, which is down a few
25 paragraphs, is that he's not sure he agrees with the decision

JCIPSTA2

Ergen - Cross

1 that this matter should not be referred to the Department of
2 Justice. But in the interest of finality, he agrees.

3 Do you see that?

4 A. Yes.

5 Q. And he was concerned about bid rigging, was he not,
6 strategic bidding? Strategic bidding strategy that he
7 referenced in the paragraph above?

8 A. Was there a question? I'm sorry.

9 Q. We'll move on. Let's talk a little bit about the DOJ and
10 FCC negotiations in this case, can we?

11 We talked yesterday that you negotiated with Mr. Makan
12 Delrahim, the head of the DOJ's antitrust division, correct?

13 A. I did have several discussions with him, yes.

14 Q. And if I could bring up Plaintiff's Exhibit 1278 and, in
15 fact, you conducted a lot of these negotiations or these
16 discussions with Mr. Delrahim by texting directly with him; is
17 that correct?

18 A. I did engage in some texts.

19 Q. Okay. And for the public screen, we have blacked out the
20 phone numbers and just left the area codes, but I would think
21 on your screen, or certainly in your binder, you have the full
22 phone numbers. So the number that begins -- that says "Charlie
23 Ergen" and "303," that's you, correct?

24 A. Is there an exhibit?

25 Q. Yes. Why don't you go to 1278, that might help you, in the

JCIPSTA2

Ergen - Cross

1 A. Yes.

2 Q. Okay. You would not have been including other companies
3 that have MVNO arrangements like Comcast, Charter or TracFone,
4 correct?

5 A. I would not have been thinking of them in that way.

6 Q. And you don't think of them in that way because they don't
7 have facilities-based services, and they don't have owner
8 economics, correct?

9 A. They are different from the four that you mentioned in that
10 regard.

11 Q. So the four-to-three would be Sprint, T-Mobile, AT&T and
12 Verizon?

13 THE COURT: Asked and answered.

14 MS. BLIZZARD: Thank you, your Honor.

15 Q. Do you recall that Mr. Delrahim, at one point, gave you his
16 personal e-mail address?

17 A. He did.

18 Q. And he sent that to you in a text message, right?

19 A. I believe he sent me his -- I believe I asked him for his
20 e-mail address, and he gave me his Department of Justice e-mail
21 address and he gave me his personal e-mail address.

22 Q. But my question was, that was in a text message to you,
23 right?

24 A. I believe so.

25 Q. And you don't have any idea why he was giving you his

JCIPSTA2

Ergen - Cross

1 personal e-mail address, do you?

2 A. I do not.

3 Q. In your discussions with Mr. Delrahim, did you ever have
4 the impression -- you, yourself, have the impression he was
5 trying to keep discussions off of his official DOJ e-mail
6 address?

7 A. I did not.

8 MR. PARKER: Objection. That calls for speculation
9 about what Mr. Delrahim had in mind.

10 THE COURT: Sustained.

11 MS. BLIZZARD: Your Honor, let me rephrase the
12 question. I'm not asking about what Mr. Delrahim had in mind.
13 I'm asking what, in his discussions, Mr. Ergen had in mind when
14 he was given the personal e-mail address.

15 MR. PARKER: She's talking about impression.

16 THE COURT: Sustained.

17 MR. PARKER: Impression is another word for
18 speculation.

19 THE COURT: Sustained.

20 BY MS. BLIZZARD:

21 Q. So do you recall you sent a proposed remedy to Mr. Delrahim
22 on May 27th? We looked at that e-mail yesterday. Do you
23 recall that?

24 A. I do.

25 Q. Okay. But you didn't send it to his personal e-mail, did

JCIPSTA2

Ergen - Cross

1 you?

2 A. I did not.

3 Q. Now, in addition to these discussions with the Department
4 of Justice, you also needed to get DISH's FCC spectrum
5 build-out deadlines extended, correct?

6 A. In the particular remedy, we did not need to do that
7 because we were prepared to finish our IoT network, which would
8 have met our commitment. So we did not need to change our
9 licenses to compete.

10 Q. You didn't need to change your licenses to complete your
11 internet of things network, that's what you're saying?

12 A. I'm saying two things, to be clear. One is that we didn't
13 need to change our licenses because we were down the path of
14 finishing our IoT network, and we didn't need to change our
15 licenses to compete because we had something called a
16 flexible-use license, which meant that we could do IoT, but we
17 also could do broadband with that license; so it was a very
18 flexible license.

19 Q. But if the Department of Justice wanted you to enter
20 quickly with a consumer mobile broadband network, you could not
21 do both, that and deploy your internet of things network, in
22 time to meet your FCC deadlines, correct?

23 A. That's not true.

24 Q. So why did you negotiate with the FCC to extend your FCC
25 deadlines?

JCIPSTA2

Ergen - Cross

1 A. We were going to need -- we were interested in the
2 850 megahertz spectrum, and we were going to need FCC approval
3 for that. And so we wanted to be -- so with the meeting with
4 the FCC, they had things that they wanted, and they wanted
5 to -- this is my recollection.

6 They wanted to make sure that a broadband network was
7 built -- they were desirous of a broadband network being built
8 as soon as possible, and were less interested in an IoT
9 network; so in that negotiation, we agreed to build a much more
10 robust network, obviously, with nine million subscribers, and
11 to forego our IoT network to build a more robust network with
12 the totality of the deal that gave us the tools to compete
13 with, day one, with the rest of the industry. So it was a bit
14 of a negotiation, I guess, would be the answer.

15 Q. So your testimony is that the FCC wanted you to build a
16 more robust consumer mobile broadband network faster, correct?
17 That's what they wanted, and so you had to change your
18 deadlines to meet that request, yes?

19 A. We -- it's a little more complicated because we already had
20 deadlines. The narrow band IoT network would have met those
21 deadlines; so we voluntarily, in the interest of getting --
22 because we thought this deal was good for our company, and we
23 thought it was good for competition, we took our deadlines and
24 made them broad -- we took the flexible-use license and made it
25 a specific license to broadband, which since we weren't

JCIPSTA2

Ergen - Cross

1 building a broad network at the time, would require that if it
2 was a broadband license, the time would need to be extended.

3 But we didn't need to extend it if we'd have just
4 finished our IoT network. I'm not sure I'm clear. I hope
5 that's clear.

6 Q. Well, I think we can at least agree you needed to -- you
7 did enter into some negotiations with the FCC to alter the
8 build-out deadlines on your spectrum licenses; can we agree on
9 that?

10 A. We agreed to two things, one was to alter the license, and
11 then altering the license to a more narrow license for
12 broadband. And in that, I think you're correct that in
13 narrowing to a broadband license, by definition, we had to
14 extend the deadline because the deadline was like eight months
15 away. So you, obviously, couldn't build a broadband network in
16 eight months.

17 Q. Okay. You obviously couldn't build a broadband network in
18 eight months. Okay.

19 On June 10th, which I'll represent to you is the day
20 before this lawsuit was filed, on June 10th, Mr. Delrahim asked
21 you to contact members of Congress, specifically the Senate, to
22 speak to Chairman Pai about the deal, correct?

23 A. I think what he said -- I wouldn't say -- I think he
24 wanted -- I think he said I should talk to my -- I can't
25 remember if he said my Senate friends or Washington friends.

JCIPSTA2

Ergen - Cross

1 Q. Can we have Exhibit 1278 again, at page 1222, to refresh
2 your recollection about what Mr. Delrahim asked you to do.

3 "Today would be a good day to have your Senator friends contact
4 the chairman." Do you see that?

5 A. Yes.

6 Q. And "the Chairman" would be Chairman Pai, correct?

7 A. That's correct.

8 Q. And, in fact, you reached out to Senator Gardner of
9 Colorado, correct?

10 A. I did.

11 Q. And you also spoke with Senate Majority Leader Mitch
12 McConnell, correct?

13 A. I did.

14 Q. And you asked the -- see if I can see page 23 -- sorry,
15 1278, page 23 -- Exhibit 1278, page 23. Part of the way down,
16 you say -- that's where you confirm: "Very good. Talked with
17 Leader McConnell by phone as well."

18 Do you see that?

19 A. Yes.

20 Q. And you asked the Senators to contact Chairman Pai and say
21 that they supported DISH's efforts to negotiate with the FCC,
22 correct?

23 A. That's not correct. I asked Senator Gardner to contact the
24 Chairman because he knew our -- he was our state Senator from
25 Colorado. He was our -- I'd known him for probably 15 years.

JCIPSTA2

Ergen - Cross

1 He had been our congressional representative; so he knew our
2 company. He knew our plans. He'd been to our office many
3 times. So he knew how serious we were about entering the
4 business.

5 So I asked him -- and he's also on the Senate commerce
6 committee, which has some oversight to the FCC; so he knew the
7 Chairman, and I asked him to reach out to him in that context.
8 I don't believe I asked Leader McConnell to reach out to
9 anyone.

10 Q. So you're saying here, when you are reporting back to
11 Mr. Delrahim, this is what we have on the screen is a text
12 message, again, between you and Mr. Delrahim, correct?

13 A. Yes.

14 Q. And you say: "Very good. Talked with Leader McConnell by
15 phone as well," and you're saying you didn't talk to him about
16 the Sprint/T-Mobile merger?

17 A. I told him that the Sprint/T-Mobile merger was going on and
18 that DISH might be involved in that in some fashion, but I did
19 not ask him -- I think your question was -- or your statement
20 was, did I ask him to reach out to the Chairman, and that is
21 not true.

22 Q. Okay. So when Mr. Delrahim said -- asked you to reach out
23 to your Senator friends and have your Senator friends contact
24 the chairman, Chairman Pai, you reached out to Leader
25 McConnell, but you didn't take the next step of asking him to

JCIPSTA2

Ergen - Cross

1 contact Chairman Pai?

2 A. I did not. In full -- I also reached out to Senator
3 Bennet, who was the other Colorado Senator, who knows our
4 company very well, but was unable to reach him; so I didn't
5 have a conversation with him.

6 Q. Can I have the litigation depo at page 150, lines 1 through
7 20, please.

8 And I was asking you about this series of events, and
9 actually, on line 8 I say:

10 So again, I am not asking you for why he was doing it,
11 why Mr. Delrahim was suggesting that you reach out to your
12 Senator friends, I'm asking what your understanding was of why
13 he was asking you to.

14 And your response is: I think because we were talking
15 about 5G, pretty sophisticated technology that is not
16 necessarily well understood at this time frame, even at the FCC
17 and even by the Chairman.

18 So you believed that the FCC, at that time, didn't
19 have -- the FCC chairman did not have an understanding of the
20 5G technology; so it would be helpful for the Senators to talk
21 to him?

22 MR. PARKER: Your Honor, I don't believe this is
23 impeachment. I don't know why we're reading this deposition
24 here. I object.

25 THE COURT: Ms. Blizzard?

JCIPSTA2

Ergen - Cross

1 A. Okay.

2 Q. Okay. DISH and new T-Mobile have a seven-year agreement
3 where new T-Mobile will provide services to DISH, correct?

4 A. That's true.

5 Q. Okay. And at the same time that they are proceeding under
6 this contract, you're going to be competing for wireless
7 customers, correct?

8 A. Yes, we are.

9 Q. And DISH will be trying to steal customers from new
10 T-Mobile, right?

11 A. We will.

12 Q. And I assume, based on your knowledge of the industry and
13 general business, that T-Mobile will be trying to steal
14 customers from DISH, correct?

15 A. I believe they will.

16 Q. Okay. And certainly, DISH would rather that any customer
17 be a DISH customer than a new T-Mobile customer, right?

18 A. That is correct.

19 Q. And the opposite would be true --

20 A. I should say, just to be clear, if they pay their bill, we
21 wish them to be a DISH customer. If they don't pay their bill,
22 we wish them to be a T-Mobile customer.

23 Q. Understood. And the opposite would also be true, right,
24 that T-Mobile wants the customers that pay their bills and
25 wants the ones that don't to go to DISH, correct?

JCIPSTA2

Ergen - Cross

1 A. That's right.

2 Q. Okay. But T-Mobile will be getting some revenue from DISH
3 to support its customers under this seven-year agreement,
4 correct?

5 A. When we use the T-Mobile network, they will receive some
6 revenue from DISH, even though that customer will be DISH's
7 customer.

8 Q. And would you agree with me that DISH will put its
9 interests above T-Mobile and vice versa, T-Mobile will put its
10 interests above DISH's?

11 A. I think that will generally be the case.

12 Q. Now, despite this need to work together going forward, DISH
13 and T-Mobile have a long history, in fact, of not getting
14 along; would you agree with that?

15 A. There have certainly been times when we did not get along.

16 Q. And DISH has publicly accused T-Mobile of trying to stifle
17 competition, agreed?

18 A. I think we may have said that.

19 Q. Okay. Would you like to see where you said it?

20 A. Sure. I'm here to answer any question I can for you.

21 Q. All right. Let's just -- very quickly, can I have
22 Plaintiff's 269?

23 Okay. And this is an e-mail actually transmitting to
24 Matthew Pearl at the FCC from DISH employees, and it says:
25 "Please find attached for your reference an as-copy filed of

JCIPSTA2

Ergen - Cross

1 DISH's response to T-Mobile's letter regarding DISH's build-out
2 plans."

3 Do you see that?

4 A. I do.

5 Q. And then if I could flip to the first page of the letter,
6 this is a letter to Donald Stockdale at the Wireless Bureau
7 responding to a letter from T-Mobile.

8 And then you say, I believe in the first paragraph,
9 the last sentence of the first paragraph: "The T-Mobile letter
10 is a blatant attempt to stifle competition, factually
11 inaccurate, legally without merit, and should be disregarded in
12 its entirety."

13 Do you see that?

14 A. I do.

15 Q. And that was a true statement when you submitted it to the
16 FCC?

17 A. I believe so.

18 Q. Do you still feel that way about T-Mobile?

19 A. I still feel the way about that particular document.

20 Q. Okay.

21 A. I mean, look, do our company -- me, personally, want to
22 compete against T-Mobile? We can't wait, and I hope I get done
23 today because I'm going to go back and figure out ways to
24 compete with them on the plane, and I'm going to figure out in
25 the middle of the night tonight how to compete, and that's what

JCIPSTA2

Ergen - Cross

1 we're trying to do.

2 And so does that mean we get along with T-Mobile? No,
3 we probably don't.

4 Q. And yet, at the same time, under the seven-year MVNO
5 agreement, you're going to have to get along with T-Mobile at
6 some level, right?

7 A. We're going to have to make sure we're protected from any
8 mischief that they might try to cause, and I think that --
9 look, I think that's a possibility. And I think, in this
10 particular case, the Department of Justice appointed a monitor
11 Mr. Ullyot, that we talked about yesterday, and for the sole
12 purpose of making sure that that doesn't happen.

13 THE COURT: Let me jump in at this point on what you
14 just indicated.

15 THE WITNESS: Sure.

16 THE COURT: You said before that T-Mobile is going to
17 get paid for customers that use the DISH Network?

18 THE WITNESS: Yes.

19 THE COURT: But they're DISH's customers; so that's on
20 a plus side financially for T-Mobile.

21 Now, on the other side, are there costs that T-Mobile
22 will be incurring in carrying out its commitments to the DOJ,
23 for example, in providing a network at wholesale, below-market
24 price?

25 THE WITNESS: So T-Mobile -- I'll make it really

JCIPSTA2

Ergen - Cross

1 simple. If we charge -- T-Mobile charges us two ways. One is
2 by the megahertz at a low rate or a bucket of unlimited plans
3 at a rate. They will make revenue -- I'm just going to give a
4 simple example, and this by no means is -- okay.

5 But if we may pay them 50 cents of every dollar of
6 revenue we receive. Right? That's a made-up number, but it's
7 just to give you a ratio. They then have costs for that 50
8 cents. They have to maintain the network. They have to build
9 the network. They have to invest in the network, but if that
10 was their customer, right, they might have made 90 cents on the
11 customer. Right?

12 So they're torn between trying to make 90 cents and
13 only maybe making 40 cents. Right? They'd much rather make
14 the 90 cents. The great thing about this particular
15 transaction that the Justice Department put in place is that
16 while they may make 40 cents on that customer, when we build
17 our network, as we build our city out, and that customer is
18 solely on our network, they now make zero on that customer.

19 So when you put those factors together, that they make
20 materially less money than they otherwise would if it was their
21 customer, and then as our network is being built out and those
22 customers switch to our network and they make nothing, they are
23 not going to want DISH to have customers. And from a practical
24 point of view, the fact that we ride on their network is not
25 really a competitive factor because they are not going to want

JCIPSTA2

Ergen - Cross

1 DISH to get customers, but, you know, certainly, in the long
2 run, they do not.

3 THE COURT: All right. Are you suggesting that,
4 bottom line, that, on balance, this deal is going to cost
5 T-Mobile more than it is going to give them benefits?

6 THE WITNESS: It will. It will, because as we compete
7 with them and they have less customers than they otherwise
8 would have, that would be one way that will cost them, and the
9 second way it will cost them is they won't be able to raise
10 their prices as much as they otherwise might be able to.

11 So it's going to hit them in the ability to raise
12 price, and it's going to hit them in lost customers, thus, lost
13 revenue.

14 THE COURT: Let's pursue that for a moment. Now,
15 putting your concern aside about mischief, which the DOJ is
16 going to be monitoring, if T-Mobile decides that it's going to
17 start a war with DISH for customers, that would not be
18 mischief, that's competition.

19 THE WITNESS: They could do that under this agreement.

20 THE COURT: And if, looking at their bottom line, they
21 see that over the course of the next three to seven years it's
22 going to cost them tens of millions of dollars for this
23 agreement, why is there not an incentive for them to work
24 competitively within the rules to put you out of business?

25 THE WITNESS: I think they'll try. I think they'll

JCIPSTA2

Ergen - Cross

1 try.

2 THE COURT: They will.

3 THE WITNESS: Look, competition is always a concern,
4 but as a company, I mean, we compete against AT&T and Verizon
5 and T-Mobile in video today, and we compete against AT&T in
6 satellite television, and so we do pretty well. The -- the
7 point I was going to make is --

8 THE COURT: AT&T does not have an agreement with you
9 that is a negative for them.

10 THE WITNESS: Yes. No, my point is that I do believe
11 T-Mobile will try to compete, and I think, outside of mischief,
12 they will try their darnedest to out-market us, get customers
13 and be aggressive in the marketplace.

14 I was going to say the -- I lost my train of thought.
15 The difference is that as we get -- if they lower their price,
16 our formula -- we talked about that deflater yesterday as one
17 of the parts. That formula, because of the buckets that are in
18 that formula, our price, if they lowered their price for their
19 popular packages, our price would go down as well.

20 So they can't do what -- it would be difficult for
21 them to lower their price and enter a price war and eliminate
22 us as a competitor. They would certainly have an impact on the
23 industry. It certainly would reduce our profits as well, but
24 it wouldn't eliminate us as a competitor because there's a
25 formula that protects us.

JCIPSTA2

Ergen - Cross

1 THE COURT: All right. Proceed.

2 (Continued on next page)

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JCITSTA3

Ergan - Cross

1 THE COURT: All right, you may proceed.

2 MS. BLIZZARD: Thank you, your Honor, I will try to
3 move a little faster here.

4 BY MS. BLIZZARD:

5 Q. One quick question on dynamic calling spectrum sharing,
6 DSS. You know what that is, right, Mr. Ergan?

7 A. I do.

8 Q. And you testified at your deposition that DISH intends to
9 use dynamic spectrum sharing. Do you recall that?

10 A. I think that at the time of the deposition it was one of
11 the things -- it's one of the technologies that we're looking
12 at. With the addition of some of the high level engineers that
13 we talked about yesterday, we are probably a little less
14 optimistic about dynamic spectrum sharing, but it's still AN
15 option for us, but we have other options.

16 Q. I'm going to move on. Let's talk a few more moments about
17 broken promises and some of the missed deadlines which we
18 started with.

19 MR. PARKER: I object to that characterization.

20 THE COURT: Sustained. Ms. Blizzard, have we not
21 exhausted this topic already?

22 MS. BLIZZARD: Sadly, we haven't, your Honor.

23 MR. PARKER: For the record, I think we have, your
24 Honor.

25 BY MS. BLIZZARD:

JCITSTA3

Ergan - Cross

1 Q. Mr. Ergan, has a federal court ever found that you failed
2 to uphold promises that you had made to the court under penalty
3 of perjury?

4 A. I can remember a case years ago where a judge found that I
5 personally had broken a promise.

6 Q. And that case was *CBS Broadcasting v. EchoStar*, correct?

7 A. It was a case with -- I remember it was in Miami, and I
8 remember it was a case against broadcasters, it might have been
9 a lot of broadcasters or might have just been CBS, I don't
10 remember.

11 Q. And that district court found in its findings of fact that
12 you had made a formal pledge under penalty of perjury to
13 terminate certain subscribers from EchoStar services, correct?

14 A. That's my recollection.

15 Q. And the court found that the promise was in fact made in an
16 effort to dissuade this court from issuing a preliminary
17 injunction, correct?

18 A. I don't remember the exact details of why they found it,
19 but they certainly felt like that I personally had broken a
20 promise.

21 Q. And following a bench trial the court made a finding that
22 you had later elected to break a promise that you made under
23 penalty of perjury to the court, correct?

24 A. Again, I just remember that it was a very embarrassing time
25 for me, because nobody wants a court to find that they have

JCITSTA3

Ergan - Cross

1 found that they believe you had broken a promise.

2 Q. More recently, in United States Bankruptcy Court here in
3 the Southern District of New York, did a court find that your
4 testimony was not credible?

5 A. They did, but the good news is that history has proven my
6 testimony to be very, very, very credible.

7 Q. So the courts -- the bankruptcy court at that time found
8 that your testimony concerning a certain bid as a personal
9 investment was not credible. Do you recall that, that finding?

10 A. My recollection was that the court found that our
11 motivation for not pursuing a particular transaction was not
12 credible because there was no interference, and I think the
13 company at that time was called LightSquared, but today called
14 Ligado, and yet here we are three years later and the NTIA, the
15 Department of Defense, the federal transportation agency have
16 said that what we said in our due diligence, that there was
17 interference, was absolutely correct, that the judge didn't
18 find it credible, but many places in the government have found
19 that our due diligence was in fact accurate.

20 Q. But I'm not interested in the substance of LightSquared.
21 The issue is not the substance of whether your analysis is
22 right, the issue is, and what the court found was what you told
23 the court, your testimony, was not credible; not the substance,
24 but your testimony was not credible. Do you recall that?

25 A. Well, again, the recollection I have is the credibility was

JCITSTA3

Ergan - Cross

1 about -- again, there was probably -- there were parts of my
2 testimony that the judge did not find credible, but that
3 sometimes happens. I think judges have to decide which
4 witnesses are credible and which ones aren't, and in this
5 particular case the judge did make some -- I just recall made
6 some mention of my credibility.

7 Q. Okay. And in fact, the court found that you, Mr. Ergan,
8 failed to testify truthfully about the reasons for your, quote,
9 "no vote," and that was significant and part of a troubling
10 pattern of non-credible testimony.

11 Do you recall that?

12 A. Again, I think what you just said is exactly what I
13 remember, which is that we had uncovered in due diligence there
14 was interference problems with the LightSquared satellites, and
15 we were the only -- of all the companies that had done due
16 diligence, our company found and therefore we were no longer
17 interested in purchasing or buying that company out of
18 bankruptcy, the judge found that wasn't credible. Later, as we
19 sit here today, many parts of the U.S. government have found
20 our due diligence was exactly correct. And so while I would
21 prefer that the judge didn't find our company not credible in
22 that bankruptcy trial, I'm somewhat -- I feel somewhat
23 vindicated that history has shown that we in fact were
24 credible.

25 MS. BLIZZARD: Mr. Nikels, do we have the LightSquared

JCITSTA3

Ergan - Cross

1 opinion?

2 Q. This is the opinion you were talking about?

3 Can we go on page, I believe it's 319.

4 THE COURT: Ms. Blizzard, is there something new about
5 what you are showing?

6 MR. PARKER: Your Honor, I don't see how this --

7 MS. BLIZZARD: I was just trying to refresh
8 Mr. Ergan's recollection that the issue was not the substance,
9 the issue was that when what was said to the court was not --

10 THE COURT: I think the question was asked and
11 answered, let's move on.

12 MS. BLIZZARD: All right, your Honor.

13 BY MS. BLIZZARD:

14 Q. Mr. Ergan, do you recall back in 2012 you were seeking to
15 acquire certain AWS spectrum, do you recall that?

16 A. I think we first started to acquire spectrum in 2011.

17 Q. And in 2012, in the course of an FCC proceeding, you told
18 the FCC that you planned to enter into the wireless market to
19 support American consumers if you were allowed to get the
20 spectrum. Do you recall that?

21 A. I have a general recollection of that. Yes, I think that's
22 accurate.

23 Q. And even though you told the FCC that in 2012, to this day
24 DISH has not built out a network to support mobile broadband
25 for consumers, correct?

JCITSTA3

Ergan - Redirect

1 A. Well, we have built --

2 Q. Yes or no, Mr. Ergan.

3 A. We built a network -- ask the question again, I will make
4 sure I respond to it.

5 Q. Despite telling the FCC in 2012 that you plan to enter the
6 wireless market for American consumers for broadband, that
7 today, the end of 2019, DISH has not built a mobile broadband
8 network for consumers. As we sit here today, that network does
9 not exist, correct?

10 A. We have not built that network yet.

11 MS. BLIZZARD: Thank you, no further questions, your
12 Honor.

13 REDIRECT EXAMINATION

14 BY MR. PARKER:

15 Q. Good morning, Mr. Ergan.

16 A. Good morning.

17 Q. Let me go back on some of what Ms. Blizzard has talked
18 about, but first I want to give some context. Why are you
19 agreeing to build a 5G network?

20 A. That's what we're going to need. We're going to need a 5G
21 network with broadband to compete against -- if this merger is
22 allowed, to compete against the three big incumbents.

23 Q. And you're doing it in order for commercial purposes
24 because you believe it is a profitable investment, am I right?

25 MS. BLIZZARD: Objection, leading, your Honor.

EXHIBIT C

JCGTSTA1

1 UNITED STATES DISTRICT COURT
 2 SOUTHERN DISTRICT OF NEW YORK

-----x
 3 STATE OF NEW YORK, et al.,

4 Plaintiffs,

New York, N.Y.

5 v.

19 Civ. 5434 (VM)

6 DEUTSCHE TELEKOM AG, et al.,

7 Defendants.

-----x

8 December 16, 2019
 9 9:05 a.m.

10 Before:

11 HON. VICTOR MARRERO,

12 District Judge

13 APPEARANCES

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BEAU W. BUFFIER

JCGPSTA4

Claire - Cross

1 Department of Justice has determined would be acceptable,
2 correct?

3 A. Correct, with a lot of remedies.

4 Q. Okay. And when DISH did -- sorry. When Sprint had
5 assessed DISH's ability in the past to set up a wireless
6 network, it concluded that it would be very hard for DISH to
7 become a strong national retail competitor, correct?

8 A. Correct.

9 Q. And you testified just before that you have met Charlie
10 Ergen, correct?

11 A. Correct.

12 Q. And at your DOJ deposition, do you remember that you
13 testified that Mr. Ergen's latest trick is to build this
14 really, really thin network to say he's built a network" --
15 let's just put up the DOJ testimony. I think it would be
16 easier. It's at page 367, line 15 to 368, line 6.

17 All right. The question was: "And isn't he under the
18 gun to do something with his spectrum by 2020?"

19 And you said: "I'm sure he's going to find -- his
20 latest trick is to build this really, really thin network to
21 say that he's built a network;" do you see that?

22 A. Yes.

23 Q. And further, you were asked: "Do you think he can do it?"

24 And you answer: "A meaningless thin network so that
25 he doesn't get in trouble with the FCC. He's a master at that.

JCGPSTA4

Claire - Cross

1 He's a master of band spectrum when he's not a carrier. I
2 mean, everybody knows Charlie, what his game plan is."

3 Do you see that?

4 A. Yes.

5 Q. And that was based on your prior familiarity or experience
6 with Charlie as a businessman, correct?

7 A. That was public, what Charlie intended to do, to build a
8 thin network to satisfy the needs of the FCC.

9 Q. And can we look at 368, line 17 through 369, line 6. The
10 question -- can we look at the question, first.

11 "But given the fact that he hasn't yet built out a
12 network, don't you think this would give Sprint leverage to get
13 a good price?"

14 And you answer: "Again, Charlie Ergen, his plan, I
15 think he's basically somebody who holds spectrum for the value
16 to continue to go up, and he'll build -- I think his latest
17 thing, he's going to spend a billion dollars to build a
18 nationwide network so that he can claim he has a network. As
19 long as he connects one device or five devices or ridiculous
20 amounts of low devices, then he's out of -- he's out of trouble
21 with the FCC."

22 Do you see that?

23 A. Sure.

24 Q. And you were talking then about the termination of your
25 prior negotiations with DISH, correct?

EXHIBIT D

JCAVSTA5

Langheim - direct

1 A. Correct.

2 Q. Let's turn, please, to page 3 of that document. And here
3 is an email from Mr. Boorman. Is Mr. Boorman also a member of
4 your team?

5 A. Yes, he is.

6 Q. And he starts his email by saying: We just texting you
7 after a call with Peter and Braxton. Do you see that?

8 A. Yeah.

9 Q. And did you understand that Peter and Braxton to refer to
10 Peter Ewens and Braxton Carter, two executives at T-Mobile?

11 A. Yes.

12 Q. Did you understand Mr. Boorman to be relaying the
13 conclusions that he received from the T-Mobile executive team?

14 A. Yeah.

15 Q. Do you see the paragraph that begins with "Also"?

16 A. Yeah.

17 Q. Mr. Boorman reported: Also, they very skeptical that much
18 network would be built, as it takes so long and needs billions.
19 Right?

20 A. Correct.

21 Q. And so you understood at that time that's the view of
22 Mr. Boorman and of the T-Mobile executive team; correct?

23 A. Correct. Yes.

24 Q. Let's please turn to Exhibit 402.

25 A. Mr. Mach, may I highlight one sentence which is very

JCAVSTA5

Langheim - direct

1 important in this context on this exhibit?

2 The granularity of the buildout. Because it's very
3 important to understand this is June; this is before we got the
4 final remedies with the DOJ that we negotiated in August on the
5 table. There's a very important sentence in there, which is:
6 The way cherry-picking -- meaning building your network in top
7 25 markets, for example, or starting in New York City -- is via
8 limiting granularity. You can't bid just Manhattan; you would
9 have to bid New York City metro area.

10 It was a problem until June. Before then, the roaming
11 agreement and the MVNO was amended.

12 Q. Thank you, sir.

13 So we'll look at some of the other reasons that your
14 team offered for the views that they shared.

15 A. Yeah.

16 Q. Let's move on to Exhibit 402 please. I'm sorry, that is --
17 yes, Exhibit 402.

18 Here we have another email from Mr. Pohlmann, right,
19 sir?

20 A. Yes.

21 Q. And Mr. Pohlmann is reporting another conversation with
22 Mr. Carter and Mr. Ewens of T-Mobile, right?

23 A. Yeah.

24 Q. And Mr. Pohlmann told you --

25 MR. MACH: A little further down, Mr. Nichols, where

JCAVSTA5

Langheim - direct

1 it says "First and foremost." Thank you.

2 Q. Mr. Pohlmann told you --

3 MR. MACH: Right below that, Phil.

4 Q. Charlie has no real team to run a wireless business of
5 substance, and so far did not appear with any partners,
6 financial sponsors, etc. That is not to say there won't be
7 any. Right?

8 A. Yeah.

9 Q. And then below that, Mr. Pohlmann told you that Charlie
10 appears to be interested to solve his FCC milestones. Spectrum
11 at a discount is worth having, but he did not seem to be too
12 intrigued on Boost, right?

13 A. That's Mr. Pohlmann's view, yes.

14 Q. What did you understand Mr. Pohlmann's view to be there?

15 A. What you are saying all along, which is that a network
16 build of DISH is unlikely.

17 Q. And where it said impact to Newco, do you see that, sir?

18 A. Yeah.

19 Q. And at the bottom where it says "impact to Newco," there's
20 a bullet that says: All in all, they put less weight on any
21 significant network build over the next ten years and
22 respective second order effects. Do you see that?

23 A. Yes.

24 Q. And again, your understanding, that he is relaying --
25 relaying his conversation with the T-Mobile team, right?

JCAVSTA5

Langheim - direct

1 A. Yes.

2 Q. And you understood him to be saying that according to the
3 T-Mobile team, it was not likely to be a significant network
4 build by DISH over the next ten years, right?

5 A. I was pushing the team's many times in that time period of
6 coming to a conclusion, because I was worried, that's the
7 reason why we have done the work.

8 And please consider this is June. This is not August.
9 A lot of things have changed fundamentally.

10 But it's fair what you are saying, that the conclusion
11 of the team is what they are -- what they are writing here on
12 the letter.

13 Q. Thank you.

14 And he then makes this reference to second order
15 effects. Do you see that?

16 A. Yes.

17 Q. And did you understand that to be a reference to pricing
18 effects against T-Mobile?

19 A. Yes, that's -- that's the thing that worries me the most.
20 It means that the second order price impact is that we
21 believe -- I believe, I strongly believe, by building out that
22 network, in combination with the MVNO agreement, prices will
23 fall even beyond what we have forecasted ourselves in the S-4
24 filing. That's a second order impact.

25 It's not only that you offload customers from the MVNO

JCAVSTA5

Langheim - direct

1 to your own network, then we lose obviously revenues, but it's
2 also the impact that if you have a new network, you want to
3 just get customers on. How do you get customers on? You lower
4 price, and then the prices are coming down in the market.
5 That's the second order impact.

6 Q. Right.

7 So the concern that is being discussed here when it
8 talks about second order effects is the concern that DISH will
9 be a price competitor that pulls prices down, right?

10 A. Yes.

11 Q. And the report here is that neither this member of your
12 team nor the T-Mobile team believed at that time that that
13 would occur?

14 A. In June, correct, yes.

15 Q. Now, you've mentioned the commitments that were made to the
16 DOJ a couple of times.

17 A. Yeah.

18 Q. So let me touch on this a little bit with this document and
19 the one we just looked at.

20 So the commitments to the DOJ didn't give DISH any
21 additional partners to build its network, right?

22 A. What do you mean which partners? Money -- strategic
23 partners or --

24 Q. Sure. So it says: Charlie has no real team to run a
25 wireless business of substance, and so far did not appear with

JCAVSTA5

Langheim - direct

1 any partners, financial sponsors, etc. Do you see that?

2 A. Yes. Correct.

3 Q. So the deal with the DOJ didn't give Charlie a team to run
4 a wireless business of substance, did it?

5 A. This is Philipp Pohlmann, a 38-year old MNA process
6 execution person, not a strategic head of strategy. He's
7 writing this.

8 My personal experience on this one is different. You
9 can hire a team. DISH is in the business of talking to
10 consumers, having subscription business. So I don't -- I
11 disagree with this. That there are no team in the world that
12 is building this network out, I think we will see otherwise.

13 Q. I understand that you're saying that you disagree with
14 Mr. --

15 A. I just -- exactly. I disagree with this particular line
16 here.

17 Q. But you would agree that the concern that Mr. Pohlmann is
18 raising is not solved by the DOJ commitments; correct? It
19 doesn't do anything to give Charlie a team?

20 A. Yeah, that's fair.

21 Q. And if you look back, please, to the document we just
22 looked at, which was Exhibit 401.

23 A. Yeah.

24 MR. MACH: And on page 3 of 401, Mr. Nichols, if you
25 could go there.

JCAVSTA5

Langheim - direct

1 Q. So Mr. Boorman, when he said he was skeptical that much
2 network would be built, he said: They very skeptical that much
3 network would be built, referring to the T-Mobile team, right?

4 A. Yes.

5 Q. As it takes so long and needs billions, right?

6 A. Correct.

7 Q. So the commitments to the FTC didn't -- I'm sorry, the
8 commitments to the DOJ didn't change how long it takes to build
9 a wireless network, did it?

10 A. It changed one very important thing: That DISH can now
11 build out city by city. So you start in New York, service the
12 customers in New York, and you don't worry that your customer
13 that is traveling to Florida on holiday, the phone is not
14 working. So the national roaming, the link between the MVNO
15 and the network buildout is a real game-changer. The DOJ has
16 been very smart on this. That's the reason why he now doesn't
17 have to start from scratch, build a network countrywide.

18 I'm sorry.

19 Q. You're talking about the possibility that he builds one
20 city or another city or a third city?

21 A. Yes. Exactly.

22 Q. But in terms of what it would cost and how long it would
23 take to build out a nationwide network, that is not changed by
24 the DOJ commitments, is it?

25 A. Yeah, but it helps him -- without these -- these remedies

JCAVSTA5

Langheim - direct

1 on the table, doing it standalone, without offering a customer
2 from day one, coverage on the whole of the United States, that
3 may be a very tough undertaking. So this is -- this is the
4 real game-changer.

5 Second, it will cost billions. But it will cost much
6 less to build a 5G network only, which was building out a 2G,
7 3G, 4G, 5G network. So, yes, of course, it will still cost
8 billions. You have to ask him, but eight to ten billions is a
9 number that I've seen in the press. But it's very worthwhile
10 now doing it, very worthwhile economically to do that, because
11 he has this MVNO at record low prices with us and a roaming
12 agreement between these two agreements that he has the network
13 and the -- and the MVNO, that makes it economically so
14 attractive for him.

15 Q. Let's go to Exhibit 346 please.

16 Exhibit 346 is an email from Mr. Pohlmann that
17 attaches the impact analysis that your team prepared in
18 response to your request, right?

19 A. Yes.

20 Q. And the result of your team's impact analysis at that time
21 was that DISH was not likely to build its own wireless network,
22 as you said, right?

23 A. I don't see the full document, but I trust you're right on
24 this.

25 Q. It should be in your binder, if you need it, just to be

JCAVSTA5

Langheim - direct

1 clear.

2 Let's go to page 3 of Exhibit 346.

3 A. Yeah.

4 Q. And you see here it's the executive summary and key
5 conclusions?

6 A. Yeah.

7 Q. And where it says larger network buildouts beyond 50
8 percent rather destroy NPV, what does that mean?

9 A. It would mean that if DISH would build out more than 50
10 percent of the United States, it may have a negative NPV.

11 Q. "NPV" means?

12 A. It's --

13 Q. Net present value?

14 A. -- net present value of this network. But you always have
15 to see this company is a package. So you can't afford a
16 negative NPV on a network buildout if you -- if you safeguard
17 something else which is very important for your company, has a
18 lot of value, which is \$21 billion of spectrum that he has
19 invested.

20 And even if he loses some money on a network build,
21 but safeguards 21 billion of market cap, which is a spectrum
22 that he has acquired by this agreement, then fulfilling his
23 promises vis-à-vis the FCC, this still could be economically
24 something that may be attractive.

25 Q. Let's take a look in a little bit more detail about what

JCAVSTA5

Langheim - direct

1 your team said here. The bullet point below that, it starts
2 with: Unless he MVNO taker -- I assume it's probably "the MVNO
3 taker."

4 A. Yeah.

5 MR. MACH: Phil, could you highlight that, down to the
6 next line as well please. Thank you.

7 Q. The consensus of your team was that unless the MVNO taker
8 finds a significant lever to improve network economics, the
9 outside end view doesn't provide a lot of rationale for
10 substantial buildout, right?

11 A. Yes.

12 Q. And then this slide specifically discusses the possibility
13 that DISH would be the MVNO taker, as it's referred to here,
14 right?

15 A. Yes.

16 Q. And down below where it says: Charlie has significant
17 current spectrum position valued at 20 billion.

18 A. Yes.

19 Q. Do you see that?

20 A. Yeah.

21 Q. Your team concluded that an organic business case would
22 need to match that based on assumptions in this document that
23 would not be justified. Do you see that?

24 A. Yeah.

25 Q. And your team -- if you turn to the next page, sir --

JCAVSTA5

Langheim - direct

1 analyzed three different possible scenarios of what DISH would
2 do.

3 A. Yeah.

4 Q. Right? One called Charlie doesn't do much, right? That's
5 where DISH doesn't build much of a network, right?

6 A. Yeah.

7 Q. One called the central case?

8 A. Yes.

9 Q. And one called the poor case?

10 A. Yes.

11 Q. And the poor case was called the poor case because that
12 would be a poor result for DT; is that correct?

13 A. Yes.

14 Q. And the poor case scenario that's discussed is one where
15 DISH builds a network that would cover 80 percent of the U.S.
16 population in ten years, right?

17 A. Yeah.

18 Q. And your team concluded at the very bottom of this slide,
19 where it says MVNO NPV?

20 A. Yeah.

21 Q. MVNO NPV two billion, largely because four million subs
22 does not justify the CAPEX for network. We think this case is
23 very unlikely. Buildout not realistic; funding, negative NPV.
24 Right?

25 A. Yeah.

JCAVSTA5

Langheim - direct

1 Q. Now, you mentioned a minute ago the DOJ commitments, we
2 talked about that?

3 A. Yeah.

4 Q. Now, when it says buildout not realistic, the DOJ
5 commitments, again, don't change its need to actually
6 physically build its network, right?

7 A. That is true. But it changed the economic incentive. This
8 is an analysis based on June. The analysis based in August
9 would look differently; and you know that because you've seen
10 my files. We come to different conclusions later on,
11 reflecting on the remedies that he has achieved with the
12 regulator.

13 Q. Well, you're referring to the possibility that Mr. Ergen
14 can lose his spectrum if he doesn't meet -- strike that.

15 I'm sorry.

16 You're referring to the possibility that DISH could
17 lose its spectrum if it doesn't meet its buildout commitments,
18 is that what you're referring to?

19 A. He may not -- how we say. DISH may not lose its spectrum,
20 but its market capitalization may come down over time because
21 investors are getting worried that sitting on all the spectrum,
22 not building it out, what's the case. That is actually what is
23 happening over the last three to four years to DISH, market cap
24 come down, investors are worried.

25 So some stage, I know neglect that this is all history

JCAVSTA5

Langheim - direct

1 for a second, at some stage it may very well make sense
2 economically to do something if you, at the same time, de-risk
3 the 21 billion of spectrum value that you have. That's all I'm
4 saying.

5 Q. I'm sorry, I didn't understand that.

6 You're saying that if it weren't for the fact that the
7 spectrum is at risk, in your view, because of commitments to
8 the FCC, then you would agree that he's probably not going to
9 build the network?

10 A. I apologize, Mr. Mach, I'm not clear.

11 First of all, this is all history. This is no longer
12 the case today. But I will answer your question in any case.

13 They may have, in my view, in my view, even the
14 possibility that despite building out a network may lose you
15 money, you may still want to do it, because the 21 billion
16 spectrum value may be at risk. Because at some stage you have
17 to build it out, would the regulator allow that. This spectrum
18 is being sold to Verizon, to one of the bigger guys, saying,
19 What's happening to Sprint and T-Mobile. Haven't this company
20 promised to build it out.

21 So at some stage you may even take an economic bad
22 decision, losing two billion, in order to safeguard the 21
23 billion that is at risk here. That's all I'm saying.

24 Q. Right. Just to be clear, the 20 billion you're talking
25 about is the spectrum, right?

JCAVSTA5

Langheim - direct

1 A. Yes.

2 Q. So you're saying the risk that the FCC would take the
3 spectrum away changes the calculation in your view?

4 A. Yeah.

5 Q. Okay. Let's turn please to Exhibit 347.

6 Now, here we're to June 10th, 2019. And your team is
7 still discussing the possibility of DISH building a network,
8 right?

9 A. Yes.

10 Q. And here you have another email from Mr. Boorman, right?

11 A. Yeah.

12 Q. And at the bottom of the first page there is -- there are
13 some conclusions about your analysis from Mr. Boorman, right?

14 A. Yeah.

15 Q. And Mr. Boorman said: We have to make a basic assumption.
16 If we believe the FCC will waive/flex existing buildout
17 commitments if DISH builds under the remedy, then negative NPVs
18 are okay, as long as they save the 20 billion spectrum value,
19 right?

20 A. Yes.

21 Q. And that's what we were just discussing.

22 A. Yes.

23 Q. Mr. Boorman then went on to say: My read is this won't
24 work. Maybe they flex a bit, but if the FCC gives in, everyone
25 else sues. So I'm happy to consider the MVNO as a game he can

JCAVSTA5

Langheim - direct

1 play; but it's economically illiterate to argue he actually
2 builds it, therefore 70 percent is not relevant.

3 Do you see that, sir?

4 A. Yes, I see.

5 Q. Mr. Boorman continues and says: In the end, DISH might
6 build something the lawyers can use, but not something
7 customers can use. But if I'm wrong about this, 20 percent is
8 a reasonably cautious approach. Do you see that?

9 A. Yeah.

10 Mr. Mach, we are discussing now for ten minutes stuff
11 that happened in June that has been overruled by the DOJ
12 remedies. We can dwell on this for hours. I don't deny that
13 my team was skeptical about a buildout without the MVNO
14 agreement that we finally signed without the national roaming
15 and without obviously having a gun to DISH's head of building
16 it out no matter what.

17 Q. Mercifully, we won't dwell on it for ten more hours.

18 A. Okay. Sorry.

19 Q. We will, however, look at one more document, okay?

20 A. Please.

21 Q. Could you please turn with me to Exhibit 405. And do you
22 recognize Exhibit 405 as another compilation of your notes that
23 you created in your role at DT?

24 A. Yeah.

25 Q. A few pages in on page 17, you pasted in an analysis that

JCAVSTA5

Langheim - direct

1 was created by your colleague Mr. Boorman, right?

2 A. I do have here in front of me an email, your impact
3 analysis, yeah, it says on my note files.

4 Q. I'm sorry, sir, I can't hear you.

5 A. I'm lost. I just grabbed the binder. What document are
6 you referring to? Sorry about this.

7 Q. So we are on Exhibit 405.

8 A. Yeah, 405. I have it.

9 Q. And here you have Mr. Boorman sending you an analysis
10 concerning the possibility that DISH would build again, right?

11 A. So what page are you on?

12 Q. Sure. I'm on page 17.

13 A. 17.

14 Q. Thanks for your patience.

15 A. So it's an email from Joe, 10th of June.

16 Okay. I have it in front of me.

17 Q. Here you have -- it says: Joe impact analysis, because it
18 was analysis by Mr. Boorman, right?

19 A. Yes.

20 Q. On page 17.

21 And at the top it says: So DISH has to build, but the
22 business case, our negative case, is just not credible, right?

23 A. Sorry. I'm too slow now. Yeah, I see that here.

24 Q. And in that first paragraph he gives an explanation for why
25 the business case, the negative case, is not credible, right?

JCAVSTA5

Langheim - direct

1 A. Yeah.

2 Q. He says: I think these assumptions are just too
3 optimistic. As 5G arms race continues crews are scarce, U.S.
4 zoning is painful and slow.

5 A. Yeah.

6 Q. He goes on to talk about the capital expenditures of
7 T-Mobile, Verizon, and AT&T. Do you see that?

8 A. Yes.

9 Q. And then he says: Even assuming the assumptions are right,
10 DISH burns 15 billion over ten years, and they have horribly
11 negative terminal value. You need tens of billions of subs to
12 justify it. Do you see that?

13 A. Yes.

14 Q. And then he concludes: A big bill just isn't going to
15 happen. Right?

16 A. Correct. In June.

17 Q. Right. So he gives some reasons here, right? He says, for
18 example: U.S. zoning is painful and slow.

19 A. Yes.

20 Q. DOJ commitments don't change the nature of zoning for
21 building a tower or other facilities, right?

22 A. But you can start in Manhattan and don't have to start
23 nationwide; so you do it then over seven years. We have an
24 MVNO agreement that is covering you for seven years. So you
25 can do it city by city, which before the full remedy package

JCAVSTA5

Langheim - direct

1 wasn't available to DISH, that's the reason why they have
2 struggled for the last five years to find a way to build a
3 network.

4 Q. You can do it maybe city by city, but you'd still have to
5 resolve zoning in each of those places, right?

6 A. It's different when you want to do this for 350 million
7 pops or just for 10 million customers in New York. So you
8 start with one and the focus is on that, yeah.

9 Q. Right. Needless to say, a network that covered 10 million
10 pops would be far short of a nationwide network, right?

11 A. Yes. Yes.

12 Q. He also mentions: As 5G arms race continues, crews are
13 scarce. Right?

14 A. Crews?

15 Q. Crews are scarce. That's in his analysis, right?

16 A. Can you highlight it for me? Crews are scarce. Yes.
17 Sorry. Yes.

18 Q. And that is not a problem that is solved by any DOJ
19 commitment, right?

20 A. Correct.

21 Q. And your team actually gave other reasons that aren't
22 resolved by the DOJ commitments, right?

23 A. Yes.

24 Q. Let's go to 403. I think this will be the last document we
25 look at on this topic.

JCAVSTA5

Langheim - direct

1 Here we have an email from Mr. Pohlmann to you and
2 other members of your team, right?

3 A. Yes.

4 Q. The headings are a little bit confusing, because it goes A,
5 A, C, A. But I want to ask you what occurs below the last A in
6 the middle of the -- below knock-on effects, the last A.

7 MR. MACH: And let's capture the next two bullet
8 points as well there, Phil.

9 Q. And do you see Mr. Pohlmann says knock-on effects into the
10 market?

11 A. Yes.

12 Q. And again, you recognize this as asking the question of
13 whether DISH is going to have the potential to competitively
14 price its product compared to T-Mobile, right?

15 A. Yes.

16 Q. And again, he says: You can guess what the U.S. team's
17 answer to all of the above is directionally, right?

18 A. Yes.

19 Q. I'm sorry. Skip the point here.

20 The first A, the question is: How significant of a
21 network will the buyer set up in seven years, right?

22 A. Yeah.

23 Q. You see that, sir?

24 A. Yes, I see that.

25 Q. I'm sorry. I skipped over that.

JCAVSTA5

Langheim - direct

1 So then the U.S. team, it's the second bullet, says:
2 Most importantly, they have little confidence that Charlie or
3 any other buyer will have ability and incentive to build a
4 meaningful fourth network, right? That's what they reported?

5 A. Yes.

6 Q. And then they included arguments here. They say: The key
7 arguments are capital intensity, complexity, time, and team
8 requirements, as well as MVNO mechanics. Right?

9 A. Yes.

10 Q. And then there's this parenthetical, minimum buildout areas
11 are New York rather than a block of Manhattan. Right?

12 A. Yes.

13 Q. And that's what you're referring to about the change with
14 the DOJ commitments, there could be more cherry-picking?

15 A. Cherry-picking is possible, yes.

16 Q. And that could solve the MVNO mechanics issue that is
17 listed here in Mr. Pohlmann's email is what you're saying,
18 right?

19 A. Can you rephrase that question?

20 Q. Sure. So Mr. Pohlmann's email says: Key arguments are
21 capital intensity, complexity, time, and team requirements, as
22 well as MVNO mechanics. Right?

23 A. Yeah.

24 Q. And the last one, MVNO mechanics, I think your point is,
25 could be addressed by the changes that you're referring to.

JCAVSTA5

Langheim - direct

1 Right?

2 A. Now I see where you're going. Yes.

3 Q. Okay. But the FCC agreement doesn't change the time and
4 team requirements, for example, the other key points there.

5 A. I think smart people will figure out that this remedy is
6 very attractive, and DISH will be a very valuable company a few
7 years down the road. This will entice enough smart guns to
8 join this company.

9 I think it's always tough to join something if you
10 have doubts. But I believe that this is not about -- my
11 personal view. Capital intensity, we always have discussions
12 about it. If you want to have my view, I think to build out a
13 5G network only may cost you about 8 to \$10 billion, but you
14 have to ask that question Mr. Ergen and DISH.

15 You have much more conviction of doing this if you
16 know what kind of remedy you have at the end. And this remedy
17 from a shareholder perspective on the team U.S. side is
18 terrible. So it means it's very attractive for DISH. And
19 therefore, you will find financing partners, you will find
20 people that are attractive to this. So a lot of change after
21 June. We will solve some of these questions that have been
22 raised many times before by parties.

23 Q. Sir, let's just hone in on one more question.

24 The DOJ commitments don't change, just to use a
25 specific example, the team requirement, right? The team that

JCAVSTA5

Langheim - direct

1 DISH needs does not change --

2 A. I think it's much more attractive for people to join, so I
3 think that changed. If you have a winning proposition, you
4 will find people. You will find capital for doing it. I think
5 this is the thing that has changed.

6 Q. Now, has your team considered the possibility that what
7 DISH is actually doing is just trying to get time to hold on to
8 its spectrum without actually building the network?

9 A. I've heard that argument before June or at the beginning of
10 the year or last year, yes, I did.

11 Q. And actually, if you see here, the next bullet point below
12 where we've highlighted, your team concluded that Charlie is
13 mostly interested in resolving his milestone issue, gain two to
14 three years, keep his status as a poker player, and be a seller
15 when spectrum becomes scarce, right? That was the team's
16 conclusion at the time?

17 A. The team's conclusion, but not mine. I would disagree with
18 that.

19 Q. But now DISH has made promises that it will build its
20 network that didn't exist before, right?

21 A. Yes.

22 Q. But you know, sir, don't you, that DISH has a history of
23 broken promises in the industry?

24 A. Well, if you read the press, some people complaining about
25 this. And I think I have also been complaining about this,

JCAVSTA5

Langheim - direct

1 that this spectrum that DISH has, the wonderful 100 megahertz,
2 is not coming to play. These are tools that we would have
3 loved to get our hands on.

4 Q. Sir, if you could focus on my question. My question is
5 just whether you agree that DISH has a history of broken
6 promises in the industry?

7 A. Personally, we've never had any broken promises with DISH,
8 number one. Number two, I have read the press, yes, and it
9 looks like that DISH is a tough negotiator, and some people
10 claim that this company has broken promises.

11 MR. MACH: Mr. Nichols, could you please bring up
12 Exhibit 376.

13 Q. This is a text message thread between you and Mr. Legere,
14 right?

15 A. Yes.

16 Q. I'm sorry it's so difficult to read. It's how it was
17 produced.

18 A. I think I now need to grab the -- what was this exhibit?

19 Q. 376.

20 And at the bottom of the first page of exhibit 376,
21 there's a text message from you to Mr. Höttges and Mr. Legere.
22 Do you see that?

23 A. Yes.

24 Q. And you write: I understand your frustration, and I do
25 understand PAI's view. DISH has a history of lawsuits with

JCAVSTA5

Langheim - direct

1 many different parties and broken promises. You have been a
2 counterpart to PAI with a reliable buildup commitment.

3 Do you see that, sir?

4 A. Yes.

5 Q. So does that refresh your recollection --

6 A. Doesn't it states in the view of many?

7 Q. Okay. That's fair. It was not your view?

8 A. I do what everybody is doing, reading the press and
9 concluding that this is -- I was always frustrated about the
10 following, Mr. Mach, which is, we needed tools, we needed
11 spectrum. There were 100 megahertz of spectrum. So I, of
12 course, complained a little bit about it. Do I know what the
13 agreement of DISH is with the FCC and whether there are any
14 broken promises? I don't really know, and I should not judged
15 it. If I have done so, then this was wrong.

16 Q. Let's turn to Exhibit 1177.

17 MR. PARKER: What was the number?

18 MR. MACH: 1177, counsel.

19 Q. You have 1177 in front of you, sir?

20 A. Now I have it, yes.

21 Q. I will represent to you this is a document that the
22 plaintiff states retrieved from the FCC's public website.

23 And if you turn to page 7 of the document.

24 A. Page 7, yes.

25 Q. You can see that this is a letter signed by an attorney for

EXHIBIT E

JCAPSTA1

1 UNITED STATES DISTRICT COURT
 2 SOUTHERN DISTRICT OF NEW YORK

3 -----x
 4 STATE OF NEW YORK, et al.,

5 Plaintiffs,

New York, N.Y.

6 v.

19 Civ. 5434 (VM)

7 DEUTSCHE TELEKOM AG, et al.,

8 Defendants.

9 -----x

December 10, 2019
 9:05 a.m.

10 Before:

11 HON. VICTOR MARRERO,

12 District Judge

13 APPEARANCES

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 17 KURUVILLA JOSEPH OLASA
 KYLE W. MACH

18 STATE OF CALIFORNIA
 19 Department of Justice
 20 Office of the Attorney General
 Attorneys for State of California
 BY: PAULA L. BLIZZARD

21 STATE OF NEW YORK
 22 Office of the Attorney General
 Attorneys for State of New York
 23 BY: ELINOR R. HOFFMANN
 24 BEAU W. BUFFIER
 25

JCAPSTA1

Hottges - Direct

1 colleagues would intend to come back to other parts of this
2 thread at other times, but at this time, all I'm offering it
3 for is this one text message from Mr.~Legere and the date on
4 it.

5 THE COURT: All right.

6 MR. PARKER: That's all right for now.

7 BY MR. POMERANTZ:

8 Q. And Mr.~Legere is referring to the merger of T-Mobile and
9 Sprint as a four-to-three merger, correct?

10 A. Yes.

11 Q. He didn't say it was like a 10-to-nine merger because you
12 have to include all the MVNOs, right?

13 THE COURT: Asked and answered.

14 MR. POMERANTZ: Sorry?

15 THE COURT: Asked and answered.

16 MR. POMERANTZ: Thank you, your Honor.

17 Q. Let's change topics. Is it fair to say that you and
18 T-Mobile have learned a lot since 2012 about what it takes to
19 succeed in the U.S. wireless market?

20 A. We did.

21 Q. So let's talk about some of the things that it takes to
22 succeed in the U.S. wireless market. One of those things is
23 capital, correct?

24 A. Yes, sir.

25 Q. To succeed in the U.S. wireless market, a carrier has to

JCAPSTA1

Hottges - Direct

1 continue to invest in its network, correct?

2 A. Heavily.

3 Q. This is a pretty dynamic industry, right?

4 A. We had seen 2G, 3G, 4G, and now the investment is coming
5 with 5G; so this is coming with a very capital-intensive
6 requirement.

7 Q. It's an industry in which technology rapidly changes,
8 correct?

9 A. That's correct, sir.

10 Q. And it's hard to predict what technology is going to be
11 five years from now, correct?

12 A. Not really. We know where the technology is heading to,
13 but we have to build networks, and to build them, sometimes I
14 would say it's difficult to predict what's beyond 10 years.

15 Q. Well, it's fair to say that predicting the future is always
16 a challenging exercise, correct?

17 A. That's correct.

18 Q. And it's even more challenging in a market like the
19 wireless market that has rapid technology changes, correct?

20 A. Yes. We are in an infrastructure business; so it's a
21 little bit easier to predict the future than being in a
22 software industry, which is much more dynamic than our
23 infrastructure business.

24 Q. Well, it's fair to say that even a very good CEO will
25 regularly get his future predictions wrong, correct?

JCAPSTA1

Hottges - Direct

1 A. That's the name of the game.

2 Q. Now, another thing that a successful wireless carrier needs
3 is experience and expertise, correct?

4 A. Yes, sir.

5 Q. And to have a chance of succeeding as a wireless
6 competitor, you need to have business people with real
7 experience and expertise in the retail mobile wireless
8 business, correct?

9 A. Most important ingredient for entrepreneurial success.

10 Q. So you agree with me?

11 A. Yes.

12 Q. And it's fair to say that the years and years of experience
13 in the T-Mobile and Deutsche Telekom business, people have been
14 absolutely necessary for the success we've seen at T-Mobile,
15 correct?

16 A. Yes.

17 Q. And another thing that you need to succeed as a wireless
18 carrier is scale, correct?

19 A. That's correct.

20 Q. And by scale, what you mean is that you need a lot of
21 customers so that you can cover the significant costs of
22 operating a wireless network, correct?

23 A. That's right.

24 Q. And you think that scale requires a U.S. wireless carrier
25 to have tens of millions of customers in order to be able to

JCAPSTA1

Hottges - Direct

1 successfully compete, correct?

2 A. Competition is always a function about the players in the
3 market, and if you have two players in this market who have
4 capital, and you talked about capital, market capitalization of
5 150 or 200 billion while you're operating in a market cap of 50
6 billion, when we have 18 million customers while these guys
7 have customer bases from 100 million and above, then it's very
8 difficult to utilize your infrastructure in this environment,
9 that's correct.

10 Q. So the end of that question, "that's correct," was
11 answering my question?

12 A. Look --

13 Q. Let me go back. That's a terrible question. I withdraw
14 it.

15 A. Because if you compare European market with the U.S.
16 market, it's a totally different game.

17 Q. So let's go back to the answer you gave. When you said
18 somebody has over a hundred million customers, you were
19 referring to Verizon and AT&T, correct?

20 A. That's correct, yes.

21 Q. And when you said that you only had 80 million customers,
22 you were saying that wasn't sufficient scale, correct?

23 A. Yes.

24 Q. So you think that a national wireless carrier in the U.S.,
25 to successfully compete, needs to have more than 80 million

JCAPSTA1

Hottges - Direct

1 customers?

2 A. That's correct, yes.

3 Q. And another thing that a successful U.S. wireless carrier
4 needs is a brand that U.S. consumers recognize, correct?

5 A. Very important.

6 Q. And you need a brand that consumers not only recognize but
7 a brand that they like and respect, correct?

8 A. A brand is whether you fulfill your promise towards your
9 customers every single day with regard to price, credibility,
10 service, attitude and your ethical values.

11 Q. And so you need a brand that consumers would recognize as
12 providing good, quality wireless services, correct?

13 A. Yes.

14 Q. At a fair price, correct?

15 A. Yes.

16 Q. And it takes time for someone to develop that kind of a
17 brand, correct?

18 A. That's correct.

19 Q. T-Mobile has spent the last seven, eight, nine years
20 working really hard to try to improve its brand, correct?

21 A. That's not a hundred percent correct because the Deutsche
22 Telekom brand, T-Mobile, was invented in 1999, and then
23 expanded across the globe and was then reinvented, reignite by
24 the U.S. management team around John Legere and Mike Sievert
25 and the team in 2011 and '12.

JCAPSTA1

Hottges - Direct

1 Q. You're right. Because you manage a global enterprise, and
2 I was focused on the United States; so I was not clear. Let me
3 restate the question.

4 T-Mobile, in the United States, has been working hard
5 for years to try to improve the T-Mobile brand in the eyes of
6 the consumer, correct?

7 A. That's what we did.

8 Q. And it takes years to develop a successful brand?

9 A. It is a very successful brand.

10 Q. All right. Let me go now to Dish. T-Mobile recently
11 entered into a deal with Dish, correct?

12 A. We did, yes.

13 Q. And that was part of T-Mobile's arrangement with the
14 Department of Justice, correct?

15 A. That's correct.

16 Q. And you understand that T-Mobile's agreement with the
17 Department of Justice and with Dish were designed to try to
18 enable Dish to become a meaningful fourth competitor in the
19 U.S. wireless market, correct?

20 A. That's correct, yes.

21 Q. Now, you've had discussions within Deutsche Telekom about
22 the likelihood that Dish will ever become a meaningful fourth
23 competitor, correct?

24 A. We had very intense discussions, and we were very concerned
25 about this remedies.

JCAPSTA1

Hottges - Direct

1 Q. And some of your most senior executives expressed those
2 concerns, correct?

3 A. Whom are you talking about?

4 Q. Well, for example, your CFO?

5 A. This might be the case. We had all concerns in the
6 management team around this remedies.

7 Q. Your CFO's name is Mr. Dannenfeldt, right?

8 A. He is our former CFO, retired by the end of last year.

9 Q. Okay. At the time that you were deposed, you mentioned
10 Mr. Dannenfeldt as somebody who had expressed concerns about
11 whether Dish could become a meaningful competitor, correct?

12 A. Would you mind to repeat that?

13 Q. Yes. Do you recall stating at your deposition that you
14 thought Mr. Dannenfeldt expressed concerns about Dish becoming
15 a meaningful competitor?

16 A. Yes.

17 Q. And that's still your recollection?

18 A. Yes.

19 Q. And the concerns that you were hearing within Deutsche
20 Telekom was about whether Dish would really be able to build
21 its own 5G network, correct?

22 A. That's correct.

23 Q. And you were hearing concerns about whether, even if they
24 built their 5G network, whether they would then be able to
25 successfully compete, right?

JCAPSTA1

Hottges - Direct

1 A. Yes.

2 Q. And the concerns you were hearing were whether Dish would
3 be able to really build an entire network infrastructure from
4 nowhere, correct?

5 A. Yes.

6 Q. Now, it's fair to say that the senior executives in
7 Deutsche Telekom -- let me withdraw that, Mr. Hottges.

8 Is it fair to say that there was no consensus within
9 Deutsche Telekom's senior management about whether Dish would
10 ever become a competitively relevant competitor against
11 T-Mobile?

12 A. Look, they're different positions where we discussed Dish
13 in the past. There was a time when he wasn't a stand alone
14 perspective. We saw that he had a very juicy and strong
15 position in the spectrum area, and then we had this discussion
16 around the remedies and some of this here. And since then, we
17 are very concerned, and I got your question the way that you're
18 talking about this time period. We were very concerned, and we
19 are very concerned, about the capability that Dish is becoming
20 a nationwide fourth player. He had a very favorable deal on
21 the table from other DOJ.

22 Q. Was there a consensus view within Deutsche Telekom about
23 whether or not Dish would become competitively relevant in
24 competition against T-Mobile?

25 A. Sorry, I missed this question.

EXHIBIT F

1 UNITED STATES DISTRICT COURT
2 SOUTHERN DISTRICT OF NEW YORK
-----x
3 STATE OF NEW YORK, *et al.*,

4 Plaintiffs,

New York, N.Y.

5 v.

19 Civ. 5434 (VM)

6 DEUTSCHE TELEKOM AG, *et al.*,

7 Defendants.
-----x

8 December 11, 2019
9 9:00 a.m.

10 Before:

11 HON. VICTOR MARRERO,

12 District Judge

13 APPEARANCES

14
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18 STATE OF CALIFORNIA
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21 STATE OF NEW YORK
Office of the Attorney General
22 Attorneys for State of New York
BY: ELINOR R. HOFFMANN
23 JEREMY KASHA
24 BEAU W. BUFFIER
25

1 THE COURT: Yes, you may.

2 The clerk will swear in the witness.

3 CARL SHAPIRO,

4 called as a witness by the Plaintiffs,

5 having been duly sworn, testified as follows:

6 DIRECT EXAMINATION

7 BY MR. POMERANTZ:

8 THE COURT: State your name and spell it for the
9 record.

10 THE WITNESS: Carl Shapiro, Carl with a C,
11 S-H-A-P-I-R-O.

12 THE COURT: Before Mr. Pomerantz starts, let me just
13 indicate that we are taking this case in a different protocol
14 than you may have been familiar with when you testified as an
15 expert, and the parties essentially laid a foundation for your
16 expertise to testify to the subject. If there is no objection
17 to Professor Shapiro testifying on this subject, the Court will
18 admit you and allow you to testify as an expert without going
19 into the details of your 20 pages of CV, which will save us a
20 lot of time. I have read the 20 pages and I am sufficiently
21 impressed and we'll accept that you're an expert in this area
22 and allow you to testify in that context.

23 Yes?

24 MR. CARY: Your Honor, we have no objection.

25 THE COURT: Okay.

1 MR. POMERANTZ: So will offer into evidence the CV at
2 the end of the examination, your Honor.

3 THE COURT: All right.

4 BY MR. POMERANTZ:

5 Q. So Professor Shapiro, good afternoon.

6 In preparing for your testimony today, did you create
7 some slides to help describe your opinions to the Court?

8 A. Yes, I did.

9 Q. So I'm going to control the clicker, but you tell me if you
10 need me to move back or forward as we move along.

11 Let's go to the first slide here. What was your
12 assignment in this case?

13 A. Well, as indicated here, the first part was to identify the
14 relevant market or markets in which to analyze this proposed
15 merger, then measure market shares and concentration in those
16 markets, and how the merger would affect concentration, and
17 then go on and analyze the likely competitive effects of the
18 proposed merger in those markets.

19 Q. We'll spend quite a of time going through your conclusions
20 in detail, but what is the bottom line conclusion on the likely
21 competitive effects of this proposed merger?

22 A. As indicated here, I believe that it is likely -- the
23 merger is likely to substantially lessen competition and harm
24 consumers in the market for retail mobile wireless
25 telecommunications services -- and this would be both in the

1 United States as a whole and in a number of local markets
2 within the United States -- unless the merger would generate
3 substantial cognizable efficiencies.

4 Q. We'll spend the next hour or so, maybe two, going through
5 the basis of that conclusion, but based on that conclusion,
6 what does that mean to consumers?

7 A. So your Honor, this slide depicts some calculations I have
8 done to show the type of harm or the magnitude of harm, I
9 should say, that consumers could suffer as a result of price
10 increases following the merger and caused by the merger.

11 The upper panel, as you see in the heading there, if
12 the new T-Mobile, Verizon and AT&T together coordinate and
13 simply avoid price declines, so if prices stabilize rather than
14 decline for the next year, that would itself, if that is the
15 impact, then annual consumer harm resulting from that in one
16 year, annual, would be \$8.7 billion. That is calculated off a
17 revenue base for those three firms in this market nationally of
18 138 billion. So that's one mode of analysis, the coordinated
19 effects mode that we'll be talking about, or coordinated
20 effects as a type of specious of effect from the merger.

21 The second panel relates to unilateral price
22 increases, so this doesn't involve AT&T and Verizon raising
23 price, or stabilizing price, I should say, this is simply if
24 the new T-Mobile sets higher prices themselves as a result of
25 the merger, in that case we have a smaller revenue base, about

1 42.8 billion as shown here annual revenue base, but I
2 calculated a larger percentage increase, for reasons we'll get
3 into, and so the harm calculated with that method is \$4.6
4 billion a year.

5 Q. All right. So we'll go now through this in detail, but at
6 a high level, what analysis did you perform to reach the
7 conclusions that you just described?

8 A. I followed what I would call the standard techniques and
9 methods that antitrust economists use to analyze horizontal
10 mergers. And these are I think laid out in the horizontal
11 merger guidelines from the Justice Department and the Federal
12 Trade Commission, and that's the framework which is the
13 standard framework that antitrust economists use, and that's
14 what I did here.

15 Q. I want to be careful here and make sure we always define
16 terms. You used the term "horizontal merger." There's also a
17 "vertical merger," correct?

18 A. Indeed.

19 Q. And this is a horizontal merger that we're evaluating here,
20 correct?

21 A. Yes, that simply means that the merging parties are
22 competitors.

23 Q. They're in the same level of the market?

24 A. They're in the same market.

25 Q. So what are the horizontal merger guidelines?

1 A. So these are guidelines issued by the two federal antitrust
2 enforcement agencies, updated now and again, that describe for
3 the business community and for the courts how they analyze
4 horizontal mergers, typically as part of the Hart-Scott-Rodino
5 review process by which these agencies review proposed mergers.

6 Q. All right. And the slide that we have on the screen here
7 has a date at the bottom of August 19, 2010. Is that the most
8 recent revision to the horizontal merger guidelines?

9 A. Yes, it is.

10 Q. Did you have any role in that revision process?

11 A. Yes. This is during the time when I served as the chief
12 economist at the Justice Department, and I took a lead on the
13 DOJ side in organizing efforts to do the updating for these
14 guidelines. There was a comparable team -- large teams on both
15 sides, but a comparable team at the Federal Trade Commission.

16 Q. And in performing your analysis in this case, what
17 information did you rely upon?

18 A. Well, there's a number of different sources, and they're
19 detailed in great length in my reports, but certainly a lot of
20 data that has been made available to me and my team that
21 supports me and the economists supporting me on this, documents
22 that have been produced in discovery, depositions, public
23 information in some cases. Those are the main ones that come
24 to mind.

25 Q. And did you also rely upon certain economic literature and

1 training in this area?

2 A. Certainly.

3 Q. Why did -- you said one of the categories of information
4 that you considered were documents produced by the parties in
5 this case, correct?

6 A. Yes.

7 Q. So documents produced by T-Mobile and Sprint, correct?

8 A. Yes.

9 Q. Why did you consider those documents in connection with
10 your analysis?

11 A. Well, in my experience, the documents, particularly in
12 larger firms where they're doing strategy analysis and forth,
13 are very informative about how the companies view the markets,
14 how competition plays out. For example, we were just talking
15 about MVNOs, mobile virtual network operators, and it's part of
16 my analysis, certainly, and it's helpful for me to see how
17 T-Mobile, for example, uses MVNOs.

18 Q. Is one way to refer to these documents as ordinary course
19 of business documents?

20 A. Yes, that's a term commonly used, particularly by lawyers.

21 Q. Well, I'm a lawyer, so I will keep using it. Are ordinary
22 course of business documents typically relied upon by a
23 economists when they evaluate mergers?

24 A. Absolutely. The advantage is they're not prepared for
25 litigation, or we hope at least, they're a depiction of how the

1 executives or companies see the market, not stilted in some way
2 for litigation.

3 Q. Now I said before we started your examination that you had
4 prepared to two reports in this matter. Could you briefly
5 describe at a very high level what the nature is of each of
6 those reports?

7 A. It's a nice fat report. The first report that was filed in
8 September really lays out my analysis of the case, why I
9 ultimately reached the conclusions that you will hear about
10 that the merger is likely to generate anticompetitive effects;
11 so going through all the elements that we talked about, there's
12 tendencies to all these things.

13 And the second report, my reply report, was in
14 response to economic experts for T-Mobile and Sprint who didn't
15 totally agree with me, and so I defended myself, effectively,
16 in replying to what they said, and that's my reply report.

17 I also was able to update some of the data,
18 particularly I think most important, your Honor, the market
19 share data. The first report only had data through June of
20 2018, and the second report has data through December of 2018.

21 Q. What steps do antitrust economists typically take to
22 analyze a merger such as the one we're facing here?

23 A. Well, again, we're still at a pretty high level. There's
24 defining relevant market and measure market shares and
25 concentration, that's kind of one set of tasks. Then there's

JCBTSTA5

Shapiro - Direct

1 evaluating competitive effects in those markets, that's a
2 second set. And then if those two steps indicate a concern
3 about competition, then we would typically go to a third step
4 and see whether there are mitigating factors, such as would
5 entry save the day, new firms coming into the market, or
6 efficiencies.

7 Q. So briefly, what was your conclusion regarding the first
8 step, that is, the relevant market and the market shares and
9 concentration?

10 A. So the relevant market here is the -- as you know, your
11 Honor, retail mobile wireless telecommunications services,
12 that's the product market. We have a national geographic
13 market, and in my view also a number of local of markets as
14 well. So that's the market definition piece.

15 And then we have market shares. Is that still the
16 question?

17 Q. Yes.

18 A. Market shares. These markets are highly concentrated, but
19 I will talk about the national market to save time now. It
20 will be significantly more concentrated as a result of
21 combining T-Mobile and Sprint. So that's the first large chunk
22 of what we'll work on, that piece.

23 (Continued on next page)

1 Q. All right. And then what was your conclusion about, with
2 regard to the second step, that is the anticompetitive effects?

3 A. So we break this up into coordinated effects and unilateral
4 effects, and we'll be spending time on those. Both of those
5 are a concern here. Coordinated effects, and this reflects the
6 numbers I showed you a few minutes ago, your Honor.

7 Coordinated effects will be concerns of softening the
8 competition between the remaining big three, namely, new
9 T-Mobile, Verizon and AT&T. And I think there are reasons to
10 be quite concerned about that. I'll tell you that.

11 Unilateral effects would be simply new T-Mobile
12 raising price because they're no longer competing against
13 Sprint. They've acquired Sprint. That also was a concern in
14 this case. So on both of those fronts, my analysis indicated
15 the merger is likely to generate anticompetitive effects.

16 Q. And then the third step that you described, did you
17 consider whether there were any mitigating factors that would
18 prevent or reverse those anticompetitive effects?

19 A. So yes, I did. So I mentioned, in particular, entry and
20 efficiencies are the two -- or remedy would also come in here.
21 So the efficiencies, I have not myself analyzed. Another
22 expert, Professor Fiona Scott Morton from Yale will be
23 analyzing the efficiencies that the parties have claimed; so
24 I'm not doing that part of the overall analysis.

25 Q. And then did you do any analysis relating to an entry or

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1 any remedies in this case?

2 A. Right. So I did look at entry. I think it's clear that
3 there are very high entry barriers into the markets, especially
4 nationally, and but I also considered DISH, the DISH
5 arrangement. DISH is planning to be an entrant; so that's part
6 of the analysis. Again, that part I also share with Professor
7 Scott Morton.

8 I am looking in the near term at the effect of DISH as
9 they come in for the first two, three years, and she is looking
10 at a longer term in terms of their build-out plans and possible
11 entry as a network operator.

12 Q. All right. So with that background, let's now go through
13 each of those three steps in a little more detail, and we'll
14 start with relevant markets. What are the components of a
15 relevant antitrust market?

16 A. As I indicated, we would have a product component and a
17 geographic component.

18 Q. And what are your conclusions regarding the product market
19 in this case?

20 A. So retail wireless -- retail mobile wireless
21 telecommunication services would be the mouthful, but that's
22 the term we're using, I'm using, as the relevant product or
23 service in this case.

24 Q. All right. And so let's start with the product. Does a
25 product market typically include every single substitute of a

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1 product?

2 A. No, no. It does not. So, for example, your Honor, if we
3 had a merger between two companies that made beer, we might
4 very well have a market for beer. Although, we would
5 understand that hard liquor would be a substitute, to some
6 degree, or maybe soft drinks would be too, right, to some
7 degree, but those are more distant substitutes. So the idea is
8 to capture a set of reasonable substitutes that will be
9 informative for analyzing the merger, not all substitutes.

10 Q. All right. And what was your conclusion regarding the
11 relevant geographic market in this case?

12 A. Well, there is a national market for these services, and
13 there are also a number of local markets. I've used the
14 cellular market areas or CMAs as my local markets.

15 Q. And where -- I'm sorry. I didn't mean to interrupt.

16 A. Go ahead.

17 Q. Where does CMAs, where does that concept come from?

18 A. Well, this originally comes from the Federal Communication
19 Commission, FCC, based on the original license areas for
20 spectrum, but it's over the years the standard way in which the
21 Federal Trade Commission has analyzed local markets and
22 competition in this industry.

23 Q. Okay. So let's drill down a little bit deeper. Is there
24 any kind of a test that antitrust economists typically use to
25 help identify the appropriate relevant antitrust market?

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1 A. Yes. We have something called the hypothetical monopolist
2 test.

3 Q. And what is that?

4 A. So this test is designed -- well, first off, it's been a
5 standard tool for 30 or 40 years now for antitrust economists.
6 It's designed to do what I said before, which is identify
7 reasonable substitutes for merger analysis but not all
8 substitutes.

9 So, you know, in the beer merger, we would end up with
10 beer, very possibly. We don't know that ahead of time but
11 that's the idea. Let's draw some boundaries so we capture a
12 reasonable set of substitute that is informative for the
13 analysis.

14 Q. All right. And the defendants have retained two economists
15 to testify in this case. You responded to them in your reply
16 report, correct?

17 A. Yes.

18 Q. Did either of them identify a different test, a different
19 way of going about and defining a relevant market?

20 A. No.

21 Q. Okay. And so how does an economist apply the hypothetical
22 monopolist test to define the relevant product markets?

23 A. Well, a key concept here is the notion of a candidate
24 market and then the hypothetical monopolist. Those are the
25 elements.

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1 So if I give an example, sticking with beer, suppose
2 we had a merger between two companies that were really quite
3 strong in selling light beer. We might say, well, is there a
4 market for light beer that we would analyze that merger in? So
5 you would take light beer as a candidate market. You don't
6 know if it's going to end up being the market yet, that's why
7 it's a candidate. And then you ask if a single firm, that's
8 the hypothetical monopolist, controlled all the sales of light
9 beer, would they significantly raise price above the current
10 levels?

11 Current levels are based on some degree of
12 competition; so a monopolist would probably raise price, but
13 how much? If the hypothetical monopolist would raise price at
14 least 5 percent, then the candidate market is going to pass the
15 test. If not, it's going to fail the test.

16 Now, what's that going to come down to, you imagine
17 you raise the price of light beer, some people will buy less of
18 it. The normal rule of law of economics, if the price goes up,
19 people buy less. But then what's left? If a lot of people
20 would say, hey, light beer went up 5 percent, I'm buying
21 regular beer, then a lot of people would move out, and this
22 price increase would not be profitable. The monopolist would
23 lose some of these sales.

24 So if a lot of people would shift to regular beer,
25 then light beer would fail the test. And that would reflect

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1 the fact that there's really quite a close substitute, regular
2 beer, and it would be a mistake to not include that. So that's
3 how you do the test.

4 Now, suppose you were testing all beer. You'd say,
5 well, if we raise the price of all beer, would very many people
6 stop drinking beer or reduce their usage? And we probably
7 would find, I would think, that that would be profitable for
8 the hypothetical monopolist even though some people would shift
9 from beer to soft drinks or hard liquor. So in that case, all
10 beer would satisfy the test. Light beer might not.

11 You start with a candidate market. You do this test
12 until you have a group of substitutes that's large enough so
13 the test is satisfied. So that's how it goes. That's as
14 simple as I can make it.

15 Q. What candidate product market did you start with here?

16 A. So I started with the market, the retail mobile wireless
17 telecommunication services, and I ran the test and it was
18 satisfied; so I didn't have to keep expanding beyond that.

19 Q. And what specifically did you include in what we're calling
20 retail mobile wireless telecommunications services?

21 A. All right. So now we have to get kind of into the weeds a
22 bit because we want to measure these things and, you know, I
23 need to be very precise, at least as precise as I can be with
24 the available data.

25 So first, retail, we're talking about basically

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1 consumers and not large businesses. So that's what we mean by
2 retail, and I'm not going to include the enterprise sales,
3 which are a separate category that are tracked.

4 Q. Let me just stop you for one second. When you use the word
5 "enterprise," that means the same thing as large businesses?

6 A. Yes, it does.

7 Q. And they buy in a different way than consumers?

8 A. Yes, they often buy through a procurement process. It's a
9 different category of customer than retail customers.

10 Q. All right. So then what else did you specifically end up
11 including in retail mobile wireless telecommunication services?

12 A. So then for the consumers, I'll call them, I then also have
13 to decide, well, which lines or devices am I going to include
14 in the market? And so I have included, basically, cell phones
15 but not what are called connected devices and not what are
16 called internet of things, these other categories of devices.
17 So a connected device would be like a smartwatch. I've not
18 included those. I am sticking with devices that are basically
19 well suited and designed to handle data and voice services and
20 mobility.

21 Q. Does the candidate product market that you just described,
22 did it satisfy the hypothetical monopolist test?

23 A. Yes, it did.

24 Q. And how did you reach that conclusion?

25 A. So there's two ways we can see that more quantitatively.

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1 First, we -- I think you've already seen a fair bit of
2 evidence, your Honor, that we have seen that competition among
3 the large four, the four MNOs, over the past several years.
4 Floor plans for exactly these devices for consumers has driven
5 the price down substantially more than 5 percent; so
6 competition has lowered price quite a bit. We're all
7 benefiting from that.

8 That tells me if you took away the competition and you
9 had a single firm setting the prices, it would be profitable to
10 set them quite a bit higher, more than 5 percent, because the
11 competition has caused prices to go down more than 5 percent.
12 So we can see the direct effects of competition, lowering
13 price. The hypothetical monopolist would set a higher price;
14 so that's a fairly easy and indirect way to see that this group
15 of products satisfies the test.

16 Q. All right. And did you apply any other methods to evaluate
17 whether the proposed product market satisfies the hypothetical
18 monopolist test?

19 A. Yes, I did. There is another quantitative method that
20 economists have developed that I applied.

21 Q. Could you describe that method, please?

22 A. Yes, sure. So what we do is we ask -- we have a form that
23 we've developed, and it involves asking -- really, we're trying
24 to figure out to what extent to the firms compete with each
25 other directly, and if there's a lot of that, then this market

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1 will pass the test.

2 If they're competing with more distant products than
3 they can market, may not pass the test. So we ask if one of
4 the firms, let's take T-Mobile in our case, raise their price,
5 they're going to lose some customers. Some of those customers
6 will go to the other firms in our candidate market, other cell
7 phone suppliers, AT&T, Verizon, Sprint. Some will leave the
8 market entirely, drop their cell phone service, let's say.

9 We have a quantitative test that says how many people
10 would have to leave this market entirely in order for the test
11 to fail, and that depends on the profit margins that come into
12 this calculation.

13 And so I used -- I applied that test, and with the
14 profit margins we've got here, if T-Mobile alone were to raise
15 the price, more than 80 percent of the lost customers would
16 have to move outside the market in order for this group not to
17 pass the test, such as dropping their cell service or maybe
18 getting a smartwatch instead, something not in my market, and
19 that is an implausibly high number.

20 From all of the evidence we see, that when one of
21 these firms raises or lowers their price, predominantly they're
22 winning business from the other firms involving the products in
23 the market that we're looking at; so this test is also
24 satisfied. When we do this test, this candidate market
25 satisfies the test.

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1 Q. All right. So now, let's move from the product market that
2 we were just talking about to the geographic market. How does
3 an economist apply the hypothetical monopolist test to the
4 geographic market?

5 A. We do exactly the same thing. It's the same idea, but
6 applied to geography. So if we had a merger of grocery stores,
7 we might say, oh, these two companies, they both have grocery
8 stores in Brooklyn, maybe a high share in Brooklyn. Is that a
9 market, or do we need to have a broader market or a narrower a
10 part of Brooklyn?

11 So you would ask if the price went up in Brooklyn,
12 would people go and buy their groceries someplace else? Would
13 people leave the market. Same idea. Here, when you start with
14 the United States as the candidate market, it's undisputed that
15 if the price of cell service in the United States went up, very
16 few people would get service somewhere else, and so the test is
17 easily satisfied.

18 Q. So I think you answered the question. You apply the
19 hypothetical monopolist test to the national market consisting
20 of the entire United States?

21 A. Yes.

22 Q. And your conclusion was?

23 A. That the test is easily satisfied in that market. Again,
24 the key point being if the price went up in the United States,
25 almost nobody would go get service outside the United States as

1 a substitute. That's not plausible.

2 Q. All right. So we've had some discussion already during the
3 course of this trial about local markets; so let's turn to
4 local markets. You also ended up defining some local markets
5 in this case, correct?

6 A. Yes.

7 Q. Why did you define local markets, as well as the national
8 market?

9 A. Because some dimensions of competition take place locally,
10 and those are best analyzed in local markets.

11 Q. And if you didn't analyze the local markets in addition to
12 the national market, what would happen?

13 A. Well, you would just -- you would miss those dimensions of
14 competition or you could miss them. You could very easily do
15 so.

16 So to give an example, suppose that we had two of our
17 carriers -- suppose we had a merger with four national
18 carriers. Two of them, or the only two -- this is an extreme
19 case, but just to get the idea across, but the only two to
20 serve a certain locale of a certain area. The other two
21 national didn't cover that area.

22 If you look at national market share, you would miss
23 the fact that there would be a merger to monopoly in that local
24 area. You need to look at the local market in order to capture
25 that or see whether that is a problem. And in fact, we're

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1 going to see the market shares vary quite a bit from one region
2 to another. If they were the same everywhere, it wouldn't
3 really -- this wouldn't get us so far, but there are
4 significant differences.

5 Q. And what aspects of competition take place at the local
6 level?

7 A. Well, certainly the investments to provide local service,
8 service quality in a given area, the cell towers, the
9 purchasing and deployment of spectrum; so network quality
10 varies quite a bit from one locale to the other. So those are
11 an important dimension of local competition. Retail stores is
12 another clear example, and there are local promotions as well.

13 Q. Now, do the business documents of T-Mobile and Sprint that
14 you considered in this case support the conclusion that certain
15 important aspects of competition take place locally?

16 A. Yes, they do.

17 Q. All right. I just want to look at a couple of the
18 documents that you relied upon in reaching your opinions. This
19 is Exhibit 160. It's in your binder. Professor Shapiro, just
20 at anytime you need to look at an exhibit that I put on the
21 screen, it's also in your binder.

22 A. Thank you.

23 Q. Is this an example of a document that you looked at in
24 connection with assessing local quality?

25 A. Yes. So this, Sprint is touting the fact that it has fast

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1 speed in Boston; so that's a local area, faster than the
2 others. So that's a good example of what I was talking about.

3 Q. If you look at the box in the lower left-hand corner of
4 this slide, there are these bar charts, and I think it says
5 "fastest download speeds" and I can't read the white writing
6 here, but I think this is a test run by somebody independent of
7 any of these companies, some third party; do you see that?

8 A. I can't read the white writing either, but I get -- I hear
9 you.

10 Q. Okay. And is it your understanding that -- and I'm
11 assuming again. I can't read it. I'm assuming that yellow in
12 this particular chart is Sprint?

13 A. That, actually, I can read. I'm proud of myself. Now, I
14 took off my glasses. So yellow is Sprint is the highest, and
15 AT&T and T-Mobile and Verizon are shown there with slower
16 download speeds in this chart.

17 Q. And because things like spectrum and towers vary from
18 location to location, this particular speed chart would look
19 different if you were looking at Denver or Seattle or Dallas,
20 right?

21 A. Certainly.

22 Q. All right. So now, let's go to the next document. Could
23 you just briefly describe what this document is, and how it
24 affected your local market analysis?

25 A. Well, this document, your Honor, is illustrative of a

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1 different dimension of local competition, namely, retail
2 stores. You can see the box on the right, 300 stores, 100
3 stores. This is a T-Mobile document from a few years ago, and
4 you can see what they say, "Spend to strength in
5 high-performing markets;" so they're opening stores in areas
6 where they have, it says, 700 megahertz license markets or
7 newly expended covered. So they've got some strength in terms
8 of their network, and it's 300 stores.

9 The lower panel is spend to opportunity, Greenfield
10 markets; so there is where they can have good coverage but they
11 need distribution. So retail stores are clearly a dimension of
12 competition that occurs locally.

13 Q. So using these two exhibits, these two examples, one of
14 speed and one of retail locations, why would it be a problem in
15 this case if we only defined a national market and only looked
16 at competition at the national level?

17 A. Because we would be missing these local dimensions of
18 competition. In particular, if we're going to -- we are going
19 to see, your Honor, some quite high market shares for the
20 merging firms in certain local markets, considerably higher
21 than their national average. So the concern is that in those
22 markets, because they have a high share and the concentration
23 will go up a lot in those areas, the anticompetitive effects
24 will be greater there on the dimensions where they compete
25 locally, which we've identified.

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1 Q. So as a matter of antitrust economics, does it make sense
2 to define a national market and also to define local markets
3 that are contained within that same national market?

4 A. It does. I find talking to people, some people find this
5 counter intuitive, but it is correct as a matter of economics
6 and merger analysis.

7 The way to do this is you -- the national market will
8 be a good market to analyze dimensions of competition that
9 occur nationally, and by and large, the national plans and the
10 basic plans and pricing by the nationwide carriers are done
11 nationally, and I think that's agreed by all.

12 But at the same time, there are dimensions of
13 competition that take place locally, and if you didn't define
14 local markets, you would not be properly evaluating those
15 dimensions of competition. So since competition with different
16 dimensions occurs with a different geographic scope, it is
17 informative and correct to define the two types of geographic
18 markets.

19 Q. All right. So what local area did you select as your
20 candidate geographic market?

21 A. So these are the cellular market areas, the CMAs, that we
22 talked about briefly already.

23 Q. All right. So let's look at an example of a CMA. I put on
24 the slide -- I'm sorry, on the screen a slide that, on the top,
25 says New York City CMA. Using this slide, could you just

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1 explain a little more what a CMA is?

2 A. Well, the whole country is divided into these CMAs. This
3 happens to be a metropolitan one in the New York area; so, you
4 know, there's going to be adjacent CMAs. This is the New York
5 one. It's just shown on the map. I don't have more to say
6 than that.

7 Q. How many -- do you recall how many CMAs there are in the
8 United States?

9 A. 700-something.

10 MR. POMERANTZ: And, your Honor, I think in the report
11 it's 734. I don't think there will be any dispute about that.

12 Q. Have CMAs been used as geographic markets in prior merger
13 reviews?

14 A. Yes, they have, regularly.

15 Q. Okay. And what did you --

16 A. The FCC has done that and the DOJ used CMAs in the AT&T and
17 T-Mobile merger some years ago.

18 Q. And does the FCC regularly use CMAs in merger reviews?

19 A. Yes, that's what the FCC does. I thought that's what --

20 Q. I might have said FTC. I meant FCC.

21 A. I said FCC.

22 Q. I think we both either got it right or wrong.

23 What did you find when you conducted the hypothetical
24 monopolist on the CMAs as the candidate markets?

25 A. They satisfied the test.

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1 Q. And how did you reach that conclusion?

2 A. So it's the same calculation we had before. We asked if
3 T-Mobile raised the price of their services in the New York
4 region, in this one shown, they would lose a bunch of
5 customers. Would at least 80 percent of those customers move
6 out and get service outside the candidate market, the products
7 I've talked about, and this region?

8 And, no, it's not plausible that people who are living
9 in New York, in response to a 5 percent price increase, are
10 going to go get service that doesn't cover New York. The
11 hypothetical monopolist here is the only one providing service
12 here in this region. So it's very -- this CMA satisfies the
13 test as a geographic market.

14 Q. Now, has Sprint previously expressed the view that it is
15 informative to define a national market, as well as local
16 markets in this very industry?

17 A. Yes, that would be back at the time of the -- I believe
18 they did that during the AT&T/T-Mobile merger review in 2011.

19 Q. All right. So let's look at what Sprint said. Could you
20 just explain this slide to the Court?

21 A. Of course. So if you see the blown-up parts, this is
22 Sprint Nextel, they were called then, I guess, petition to
23 deny -- petition to the FCC to deny the AT&T/T-Mobile merger.

24 Q. Hold on one second, Professor Shapiro. I'll try to be
25 better for this because I'm not saying, for the record

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1 purposes, what the exhibit is, and I probably should do that as
2 we pull up each slide. This is Exhibit 655.

3 MR. POMERANTZ: One other thing, your Honor, for, I
4 guess, housekeeping purposes. We're going to get to some
5 slides that have a whole bunch of numbers on them, like HHIs,
6 and I don't want to have Professor Shapiro read every single
7 number into the record; so that we have them in the record
8 right now. These are not exhibits. There will be certain
9 slides, which I'll try to remember, I'll ask the other side to
10 stipulate that that particular slide will come into evidence;
11 so that we can get it in more easily in front of your Honor.

12 THE COURT: All right.

13 MR. POMERANTZ: Not this one, but we're getting to it
14 very soon.

15 THE COURT: Let me ask, just for my own curiosity and
16 totally unrelated to this litigation.

17 MR. POMERANTZ: Okay.

18 THE COURT: This exhibit contains 377 pages, by my
19 count. How many of those pages are you going to be using for
20 your case here?

21 MR. POMERANTZ: Well, so far as I know, it's not even
22 a matter of pages. It may be a matter of lines. In other
23 words, if you want to --

24 THE COURT: You get my point.

25 MR. POMERANTZ: Yes, I get your point, and I can work

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1 with the other side. I just don't want to put it in there and
2 say you left out the most important counter-piece of evidence.
3 But once we finish the examination, I'm happy to work with the
4 other side and give you like a paragraph or a page, whatever it
5 is, that's necessary for the record.

6 THE COURT: If you had read the Court's individual
7 practices on this point, you would have done it the other way
8 around.

9 MR. POMERANTZ: I apologize, your Honor. I'm sorry.

10 THE COURT: No need to apologize. It's my own
11 personal quirk about these kinds of situations, where we're
12 tearing down a forest in order to get a couple of lines of
13 evidence into a case.

14 MR. POMERANTZ: I hope it's the only one of your
15 individual rules that I missed. We've been working fast, and I
16 apologize, your Honor. We'll try to deal with that going
17 forward.

18 BY MR. POMERANTZ:

19 Q. All right. So we were on this one paragraph, four lines
20 from Exhibit 655. Could you just briefly explain them to the
21 Court?

22 A. So the heading there, I think, makes the key point that
23 Sprint is saying regarding that merger, that it would increase
24 concentration in the wireless industry and harm competition in
25 national and local markets alike. So that's the point, that

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1 this is like -- Sprint took the same view that I think is
2 correct and am taking here, that it makes sense to define a
3 national and a local market.

4 And the quote, that paragraph 28 quote, is from a
5 joint declaration by a number of economists that Sprint
6 retained that made the same point. It's not that some believe
7 there is only a single relevant market in which to analyze the
8 effects of a merger, that is not correct.

9 Q. All right. And then this next slide is also from that same
10 time period, but this one was submitted by Mr. Alling of
11 T-Mobile, and briefly, if you could explain to the Court what
12 this is?

13 A. Right. So this is, again, before the FCC, and I'm just
14 going to read this sentence: "Supports T-Mobile's view that
15 wireless providers compete for customers on a local basis."

16 Q. All right. And just one more. This is from something that
17 T-Mobile previously used with -- about CMAs. I think it's in
18 connection with the California Public Utilities Commission.
19 Could you briefly describe what this is?

20 A. All right. So this is, as you say, and they're urging the
21 commission here, meaning the California Public Utilities
22 Commission, they're saying should follow the FCC's lead in
23 defining relevant markets as local, and they specifically
24 mention CMAs, as well as CEAs, a related concept.

25 And they have some rationale for why it's important to

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1 define a local market, but specifically CMAs, they're
2 advocating for.

3 Q. And just to be clear, this is something that T-Mobile
4 itself submitted, correct?

5 A. Yes, that's right.

6 Q. All right. So T-Mobile here says that CMAs is the relevant
7 geographic market, and you also are here saying in this court
8 that CMAs are the -- are a relevant geographic market, correct?

9 A. That's correct.

10 Q. Why did you pick CMAs rather than some other region as your
11 local geographic market?

12 A. Well, this has been the standard practice in the industry.
13 It fits with the -- I can do this with the data I have
14 available that we'll talk about from the -- we'll talk about to
15 measure market shares.

16 Ultimately, you want to measure market shares. That's
17 where this is going to. If we can't measure market shares,
18 we've got some problems; so it's workable and practical, and
19 those are the main things. It's also worth noting that the
20 companies, in some cases, refer to CMAs in their own planning
21 documents as markets as well.

22 Q. Well, let's look at a couple of those documents. Could you
23 briefly explain this document to the Court and how it supports
24 your selection of CMAs?

25 A. So this is Exhibit 911, a T-Mobile document from 2016, and

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1 they're talking about launching in 305 markets. It says MSAs
2 there. The CMAs, your Honor, consist of MSAs, which are
3 metropolitan areas, and rural areas, RSAs. Together, they form
4 the CMAs. So the MSA is a CMA. It's a little confusing.

5 And they talk about license owned includes nine of top
6 10, 26 of top 30 metro areas, CMA-based ranking. So they're
7 just using these for the purpose of their planning and
8 reporting.

9 Q. All right. So I want to show you one more document.

10 MR. POMERANTZ: It's a Verizon, document, your Honor.

11 Verizon designated it as highly confidential. So,
12 Mr. Nichols, I want to turn off the public screens, if we can.
13 I'll tell you what, let me just use the binders if I may.
14 Let's not worry about the screens, Mr. Nichols.

15 Q. Professor Shapiro, can you look in the binder at
16 Exhibit 1235?

17 A. Yes, this is slide 13. So understanding the
18 confidentiality, this is a Verizon document, and they are also
19 talking about capital planning.

20 Q. Hold on one second, Professor Shapiro.

21 A. Oh, should I not --

22 Q. Hold on. I want to make sure we're all on the same page.
23 What page of Exhibit 1235 are you on?

24 A. It says --

25 Q. The page, look at the bottom right-hand corner.

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1 A. This is slide 13, but internally it's page 30 of
2 Exhibit 1235.

3 Q. Just so we're clear, on the bottom right-hand corner where
4 there's a typed number?

5 A. Oh, I see. I get it. Page 30.

6 Q. What?

7 A. Page 30.

8 Q. Just wait for second so that I can get there and so that
9 the Court can get there.

10 All right. And so, Professor Shapiro, without
11 discussing the substance of what's on this page, I think you're
12 just referring to the reference to CMAs, correct?

13 A. Yes, in the context of an important decision being made by
14 Verizon.

15 MR. POMERANTZ: All right. So, your Honor, I'll just
16 give a moment so you can see that, and I think we're done.

17 Now, I guess I'm going to have to ask everybody in the
18 audience to close their eyes for a second so I can quickly flip
19 through one slide here, but -- or, Phil, did you get me through
20 this? Okay. I'll just kind of go really fast here.

21 All right.

22 THE WITNESS: Now you're going to make them all want
23 to look.

24 (Pause)

25 MR. POMERANTZ: That's okay.

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1 THE COURT: Mr. Pomerantz, perhaps this material is
2 cumulative at this point.

3 MR. POMERANTZ: I'm just going to go past it. I'm
4 just trying to figure out how to get past it. I have no more
5 questions to ask on this subject. I want to go to slide 14.

6 Q. So let's turn to the next subject, which is the
7 concentrations in this market. What did you -- where did you
8 get the data that you used to then calculate the market shares
9 in the markets that you have now defined?

10 A. So we have data from all four of the large MNOs. We have
11 data on their subscribers and their revenues that are relevant
12 to measure these things. We have data from U.S. Cellular,
13 which is the largest regional. We have data from TracFone,
14 which is the largest MVNO, and we have some data from the FCC
15 as well.

16 Q. All right. So let's look at the market shares. Could you
17 briefly explain this chart to the Court?

18 A. So this is, first off, national market shares, and we're
19 measuring this. This is our most recent data from
20 December 2018. If you look at the rows, they are the different
21 mobile network operators. You see the four big players listed,
22 and then the others, which would be the regionals are lumped
23 together in one row. So those are the suppliers we're
24 measuring.

25 We're going to -- I note, of course, there are MVNO

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1 subscribers. They are attributed to these MNOs. I'll talk
2 about that later, why I did it that way. Then for each of
3 those suppliers, we've got to now look at the columns. The
4 first pair of columns counts number of subscribers, which is
5 how the data comes, which you should think of as number of
6 lines. So a family with multiple lines would be counted as
7 multiple subscribers here. So let's look at those.

8 Those columns, if you see the total, there's close to
9 300 million subscribers in the United States, and then if you
10 look at the shares, you could see Verizon is the lead with
11 around 32 percent, and we go down from there. T-Mobile and
12 Sprint having 23 percent, and about 15 percent respectively.
13 So that's the subscriber shares.

14 Then before we -- but I also mentioned share based on
15 revenue. There are advantages and disadvantages of both those
16 metrics. I'm showing you both. So the revenue -- and you can
17 see -- by the way, this is -- the monthly revenue here is \$13
18 million. That's the total there under the revenue line.

19 And then again, you can see the shares, and they're a
20 little different, right? And it's, as I'm sure you -- worth
21 knowing, T-Mobile's share is 20.6, instead of the subscriber
22 share is 23.2, and Sprint's share of revenue is also slightly
23 smaller, 13.8 rather than 14.7. That reflects the fact that
24 they, on average, are earning a bit less per subscriber. They
25 tend to be -- especially Sprint has a lower price, and so we

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1 get these different shares in revenue.

2 So that's the basic market exercise, the first half of
3 this table.

4 Q. Okay. So let's stop with the upper. Now, the lower half
5 is some calculations you used related to HHIs, and our
6 discussion with the Court on Friday at the pretrial conference
7 let's us all know that the Court understands HHIs.

8 So rather than having any explanation of what they are
9 and why they matter, if you could go to the basic calculations
10 themselves?

11 A. Okay. First off, before I get to HHI, there's a row there,
12 combined share; so that means T-Mobile and Sprint put together.
13 So that would be the share of the new T-Mobile that we're
14 getting. As you can see, that's 37.8 percent subscriber share,
15 34.4 percent revenue share. I consider that informative, as
16 well as the HHI measures.

17 And then the HHI measures, let me just focus on the
18 subscriber shares, since that's the one I prefer to use.
19 Without the merger, as of December 2018, we'd have around 2500,
20 and it goes up by 679, that's a large amount, to 3186 with the
21 merger, and you can see the revenue shares. The Herfindahl
22 numbers are slightly different but not significantly so, in my
23 view.

24 Q. All right. So the threshold in the merger guidelines for a
25 presumption of an enhancement of market power is a 200 increase

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1 in HHIs and a 2500 total post-merger HHIs, correct?

2 A. That's correct.

3 Q. Now, does it make a difference to an economist, and the way
4 you look at these numbers, whether the increase in the HHI is
5 201, just one over the 200 threshold, or 679? Does that matter
6 to you as an economist?

7 A. Well, certainly. These metrics, the higher the number, the
8 more concerning, everything else equal. So these are, you
9 know, very substantial increases in HHI, and that's -- look,
10 that's what you get when you add a 23 percent player and a
11 15 percent player. That's what you get. You get roughly a 700
12 point increase in the Herfindahl.

13 Another way to think about it, your Honor, is the 200
14 Herfindahl change threshold, that would occur if you had two
15 ten percent firms merging. You would get a 200 increase in
16 Herfindahl. It's a lot more than that. If it's 23 and 15, you
17 get a 600 or so point increase. So it is significantly
18 different, far above the threshold.

19 Q. All right. Now, let's go over a few of the issues that had
20 been raised by the defendants' economist relating to these
21 calculations and HHIs. Defendants have suggested that
22 connected devices should be included in the market. Do you
23 agree with that?

24 A. No, I don't. Again, that would be smartwatches, a tablet
25 or my mother's emergency -- personal emergency device. I don't

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1 think it should be included. I explained earlier why.

2 Q. All right. And in any event, how would including connected
3 devices in the market effect these national market shares?

4 A. Well, that's our next slide.

5 Q. Well, then I should go there. Okay.

6 A. So, your Honor, the middle column here is the one you just
7 saw. This is subscriber counts that we just had with the
8 Herfindahl, going up from 2507 to 3186. If we include
9 connected devices, it's true that T-Mobile and Sprint's shares
10 each falls a little bit. We still have a Herfindahl going out
11 from 2558 to 3169; so it's not a material difference.

12 MR. POMERANTZ: All right. Your Honor, I would move
13 slides 15 and 16 into evidence at this time.

14 MR. CARY: No objection, your Honor.

15 THE COURT: Admitted without objection.

16 MR. POMERANTZ: Thank you, your Honor.

17 (Plaintiff's Exhibits Slides 15 and 16 received in
18 evidence)

19 BY MR. POMERANTZ:

20 Q. Now, defendants have also suggested that enterprise
21 accounts, or large business accounts, should be included in the
22 relevant market; do you agree?

23 A. No, I don't. Mostly, these are what are called corporate
24 liable, which means the company is paying for it, and I don't
25 think, if you ran my hypothetical as I did, the hypothetical

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1 monopolist test would be satisfied without including those.

2 Q. All right. Now, in addition to calculating the market
3 shares at the present time, or as of the end of 2018, did you
4 also calculate projected national market shares in 2020?

5 A. Yes, I did.

6 Q. All right. So turning to this chart, maybe you can use
7 this to explain what you did?

8 A. So first all, let me explain. The numbers I showed your
9 Honor for December 2018, that's a year ago. So it's a fair
10 question. Well, are they out of date? Has the market changed,
11 or is it predictably going to change in a significant way that
12 we don't want to use those numbers from a year ago? That's my
13 most recent data; so I'm looking into that question. So that
14 is about in looking at trends and doing projections.

15 This chart here shows the trends of the market shares.
16 In some industries, the market shares move a lot. Maybe one
17 firm is really growing and another firm is really dropping.
18 You'd want to take that into account. That's not the case
19 here. These are quite stable. These are subscriber market
20 shares. They're quite stable, as you can see.

21 In fact, the only real change you see here is the
22 little bump up in the blue, which is AT&T, in early 2017, which
23 we think is actually just an artifact of they changed -- it
24 looks like they changed the way they reported, and so they
25 reclassified a bunch of devices. So we have stable market

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1 shares for the last three years.

2 Q. Now, the Court has heard a lot of testimony in just the
3 first few days of this trial about Sprint's situation in the
4 market in recent years. What does this slide tell you about
5 Sprint's situation?

6 A. Well, you can see their share is virtually unchanged.
7 Perhaps it's gone down one percentage point. This is
8 subscriber share again, and we've also looked at revenue share;
9 so it's quite stable.

10 Q. All right. So then how did you go about calculating market
11 shares for 2020?

12 A. What I wanted to do was come up with a market share for
13 2020 so we could say what they'll probably be next year, rather
14 than just what they were a year ago, based on actual data. So
15 I did -- so the standard thing, which is just to do some
16 projections, I used the last year or so of the trend to -- the
17 last four quarters, to project, and you can see here the
18 projection. So I'm projecting out two years from the end of my
19 data, which is the end of 2018, to the end of 2020. And
20 unsurprisingly, it stays pretty flat because the shares have
21 been so stable.

22 Q. Now --

23 A. And then what I do is I take the projected shares here in
24 2020, and I use that to calculate Herfindahles and the like.
25 That's where we're going.

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Shapiro - Direct

1 Q. Yes. So before we get to your calculations for 2020, are
2 the projections that you're doing on this slide 18, these
3 dotted lines going forward, are those projections consistent
4 with the defendant's own submissions during this merger?

5 A. Yes, they are, and I'm very much aware that the defendants
6 have -- are making the argument that Sprint is in trouble and
7 declining, and of course, that's something I want you to look
8 at. If I'm going to do these projections and use market shares
9 and the documents that Sprint and T-Mobile themselves put in to
10 DOJ and the FCC, showed stable shares, and the materials their
11 economist put in also showed stable shares going out several
12 years. So this is what the other data show as well.

13 Q. So your own analysis, plus the data put in by the
14 defendants in connection with the merger review by the federal
15 authorities, do not predict that Sprint will not be viable two
16 years from now, correct?

17 A. The market share projections don't show anything of the
18 like. The historical data don't show that, and the market
19 share projections, mine and the ones from the merging parties,
20 do not show any such decline.

21 Q. And you've reviewed a lot of documents in this case,
22 including public statements by Sprint executives to the federal
23 government and to the SEC. Did any of the Sprint statements
24 publicly say that we're not going to be viable in two years?

25 A. Not that I can recall.

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Shapiro - Direct

1 Q. All right. So you said that you then calculated HHIs for
2 2020. What did that show?

3 A. Well, I'm pretty sure that's our next slide.

4 Q. Well, then I should go there.

5 A. Though the right-hand column here uses the projected shares
6 for the four big carriers for 2020 and then recalculates the
7 Herfindahles, there's no significant difference. The level of
8 Herfindahl, the post-merger Herfindahl and the increased
9 Herfindahl are slightly higher with the projections, but
10 basically there's no difference.

11 MR. POMERANTZ: All right. Your Honor, again, I'd
12 like to go back and move into evidence slides 16, 17, 18 and
13 19.

14 MR. CARY: No objection, your Honor.

15 THE COURT: Admitted without objection.

16 (Plaintiff's Exhibits Slides 16, 17, 18 and 19
17 received in evidence)

18 MR. POMERANTZ: Thank you.

19 BY MR. POMERANTZ:

20 Q. Let's turn to local markets and the shares and HHIs. I
21 take it you looked at both those shares and HHI as well?

22 A. Yes, the data allowed us to do calculations at the CMA
23 level.

24 Q. All right. So let's look at, first, what does this chart
25 reflect?

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1 A. This chart, your Honor, is a list of all the CMAs in the 13
2 litigating states, plus the District of Columbia, that trigger
3 the structural presumption based on Herfindahl indices that's
4 found in the horizontal merger guidelines. That is to say, a
5 post-merger Herfindahl of at least 2500 and an increase in the
6 Herfindahl of at least 200.

7 Q. All right. And if you look at the next, I think, four
8 slides, here's the first one, what does this slide show?

9 A. So this lists the CMAs in California, and this is actually,
10 the first one, it's a good example. It's a big CMA because of
11 the population in the LA area. The buy share is actually
12 57 percent between the two firms there, and the increased
13 Herfindahl you can see, 1281, post-merger Herfindahl 4158. So
14 we've calculated that for each of these CMAs. This page shows
15 California and then subsequent pages show other states and DC.

16 MR. POMERANTZ: So I'll just quickly flip through
17 them. Your Honor, we won't have any testimony on them. 22 is
18 Connecticut, Hawaii, Illinois; 23 is Maryland, Massachusetts,
19 Michigan; 24 is Minnesota, New York, Oregon; and 25 is
20 Pennsylvania, Virginia, Wisconsin. We would ask to move into
21 evidence slides 20, 21, 22, 23, 24 and 25.

22 MR. CARY: Your Honor, we wouldn't object to the
23 inclusion of these, but we would like the backup so that we can
24 also introduce it if, we need to do so, in recalculating these
25 summary slides.

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1 MR. POMERANTZ: My understanding is that the backup is
2 provided, is already provided in connection with Professor
3 Shapiro's report, but I will -- maybe you can confirm that,
4 Professor Shapiro.

5 A. These numbers are out of my report. I believe the one
6 thing we did was added the shares so we can report the combined
7 share.

8 MR. CARY: So again, we haven't been in a position to
9 validate those numbers, and if Mr. Pomerantz will stipulate
10 that he will not object if we want to introduce that backup
11 material at a later date, if we find some inaccuracies, we will
12 not object.

13 MR. POMERANTZ: So stipulated.

14 THE COURT: All right. Yes, admitted.

15 (Plaintiff's Exhibits Slides 20, 21, 22, 23, 24 and 25
16 received in evidence)

17 BY MR. POMERANTZ:

18 Q. Now, let's go to slide 26, and if you could just briefly
19 explain this one?

20 A. Okay. So this is illustrative, your Honor, of instead of
21 looking at dozens and dozens of CMAs, these are the top 10 CMAs
22 in the plaintiffs' states based on number of subscribers, and
23 it shows just the numbers that were in those long charts,
24 namely, for each CMA. The combined shares are actually shown
25 down at the bottom.

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1 So the first is New York. Combined share of Sprint
2 and T-Mobile in New York is 58 percent, subscriber counts
3 again. Then it shows the post-merger Herfindahl, New York
4 4284, and so forth for the other cities.

5 What is notable, I think, is that all of these cities,
6 these top 10 CMAs, the post-merger Herfindahl is above the
7 national level. So this is indicating that Sprint and
8 T-Mobile's shares are larger in these cities than they are on
9 average nationally.

10 Q. All right. And to move this along, I'm going to skip some
11 slides.

12 A. Actually, what I just said isn't quite right. Their
13 markets are more concentrated, the next slide will show, with
14 the increase in Herfindahl because that's about the shares of
15 the merging firms. That shows that the increase in the
16 Herfindahl in all of these markets are higher than the national
17 average, and that goes along with the two firms having higher
18 shares, the higher combined shares than they do nationally, as
19 indicated in the -- with the names of the cities.

20 Q. Okay. So let's step back from all of these numbers and
21 just, what does your analysis of market shares and
22 concentrations tell you about the impact of this merger in
23 local markets?

24 A. So we have a large number of local markets, CMAs, where the
25 merger will combine two firms with, in many cases, nearly

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1 50 percent. At least 40 to 50 percent combined share will lead
2 to very highly concentrated market and will cause really a very
3 large increase in the Herfindahl index. We've got 800 to 1400
4 roughly on this chart.

5 Q. Would your analysis of market concentration in local
6 markets change significantly if you looked at a smaller
7 geographic region, such as a county rather than a CMA?

8 A. No, it would not. In my reply report, I present analysis
9 based on the county level Herfindahl indices, and shows that
10 one tends to get similar but, if anything, slightly higher
11 increases in the Herfindahl index if you do it at that level,
12 county rather than CMA.

13 Q. Okay. So let's skip slides 28 and 29. All right. So
14 let's go to MVNOs. How did you account for MVNOs, like
15 TracFone, in the market share calculations that we just
16 presented to the Court?

17 THE COURT: Mr. Pomerantz, to the extent you're going
18 to a different topic, why don't we break at this point for 10
19 minutes?

20 MR. POMERANTZ: That would be fine, your Honor.

21 (Recess)

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Shapiro - Direct

1 THE COURT: Thank you. Be seated.

2 Mr. Pomerantz, you may resume.

3 MR. POMERANTZ: Thank you, your Honor. We were just
4 about to discuss MVNOs.

5 BY MR. POMERANTZ:

6 Q. Professor Shapiro, how did you account for MVNOs like
7 TracFone in the marker share calculations that we just
8 presented to the Court?

9 A. As I mentioned, I attributed MVNO subscribers to the MNOs,
10 the network operators that are providing the underlying
11 services that the MVNOs are reselling.

12 Q. And why did you treat MVNOs in this manner?

13 A. The underlying principle here, your Honor, is that when
14 we're measuring markets shares in the merger analysis we want
15 to measure the ability of different firms to independently
16 compete to serve the customers. And MVNOs do not have the
17 ability to independently compete because they rely so heavily
18 on the network operators in order to provide service. That's
19 the guts of it, but we'll go through more detail.

20 Q. So I think you put together this chart to go through the
21 more detail, so could you use this chart to explain to the
22 Court why MVNOs are not independent competitors, in your view?

23 A. Yes. So you see I set them side by side with TracFone as
24 my example. They're the largest MVNO by far. The first
25 bullet, they're paired here, the MVNOs have massive investments

JCBTSTA7

Shapiro - Direct

1 in cellular networks, billions of dollars a year. I will talk
2 about TracFone, as an example, does not invest in a cellular
3 network; very different creature.

4 For that reason, the second bullet, of course of
5 carriers compete on network quality, improving speeds, making
6 investments and so forth. It's a critical dimension of
7 competition. MVNOs just cannot compete on that dimension.
8 They don't have their own investments and their own networks,
9 so they're not able to compete on that critical dimension. So
10 they look very different as businesses and business models, and
11 the MVNOs cannot compete on network quality.

12 Q. The next two points on each side referred to cost margins
13 and marginal cost, and I think you put together this chart to
14 help explain these points.

15 A. Go back, actually. I think that's a little too fast,
16 because --

17 Q. I think the judge liked my way more than yours, but go
18 ahead.

19 A. I don't know. The point is if we look at price cost
20 margins, T-Mobile, as an example, had about a 50 percent price
21 plus margin. This is a marginal cost, they're incremental
22 costs of serving the subscriber, while TracFone has a very thin
23 margin, it's about one percent, which is to say 99 percent of
24 their revenues are going to the costs, the marginal costs of
25 serving the customer. That's a very thin margin.

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1 And that goes along with the point there about low
2 versus high marginal costs, a critical element for an economist
3 of a firm's ability to compete is its marginal costs. Firms
4 that have high marginal costs are disadvantaged. So the
5 network marginal cost, using Metro here to go along with
6 T-Mobile as their prepaid brand, is \$1.75 per subscriber per
7 month. And TracFone has a much higher cost. They have to pay
8 a wholesale price to whatever the MNO is that they're using,
9 and that's 14.75, on average. So very, very different. They
10 have a much higher marginal cost, so that's a big disadvantage
11 that the MVNO inherently faces.

12 So those points go together as the MVNOs have very
13 different economics, thin margins, and this very much limits
14 their ability to compete.

15 Now you can go to the next slide.

16 Q. Go ahead.

17 A. So this, if you look at the title, your Honor, if we take a
18 subscriber, TracFone subscriber, who is making money? We're
19 following the money here. Who is actually making money on that
20 subscriber, and how much? Well, TracFone makes some money, but
21 so does -- let's suppose this is a subscriber carried on the
22 T-Mobile network, served by the T-Mobile network, so we can see
23 who is actually making money on the subscriber.

24 So let's look at the TracFone column first. And this
25 is from TracFone, the data we got from them. So the ARPU, the

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1 monthly average revenue per user, \$25.70. After deducting
2 their costs, the profit margin is only about 29 cents. That's
3 our calculation. Why is it so low? Or one percent, basically,
4 one percent margin. That's what I referred to earlier on the
5 previous slide. Why is it so low?

6 First, they have to pay a substantial fee to
7 T-Mobile --

8 Q. That's the 12.50 you have on the slide?

9 A. That's the 12.50, or on average it's larger for them, but
10 that's the same concept, the wholesale price.

11 And they also have other costs, most notably
12 subscriber acquisition costs that they have to account for.
13 And so when you take away those other costs, they have a very
14 thin margin, one percent of their revenue, roughly.

15 Now to go to T-Mobile, that same subscriber, again the
16 TracFone customer served by T-Mobile, T-Mobile will get on
17 average for its MVNO subscriber it's serving, they get 12.50 a
18 month. That's essentially the wholesale price they're getting.
19 And they have a very low cost, less than a dollar of marginal
20 cost of serving the customer. These are the marginal network
21 costs. So they have a margin that's \$11.52.

22 So on this customer, who is really making the money?
23 It's T-Mobile, not TracFone. For that reason, the underlying
24 economics is telling us it would make no economic sense to
25 assign that customer to TracFone when there's market shares,

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1 the money is being made by T-Mobile, and that's what I have
2 done.

3 Q. So let's go back now to your prior slide, and I think we
4 have covered all the bullet points except the last one on each
5 column. So if you could address: Why does it matter that
6 MVNOs are heavily dependent on MNOs?

7 A. Well, the -- it's easier to think first in the longer run.
8 Merger is a fundamental structural change of the industry. The
9 MVNOs need to sign contracts, and they're dependent on the
10 MNOs, but it also means that the MNOs can lever control of the
11 MNO and limit them. I think the key point is market shares --
12 you're trying to measure independent competitors, I think the
13 key point is that an MVNO is not a competitor for the MNO that
14 is serving it. They're partners, they're not competitors. And
15 that, again, points to attributing the subscribers to the MNOs.

16 Q. Let's look at some of the underlying ordinary course of
17 business documents that you reviewed in connection with this
18 issue, and let's start with Exhibit 1031.

19 Could you explain how this document, which is a
20 T-Mobile document, relates to the opinions you just gave about
21 MVNOs.

22 A. So you see this is an MVNO strategy review document from
23 T-Mobile about two years ago. I have chosen to highlight the
24 title there of the slide that they're describing MVNOs as their
25 partners. That is, I think, an important point. There's

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1 underlying economics that we have been talking about. And
2 point of this slide is the three main levers that they have to
3 steer these partners, and the levers are -- you can see the
4 three grayish boxes, they have pricing and contract, network,
5 and they have distribution.

6 Q. So let's go -- I take it the way this slide is laid out
7 there's a red, yellow, green, and red would be where you wanted
8 to stop or deter the MVNO, yellow is neutral, and green is you
9 want to grow the relationship, as you see at the top. So if
10 you go down the red column and briefly explain the levers that
11 an MNO has against an MVNO that affects the MVNO's ability to
12 compete.

13 A. So pricing, so this is wholesale pricing now, if you want
14 to harvest the relationship or wind it down, T-Mobile would
15 increase the pricing when they can, which would be at contract
16 expiration. And they can also take a hard line in enforcing
17 contract terms. That's the second point there.

18 Q. And then on the network?

19 A. Well, since the network quality available to the MVNO is
20 only what the MNO is offering them, they could degrade that, I
21 will say, or they say reduce network priority, so they could
22 choose to give lower priority and therefore lower quality
23 service to the MVNO.

24 Q. And so we see some distribution restrictions as well, and
25 they're in the record, so we won't belabor the point.

JCBTSTA7

Shapiro - Direct

1 Let's, if we can then, look at the next slide, and if
2 you can just address what this is saying.

3 A. So this is an article from a industry outlet, I guess,
4 where the Verizon --

5 MR. CARY: Your Honor, we're going to object to
6 reading this document into the record. This is just some
7 random press article quoting some random third party from some
8 random fourth company. I guess it's Verizon purportedly, but
9 we have not basis for that. This is not the kind of, I would
10 think, scientific evidence that an expert economist would rely
11 upon.

12 MR. POMERANTZ: Your Honor, we're not offering it as
13 an exhibit in the case, however, it is the kind of information
14 that an economist would use. It doesn't have to be scientific.
15 In fact, here, as we heard some prior testimony, Fierce
16 Wireless is one of the publications in this industry that
17 business people read and rely upon. I forget which witness it
18 was, but one of the witnesses in particular testified about
19 Fierce Wireless. And this is just one of the little pieces of
20 information that Professor Shapiro relied on. It was cited in
21 his report in footnote 75, as indicated on the slide.

22 THE COURT: Thank you. Overruled. To extent the
23 document is not coming into evidence but it was part of what
24 the professor considered, along with a hundred other books and
25 treatises I presume that he read and prepared for this report

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1 and would not have been admitted into evidence either, but he
2 did consult them.

3 MR. POMERANTZ: That's correct, your Honor.

4 BY MR. POMERANTZ:

5 Q. Professor Shapiro, if you could please proceed.

6 A. So the idea is that Verizon sees TracFone as their prepaid
7 product. Going beyond the particular quote, the reality is
8 that has been Verizon's strategy is to generally not have its
9 own prepaid brand but to use TracFone to reach that segment.

10 Q. So we heard testimony already in this case about how Sprint
11 has Boost as its prepaid brand and T-Mobile has Metro as its
12 prepaid brand, is it your understanding that historically
13 Verizon has not had its own prepaid brand but instead used
14 TracFone as its prepaid brand?

15 A. They definitely have not had their own prepaid brand
16 historically. They did launch a brand, I think it's very small
17 still, but they have used TracFone for this purpose.

18 Q. So now let's move on to Exhibit 655. This is a declaration
19 of Mr. Kolinowski, who is employed by Sprint, and his deposition
20 actually was taken in this case as well. He is still employed
21 by Sprint. Did you consider Exhibit 655 in evaluating whether
22 MVNOs are competitors to their MNO hosts?

23 A. Yes. So this is just another illustration of the same
24 point that Mr. Kolinowski, on behalf of Sprint, viewed Cox,
25 which is an MVNO utilizing Sprint's network, not a direct

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1 competitor; same idea, they're a partner instead of a
2 competitor.

3 Q. And the next slide is also a quote from Mr. Kolinowski. Did
4 you rely on this?

5 A. Yes. This is more recent now from 2016, and it's this --
6 again the key economic idea is that the MNO is using MVNO, as
7 he said, to reach niches of customers not typically targeted by
8 Sprint. To get to incremental business, this is their
9 strategy, and I would say that fits with the idea of the MVNO
10 being their partner, not their competitor.

11 Q. One more, and this is from AT&T.

12 MR. POMERANTZ: And again, your Honor, we're not
13 offering this into evidence here.

14 Q. But is this something else that you relied on in connection
15 with your analysis in this case?

16 A. Yes, it's the same idea, that AT&T, in describing their
17 MVNO relationship, said in the second part: MVNO solutions are
18 incremental to our other businesses, that's the goal, as
19 opposed to being directly competitive.

20 Q. So now what are the implications of the way that MNOs treat
21 MVNOs for the calculation of market shares in this matter?

22 A. Well, what I have been -- as I said, I attributed MVNO
23 subscribers to the network operators, and I have been seeking
24 in the last part of my testimony to explain why I think this is
25 clearly the correct approach as a matter of economics,

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1 antitrust economics.

2 Q. So we have now a T-Mobile document, Exhibit 813. Is this a
3 document that you considered in your analysis?

4 A. Yes, it is.

5 Q. And why is this document relevant to your MVNO analysis?

6 A. This maybe is icing on the cake, if you will. This is
7 simply showing when T-Mobile measured shares, in this case
8 nationwide prepaid shares, they are reporting the four
9 carriers. As indicated in the highlight, all carriers include
10 MVNO activity. So in this instance, they attributed the MVNO
11 subscribers to the carriers, as I am doing.

12 Q. And you're referring to the box, that says "special notes,"
13 and then you highlighted something next to it that says "all
14 carriers include MVNO activity," correct?

15 A. Correct.

16 Q. And this is a T-Mobile document, correct?

17 A. Yes, from 2017.

18 Q. And one last one. I do not want you to talk about any of
19 the arrows or numbers, but if you would just please explain to
20 the Court how this, another T-Mobile document, supports your
21 views about how MVNOs should be treated for market share
22 calculations.

23 A. So this is another T-Mobile document, it's about what they
24 call internal migrations, and my sole point here is that they
25 are including in what they call internal migrations customers

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1 switching or moving between the brands -- their own brands,
2 T-Mobile and Metro. And they have an MVNO here in the lower
3 part of the diagram, and they are including MVNO as calling it
4 an internal migration. That's the whole point here.

5 Q. So defendants' economists have argued that MVNOs should be
6 treated as separate competitors when calculating market shares.
7 How do you respond?

8 A. I think I responded pretty fully. I think it's not correct
9 as a matter of economics, by which I mean measuring market
10 shares in a way that accurately reflects the ability of the
11 firms to compete independently and basically their competitive
12 impact in the market. Furthermore, it's inconsistent with how
13 the FCC has generally analyzed these markets over the years,
14 and how the -- I don't know about DOJ, I should not say that,
15 FCC.

16 Q. Let's move on to anticompetitive effects. What are the
17 different kinds of anticompetitive effects that can be
18 generated by a merger between companies, between competitors?

19 A. So we generally think of these two large buckets of
20 possible anticompetitive effects, coordinated effects and
21 unilateral effects. I mentioned them briefly at the beginning
22 of my testimony this afternoon.

23 Q. So let's go to coordinated effects first. What are
24 coordinated effects in a merger analysis?

25 A. Coordinated effects refer to -- I'm not going to keep

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1 saying it, but we mean by these anticompetitive coordinated
2 effects, I mean as a result of the merger, the merged firm and
3 its remaining competitors will compete less aggressively than
4 they would otherwise have. So not just the firm, the merged
5 firm itself, but with its competitors they will pull their
6 punches more. That's the concern.

7 Q. And are coordinated effects a standard element of merger
8 analysis?

9 A. Absolutely. For many years they were the predominant
10 element, and then unilateral effects have taken on a bigger
11 role in the last 20 years.

12 Q. Let's start with the way the merger guidelines address
13 coordinated effects. Could you briefly describe what's on this
14 slide.

15 A. This is a quote from the merger guidelines, "Coordinated
16 interaction involves conduct by multiple firms that is
17 profitable for each of them only as a result of the
18 accommodating reactions of the others."

19 So there's this notion of accommodation, or it's not
20 simply one firm changing its behavior, we have got a change in
21 the behavior of several firms, more than one, anyhow, typically
22 the largest firms, that were concerned about, by which we mean
23 compete less aggressively.

24 Q. And so we're absolutely clear here, in this particular
25 matter we're not saying that coordinated effects means that new

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1 T-Mobile is going to call up AT&T and Verizon and say let's fix
2 the price at a higher level, that's not what you're addressing
3 here in this particular analysis, correct?

4 A. No, it's not simply -- it's not just about expressed
5 cartels, it's really a much more general concept that there
6 will be weaker competition, that the firms won't go after each
7 other as much as the merger.

8 Q. So did you have an opportunity to read the testimony of
9 Mr. Solé from this particular trial earlier this week?

10 A. Yes, I know he was on the witness stand on Monday.

11 Q. All right. And I am not asking you about the substance of
12 this document, I'm going to ask you to read it, but do you
13 understand this was one of the documents that he was asked to
14 testify about on Monday?

15 A. Yes.

16 Q. And this is Exhibit 566. Does Exhibit 566 address the
17 general idea of coordinated effects?

18 A. Yes, it's talking about the benefit of a consolidated
19 market being a higher price, \$5 ARPU he mentions here, and he
20 mentions the three players, obviously new T-Mobile, AT&T and
21 Verizon. So this is exactly the concept that we're talking
22 about, higher prices set by the big players after a merger that
23 consolidates the market.

24 Q. What is the basic concern regarding coordinated effects in
25 this case?

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1 A. In this case, to distill it down I would say, my central
2 concern is that after the merger the remaining three big
3 carriers will not, as I guess I said, not fight so hard, not
4 press so hard with lower prices, they will pull their punches,
5 because Sprint will be gone and T-Mobile will be a much bigger
6 market share.

7 Q. Have you heard the term "parallel accommodating conduct" in
8 connection with coordinated effects analysis?

9 A. Yes, that's a term used in the merger guidelines.

10 Q. What is it?

11 A. So it refers one flavor of coordinated effects, which is
12 really what I have been talking about in the sense it does not
13 necessarily involve any agreement or prior understanding among
14 the firms, in this case, the big three carriers, but simply a
15 lessening of competition by virtue of the greater concentration
16 in the market and just a mutual awareness that they could all
17 benefit by competing less.

18 Q. How do economists analyze the likelihood of coordinated
19 effects following a merger?

20 A. So we do this sort of in two big parts, this analysis.
21 First we try to assess the market in which this is happening,
22 and is this market vulnerable and susceptible to competitive
23 effects? So we look at the market, and then we look at: How
24 is the merger changing things? Is the merger really going to
25 make this a greater danger? Those are the two big pieces.

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1 Q. So now if we look at this slide, this is from the merger
2 guidelines again, is this the approach taken in the horizontal
3 merger guidelines relating to what you were just describing?

4 A. Yes. So this lays it out. I won't read it, your Honor,
5 but item two here is what I said: Is the market vulnerable,
6 susceptible to coordinated conduct? That's one.

7 And then: If so, is the merger going to make it
8 worse? And one element that will make it worse is increase in
9 concentration, there are other elements we'll talk about.

10 Q. Let's start with the first thing that you said, which is
11 the susceptibility of the post-merger market to coordination.
12 How does an antitrust economist determine whether an industry
13 is generally susceptible to coordinated effects?

14 A. There's been decades of research on this issue with
15 concerns about oligopolies going back to genesis of the
16 antitrust laws. So we have a slide here to describe a number
17 of factors that economists look at. And it's kind of a
18 checklist approach, which is industries are so different we
19 have things we systematically look at to assess whether a
20 market is susceptible to coordinated effects, and I listed
21 items here that tend to make a market more susceptible. It's
22 not yes or no, it's not like you need all these, these are just
23 things economists have found it's useful to look at.

24 Q. And does the relevant market for retail mobile wireless
25 telecommunications have features that you believe make it

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1 susceptible to coordination?

2 A. Yes, quite a few, and we can go through those on this list.

3 Q. If you could.

4 A. So small number of firms, or basically going from four to
5 three in terms of nationwide carriers, so that's small.

6 Similarity among larger firms. Well, after the merger
7 particularly we would have three similarly-sized firms in terms
8 of market shares. They are different in some other respects,
9 but we would have that situation. We saw the market shares
10 earlier. They will all be in the 30s.

11 Inelastic demand. What that means is if they manage
12 to pull their punches and keep prices up, would they lose
13 business as a group? Inelastic demand means no, they will not
14 lose much. Here it's not disputed that the demand for cell
15 service overall is quite inelastic. Most people will get the
16 service, even if it costs a bit more. So that would be a
17 factor that would apply in this industry as raising concerns.

18 Higher barriers to entry. Could other firms come in
19 easily? Not at all here.

20 Predicable or stable demand. We're going to talk more
21 about this, I think, but the basic idea is if a group of firms
22 are trying to coordinate, it's natural for them to be looking
23 out and seeing: Are the other guys going along? Are they kind
24 of cheating on the deal; quote, unquote "cheating." If demand
25 is pretty stable, along with the last point that you could

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1 watch each other in realtime pretty closely, then it's easier
2 to hold that together and the coordination to persist. So here
3 we have quite stable demand. I understand, of course,
4 technology changes a lot. This is not a static industry, I
5 don't mean that, but demand is not fluctuating a great deal
6 from one month to the next. That applies here.

7 Absence of large buyers. This is a consumer market,
8 so the -- there are no large buyers. Even the enterprise
9 people, who are still small in the overall market, are in a
10 separate segment.

11 So all these points are -- all these factors are
12 pointing towards concerns.

13 The transparent pricing and rapid monitoring, this is
14 the same idea I mentioned in the context of predictable, stable
15 demand, which is if the firms are feeling each other out and
16 not competing too much, then if one firm is thinking maybe I
17 will get a jump on the other guys by lowering the price, how
18 much of a jump can you get? If they find out quickly and
19 respond, you don't gain very much. So if the prices can be
20 monitored rapidly and have rapid responses, the prices are
21 transparent, that tends to support coordination. And we have
22 that here, and we will talk about that a little more.

23 So those were all these elements. I am aware that the
24 economists on the other side have pointed out that there's some
25 complexity in pricing. There are a lot of different components

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1 of pricing, I expect to be asked about it, and I agree that is
2 a factor that, everything else equal, could push the other way,
3 but looking at these in total and with many other things we'll
4 talk about, I think this is definitely a market that is
5 susceptible to coordinated effects.

6 Q. I want to briefly look at a few documents that go to this
7 last point, which is the transparency of pricing in this
8 industry and the ability to rapidly monitor what your
9 competitor is doing. Is this one, Exhibit 1021, one of the
10 documents you relied upon in this matter in connection with
11 this very point?

12 A. Yes. So it's a T-Mobile document, Executive Dashboard Key
13 Metrics is the title of it. And you see weekly promotion
14 overview post-paid. And so they're tracking Sprint, Verizon,
15 AT&T on multiple dimensions. And you could see some of the
16 complexity I mentioned. My key point is that they are doing
17 this on a weekly dashboard here weekly reports. That's quite
18 rapid.

19 Q. This next one, is this another regular document that you
20 have seen in their productions, and what does it tell you?

21 A. Again, the T-Mobile document, again executive dashboard,
22 and they're monitoring particularly these porting trends. So I
23 think you heard about this. Porting is when a person moves
24 their number from one carrier to another. So that's something
25 they're pretty interested in: Are they gaining port-ins and

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1 port-outs? And they have a weekly view of port-ins and
2 port-outs by carrier. So that's a lot of detail. In a lot of
3 industries it's more the fog of war: I lost customers, I don't
4 know what happened. Here they know a lot quickly, and that
5 tends to support coordination.

6 Q. And this document, does it relate to the same point about
7 monitoring and also transparency of pricing?

8 A. Yes, exactly.

9 Q. And this one here?

10 A. Sorry, I wasn't looking. I didn't understand. There's a
11 point about signaling, a slightly related point, which is you
12 could monitor and then signal. So there's a clear mutual
13 awareness among the big players of what they're doing and
14 trying not to trigger an overreaction, say no need to panic,
15 they say. They don't want the other firm to think they're
16 doing something dramatic on an ongoing basis, because that
17 would trigger a response that would be essentially bad for both
18 or all of them, because it would be like initiating a price
19 war. They don't want that to happen, so they're signaling.
20 That's the type of thing that we look at when talking about
21 coordinating effects.

22 Q. You were just discussing Exhibit 777, and the next one,
23 Exhibit 856, is of a similar nature?

24 A. Again a signaling example.

25 Q. So let's turn now to the second part of your analysis of

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1 coordinated effects, which is whether the merger itself is
2 likely to increase the danger of anticompetitive coordination
3 in this market.

4 A. Okay.

5 Q. Why would the proposed merger between T-Mobile and Sprint
6 make coordination more likely?

7 A. So there are three reasons, all of them quite strong, in my
8 view. First, the merger will significantly increase
9 concentration, and that creates inherent dangers. That's one.

10 Second, Sprint will be eliminated as a competitor.
11 And they have been a disruptive force. We call them a
12 maverick. I will talk about that term in a moment.

13 And T-Mobile has also been rather disruptive, and they
14 will go from being the scrappy number three to being the market
15 leader. And that is transformation that will tend to raise the
16 concerns about coordinated effects. So those three reasons.

17 Q. Let's go to the first one. How does increased market
18 concentration affect the likelihood of coordination?

19 A. Well, this is the intuitive idea that if there are fewer
20 players, not as many have to coordinate. And when the players
21 are bigger, in terms of the market share, they are happier with
22 the status quo. And if they were to start a price war, they
23 would be more at risk, basically, because they would have more
24 to lose. So it's just the general idea of market concentration
25 as related to less competition.

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1 Q. And how does that concern, the number of competitors, et
2 cetera, relate to the HHIs that we were previously talking
3 about and the changes in HHIs?

4 A. Well, that's the link between that quantitative measurement
5 of market shares we spent a while on with those large increases
6 in Herfindahl tendencies, 600, 700, highly concentrated market,
7 3,000 plus after the merger. So that directly links to this
8 concern. And going back to the guidelines, back to 1982,
9 that's been the linkage, the Herfindahl and coordinated
10 effects.

11 Q. So let's go to your second and third reasons about the
12 concerns about this merger and its effects on coordination,
13 both of which relate to the maverick concept. Could you
14 explain what a maverick is in the context of coordinated
15 effects?

16 A. Certainly. So the term is used in the literature,
17 sometimes also use the term "disruptive firm." Basically it's
18 a firm that tends to initiate competitive moves and is less
19 likely to go along with coordination by others, or let's say
20 with price increases or other moves that are not in favor of
21 consumers. So the firms that have been disruptive have been
22 lowering prices, and it's often a smaller firm, could be, or a
23 firm with lower costs, for example, or a firm that has some
24 other -- those would be two good examples, yeah.

25 Q. So T-Mobile likes to say that being a maverick is in their

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1 DNA, it's parts of their culture. Does the way that the merger
2 guidelines and antitrust economists look at the concept of
3 maverick, does it have anything to do with the corporate
4 culture of a particular firm?

5 A. It's not about that, no, it's really about the economic
6 incentives facing the firm. If you have a firm with a
7 relatively small share but has the prospect to grow that, they
8 may figure look, we're going to cut price, we could pick up
9 some share doing that. The attribute there that makes them a
10 maverick is a small share, or in my other example, the cost,
11 it's not about cooperate culture. So this is important because
12 when you have a merger, the incentives of the firms are going
13 to change. And so a firm that has been a maverick might not be
14 one anymore. That's what I'm concerned about here for
15 T-Mobile.

16 Q. So I want to go back to slide 45. So what is the role of
17 maverick? We see that in the next to last line here. What is
18 the role of maverick firms in a merger analysis?

19 A. Well, the last sentence here is worth my referencing. It
20 says: An acquisition eliminating the maverick firm --
21 explained elsewhere -- in a market vulnerable to coordinated
22 conduct is likely to cause adverse coordinated effects.

23 So the idea is if a market is susceptible, and I
24 explained that this one is, to eliminate a maverick firm is
25 inherently worse. I'm giving a little overlay here, but we'll

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1 talk about Sprint, for example, they have been a low price
2 firm. T-Mobile has their uncarrier strategy. If you eliminate
3 a maverick for a moment -- let me stick with Sprint, because
4 it's the firm being eliminated -- it's inherently worrisome in
5 terms of coordinated effects if you're in a market where such
6 effects -- it's vulnerable, it's susceptible. So it's a really
7 central part of coordinated effects analysis. It's not the
8 only path for one to find these effects in analysis, but it's a
9 central one, and it's identified here in the merger guidelines.

10 Q. Let's skip forward six slides to slide 51.

11 You said both Sprint and T-Mobile have been mavericks.
12 Let's start with Sprint. How will the elimination of Sprint as
13 a maverick increase the danger of coordination?

14 A. So we're on the left-hand side here, your Honor, then we'll
15 turn to T-Mobile next.

16 So I just listed here some of the ways -- significant
17 ways in which Sprint has acted as a maverick, and let me
18 translate that, meaning engaged in competitive initiatives that
19 have been pro-consumer and have put pressure on the other
20 firms. So they have this cut-your-bill-in-half promotion, this
21 was around 2015 where they offered to -- well, I think you
22 heard about it -- where they offered to -- if you moved from
23 one of the other carriers you only paid 50 percent, and that
24 triggered responses. They were one of the leaders with
25 T-Mobile in introducing low cost unlimited plans. That

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1 triggered responses. So they have been initiating these
2 competitive modes and triggering responses, some by T-Mobile,
3 some by AT&T and Verizon.

4 They also were the first to get into cell phone
5 leasing. They have been supportive of eSIM technology. I
6 don't know how much you heard about that yet, but this is
7 mostly with Google Prime now. It's a way for the cell phone to
8 be able to automatically shift from one carrier to another. So
9 this is a pro-competitive technology that Sprint has been
10 supportive of and the other carriers have not. So that's
11 initiating the competitive move in that sense. And they both
12 have done that with MVNOs with giving them core control, some
13 additional autonomy, a little bit, some additional scope of
14 action, I will say.

15 So these are all dimensions in which Sprint has been a
16 maverick, initiated competitive moves. So naturally if they're
17 gone as an independent firm, that's not happening. So we
18 worry: Is somebody else going to do that? Who is going to do
19 that without Sprint to do it? It's the concern.

20 Q. Let's turn to T-Mobile. How will the transformation of
21 T-Mobile into new T-Mobile increase the danger of coordination?

22 A. So again I listed some ways in which T-Mobile has been a
23 maverick. I think they're rather proud of it, and I applaud
24 them and their CEO for shaking up the industry. They have put
25 a lot of pressure on AT&T and Verizon over the years, competed

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1 with Sprint, too, we'll talk about that a little more. The
2 whole uncARRIER strategy, there's been a lot of pieces to it.
3 They eliminated long-term contracts, the low cost unlimited
4 plans, eliminated overcharges and others.

5 So they have initiated a lot of moves, and it's
6 generated enormous value for the consumers; not just their
7 consumers, but AT&T and Verizon subscribers also benefit
8 because they have been forced to respond. So again, now the
9 question is not they will be eliminated, T-Mobile, but they're
10 going to be transformed. They will have the largest market
11 share, and one just has to ask whether they will have the same
12 incentives to compete when they are the market leader as
13 opposed to number three trying to gain ground.

14 Q. And Professor Shapiro, you mentioned the CEO of T-Mobile,
15 Mr. John Legere, right?

16 A. Yes.

17 Q. He has a rather big personality, right?

18 A. Yes.

19 Q. And the way you're looking at this, does this have anything
20 to do with Mr. Legere's personality or Mr. Sievert, who is
21 about to succeed him, or Mr. Kerry, who might succeed
22 Mr. Sievert, or whoever the head of it is, does this have
23 anything to do with the personality of the individual or does
24 it have to do the economic incentives of the company?

25 A. As I said, it's not about corporate culture or about

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1 individual leaders, at least in my analysis. I will testify as
2 an economist here, so I'm talking about the economic
3 incentives. And this is deep in the DNA of an antitrust
4 economist: If this merger goes through, what will the
5 incentives of these firms be? They're going to be trying to
6 make profits, where will that take us? It's all about economic
7 incentives and capabilities.

8 Q. How do MVNOs factor into your analysis of the likelihood of
9 coordination among new T-Mobile, Verizon and AT&T?

10 A. So I have accounted for the MVNOs in my analysis of
11 coordinated effects. I hope you will remember, your Honor, I
12 said a while ago that because the MVNOs have these really low
13 margins, they cannot initiate price cuts. They can't
14 significantly lower price because that will put them under
15 water. They're basically on very thin margins as resellers.

16 So if new T-Mobile, AT&T and Verizon pull their
17 punches, don't lower prices as much, without the mavericks
18 pushing -- without Sprint, let's say, to push them down, the
19 MVNOs will not disrupt that. They can't be the one to initiate
20 the price increases. They don't have the margin. They would
21 be under water. So this type of coordination in the MVNOs, I'm
22 not saying they're going to be coordinated or part of it, but
23 they also can't restrain it. So the concern is not reduced by
24 recognizing that there are MVNOs out there. I have done that.
25 I recognized them.

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1 Q. So based on your coordinated effects analysis, how are
2 consumers going to be harmed?

3 A. So that's the slide here, your Honor, now, potential harm
4 to consumers. So the specific scenario, new T-Mobile, Verizon,
5 AT&T coordinate to avoid price declines in 2020. So I have
6 been telling the story a bit already, which is without -- after
7 the merger, instead of having prices go down, they just stand
8 pat, they pull their punches, as I have been calling it.

9 Now why would that harm consumers? Well, consumers
10 would be missing out on the price reductions that would
11 otherwise take place. So I have a way of quantifying that. We
12 can look at what the price reductions have been over a several
13 year period as reported by the FCC, and that's the middle row
14 here. This is the most recent data we have from them on this,
15 that's why it's 2014 to 2017. It's the ARPU, the ARPU have
16 been declining at a rate of 6.3 percent a year.

17 So I will call it an illustrative calculation for your
18 Honor based on the scenario. If the coordination involves
19 prices stay where they are instead of going down 6.3 percent,
20 and it's just the three big players who do that, that would
21 cause annual consumer harm of 8.7 billion. That's taking the
22 6.3 percent and multiplying it by that revenue base of 138
23 billion. There's so much money in these markets. These are
24 huge markets. That's a lot of consumer harm simply by avoiding
25 price increases for one year.

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1 Q. So now let's turn to unilateral effects, the other kind of
2 anticompetitive effect. Just briefly, if you could explain
3 what unilateral effects are. And I put on the screen another
4 provision in the horizontal merger guidelines relating to
5 unilateral effects.

6 A. So as I say here, a merger between firms selling
7 differentiated products may diminish competition by enabling
8 the merged firm to profit by unilaterally raising the price of
9 one or both products above the premerger level.

10 So here we're talking about T-Mobile and Sprint,
11 they're selling differentiated products. The unilateral means
12 the merged firm, new T-Mobile, would set higher prices than
13 T-Mobile and Sprint would otherwise set if they weren't
14 combined. So unilateral, we're focusing very much on T-Mobile
15 and Sprint. The coordinated effects discussion, there was a
16 lot about AT&T and Verizon, now we can kind of put them aside a
17 bit in the sense they're out there, they're competing, but
18 let's take their prices as given, and just looking at T-Mobile
19 and Sprint combining, would that create incentive to raise
20 price?

21 And that's what the effects are about, and I am going
22 to explain why I believe it would. The idea is rather simple,
23 I think, and intuitive. After the merger, if T-Mobile raises
24 their price, they won't have to worry about losing customers to
25 Sprint, they own Sprint. That's what we're talking about.

JCBTSTA7

Shapiro - Direct

1 Q. Let's step back for a second and focus on the term "higher
2 prices" in the context of a unilateral price effect. How in
3 this context should we interpret the term "higher prices?"

4 A. It means higher prices with the merger than without the
5 merger. In this industry, where price has been coming down,
6 what I'm really thinking about is prices will stop coming down
7 or won't go down as fast. So it's prices with the merger
8 compared to without. And that's what this -- we'll get into
9 some quantification here -- that's what the techniques are
10 focused on is the difference between the merger with or without
11 the merger, not over time.

12 Q. And bottom line, what is your conclusion regarding
13 unilateral price effects?

14 A. So there are -- I expect there to be significant unilateral
15 price effects associated with this merger, and that will harm
16 consumers.

17 Q. What are the factors that drive you to that conclusion?

18 A. The central element of that conclusion is that there is
19 significant direct competition between T-Mobile and Sprint that
20 will be eliminated.

21 (Continued on next page)

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JCBPSTA8

Shapiro - Direct

1 Q. Now, wouldn't there be a loss of head-to-head competition
2 between the merging parties in any horizontal merger?

3 A. Yes, there would be. So we need to -- it's desirable, to
4 the extent we can, to quantify the extent of this loss of
5 competition. It's the same idea of the Herfindahles, your
6 Honor. Any horizontal merger will raise the Herfindahl in the
7 relevant market. We don't make a big deal of it if those
8 changes are small or if the Herfindahl is low.

9 In this case, we need to see how big is this effect,
10 how much do they compete directly, and that's what we want to
11 quantify and that's what I'm going to do.

12 Q. So what evidence did you look at to help determine the
13 extent of the head-to-head competition between T-Mobile and
14 Sprint?

15 A. Well, there's a lot of company documents that naturally
16 talk about competition, and let me be clear here, of course,
17 they each compete with AT&T and Verizon. What we were just
18 trying to quantify is the extent to which they compete with
19 each other. So we have documents, and then I have data that I
20 particularly like.

21 Q. All right. Okay. We're not going to go over that data too
22 much here. Were you able to quantify the extent of
23 head-to-head competition between T-Mobile and Sprint?

24 A. Yes. So the way we do that is through something we call a
25 diversion ratio, and basically it runs like this: If T-Mobile

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1 raises their price, they're going to lose some customers.
2 They're going to lose customers basically to AT&T, Verizon and
3 Sprint. We want to measure how many would they lose to Sprint.
4 If they're losing a lot to Sprint, then that's significant
5 head-to-head competition.

6 So the diversion ratio is of the customers they lose,
7 what share go to Sprint, and then we do the same thing in the
8 opposite direction. If Sprint raised the price, what share of
9 the customers they lose would go to T-Mobile; so that way, we
10 can quantify the head-to-head competition through this measure
11 called the diversion ratio. You may have seen in other cases,
12 maybe not, something in the conversation called
13 cross-elasticity of demand. It's the same idea.

14 THE COURT: Mr. Pomerantz, let me interrupt here
15 because a lot of questioning that you have been asking have
16 raised some questions of my own, which perhaps at this point --

17 MR. POMERANTZ: That's more important than mine, your
18 Honor.

19 THE COURT: There's an assumption that I think is
20 implicit in your analysis that essentially if the merger goes
21 forward, Verizon and AT&T and now the new T-Mobile are
22 essentially going to sit on their hands. You say that they're
23 not going to compete as aggressively.

24 THE WITNESS: That would be the coordinated effects
25 part.

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1 THE COURT: Yes, the coordinated effect. Is there
2 evidence or experience about head-to-head competition between
3 Verizon and AT&T, under current conditions? In other words,
4 they don't just sit back and see the scrappy ones down below
5 fighting one another and they just sort of take a back approach
6 and do nothing.

7 What is the likelihood that, in a merger situation,
8 AT&T and Verizon will see that, won't want to have T-Mobile in
9 their league, so to speak, and take actions, whatever they may
10 be, to compete even more aggressively in order to increase
11 their market and lower T-Mobile's?

12 THE WITNESS: Well, what we've --

13 THE COURT: Let me amend that by saying something
14 else. Part of the assumption also seems to be that price is
15 everything and that competition could not take place in other
16 ways.

17 And I think you alluded to something else, which is
18 the third point, that these firms don't increase prices the way
19 that we've seen Sprint do it, by cutting things in half
20 immediately and then boasting about it, and two years later it
21 turns out it was counterproductive. That experience is out
22 there.

23 So to what extent do you assume somehow, if there's
24 going to be price increases, it necessarily will be in the
25 aggressive way that Sprint did it and/or to what extent are

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1 these price increases in a market that's really not
2 transparent, that they find ways of increasing prices through
3 other kinds of services, by bundling, for example, so that it
4 doesn't appear on the surface that you're really paying higher,
5 but you really are because you're paying a little bit more for
6 another service and a little bit less for wireless? So all of
7 these complications may somehow raise questions about the
8 analysis you've given, at least in my mind.

9 THE WITNESS: Your mind is the one that matters. So
10 the first point, so no doubt Verizon and AT&T do compete
11 against each other. They're the two leaders. What I think the
12 evidence shows, as I've read it and seen it, your Honor, is
13 that they have been rather reactive or passive, and so that's
14 the flip-side of what I said --

15 THE COURT: That's not been a danger or threatened,
16 the way that this merger would, because now they're going to be
17 less, they will have less of a market share or one, T-Mobile,
18 is going to have larger share than they?

19 THE WITNESS: Well, if you want to be the No. 1 firm,
20 you're not No. 1 anymore, if you're Verizon, after this.
21 T-Mobile would have a somewhat higher share. I don't think I
22 would call that threatened, though. Under the coordinated
23 effects analysis I've just been through, it might be welcomed
24 because you wouldn't have to face scrappier No. 3 and No. 4
25 anymore. So I don't think of this as threatening Verizon. It

1 might be welcome.

2 In any event, on the coordinated effects part --

3 THE COURT: If they welcome it, would that not suggest
4 that they would try to find ways of either making sure that
5 they retain their market share or that they increase it at the
6 expense of T-Mobile?

7 THE WITNESS: Well, so I think, to the extent that
8 Verizon reacted to this merger by saying, hey, we're used to
9 being No. 1, and we don't like it anymore, and they responded
10 with price cuts, say, well, that would be against the
11 coordinated effects theory. Okay? That's not -- we don't
12 really know about that exactly because what we've seen -- what
13 I can go on is the historical record, is AT&T and Verizon have,
14 as I said, been more reactive or passive. They haven't been
15 initiating these moves.

16 My analysis is they would have some interest, as would
17 AT&T, in not competing as much after the merger due to the
18 market consolidation, but we can't predict these things
19 perfectly. So that's your first question. Can I go onto the
20 the --

21 THE COURT: Yes, please. Go ahead.

22 THE WITNESS: Then you said there's a lot about price
23 competition, and actually we often get criticized, like, price,
24 price, price with you people. Right? Quality is really
25 important here. I think you're going to hear it a lot.

1 THE COURT: That is my question precisely. It may not
2 be just price. Quality is important.

3 THE WITNESS: So the bulk of my analysis of
4 coordinated effects and unilateral effects is about prices.
5 That is what the tools we have to do, and I'm presenting that
6 to you.

7 The quality competition, which is really through
8 network investment, I mean, the biggest thing -- I'm not
9 offering specific opinions about how that will be affected. I
10 did mention the local markets, and so the concern would be, in
11 local markets that are very highly concentrated, there would be
12 a slower investment going on because it wouldn't be as
13 competitive. Okay? But I don't have a way to quantify that,
14 but I think I would certainly agree, quality competition is
15 very important here and technology is changing. So I just
16 can't quantify that for you.

17 THE COURT: All right.

18 THE WITNESS: And then, well, I guess maybe I answered
19 your other -- oh, the hidden fees in the bundling.

20 THE COURT: Transparency, price increases.

21 THE WITNESS: Right. So there are -- as I
22 acknowledge, there is a fair bit of complexity of the pricing
23 and bundling, equipment discounts; so that's the reality of
24 this business. I think you were picking up on the possibility
25 of hidden fee increases. I haven't really looked at those.

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1 I've been thinking more about the other side, which is if one
2 company lowers the price, will the others respond quickly.

3 And when that happens, if that's going to happen, it's
4 not worth starting a price war, you know. After a week, you
5 guys notice you've got your comparative intelligence. I lower
6 a price. Where does it get me? You match it in a week. So
7 that's been my point. I've not looked at hidden fees through
8 bundling. It's not something I analyzed.

9 THE COURT: Thank you.

10 MR. PARKER: Thank you, your Honor.

11 BY MR. PARKER:

12 Q. So we're talking about diversion ratios, which is looking
13 at when -- you know, how many consumers would switch, let's
14 say, from T-Mobile to Sprint. They would be diverted,
15 depending on what happens to price. When a consumer moves from
16 T-Mobile to Sprint or Sprint to T-Mobile, that may be based on
17 whatever factors that consumer values, correct?

18 A. Certainly.

19 Q. And so when you are looking at diversion ratios, people who
20 are moving from one to another, would that look at the factors
21 that are important to the consumer, whatever might be important
22 to them?

23 A. Well, if we're tracking people who are actually switching,
24 it would be based on their -- you know, their situation, you
25 know, the quality offered by the different suppliers, prices

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1 and so forth.

2 So I'm going to track subscribers switching from one
3 firm to another. That's going to be my primary data.

4 Q. And to just go to the Judge's questions to you. So when
5 somebody is moving from T-Mobile to Sprint or to another
6 carrier, that would include the factors of price, quality and
7 whatever other things that the consumer or the consumers on
8 average value, correct?

9 A. Yes. So when we track these movements, it would be all
10 factors that matter to the consumer would be built in because
11 we're looking at the consumer's choices.

12 Q. All right. So I think we were looking at diversion ratios.
13 You had explained what they are, and I wanted to ask you, in
14 specifically with this matter, what data did you rely on to
15 calculate the diversion ratios?

16 A. So we have a number of sources of data here, your Honor.
17 We have porting data, which measures when people move their
18 service, move their phone number from one service to another,
19 and we have that from -- we have porting data from the FCC and
20 porting data from Comlink and porting data that the parties
21 track on their own, from their own business, you know,
22 experience when they're porting people in and out.

23 And then I have switching data, which is when people
24 switch carriers but may not necessarily keep the same phone
25 number.

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1 Q. All right. And do Sprint and T-Mobile rely on switching
2 data in their ordinary course of business?

3 A. Yes, they do. It's a natural thing to track. It's like
4 wins and losses, port in, port out. This is a common thing in
5 their documents.

6 Q. Let's turn now to this slide. Could you explain this
7 slide, and what you found when you looked at this switching
8 data?

9 A. Certainly. So these are measuring diversion ratios, let
10 me -- again, between the two firms. That's the key thing we
11 want to measure, to quantify, the extent to which they compete
12 directly with each other.

13 So let's look at the left-hand side. That's the
14 diversion from T-Mobile to Sprint. So they're around
15 40 percent. That's telling us that when people switch away
16 from T-Mobile, 40 percent of them end up at Sprint. I'm doing
17 this at the firm level. I'm adding all the brands together.

18 Okay. And the switches within the firm are not
19 counted as switches. That's just different products within the
20 same firm. So that's quite a large number. It's a very large
21 number, your Honor. Remember, Sprint's market share is about
22 15 percent and, yet, when people leave T-Mobile, 40 percent of
23 them go to Sprint. That's quite striking, actually, in terms
24 of the extent of direct competition.

25 THE COURT: To what extent is the Boost factor?

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1 THE WITNESS: Yes. So we're going to show this by
2 brand in a moment. A significant part of this is Boost, and so
3 when I evaluate the effects, I have to account for the Boost
4 divestiture; so these will overstate -- these don't -- these do
5 include Boost, and I have to break that out, and I'm getting
6 there. That's exactly right.

7 And likewise, in the other direction -- oh, the four
8 sources are listed there. Local number portable, that's the
9 FCC data. Comlink is a commercial service that tracks the
10 port. Parties have their own porting, and Facebook is the
11 switching data that is not just porting but others switching.
12 I will tend to use the Facebook data in the subsequent
13 analysis, but they're very close here.

14 And then in the other direction, people leaving
15 Sprint, around half of them end up at T-Mobile. And you're
16 quite right, your Honor, a significant part of that involves
17 prepaid; so this would be leaving perhaps -- Sprint here is all
18 the brands; so it would include Boost going to Metro is what
19 would be included in these numbers.

20 BY MR. PARKER:

21 Q. And what do these numbers tell you about the head-to-head
22 competition between T-Mobile and Sprint?

23 A. It's significant, and it's larger than one would expect
24 just based on the market shares.

25 Q. Okay. And then did you also look at diversion ratios by

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1 brand? I take it that's what you did?

2 A. Right. So that --

3 Q. And before we get to the slides, did you consider another
4 source of switching data to measure the competitive effects
5 here?

6 A. Yes. So there's another source of data. It's called
7 Harris X that I looked at. I decided not to use it, rely on
8 it, and I expect to be questioned about that. It's a survey.
9 These data are actual switches, okay, that are observed. It's
10 a survey; so it's self reported, which is neither here nor
11 there.

12 I prefer actual data to surveys when I have it, but
13 one of the things they do and ask in that survey is if you
14 switch, where did you switch? Did you port your number? And
15 people say "yes" or "no." And for the people that say they
16 ported, the data don't line up very well with the actual
17 porting data; so I don't consider that as reliable. It does
18 lead to some lower numbers. I think that's why the merging
19 parties like it instead, but I stand by these. I think they're
20 more reliable.

21 Q. All right. So let's look at it by brand now. What did you
22 find when you measured the diversion ratios at the brand level?

23 A. Right. So let's talk about Boost and Sprint just because
24 your Honor asked about it, and you do see significant diversion
25 there.

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1 So the Metro, you see if you look at the Metro, from
2 Metro to Boost is 30 percent, which is a lot. Boost's market
3 share is not that big. A lot of Metro people, people who leave
4 Metro, are going to Boost and, likewise, Boost to Metro. Down
5 at if bottom is 45 percent; so there's quite a lot of
6 competition in prepaid. It's what we'd expect. I mean,
7 prepaid is a segment.

8 We're not defining it as a separate market, but it is
9 a distinct segment, and there's more switching within that. We
10 don't really need to get into these numbers, your Honor. I
11 just wanted to put them in the record, your Honor, and I do
12 need these numbers for the analysis that is going to come
13 because I have to account for the Boost divestiture; so I have
14 to break out Boost.

15 Q. All right. So you were talking about a calculation. So
16 economists have a method for using these diversion ratios to
17 estimate the magnitude of the unilateral price increases that
18 could arise from a merger?

19 A. Yes. So in terms of the quantification, I said we can
20 measure direct competition through these diversion ratios.
21 We've done that, and then we have a method to build on that and
22 estimate or get to evaluate, to quantify how much upward
23 pricing pressure is what we call it, the merger will cause. So
24 how much incentive the elimination of competition between
25 T-Mobile and Sprint, how much incentive that will create for

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1 the merged company to set higher prices for the brands they
2 control. So that's this upward pricing pressure metric
3 that's -- that I'm going to calculate, and it builds upon the
4 diversion ratios.

5 Q. All right. And do the merger guidelines use upward pricing
6 pressure?

7 A. Yes. We have a slide here, your Honor. It says, when they
8 can, the agencies assess the value of diverted sales. That's
9 sales going from one firm to another. In this case, T-Mobile,
10 Sprint, which can serve as an indicator of the upward pricing
11 pressure on the first product resulting from the merger. So
12 that's the merger between the two products that I referred to
13 that.

14 So yes, the merger guidelines include this metric of
15 upward pricing pressure, and that's what I've calculated.

16 Q. And then could you -- how do economists compute upward
17 pricing pressure?

18 A. So we take the diversion ratios we've talked about, which
19 is measuring head-to-head competition, and then the other thing
20 we need is the profit margins because that's going to determine
21 how much incentives are created by this, by putting the two
22 products or by combining the two firms, and then we're going to
23 need the prices of the product. So we need diversions, margins
24 and prices, three inputs, and we've got those all here; so I
25 did the calculation.

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1 Q. And is this a common approach for economists to use in
2 assessing unilateral effects for a horizontal merger?

3 A. Yes, it's quite common, especially the last 10 years, since
4 it's in the guidelines.

5 Q. So before the 2010 revision, it wasn't in the guidelines
6 and it was added in 2010?

7 A. Well, there were elements of this that agencies were
8 practicing, but it wasn't in the guidelines. It was put in the
9 guidelines, and it's been used more since then.

10 Q. Did you calculate the upward pricing pressure metric here?

11 A. Yes, I did.

12 Q. All right. If you could briefly describe this slide to the
13 Court?

14 A. So we do this at the brand level; so we're trying to
15 measure this pressure for each of the three brands that the
16 merged company will control, T-Mobile post-paid, Metro and
17 Sprint post-paid. Boost is not here in this chart because they
18 will be divesting Boost, and I've accounted for that.

19 So the key column is the one labeled Upward Pricing
20 Pressure as a percent; so that percent is -- think about it as
21 being applied to the monthly prices, the \$40 for T-Mobile
22 post-paid. So this is the metric that we've calculated, I've
23 calculated, and the key numbers are the 21 percent, 30 percent
24 and the 16 percent.

25 And economically, it's as though there's going to be

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1 pressure for the T-Mobile to raise prices unilaterally,
2 economically comparable to if new T-Mobile's costs went up by
3 these amounts as a fraction of its price -- of its ARPU; so
4 these are quite high numbers, 21, 30 and 16. Those are the
5 pricing pressure metric. I can't really bring it home in terms
6 of the implication until we get to the last column; so that's
7 probably the next question. So that's the metric that's
8 calculated, those three numbers.

9 Q. All right. So if you could then take us through the
10 analysis here, all the way to the right-hand column, and
11 discuss how you did it and what the -- and how you used the
12 passthrough rates?

13 A. So this upward pricing pressure is not itself a prediction
14 of a price increase. It's what I think of as a rather elegant
15 method, but it doesn't lead to a price increase prediction.
16 One needs to introduce an additional assumption to get to a
17 price increase.

18 So we need to introduce an assumption about what
19 percentage of this pressure will be passed through to
20 consumers. And I've assumed 50 percent as a passthrough, which
21 is a standard assumption in the literature, which goes along
22 with a straight line or linear demands. It's an assumption. I
23 think of it as sort of a neutral assumption, 50 percent.

24 Applying that, we then take the numbers in the upward
25 pricing pressure column, we cut them in half, and we get the

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1 price increase that's the final column. So with that
2 additional assumption of a 50 percent passthrough rate, then we
3 would have implied price increases for each of the brands. I
4 mean, these are significant price increases, 11, 15 and
5 8 percent, that would be resulting from the merger.

6 Again, the incentive for new T-Mobile to raise price
7 on its own, taking as given the prices that Verizon and AT&T
8 are setting. So they're still competing. They're in the
9 market, absolutely, but we're taking as a given their prices
10 and just looking at the results of the combination, the
11 unilateral incentives caused by it.

12 Q. And how do these percentage price increases translate into
13 consumer harm?

14 A. So if we take those percentage price increases, multiply
15 them by annual revenue for each of the three brands that new
16 T-Mobile will control, we get a bottom line annual consumer
17 harm of \$4.6 billion.

18 Q. And you said that these calculations and your upward
19 pricing pressure calculations, they already take into account
20 the Boost divestiture, correct?

21 A. This all does, yes. The last couple of slides have
22 accounted for the Boost divestiture.

23 Q. And do your calculations also account for MVNOs?

24 A. Yes, in that I have accounted for the fact that T-Mobile
25 will be making money on MVNO subscribers and that affects the

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1 incentive. I have not assumed any increases in wholesale
2 prices, however; so that's not part of the analysis. Those are
3 taken as a given.

4 Q. All right. So you said earlier in your testimony that
5 after you go through and assess and determine whether there's a
6 likelihood of anticompetitive effects, which you have found,
7 you then look to see whether there's any mitigating factors and
8 the first one you mentioned was entry. What is involved in
9 analyzing entry?

10 A. Well, the basic question is: Will entry save the day?
11 We've determined that there are significant likely
12 anticompetitive effects. Haven't accounted for entry yet,
13 though. Will entry by new firms be sufficient? Well, timely,
14 likely and sufficient are the words we're going to use to
15 either deter those effects so they won't happen, or to
16 counteract them rapidly. That's the question. To restore
17 competition essentially that's lost.

18 Q. All right. And I think you said timely, likely and
19 sufficient. I take it that comes from the merger guidelines?

20 A. Yes, that's right. That's the standard analysis we do.

21 Q. Okay. So I want to put aside for a moment DISH as a
22 potential entrant. So putting DISH aside for the moment, would
23 entry into the national market for retail mobile wireless
24 telecommunications services be timely, likely and sufficient to
25 deter or counteract the adverse anticompetitive effects that

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1 you have found from this merger?

2 A. So putting aside DISH, the answer is absolutely not. It
3 takes years to enter. It's usual hugely expensive, and we're
4 talking about Sprint, a company that has 45, 50 million
5 subscribers, covers 93 percent of the country. That's not -- I
6 just don't see that happening anytime soon; so it doesn't seem
7 timely. It doesn't seem likely that it would be sufficient.
8 This is a very hard market to enter and nobody's entered this
9 market -- no new nationwide carriers have come in for years.
10 It just, entry is not going to save the day.

11 Q. And what about entry into the local markets?

12 A. Well, the trend has been the opposite. There were more
13 regional carriers years ago, and they were rolled up or
14 acquired. All of the regional MNOs together have maybe a
15 percent and a half, if I remember, small share of the overall
16 market. It just doesn't seem like that's very plausible, and
17 even if there were entry in some local markets, which I
18 wouldn't expect there to be, it wouldn't solve the question
19 about another local market.

20 Q. So I want to go back to the Judge's question about, well,
21 would Verizon and AT&T compete when the new T-Mobile comes in
22 as the new market leader by lowering their price? I take it
23 that if we went instead of from four to three, we went from
24 three to two, one could argue that that remaining competitor
25 would lower its price, and there would still be some

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1 competition, correct?

2 A. You would want to consider that. There is still some
3 competition if it's not one.

4 Q. So if we went instead of from four to three, we went from
5 three to two, and they were competing on the quality and price,
6 from an antitrust economist's perspective, would there be a
7 serious concern about the likelihood of anticompetitive
8 effects?

9 A. Well, I mean, if you took all my analysis and applied it to
10 a three to two rather than from a four to three, somehow
11 imagine that, the concerns would be greater. I'm not sure
12 where you're going, frankly. The fact that there's remaining
13 competitors is not a get-out-of-jail-free card in terms of a
14 merger. In other words, it's not simply merges to monopoly
15 that we're concerned about.

16 Q. Right. I guess what I was trying to get at was that, of
17 course it's possible that the remaining merger would price
18 compete, but that's true in every merger theoretically, you
19 have to look at the facts of the case, and you have to look at
20 the underlying economic incentives?

21 A. That's true. That's true, and that's why I was telling the
22 Judge that, historically, AT&T and Verizon have not been the
23 ones who have been initiating price cuts or these competitive
24 moves, and so it would be a change for them to do that.

25 Q. All right. Let's go now to the next potential mitigating

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1 factor, which is efficiencies. Have you analyzed the -- we
2 understand that the defendants are making efficiency claims in
3 this case; you understand that, correct?

4 A. I sure do.

5 Q. Have you analyzed the efficiency claims that have been made
6 by the merging parties?

7 A. No, that's not part of my analysis. Professor Scott Morton
8 have been analyzing the efficiency claims put forward by the
9 merging parties, and I'm relying on her for that part of the
10 analysis.

11 Q. So in your analysis, have you accounted for efficiencies in
12 terms of the anticompetitive effects analysis?

13 A. Well, the analysis I did was not crediting efficiencies, or
14 I guess the way you put it is, treating the efficiencies as not
15 cognizable in the language of the merger guidelines. So that's
16 what I've been doing.

17 Q. All right. Have you estimated the magnitude of
18 efficiencies that would be required for the merger to benefit
19 consumers, rather than to harm them?

20 A. Yes, I have. For the unilateral effects part of my
21 analysis, we have a method to do that, and I've implemented it.

22 Q. And what is that amount?

23 A. So we have, as I said, in unilateral price effects, this
24 upper pricing pressure metric I described, tells the incentive
25 of the merge firm to raise price. Well, if the merge firm can

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1 lower its costs through efficiencies, that could be offset or
2 even overcome. So we have a way of calculating how much of a
3 cost saving the merged firm would have to be able to achieve in
4 order to neutralize the upper pricing pressure, and I've done
5 that calculation.

6 Q. All right. And I've put up on the screen slide 64. Could
7 you explain slide 64 to the Court?

8 A. Certainly. So this is, again, the three brands -- at the
9 brand level again for the three brands that will be controlled
10 by new T-Mobile. If you see there in the middle, the upper
11 pricing pressure metric that we talked about earlier. Then
12 I've added the marginal cost of serving -- this is per
13 subscriber per month; so it's comparable units to the ARPU.
14 And then I've calculated how much of a drop, a reduction in
15 marginal costs new T-Mobile would have to achieve, brand by
16 brand, to offset the upward pricing pressure, and that's what's
17 reported in the final column.

18 Q. All right. So just to make sure we understand this chart,
19 t-Mobile post-paid would have a marginal cost of \$12.75,
20 correct?

21 A. That's their current marginal cost.

22 Q. And how much would that marginal cost need to come down
23 because of efficiencies, to reduce the upward pricing pressure?

24 A. So it would need to come down quite a lot, \$11.47, bringing
25 it down to around a buck 50; dramatically lower than what it

JCBPSTA8

Shapiro - Direct

1 is. So that's something like a 90 percent reduction in
2 marginal costs, and again, economists think of marginal costs
3 as the types of costs that drive pricing. That's why we're
4 using marginal costs. So that's a very -- that's a large
5 percentage cost reduction.

6 I should point out there's a note here, but I don't
7 want it submerged. I'm measuring marginal costs not including
8 subscriber acquisition costs because it does not appear that
9 the efficiencies that are claimed would significantly apply to
10 subscriber acquisition costs. We have calculations in my
11 report that do the other calculation.

12 Then we see the same thing here for the other two
13 brands, and these are just very large price reductions for
14 Sprint post-paid. They'd have to -- marginal costs would have
15 to drop even more as a percentage down to just, you know, 15
16 cents or something, and it's not possible -- well, they'd have
17 to drop even more than \$7.95 for the Metro brand. So using the
18 standard metric, it would seem very difficult for the
19 efficiencies to be of a magnitude to offset the upward pricing
20 pressure. To neutralize -- they might partially offset it, but
21 to fully neutralize it so that consumers were not harmed, looks
22 like it would be very difficult.

23 Q. All right. And I'll put off the rest of the efficiencies
24 issues until Professor Scott Morton testifies.

25 Now, I want to turn to the last subject of your direct

JCBPSTA8

Shapiro - Direct

1 examination, which is the proposed remedies that the parties
2 have negotiated with the federal authorities, and I want to
3 focus on two of them, and the first one is price commitments.
4 Are you aware of the parties' price commitments to the FCC?

5 A. I am.

6 Q. And how do these commitments effect your analysis of the
7 merger?

8 A. Well, what I'm asking when I look at any remedy is, does it
9 restore the competition that's lost due to the merger, any
10 merger remedy? And a price commitment may help consumers.
11 We'll talk about that, but it does not restore competition.
12 It's a form of regulation. It's a patch that is trying to put
13 a patch onto when the wound is a loss of competition, a
14 significant loss of competition. So I don't tend to think of
15 this type of short-term price commitment as restoring that
16 competition. It doesn't serve that function.

17 Q. And even if the commitments would do nothing to restore the
18 competition that's lost because of this merger, would it at
19 least protect consumers from post-merger price increases?

20 A. No, I don't -- well, it might protect consumers from
21 post-merger price increases if it's enforceable, but that's not
22 going to protect consumers from loss of competition because
23 consumers would still be denied the price decreases that would
24 result without the merger.

25 Q. So if you could explain that. I put a chart up there.

JCBPSTA8

Shapiro - Direct

1 Could you explain to the Court what you mean when that it
2 wouldn't protect them from lower price, you know, from the loss
3 of lower prices?

4 A. So this is a conceptual depiction, your Honor. On the
5 horizontal axis are the prices of cell service plans. They
6 have been coming down. I already mentioned the ARPUs and the
7 FCC data. They've been coming down due to competition.

8 Let us imagine, for the purposes of a point, that they
9 would continue to come down due to competition if there's no
10 merger. That's the blue line continuing. And the price
11 commitment, suppose it's very effective and prices are frozen.
12 Let's just say we're talking about T-Mobile's prices right now,
13 not getting into Verizon and AT&T. That's not protecting
14 consumers. Consumers would have had lower prices and, instead,
15 the prices are frozen or stabilized. These price commitments
16 simply cannot replace competition. Competition does wonderful
17 things and regulation cannot replace it.

18 Q. Right. And we've seen a lot of evidence of prices going
19 down just in the last three days. What about recently, what
20 has happened to prices very recently in this market, as best
21 you can tell?

22 A. Well, we have a slide just to illustrate what I'm talking
23 about, and the prices have been coming down. This is a
24 comparison over a year ago to last month of plan prices by
25 T-Mobile. These are some of the leading plans, and the magenta

JCBPSTA8

Shapiro - Direct

1 plan went down from 40 to 35. The magenta plus plan went down
2 from 50 to 43. So this is common.

3 The price commitment to not raise price wouldn't
4 create an incentive -- wouldn't replace this type of price drop
5 that is being driven by competition.

6 Q. All right. So now, let's turn to the very last subject
7 here, which is DISH. Have you considered whether the proposed
8 remedy involving DISH would restore the competition that would
9 otherwise be lost from this merger?

10 A. I have, but I also should clarify, I have shared this part
11 of the analysis with Professor Scott Morton. I've looked at
12 the impact of the DISH remedy, DISH arrangement over the next
13 two, three years, and Professor Scott Morton has evaluated it
14 over a longer period of time during which DISH has plans to
15 build out its network.

16 Q. All right. And how does this analysis of DISH relate to
17 your more general analysis about entry?

18 A. So I am asking here, again, in the next few years, will
19 DISH's presence, as arranged through these -- through this,
20 I'll call it the settlement, I don't know what I'm supposed to
21 call it, will that be timely, likely and sufficient as an
22 entrant, initially as an MVNO, to replace the competition
23 that's lost due to the acquisition, the elimination of Sprint?
24 So I'm still asking that question, is this adequate to replace
25 the lost competition?

JCBPSTA8

Shapiro - Direct

1 Q. And in your view, is DISH likely to be able to satisfy the
2 requirements of timely, likely and sufficient?

3 A. So, no, I don't think it does the trick, and I think I
4 break it up. In the short term, DISH will be -- well, they're
5 going to come out of the box with about nine million
6 subscribers from Boost subscribers, and they're an MVNO. I
7 mean, just right away. Of course, they have plans to build; so
8 they're different than other MVNOs in that respect. But right
9 away, that's what their market presence will be. So that is
10 not coming close to replacing Sprint for various reasons.

11 Q. So let's go a year out from now?

12 A. Okay.

13 Q. Do you recall what DISH projects in terms of the number of
14 subscribers that would be on its own network, versus the number
15 of subscribers that it would be handling through the MVNO with
16 new T-Mobile?

17 A. So according to DISH's own plans that we've had from
18 September, as I recall the numbers, during 2020, the first,
19 let's say, the next year, only 2 percent of their subscribers
20 would be on their own network, and during 2021, it grows to
21 something like 10 or 12 percent.

22 Q. All right. So over the next two years, we'll still have
23 the vast majority of the subscribers that DISH would be serving
24 being -- getting their network services through the MVNO with
25 the new T-Mobile?

JCBPSTA8

Shapiro - Direct

1 A. Through the master network services agreement with new
2 T-Mobile. So that's really what we're talking about in terms
3 of the entity that's been enabled for the next couple of years
4 through this arrangement. And while they're building, you
5 know, I'm assuming they follow the business plan as it's been
6 presented. That's what I'm doing here.

7 Q. I think Professor Scott Morton may not make that
8 assumption, but you are making that assumption?

9 A. Correct. That is exactly the point.

10 Q. Why does it matter to your analysis, at least looking at
11 the first two or three years, why does it matter to you that
12 DISH will be Reliant on the new T-Mobile network?

13 A. So there's several elements. I mean, I'm calling them an
14 MVNO just in the sense that they are not the new T-Mobile to
15 provide the services; so we had a long discussion about the
16 limited way in which MVNOs can compete, and a lot of that, not
17 all of that but a lot of that, applies to DISH.

18 Most notably, they cannot compete independently on
19 quality until they have their own network, and they're going to
20 have much higher marginal costs. Boost, in DISH's hands, will
21 have much higher marginal costs than Boost has had as part of
22 Sprint, and that makes them a weaker competitor. Higher
23 marginal costs make any company a weaker competitor.

24 Q. And in your MVNO analysis that you testified to a little
25 while ago, you were showing that the MNO, the new T-Mobile,

JCBPSTA8

Shapiro - Direct

1 would be making money with respect to each new subscriber that
2 the MVNO, here DISH, brought in, correct?

3 A. That's correct. Certainly, there's a wholesale price that
4 DISH will be paying to new T-Mobile under their agreement,
5 yeah.

6 Q. And at the same time, new T-Mobile and DISH are competing
7 with each other to go find those subscribers, correct?

8 A. That's true.

9 Q. How does that effect new T-Mobile's incentives vis-a-vis
10 DISH?

11 A. Right. So new T-Mobile would have some -- have muted
12 incentives to go after subscribers of DISH because when they
13 grab a DISH -- if they convince a DISH subscriber to come to
14 new T-Mobile, they lose the wholesale fee on that. So it's
15 just DISH and new T-Mobile will be very much entangled as
16 business entities. They won't be separate, independent
17 competitors by any means.

18 This particular component means that the new T-Mobile
19 won't compete as hard, to the extent they would be getting
20 customers from DISH. The bigger fact is that DISH is so
21 reliant on new T-Mobile, that, you know, they just won't have
22 autonomy and independence. The same point I made about MVNOs.

23 THE COURT: You're saying there's a built-in conflict
24 of interest?

25 THE WITNESS: Yes, exactly, which I translate as muted

JCBPSTA8

Shapiro - Direct

1 incentives to compete because I'm thinking about competition.

2 THE COURT: Mr. Pomerantz, we're almost at the end of
3 the day. Two more minutes? Have you completed your
4 examination on these issues?

5 MR. POMERANTZ: I have about two more minutes to go.

6 THE COURT: Oh, all right. I'll give you two minutes.

7 MR. POMERANTZ: Thank you, your Honor.

8 MR. CARY: Your Honor, I believe that the chart that
9 Mr. Pomerantz is putting on the screen --

10 MR. POMERANTZ: Okay. Get it off. Get it off.
11 Sorry. My apologies. Do you have the ability to turn it off?
12 Thank you. Okay. I apologize.

13 BY MR. PARKER:

14 Q. In your view, will DISH be at a competitive disadvantage
15 due its reliance on new T-Mobile?

16 MR. CARY: It's back on the screen.

17 MR. POMERANTZ: I think it's off to the public. Only
18 people with really good eyesight can see.

19 A. So in addition to -- I call Boost in DISH's hands, Boost
20 DISH, to distinguish them from Boost in Sprint's hand, Boost
21 Sprint.

22 So not only will Boost in DISH's hands be very reliant
23 on new T-Mobile, they will have substantially higher marginal
24 costs, and I won't read the numbers because I guess it's
25 confidential. But the Boost DISH column here, the bigger one,

JCBPSTA8

Shapiro - Direct

1 this is reflecting the -- basically the wholesale price, the
2 rate that DISH has agreed to pay new T-Mobile per subscriber
3 per month, and that is, you know, substantially larger than the
4 column on the left, which is the -- this is network marginal
5 cost, is what's being measured for Boost in 2019 as a part of
6 Sprint.

7 MR. POMERANTZ: Your Honor, like we did with the
8 Altice witness, I would ask permission to submit something
9 like, I guess, an interrogatory response to put these two
10 numbers into the record?

11 THE COURT: Yes.

12 MR. CARY: Can you turn off the screen?

13 MR. POMERANTZ: Yes, yes.

14 BY MR. POMERANTZ:

15 Q. So what about over the longer term, what's going to happen
16 to this market with DISH's potential entry over the longer
17 term?

18 A. So if we go back to timely, likely --

19 MR. CARY: Your Honor, I'm going to object to this
20 question as it's beyond the scope of the reports that Professor
21 Shapiro submitted to us in which he claimed he was only doing
22 analysis for a year or two. He's now extending that analysis
23 while previously disclaiming that that was his responsibility,
24 and that belonged to Professor Scott Morton.

25 MR. POMERANTZ: Your Honor, I think if I may ask, I

JCBPSTA8

Shapiro - Direct

1 think Professor Shapiro is only going to reiterate what's in
2 his report and pass the baton to Professor Scott Morton. If
3 Mr. Cary thinks it's gone beyond that, he can entertain a
4 motion to strike.

5 THE COURT: Why don't we put the answer off until
6 tomorrow morning.

7 MR. POMERANTZ: That's fine. Thank you, your Honor.

8 THE COURT: Let him sleep on it.

9 I'm sorry, let me ask questions that I've asked
10 earlier. You may step down.

11 (Witness temporarily excused)

12 Mr. Pomerantz, who's on deck and how long?

13 MR. POMERANTZ: I think that will go to Mr. Schwartz
14 next; is that right? I don't see Sarah here. Okay. So we're
15 going to go to Mr. Schwartz, who's from Comcast, and that will
16 be our last witness that we're calling in our case. And then I
17 believe it's Mr.~Legere and Mr. Sievert.

18 MR. CARY: Mr.~Legere and Mr. Sievert will follow,
19 yes.

20 THE COURT: All right. How long do you expect with
21 Mr. Schwartz?

22 MR. POMERANTZ: Less than an hour. I'm not sure.
23 Between 30 minutes and 60 minutes, your Honor. It's not my
24 witness, but I think it's between 30 and 60 minutes, your
25 Honor.

1 THE COURT: Anything else?

2 MR. PARKER: Your Honor, Richard Parker for Deutsche
3 Telekom. Yesterday we had the dust up about PX1034. We
4 deferred it to see if Mr. Ewens was going to testify. He is
5 not; so we took the liberty of summarizing our position in a
6 three-page letter brief to you with some attachments, and we
7 hope that's helpful to the Court. I'm sure the plaintiffs will
8 respond in due course, and the matter will be ripe for
9 decision.

10 THE COURT: All right. Thank you. Good evening.

11 MR. POMERANTZ: Thank you, your Honor.

12 THE COURT: Can I have your attention, please? In
13 terms of time used, I want to share my numbers with you, to the
14 extent that it might be helpful in how you prepare for the
15 proceedings. The plaintiffs' number is now 13 and the
16 defendants -- 13, plus change. Defendants' roughly three plus,
17 three and a half hours. All right?

18 (Adjourned to December 12, 2019, at 9:00 a.m.)
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20
21
22
23
24
25

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1 UNITED STATES DISTRICT COURT
2 SOUTHERN DISTRICT OF NEW YORK
-----x
3 STATE OF NEW YORK, *et al.*,

4 Plaintiffs,

New York, N.Y.

5 v.

19 Civ. 5434 (VM)

6 DEUTSCHE TELEKOM AG, *et al.*,

7 Defendants.
-----x

8 December 12, 2019
9 9:07 a.m.

10 Before:

11 HON. VICTOR MARRERO,

12 District Judge

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JCCPSTA1

(Trial resumed; in open court)

THE COURT: Good morning. Thank you. Be seated. One moment, Mr. Pomerantz.

(Pause)

All right. Let me begin by something that I wanted to reference. Yesterday, I was informed that there had been a large number of requests by counsel, and perhaps others, to bring in coffee cups into the courtroom in addition to whatever other beverage containers you may have. I indicated that that would not be welcome. There are a number of good reasons for that.

Coffee cups, when they're hot, tend to sometimes stain the tables; similarly, sometimes soda cans tend to create possible stains on the woodwork. There are cases that I've heard where somebody has knocked over a coffee cup and has ruined papers on the tables. So for those practical reasons, we ask that you not bring coffee cups or soda cans into the courtroom. Water bottles are fine.

One last reason is that it's a question of aesthetics. We don't want to have the courtroom turned into a cafeteria. In our increasingly indecorous and uncivil society would like to think that there's one last bastion where decorum and civility and dignity still prevail, and that's the courtroom. So for that additional reason, I would appreciate if you not bring anything other than water for a beverage.

JCCPSTA1

1 Mr. Pomerantz, let us begin with your order of the
2 day. You gave us some indication yesterday. If there is
3 anything that has changed, please let us know, and also, what
4 is your understanding of the amount of time remaining on your
5 case?

6 MR. POMERANTZ: I believe that I will be -- I will try
7 to stay within my two-minute estimate for completing the
8 examination of, at least direct examination of, Professor
9 Shapiro.

10 After we finish him, all of our examinations, we will
11 then go to Mr. Schwartz from Comcast. I think the estimates
12 are roughly 45 each side on that one.

13 Dave, is that right?

14 MR. GELFAND: Yes. Yes, your Honor.

15 MR. POMERANTZ: So I think -- and then that is the
16 last witness that we are calling in our case in chief. They
17 are then going to be calling Mr.~Legere and Mr. Sievert as
18 their first two witnesses, and I think we all believe that will
19 take us through the end of today and maybe into tomorrow.

20 MR. CARY: That's right, your Honor.

21 THE COURT: I project that we'll go until 5:30 today
22 as well. All right. Thank you, Mr. Pomerantz.

23 MR. POMERANTZ: If I may ask, I think we are equal
24 offenders of the coffee cup rule, can we have until at least
25 the first break to clear the courtroom?

JCCPSTA1

Shapiro - Direct

1 THE COURT: Yes.

2 All right. Let me remind the witness that you took an
3 oath to tell the truth yesterday. You remain under oath.

4 Mr. Pomerantz.

5 MR. POMERANTZ: Thank you, your Honor.

6 CARL SHAPIRO, resumed.

7 DIRECT EXAMINATION CONTINUED

8 BY MR. POMERANTZ:

9 Q. Professor Shapiro, have you heard the term "quality
10 adjusted prices"?

11 A. Yes.

12 Q. And do you recall using that term in your initial report in
13 this matter?

14 A. Yes, I think I did.

15 Q. Could you turn to paragraph 223 of your initial report, and
16 the first sentence says -- no, Phil; you don't need to pull it
17 up -- "Throughout this section, I discuss how the merger would
18 create incentives for new T-Mobile to charge higher prices."

19 Do you see that?

20 A. Yes, I do.

21 Q. And then I want to go to the top of the next page. The
22 first point there we've already talked about. The second
23 point: "Furthermore, the decline in prices without the merger
24 could involve quality adjusted prices, taking the form of
25 faster service or more data usage. Likewise, what appear here

JCCPSTA1

Shapiro - Direct

1 as higher prices resulting from the merger could involve higher
2 quality adjusted prices, such as would arise if lower quality
3 service or a slower improvement in service quality over time."

4 Could you explain how you use "quality adjusted
5 prices" in your analysis of prices in this market?

6 A. Certainly. So first, what is the quality we're talking
7 about? It's usually speed or data, how much data you're
8 allowed to use, sort of other non-priced features of plans that
9 consumers value.

10 And so what we've observed in recent years is not only
11 have the monthly charges that people pay gone down some, and I
12 talked about that. At 6.3 percent a year, we have significant
13 increases in quality of service. Notably, people are using
14 more data and they're allowed to use more data without paying
15 more charges, without paying overage charges. And I think that
16 is a form of quality.

17 And I think T-Mobile is certainly emphasizing for
18 itself the argument that they will improve quality for their
19 efficiency claims. So we agree that quality is an important
20 dimension of competition, and one of my concerns is that the
21 improvement in quality that would take place with competition
22 will not take place as much after the merger.

23 THE COURT: What about convenience to the consumer as
24 part of what they will look for in determining whether to stay
25 with one company versus another? Convenience, service may be

JCCPSTA1

Shapiro - Cross

1 offered from one but not from another, such as we talked about
2 yesterday in bundling.

3 THE WITNESS: Yes, so quality would have a number of
4 different dimensions. I've been emphasizing speed or perhaps
5 breadth of coverage. If it's one-stop shopping or convenience
6 for the customer, in terms of buying a group of services
7 together, cable companies certainly do this. That could -- if
8 it's a convenience for the customer, then that's pro-consumer.
9 That's fine. If it's forcing people to maybe pay for things
10 they don't really want or hidden charges, that's another
11 matter.

12 MR. POMERANTZ: I have no further questions, your
13 Honor.

14 THE COURT: All right. Thank you.

15 CROSS-EXAMINATION

16 BY MR. CARY:

17 Q. Good morning, Professor.

18 A. Good morning, Mr. Cary.

19 Q. George Cary for T-Mobile and Deutsche Telekom.

20 Dr. Shapiro, you talked yesterday about the horizontal
21 merger guidelines. Is it the case that in the horizontal
22 merger guidelines, changes in market share and concentration
23 are an initial screen for potential anticompetitive effects
24 arising from a transaction?

25 A. I say they are a screen in the sense that if the

JCCPSTA1

Shapiro - Cross

1 Herfindahles are very low, it's unlikely there will be a
2 challenge.

3 Q. Right. And so if the Herfindahls were higher, that's an
4 occasion for the Department of Justice or the FTC to take a
5 closer look, right?

6 A. To take a closer look or reach a presumption of an
7 anticompetitive market.

8 Q. Well, the Department of Justice and the FTC, when they're
9 looking at mergers, they don't rest on a presumption. They
10 take a detailed look at the characteristics of the market to
11 determine if there are going to be anticompetitive effects,
12 don't they?

13 A. Yes. As part of the overall analysis, one would typically
14 include competitive effects, as I have done.

15 Q. Right. Now, do you agree that in recent decades,
16 industrial organization scholars and courts have been more apt
17 to stress that high concentration can be compatible with
18 vigorous competition and efficiency market performance?

19 A. Well, let me take them in turn. I think in terms of
20 industrial organization, the economic literature, the answer is
21 yes and not necessarily related to mergers, though. We've come
22 to understand better that some markets may be highly
23 concentrated and be quite competitive, nonetheless.

24 So, for example, Boeing and Airbus, there's only two
25 of them, but they often compete very vigorously. So that's in

JCCPSTA1

Shapiro - Cross

1 terms of we have understood that. The relationship between
2 concentration and mergers is still concerning for the reasons
3 I've talked about.

4 In terms of the courts, I think there's been a decline
5 in the structural presumption, the strengths of it over time,
6 but I suspect you don't want me to talk too much about the law.

7 Q. Fair enough. Now, you would agree that an appropriate
8 antitrust analysis should put less weight on market shares and
9 concentration, and more on an integrated approach; is that
10 fair?

11 A. I guess I don't quite know what you mean by the "less" and
12 "more" there. I guess I would put it this way, that the -- a
13 full analysis should include competitive effects, and part of
14 that -- but with significant concerns being raised. If you've
15 got high Herfindahls, high increases in Herfindahls, high
16 diversions and the maybe other elements, such as high entry
17 barriers, those trigger concerns, but yes, you do a full
18 analysis.

19 Q. And a full analysis takes into account efficiencies; does
20 it not?

21 A. Yes, it does.

22 Q. And that's because efficiencies can make a firm more
23 competitive, right?

24 A. Correct.

25 Q. It creates an ability and incentive to compete more

JCCPSTA1

Shapiro - Cross

1 aggressively if you realize efficiencies through a merger,
2 correct?

3 A. Yes, that's correct. Merger, specific efficiencies,
4 particularly ones that lower marginal costs economists would
5 generally effect those to cause the firm to compete more
6 aggressively, everything else equal.

7 Q. Right. So that more aggressive competition can include
8 lower prices, correct?

9 A. Yes, it can.

10 Q. And improved quality?

11 A. It could.

12 Q. Enhanced service?

13 A. Yes.

14 Q. And new products entering into the market?

15 A. These are all subspecies of efficiencies that can occur and
16 arise in mergers, yes.

17 Q. And you agree that an appropriate antitrust analysis of
18 mergers should incorporate an analysis of cognizable
19 efficiencies generated by the merger, correct?

20 A. That is what I do as an antitrust economist, yes.

21 Q. In fact, you've written that an antitrust economist surely
22 should take into account efficiencies, haven't you?

23 A. I might have said "surely." I'm not disputing it.

24 Q. Now, when looking -- you mentioned the term merger
25 specific. When looking at merger specificity, only

JCCPSTA1

Shapiro - Cross

1 alternatives to the merger that are practical in the business
2 situation faced by the firm should be considered in terms of
3 defining whether it's merger specific or not; is that right?

4 A. I think that's the general tone, I would say. That's in
5 the horizontal merger guidelines. I don't have the specific
6 language in my head, but one does not want to include purely
7 theoretical possibilities that are not practical or at all
8 likely to arise.

9 Q. Right. And you've written that the inquiry into merger
10 specificity should be a realistic one, correct?

11 A. That seems reasonable, yes.

12 Q. Focusing on what will happen with and without the merger,
13 correct?

14 A. Yes, both regarding the efficiencies that are going to be
15 achieved and what would happen without the merger.

16 Q. So would you agree with me that there are some efficiencies
17 that are very difficult to achieve without a merger?

18 A. You mean as a general proposition?

19 Q. As a general proposition.

20 A. We're not talking about this case in particular?

21 Q. As a general proposition.

22 A. That can happen, yes.

23 Q. Particularly if you have the integration of the parties'
24 unique and hard-to-trade assets, that would be an example,
25 correct?

JCCPSTA1

Shapiro - Cross

1 A. I would say, yes. Hard to trade, I think I would put it in
2 terms of efficiencies or combining assets in a way that could
3 not be accomplished through some other means such as a contract
4 or a partnership arrangement. If that's what "hard to trade"
5 means, then I'll buy -- I'll accept that.

6 Q. And you've called these synergies in your academic work,
7 right?

8 A. That's the word I like to use.

9 Q. So synergies allow a firm to make output in cost choices
10 that wouldn't be feasible otherwise, correct?

11 A. Yes, again, we're using the term synergies in this specific
12 sense of what I'll also call more in the legal setting,
13 cognizable efficiencies.

14 Q. Right. You would agree with me that not all horizontal
15 mergers between competitors are anticompetitive?

16 A. I do.

17 Q. And you would agree with me that, in fact, not all
18 four-to-three mergers between horizontal competitors are
19 anticompetitive, would you?

20 A. I wouldn't have a general rule concluding all four-to-three
21 mergers are anticompetitive. One would need to look at it.
22 Market share might be small, for example.

23 Q. Right. So one of the reasons that a four-to-three merger
24 might not be anticompetitive is because it generates
25 merger-specific cognizable efficiencies, right?

JCCPSTA1

Shapiro - Cross

1 A. That's fair.

2 Q. Now, in response to one of Mr. Pomerantz's questions, you
3 quantified consumer harm, and I just want to be very clear
4 about this. Without looking at the efficiencies generated from
5 a transaction, you cannot testify under oath that there will be
6 consumer harm from this transaction; is that right?

7 A. I believe I was clear that my -- all of my analyses, I am
8 not crediting the efficiencies claimed by the merging parties
9 because I'm relying on Professor Scott Morton's analysis that
10 they do not qualify under the stringent standards we've just
11 been talking about.

12 Q. You have not, yourself, examined the efficiencies to form a
13 view?

14 A. That is correct. I am relying on Professor Scott Morton
15 for that part of the overall analysis.

16 Q. So you've done half the analysis, and she's done the other
17 half; is that right?

18 A. I am not in a position to quantify the relative
19 contributions.

20 Q. All right. Let me put it this way, then. Your analysis
21 does not provide a complete assessment of the competitive
22 effects of the merger, correct?

23 THE COURT: Asked and answered.

24 Q. You would agree that the Court, in reaching a decision
25 about the merger, should account for the efficiencies,

JCCPSTA1

Shapiro - Cross

1 notwithstanding that you have not, correct?

2 A. If you mean by "account for the efficiencies" the Court
3 should seriously consider the claimed deficiencies and the
4 arguments against them, yes.

5 Q. Now, one of the terms that you used in talking about
6 efficiencies was "verifiable," I believe, correct?

7 A. Yes.

8 Q. One of the ways that a Court or an economist, an academic
9 economist looking at a merger, the agencies, might determine
10 whether a merger generated verifiable efficiencies was to look
11 at historical experience, right?

12 A. That happens, yes.

13 Q. So if a firm has previously engaged in a merger, and if
14 that merger generated efficiencies in a comparable market
15 situation, you would credit that as a way to verify
16 efficiencies?

17 A. I think that would be relevant. It doesn't address merger
18 specificity, but it does address verifiability.

19 Q. You would consider that real-world proof that the
20 efficiencies are verifiable?

21 A. Well, of course, it depends on how comparable this prior
22 experience is to the current one that's being evaluated, but
23 it's relevant.

24 Q. Yes. And you would also agree with me that if the firm
25 that is proposing the new merger is applying the same standard

JCCPSTA1

Shapiro - Cross

1 cookbook that it applied in the past merger, that that would
2 make it even more of a proof point in terms of their
3 applicability of the efficiencies, correct?

4 A. Well, I think if I understand what you mean by standard
5 cookbook, that would suggest the current claim deficiencies are
6 very similar in terms of what's involved to the ones that have
7 been achieved in the past; so that would support comparability
8 and, therefore, make that evidence more relevant.

9 Q. The fact that efficiencies would not be realized right away
10 does not mean that you should simply ignore the efficiencies,
11 right?

12 A. No. They would be counted less because they're discounted
13 and maybe less certain, but I wouldn't ignore them.

14 Q. Right. It could be that efficiencies that happened in year
15 two, three, four and off into the future are sufficiently large
16 that even if there's upward pricing pressure in year one, those
17 efficiencies would make the merger pro-consumer, correct?

18 A. Well, it is possible. What you'd want to do is look at
19 possible consumer harm in earlier years. It's kind of
20 difficult, but balance that against consumer benefits later
21 with a proper discounting, and often there can be extra costs
22 and extra harms during a transition period. You'd want to
23 include that too.

24 Q. You'd want to look at the whole thing, the entire
25 transaction?

JCCPSTA1

Shapiro - Cross

1 A. Well, yes, with recognizing that the farther out you look,
2 the more speculative things tend to get by their nature.

3 Q. Okay. You would agree with me that cost reductions in
4 future years could cause a firm to lower prices in the first
5 year, after a merger, if there are sufficient linkages between
6 the first year and future years, correct?

7 A. Certain specific type of linkages would -- could, in
8 theory, cause that connection to occur, that's correct.

9 Q. And one of those linkages might be the impact on a firm's
10 reputation if they were to raise the price in year one, in
11 advance of realizing merger efficiencies in the future,
12 correct?

13 A. I'm not following you there. I thought you were talking
14 about an incentive to lower the price at the beginning, and now
15 you're talking about raising the price; so you threw me off.

16 Q. I'm sorry. Let me try it again. One reason that a firm
17 that is going to realize efficiencies in the future might not
18 raise prices in year one, would be the impact on its
19 reputation, correct?

20 A. Well, I think that would be a general proposition if a firm
21 raises a price -- if a firm raises a price and makes more money
22 in year one, I think that's what you're talking about, a price
23 increase that's profitable, might a firm not do that because it
24 might harm its reputation.

25 Q. Exactly. I think you testified to that in your deposition,

JCCPSTA1

Shapiro - Cross

1 didn't you?

2 A. So I think, as a general rule, that could be a factor
3 effecting price. I don't think firms just maximize profit
4 based on a quarter or year at a time, notwithstanding what
5 people say about the financial markets.

6 Q. Right. So now your analysis in this case, your unilateral
7 effects analysis, was only done for, or at least reported for,
8 the year 2020 in your report; is that right?

9 A. I think that's right. Although, I think there's kind of a
10 hybrid of 2019 and '20; so we have to use 2019 data.

11 Q. Right. So it's a one-year analysis, correct?

12 A. It's an analysis of the upward pricing pressure caused by
13 the merger. That's the way this methodology works. It's not a
14 projection about what's going to happen in years in the future.
15 It's what can we tell based on this merger and what we know
16 about the products and how closely they're competing now.

17 Q. For a one-year period?

18 A. It's not -- no, that's not -- the methodology is measuring
19 the market conditions or the pressure at the time of the
20 merger. It's not a projection. It's an evaluation of the
21 merger, like measuring Herfindahls. You measure at a
22 particular point in time.

23 Q. I see. Okay. So it's not even good for a full year. It's
24 the day after the merger, given historical conditions, this is
25 what your UPP would indicate; is that fair?

JCCPSTA1

Shapiro - Cross

1 A. Well, no, I don't agree with that. It's a measure of the
2 upward pricing pressure from the merger based on current
3 conditions and that has durability, but of course, conditions
4 will change. But it's beyond, I think, our capabilities
5 usually to know what the diversion ratio will be two or three
6 years from now. You know what it was based on switching
7 historically, so you use those data.

8 Q. Okay. So let's talk about your unilateral effects analysis
9 and the UPP work that you performed.

10 First, let's start with some understanding, a little
11 more understanding about the model that you've employed. Is it
12 correct that the model that you've employed would generate
13 upward pricing pressure in any horizontal merger? It's an
14 automatic, almost mechanical mathematical result in any
15 horizontal merger?

16 A. In any horizontal merger, one would have -- so long as the
17 two firms had positive diversion between them, their products
18 and positive margins, you would have some positive upward
19 pricing pressure. That's why we need to quantify it the same
20 as we want to quantify Herfindahls.

21 Q. Right. So you would also agree with me, though, that not
22 every horizontal merger is illegal? We've established that,
23 right?

24 A. I'm glad I get to testify about the law. I usually don't
25 get to do that.

JCCPSTA1

Shapiro - Cross

1 Q. Let me rephrase the question. Not every four-to-three
2 transaction is anticompetitive; we've agreed to that?

3 A. We have.

4 Q. Now, the UPP analysis has a lot of limitations, right?

5 A. Sure. I love it, but sure.

6 Q. In fact, I think at your deposition you said we could spend
7 the whole day talking about its limitations, didn't you?

8 A. Okay.

9 Q. You said it was --

10 A. Maybe I was hoping we'd spend the day that way, instead of
11 other questions, but go ahead.

12 Q. You said it was an infinite list?

13 A. It's a tool. Of course, there's limitations. That's why
14 the economic literature is actively working to make it better
15 and better.

16 Q. Right. One such limitation is that it does not account for
17 the repositioning of firm products or services in the relevant
18 market after the merger, correct?

19 A. The UPP takes the products as given because that's what we
20 have data on, is the diversions between the brands that have
21 been in the market. So that is correct, it does not account
22 for how products may be repositioned in the future.

23 Q. And repositioning can mitigate upward pricing pressure,
24 correct?

25 A. I guess it could, or it could exacerbate it. You'd have to

JCCPSTA1

Shapiro - Cross

1 be more specific about what you mean by the type of
2 repositioning.

3 Q. Well, for example, you're aware that Verizon recently came
4 out with a prepaid product, right?

5 A. Yes, I think it was last year.

6 Q. That would be an example of repositioning?

7 A. Well, I don't think so. I think it's a new brand, isn't
8 it? I thought that was a new brand for them, unless I'm
9 mistaken.

10 Q. Would you consider that new entry into the prepaid segment,
11 then?

12 A. New entry. It's a brand. I think of it as a brand entry,
13 but look, it's very similar to repositioning. I don't want to
14 overstate the difference.

15 Q. Okay.

16 A. It's just they didn't move an existing brand; they just
17 created a new one, if I understand it correctly.

18 Q. Exactly. So that would be an example of a strategic
19 decision that is not taken into account by the UPP analysis?

20 A. That's fair.

21 Q. And the UPP analysis does not take into account new entry,
22 right?

23 A. That's correct.

24 Q. And the UPP analysis does not take into account
25 reputational effects that might flow from actually raising

JCCPSTA1

Shapiro - Cross

1 prices pursuant to that upward pricing pressure, correct?

2 A. I think, in this case, it mostly does because the upper
3 pricing pressure we're talking about does not involve raising
4 prices. It involves not lowering prices, as I've said a few
5 times. I don't think that reputational argument comes in; so I
6 think the analysis that I've done is not subject to that
7 criticism.

8 Q. That wasn't my question, though, Dr. Shapiro. My question
9 was whether the UPP analysis itself takes that into account,
10 and we will talk about your --

11 A. I said, as applied here, I believe it does.

12 THE COURT: Mr. Cary, I'm going to pause at this
13 moment. I need to take a call.

14 MR. CARY: Yes, your Honor.

15 THE COURT: I'll be right back.

16 (Recess)

17 THE COURT: All right. Thank you. Apologies for the
18 inconvenience and interruption. Let's proceed. Mr. Cary.

19 MR. CARY: Thank you, your Honor.

20 BY MR. CARY:

21 Q. Can you bring up tab one, page 52, please.

22 Dr. Shapiro, I asked you a question about the
23 reputational effects on the UPP, and I'd like to refer you to
24 your deposition. Do you recall I asked you: "So just to be
25 clear on the testimony, the impact on reputation could be such

JCCPSTA1

Shapiro - Cross

1 a linkage that" -- meaning a linkage between the first year and
2 future years per our previous conversation -- "that would
3 prevent a firm from exercising upward pricing pressure in the
4 short term when it's going to be realizing efficiencies after a
5 year, correct?"

6 And you answered: "So the upward pricing pressure
7 index talks about internalizing the competition between the two
8 firms. Because it is based on diversion and margins, it is not
9 an analysis that incorporates longer-term effects of
10 reputation. It's not part of the methodology. It's not trying
11 to do everything."

12 Do you recall that question and that answer?

13 A. I do now.

14 Q. So, Dr. Shapiro, one of the things that the UPP analysis,
15 the way you used it, does not take into account is
16 efficiencies, correct?

17 A. Well, the UPP analysis is for accounting for efficiencies
18 usually, and then we have the compensating marginal cost
19 reduction that works with it to account for efficiencies, and I
20 did both of those.

21 Q. Right. So if you did the complete analysis and quantified
22 the efficiencies, those efficiencies would offset the upper
23 pricing pressure, and it could be that the transaction would
24 end up being net pro-competitive for consumers, right?

25 A. Are you asking in general or about this specific

JCCPSTA1

Shapiro - Cross

1 transaction?

2 Q. I'm asking about -- you've testified you didn't do the
3 analysis of the efficiencies in this specific transaction; so
4 I'm just asking about how the UPP test works.

5 A. Okay. So, in general, it works by, yes, you calculate the
6 upward pricing pressure, you calculate the cost savings that
7 would be required to neutralize or offset that, and then if you
8 have cognizable efficiencies, you see whether they're
9 sufficient, large enough, as has been identified as required,
10 to offset the upward pricing pressure, and that's the way the
11 whole analysis works as a group.

12 Q. Right. And you testified, I believe, yesterday, in
13 response to one of Mr. Pomerantz's questions, that the upward
14 pricing pressure is comparable to costs going up in terms of
15 pushing prices up, right?

16 A. Yes, that's -- some of my writings on this explain that
17 it's like a cost increase for the merged firm and that's
18 creating the upward pricing pressure; that's correct.

19 Q. Right. So the converse of that would be if you have cost
20 reductions, it reduces the upward pricing pressure, correct?

21 A. If you have reduction in marginal costs that would offset
22 or count against the upward pricing pressure and if they're
23 large enough, they could neutralize it.

24 Q. Right. And it's really a one-for-one tradeoff in that
25 regard; is that right?

JCCPSTA1

Shapiro - Cross

1 A. I'm not sure what you mean by that.

2 Q. Well, if you're attributing a dollar of imputed costs that
3 are pushing prices up and then you have a dollar of
4 efficiencies, it's a direct one-to-one comparison, right?

5 A. The compensating marginal cost reduction, what we presented
6 to your Honor as the required cost reduction, marginal cost
7 reductions, in the literature it's called compensating marginal
8 cost reduction, is subtracted from the upward pricing pressure
9 and you look at the net.

10 Q. Right. So the passthrough to consumers for the cost
11 savings is equivalent to the passthrough to consumers of price
12 increases, right?

13 A. We haven't been talking about passthrough. We're just
14 talking about the pricing pressure index. It's a different
15 topic, passthrough. Just to be clear, that's not what we were
16 talking about.

17 Q. Well, you did testify yesterday about the way that the
18 passthrough works in the UPP analysis, right?

19 A. So I said you take the UPP analysis and then you apply a
20 passthrough rate to get a price increase that would be
21 indicated.

22 Q. Right. So my question is whether you would apply the same
23 passthrough rate to any efficiencies realized?

24 A. Yes, you would.

25 Q. Thank you.

JCCPSTA1

Shapiro - Cross

1 A. So long as they're cognizable.

2 Q. Right. Would you agree with me, Dr. Shapiro, that the
3 diversion numbers that you use in your UPP analysis are not
4 going to be helpful if they are not representative of the
5 market?

6 A. I don't quite know what you mean by "representative of the
7 market." It sounds like a bad thing not to have, but what do
8 you mean by that?

9 Q. Well, the data that you used did not purport to represent
10 all switching in the entire cellular market, correct?

11 A. The data are not a complete census of all switches.

12 Q. Right. So in order to be reliable, in terms of the upward
13 pricing pressure, the subset that you used has to be
14 representative of the larger set, right?

15 A. Well, it has -- what we -- to be reliable, or ideally, I'll
16 put it that way, it would accurately measure the diversions if
17 one or observing all of them rather than just a subset.

18 Q. Right. And if the sample that you're using is distorted in
19 some way, then it can't be relied upon to generate diversion
20 ratios purporting to show the market as a whole?

21 A. Well, distorted, again, if it's -- if it's significantly
22 different, then the true diversion ratios, then that's -- then
23 you have an inaccuracy. I don't know which direction that
24 would go in, but I would accept that as a principle.

25 Q. The data that you used was -- that you put up on the screen

JCCPSTA1

Shapiro - Cross

1 was porting data, and it was Facebook data, correct?

2 A. That's correct.

3 Q. Are you aware -- well, first, do you know how the Facebook
4 data is generated?

5 A. In a general sense, I could describe it, yes.

6 Q. Go ahead, please?

7 A. If you want me to.

8 Q. Yes.

9 A. Yes? So as I understand it, I can try and get a look at my
10 report, it has more details, if you want. But basically, when
11 people have the Facebook app and they switch carriers, Facebook
12 is able to detect that, and they put that data together and
13 make it available.

14 Q. Is it correct that Facebook data only captures about
15 60 percent of the wireless subscribers?

16 A. I believe that's correct, yes.

17 Q. And the Facebook data, is it correct that the Facebook data
18 tends toward a younger demographic?

19 A. I'd have to look here to check that. I believe that, in my
20 mind, that used to be true of Facebook, but it isn't
21 necessarily true anymore. Now they have Instagram, but I can
22 look here for more detail, if you want me to answer more
23 specifically.

24 Q. Why don't we move on because, again, my time is a little
25 bit limited. But if the Facebook data were skewed younger

JCCPSTA1

Shapiro - Cross

1 demographically, then they wouldn't represent the entire
2 population, right?

3 A. Well, it doesn't represent the entire population. It's
4 only 60 percent. We already established that.

5 Q. Okay. And to the extent -- are you aware that T-Mobile's
6 demographics tend to skew towards the younger demographic as
7 well?

8 A. That sounds right to me. I don't know how significant that
9 is.

10 (Continued on next page)

JCCTSTA2

Shapiro - Cross

1 BY MR. CARY:

2 Q. Okay. So to the extent that you used the Facebook data in
3 your UPP analysis, it would overstate the presence of T-Mobile,
4 correct?

5 A. It might. There was a whole back and forth between me and
6 Professor Katz on this, and I addressed that in my reply
7 report, but I take your point. We have quantified that, and I
8 have analysis of that in my reply report.

9 Q. Dr. Shapiro, is it correct that port-in data also does not
10 represent -- actually before we move on from the Facebook data,
11 were you in the courtroom when Ms. Rittgers of Boost testified
12 with respect to Boost's experience with Facebook data?

13 A. I was not in the courtroom, no.

14 Q. So you didn't hear her say that they used that data on one
15 occasion --

16 THE COURT: Asked and answered.

17 Q. Okay.

18 THE COURT: He could not have heard it since he was
19 not in the courtroom.

20 MR. CARY: He might have read the transcript, but
21 that's fair, your Honor.

22 THE COURT: Did you read the transcript?

23 THE WITNESS: I did.

24 THE COURT: Do you want to ask your question?

25 THE WITNESS: He's good at this.

JCCTSTA2

Shapiro - Cross

1 BY MR. CARY:

2 Q. Dr. Shapiro, you're aware Ms. Rittgers indicated, at least
3 in her experience Facebook, is not a reliable indicator of
4 trends in the wireless industry, correct?

5 A. I looked at her testimony, I don't believe -- I think it's
6 called Facebook -- something like flow data, I'm not sure she's
7 talking about the same Facebook data, I thought it was Facebook
8 analytics. Am I mistaken? I'm not sure, but I thought it
9 might be a different data set.

10 Q. We'll compare and get back to you.

11 A. Okay.

12 Q. So let's move on to port-in data. You're aware that
13 port-in data does not capture the entire market, right?

14 A. You mean all switches? I think you mean that.

15 Q. Yes.

16 A. That is correct.

17 Q. Actually since you brought up switching, let me go on a
18 slight diversion, no pun intended. Switching and diversion are
19 not the same thing, are they?

20 A. Well, switching is -- what do you mean by diversion? It
21 was a little unclear what the question is.

22 Q. For an economist, diversion has a pretty precise meaning
23 that is different from all switching, right?

24 A. Well, diversion ratios relate to price switching.

25 Economists are interested in diversions, could be quality

JCCTSTA2

Shapiro - Cross

1 switching or other reasons, so there are different types of
2 diversion. Diversion ratio is about pricing. Switching data
3 does not just measure price switching, it captures all
4 switching.

5 Q. So the focus should be on price-based switching, not all
6 switching, correct?

7 A. Well, for the purpose of the diversion ratios as defined,
8 since it's price-based switching, we would be -- we're most
9 interested in the price-based switching, that's correct.

10 Q. But your data captures all switching?

11 A. That's correct, yes.

12 Q. Port-in data, it only captures switches among people who
13 port their number, correct?

14 A. That correct.

15 Q. That's not everybody, is it?

16 A. Not everybody who switches.

17 Q. Right.

18 A. Right. Some people get a new number when they switch.

19 Q. Again, it's a sample.

20 A. Correct.

21 Q. And to the extent it's a sample, it is only useful to
22 extent it is representative of all price-based switching,
23 correct?

24 A. Again, I wouldn't put it that way, I would say one would
25 be -- it could be a source of concern if you had reason to

JCCTSTA2

Shapiro - Cross

1 believe there was a significant difference between diversion
2 measured this way and if you had a complete census of all the
3 switches.

4 Q. And again you read Ms. Rittgers' testimony, she indicated
5 that the port-in data was not representative of the entire
6 market, correct?

7 A. I don't remember exactly what she said about that, but both
8 companies track and use the port-in data in the normal course
9 of business, and I considered it informative, but it's not
10 perfect.

11 Q. It's not perfect, and when companies take account of it,
12 they adjust for what they know about its imperfections, don't
13 they?

14 A. It depends the usage you're talking about. I'm not sure
15 what adjustments you're referring to.

16 Q. Isn't it the case, Dr. Shapiro, that the port-in data
17 underrepresents certain switches to MVNOs, for example?

18 A. That could be. Some of these data sources don't track the
19 MVNO's separately, so it's not in the data.

20 Q. So to the extent that Verizon, for example, has more MVNO
21 customers than AT&T, T-Mobile, Sprint and others, then it would
22 understate switches to Verizon, given the way you're
23 calculating market shares, which is to treat the MVNO with its
24 carrier.

25 A. I guess I need to look at each of these sources. I don't

JCCTSTA2

Shapiro - Cross

1 have memorized exactly how they treated the MVNOs, that's it's
2 not uniform. For example, Comlink, they have a proprietary
3 method of calculating these things, so I don't believe that
4 there's -- I'm not aware of any bias here, I don't believe the
5 issue was brought up by the experts on your side.

6 Q. Where did you hear that from?

7 A. From what I remember, from their rebuttal reports is what
8 I'm saying.

9 Q. Finally, UPP does not purport to give a precise dollar
10 figure for what will happen after the merger, isn't that fair?

11 A. UPP is an indication, as the term upward pricing pressure,
12 and in itself does not indicate price changes. One still needs
13 to apply a passthrough rate in order to get to that step.

14 Q. But even there what we're talking about with UPP is to show
15 direction, it's not to measure a precise price increase that
16 will result from a transaction, right?

17 A. It's not just to show direction, because as you pointed out
18 earlier, we would always have some upper pricing pressure. The
19 magnitude is important. This is a quantification method. So
20 it is not just a direction, but it is not itself coming up with
21 a price prediction, price increase prediction.

22 Q. Would you agree with me, Dr. Shapiro, that the UPP test, in
23 terms of its robustness, gains its robustness and elegance
24 eschewing attempts to estimate magnitudes?

25 A. Well, I'm pretty sure that's something that I wrote.

JCCTSTA2

Shapiro - Cross

1 Q. I'm sure it is, too.

2 A. But I need to see the context, because the magnitude of
3 upward pricing pressure does matter, and I expect that what I
4 was referring to in that writing was the magnitude of the price
5 effects, which requires a passthrough, as I have been saying.

6 Q. And again, the passthrough rate that you used was not one
7 that you derived from a statistical analysis of the
8 marketplace, right?

9 A. That is correct.

10 Q. It was just one that you picked?

11 A. Well, it's a standard one based on linear demand, it's
12 50 percent. It has a simplicity to it. A hundred percent
13 would be full passthrough, zero percent would be none, it's in
14 the middle. It's commonly used.

15 Q. Let's move to coordinated effects. The prospect of
16 cognizable merger specific efficiencies can make coordinated
17 effects less likely also, right?

18 A. Yes.

19 Q. In fact, you talked yesterday in explaining to his Honor
20 how the UPP works -- I'm sorry, how the hypothetical monopoly
21 test works, to switch subjects, how the hypothetical monopoly
22 test works, yesterday you gave the example of beer, right?

23 A. I did.

24 Q. And in fact, you have written about beer merger when you
25 were the deputy assistant attorney general for antitrust, the

JCCTSTA2

Shapiro - Cross

1 DOJ reviewed the MillerCoors transaction in 2008.

2 A. I was not there at the time for that.

3 Q. No, but you wrote about it when you arrived there the next
4 year, correct?

5 A. No, what happened was there's an annual report that the
6 economists group there publishes in the industrial
7 organization, that annual report included -- what was the
8 transaction MillerCoors.

9 Q. MillerCoors?

10 A. MillerCoors transaction. One of the sections of that
11 report covered that transaction because it was handled within
12 the last year, but since I was not there for that transaction
13 that is a section -- I was not part of or an author of that
14 section of the paper.

15 Q. Your name was on the paper overall, but that particular
16 chapter --

17 A. I suspect the paper indicates what I just said; but if not,
18 I'm telling you that is the case.

19 Q. That was a transaction in which the national brewers of the
20 United States consolidated from three to two, correct?

21 Anheuser-Bush, MillerCoors.

22 A. Okay. Yes, that's right. I'm thinking -- okay, go on.

23 Q. The report that has your name on it that we just talked
24 about --

25 A. It's not my paper, just to be clear. You can use -- its my

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Shapiro - Cross

1 name on it, but that's misleading.

2 Q. Okay. Ken Heyer, Carl Shapiro, Jeffrey Wilder, the year in
3 review, economists of the antitrust division 2008/2009 35
4 review of the industrial organization. That's the paper we're
5 talking about.

6 A. If you want to show me a copy of the paper I will see
7 whether -- I believe we were careful and said I wasn't
8 contributing to that section, I can't say for sure.

9 Q. I will take your word for it. I need to identify the paper
10 I'm talking about first. They called it Heyer paper, if you
11 prefer.

12 A. I'm happy to have my name associated with the other
13 sections of the paper.

14 Q. That report indicates that the reason that that three to
15 two transaction was approved was because of the prospect of
16 significant cognizable efficiencies, correct?

17 A. I would have to look at it.

18 Q. And why don't we turn to tab 19 in your binder at page 3.

19 I apologize, Dr. Shapiro it's not in your binder.

20 A. There is no tab 19.

21 Q. I just realized that.

22 MR. CARY: May I approach, your Honor?

23 THE COURT: Yes.

24 THE WITNESS: Thank you.

25 A. Yes, says here: Shapiro joined the division in March 2009

JCCTSTA2

Shapiro - Cross

1 and was not a party to any decisions made prior to that time.

2 Q. Yeah, it's clear you were not party to the decision, it
3 doesn't indicate that you weren't an author of that section of
4 the report.

5 A. But you have to understand what this is is a report from
6 the antitrust division economists about what they did in the
7 last year.

8 Q. In any event, you see that the document indicates -- and
9 we'll bring it up on the screen -- that the prospect of
10 significant cognizable efficiencies discussed below made net
11 anticompetitive coordinated effects even less likely?

12 MR. POMERANTZ: Your Honor, if he could direct us to
13 where in the article you're reading from.

14 THE COURT: What page?

15 MR. NIKELS: 351.

16 A. If there's a question, I didn't catch it, Mr. Cary.

17 Q. The question was: Isn't it true that in that transaction
18 the DOJ concluded that the prospect of significant cognizable
19 efficiencies made net anticompetitive coordinated effects less
20 likely?

21 A. I see that, but we happen to know that this was incorrect
22 because later when Anheuser-Bush went to merge -- acquire part
23 of Modello, the antitrust division challenged that transaction,
24 and the complaint includes information about coordination
25 between Anheuser-Bush and Miller that had happened after this

JCCTSTA2

Shapiro - Cross

1 merger. This is a mistake in the enforcement action that they
2 did not challenge this merger.

3 Q. Was the Microsoft Yahoo transaction also a mistake by the
4 antitrust division?

5 A. Microsoft Yahoo transaction? What transaction is that?

6 Q. That was another three to two transaction, this time while
7 you were at the DOJ.

8 A. I'm having trouble -- I'm not sure what transaction you're
9 referring to. Could you be more specific?

10 Q. Why don't we move on to other aspects of coordinated
11 interaction. You gave us a list yesterday of factors that make
12 a market susceptible to coordinated effects, right?

13 A. Yes, I did.

14 Q. You did not give us a list of factors that make a market
15 less susceptible to coordinated interaction, right?

16 A. Well, it's the same set of factors.

17 Q. Well, let's see if there are some others.

18 A. Sorry, if I --

19 Q. Would you agree with me that if a firm gets more capacity
20 so that it is no longer bumping up against capacity
21 constraints, it could produce more output before marginal costs
22 start to turn up, and that could make coordination, all other
23 things equal, less likely?

24 A. That's reasonable.

25 Q. Do you agree that firms can increase -- by increasing

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Shapiro - Cross

1 capacity, could lower their marginal costs?

2 A. That could happen, yes.

3 Q. And if you do lower your marginal costs by increasing your
4 capacity, that would make it more profitable to sell more units
5 by lowering price, all else equal, correct?

6 A. I think so. All else equal, yes, that sounds correct.

7 Q. Do you agree that where firms have asymmetrical capacity
8 utilization that that is a factor that is disruptive of
9 coordination?

10 A. I think it's going to depend on the circumstances. That
11 could happen, yes.

12 Q. If one firm has greater excess capacity than others, that
13 firm has a greater incentive than others to cut its price,
14 correct?

15 A. Well, all else equal, I think that's correct. The firms
16 that did not have any excess capacity would not have an
17 incentive to cut their price because they would not be able to
18 accommodate the increased demand resulting from the price
19 decrease.

20 Q. And in that context, it's also the case that that firm's
21 rivals have less of an ability to discipline that firm as well,
22 correct?

23 A. I'm not quite understanding that.

24 Q. You've got a firm with excess capacity and they drop price,
25 the other firms would have less of an ability to discipline

JCCTSTA2

Shapiro - Cross

1 that firm.

2 A. Why? What is it about the other firms we're talking about,
3 the fact that they don't have much excess capacity?

4 Q. Yes, sir.

5 A. I see. I think that's not clear, because if one firm
6 lowers their price to gain customers, the other firms don't
7 need excess capacity to respond because they're trying to gain
8 back the customers they had. So they could respond that way,
9 could be quite aggressively to get the customers back, and they
10 wouldn't need any extra capacity to do that, they're trying to
11 refill -- get back to the capacity utilization rate they were
12 at before the first firm cut its price.

13 Q. So that would be an example of competition basically. In
14 other words, the firm that used to be capacity constrained has
15 now lost its customers to other firm that has cut price, and
16 it's responding by trying to get them back by lowering its own
17 price, correct?

18 A. We're talking -- the whole context was coordinated effects.
19 One firm tries to gain customers, the question is: Do the
20 other firms notice quickly respond so it actually doesn't end
21 up helping? The second -- the other firms respond, let's say
22 they match the price cut, they don't need excess capacity in
23 order to get the customers back, and the whole thing basically
24 is a price war that didn't work out. The whole analysis is the
25 point that the first firm might not ever cut its price because

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Shapiro - Cross

1 the others would discipline that, and I'm saying you don't need
2 excess capacity to discipline that for the reason I just
3 explained.

4 Q. Dr. Shapiro, I would like to refer you to tab one, page 102
5 of your binder there of your deposition.

6 A. Okay. Tab one, you said, page number?

7 Q. Yes, 102.

8 A. Okay.

9 Q. Do you recall in your deposition I asked you the following
10 question and you gave the following answer:

11 "Q. More precisely, for a given level of total capacity,
12 collusion is more difficult if capacity is distributed unevenly
13 across the firms. If one firm has greater excess capacity,
14 that firm has a greater incentive than others to cut its price,
15 and its rivals have less of an ability to discipline that
16 firm."

17 Do you recall saying, "That's correct, I stand by
18 that."

19 MR. POMERANTZ: Your Honor, I don't believe that's on
20 page 102.

21 MR. CARY: Page 101.

22 MR. POMERANTZ: Okay.

23 MR. CARY: Sorry.

24 MR. POMERANTZ: Starting what line? You have to
25 reread it.

MR. CARY: Line 6.

A. Okay. Shall I continue?

Q. The question is: Was that the question I put to you, and is that the answer that I you gave?

A. That's the answer I gave. It's perfectly consistent with the answer I just gave in court.

Q. Okay. Mr. Shapiro --

MR. CARY: We have a document, your Honor, that is confidential, so we can only put it up on the Court screen, the witness' screen and the counsel table's screen, but I would like to question the witness about it.

THE COURT: All right.

Q. Dr. Shapiro, could you please turn to tab 12 in your binder.

A. Okay, I am there.

Q. His Honor asked you questions about quality competition and coordinated interaction. Do you recall those questions from his Honor?

A. Yes.

Q. So this document is a 5G strategy update dated September 2019 from Verizon. Do you see that?

A. I do.

Q. Did you review this document in forming your opinions in this matter?

A. I'm not certain.

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Shapiro - Cross

1 Q. I would like to refer you to the executive summary.

2 A. Okay.

3 Q. And the executive summary, referring you to the second
4 bullet, do you see that Verizon is expressing concern about its
5 position coming under competitive pressure?

6 A. I see that.

7 Q. And do you see in the second to bottom bullet there where
8 Verizon expresses concern that they will be challenged by new
9 T-Mobile as a result of combination of Sprint and T-Mobile.

10 A. They don't say it's a result of the combination, they say
11 it's new T-Mobile. They don't compare how they're challenged
12 without the merger.

13 Q. They say we will be challenged by the Sprint asset
14 leveraged in the new T-Mobile model, right?

15 A. That's what they say.

16 Q. Then it says they need, in the near term, to consider this
17 in terms of their own strategy, right?

18 A. I see that.

19 Q. And then they say, if you look over to the right-hand side,
20 they question whether they have to change their strategy to
21 respond, correct?

22 A. I see that.

23 Q. So they're not -- in this document, at least, they're not
24 saying that they're going to coordinate, they're saying they
25 have to come up with a plan to deal with the challenge posed by

JCCTSTA2

Shapiro - Cross

1 a more powerful competitor, aren't they?

2 A. They're talking about the challenging period coming in
3 2020. I wouldn't expect them to write down they were planning
4 to coordinate.

5 Q. Could we look on page 6, and I would like to refer you to
6 the right-hand side down at the bottom it says "competitive
7 landscape." Do you see that?

8 A. I see that now, yes.

9 Q. And you see in the competitive landscape they're talking
10 about an emerging fourth with a new business model as a
11 competitive factor that they need to consider in defining their
12 strategy going forward.

13 A. I see that.

14 Q. They say that they're facing new T-Mobile as the new
15 T-Mobile uncarrrier moves into the rural areas. Do you see
16 that?

17 A. I don't see moving in, it says new T-MO uncarrrier for rural
18 mobile.

19 Q. I would like to refer you to page 22, and in particular, we
20 saw up above on the first page we saw a reference to their
21 midterm challenges, and now this is their strategy to deal with
22 those challenges. Right?

23 A. Okay. I see it's -- Verizon 5G strategy is the topic.

24 Q. And it's adapting or changing its strategy for the shifting
25 competitive dynamics, right?

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Shapiro - Cross

1 A. That's the term they use, I see that.

2 Q. Part of that network dynamic is they are no longer the
3 unchallenged leader with a superior network relative to the new
4 T-Mobile.

5 A. I don't see that here.

6 Q. Look at the middle bullet in the midterm challenges range.

7 A. The no longer unchallenged part, I didn't see that here.

8 I see what you highlighted.

9 Q. That indicates that their midterm challenge is new
10 T-Mobile's launch of their 5G offering better performance,
11 right?

12 I don't want to read the whole thing.

13 A. I see it.

14 Q. Okay. So all of these aspects of the document would appear
15 to show that Verizon plans to respond more aggressively to
16 competition from new T-Mobile, doesn't it?

17 A. More aggressively than what?

18 Q. It is changing its strategy because it is perceiving a
19 competitor who will be more capable of bringing competition to
20 it than it was before, right?

21 That's of a fair reading of this document, isn't it?

22 A. I guess you're reading more into this than I'm seeing
23 without reading the whole document. The document is not
24 entitled "Response to T-Mobile," it's "5G Strategy Update."
25 This is one of the factors they would be foolish not to think

JCCTSTA2

Shapiro - Cross

1 about, what is happening with this huge merger in their
2 industry, so they're mentioning that. I get that. It's one of
3 the challenges they're facing. I get that. I don't see that
4 it's a comparison of the merger -- the world with the merger
5 than without, which is the relevant question. Your questions
6 are pointed in that direction. I think you're reading too much
7 into it. It faces challenges.

8 Q. When they say changing they're strategy in response to
9 something, that sounds like a reaction to me, but we'll move
10 on.

11 A. In response to what, though?

12 Q. Let's look at page 18, maybe that will show us the
13 response.

14 A. I'm just not seeing it. You may be right.

15 Q. We talked about the importance of excess capacity in terms
16 of competition and coordinated interaction. Do you see on this
17 chart that they are showing in the post-transaction world empty
18 capacity for one player and broad capacity for another player
19 and contrasting that with the situation for Verizon and AT&T
20 today, correct?

21 A. I see what they're doing, but all they're doing in
22 post-transaction, as far as I can see, is adding up T-Mobile
23 and Sprint. Sprint already has a huge amount of excess
24 capacity, according to this. So they're adding them up and
25 putting them into one row, and Dish is slightly changed for

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Shapiro - Cross

1 some reason, their low capacity is going down for a little bit.
2 So this doesn't tell me anything about the merger other than
3 just the two firms have been joined into one.

4 Q. Well, but if I were to tell you and if I were to represent
5 to you that it's the case that when you combine spectrum and
6 tower assets into a single network, the result is to multiply
7 the amount of available capacity within that network, then this
8 would be -- if somebody understood that who had written this,
9 this would be indicative of more capacity in the marketplace
10 post-transaction than pre, correct?

11 A. Well, there's some interpretation of these numbers. I'm
12 telling you what I see in front of me, added up the numbers,
13 and you're telling me that for some other reason that means
14 there's a lot of extra capacity, that's not what the numbers
15 show here, that's all. I understand the network equation that
16 underlies your question. That's not part of my analysis, the
17 efficiencies, but that's not on the chart.

18 Q. Well, it is on the chart in the sense that this chart is
19 showing that the new T-Mobile has much more spectrum than
20 either of the two the networks previously, correct?

21 A. Much more spectrum? It has the amount, there's some slight
22 discrepancies, but basically the amount you would get by adding
23 up the two constituent components. That's just addition. I
24 don't understand what you're saying.

25 Q. It's not addition, as you said, it's multiplication, right?

JCCTSTA2

Shapiro - Cross

1 If you put the two networks together, the same amount of
2 spectrum multiplies the amount of available capacity. Isn't
3 that the formula that underlies capacity in this market?

4 A. Look, I am not an expert on network physics, all I'm saying
5 is what you put in front of me shows -- it's average megahertz
6 spectrum, that's what is on the vertical axis here, and
7 what's on this chart is addition. There's no multiplication
8 here. You're telling me that this does these magical things
9 through network physics. I understand that's part of your
10 efficiency plan. I'm not analyzing efficiencies, but that's
11 not on this chart, that's all I'm saying.

12 Q. What is on the chart, going back to my previous question
13 when I cited to you to your deposition testimony, is that this
14 shows asymmetry of available capacity as between Dish and new
15 T-Mobile on the one hand and Verizon and AT&T on the other
16 hand, correct?

17 It shows mostly full and full on one side and empty on
18 broad capacity on the other. That's asymmetry, right?

19 A. Yes, that's -- okay.

20 Q. Let me point something else out on this chart. You see
21 that on this chart Verizon is reporting that Dish has more mid
22 band spectrum than it does?

23 A. That Dish does. I see, 71 versus 70, yes.

24 Q. Please don't use --

25 A. Sorry. Okay. Who knows what these units are, it's just

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Shapiro - Cross

1 numbers.

2 Q. Are you also noticing that Dish has more low band spectrum
3 than Sprint?

4 A. Okay, I see what you're referring to.

5 Q. You're aware, are you not, Professor Shapiro, that Dish's
6 low band spectrum is totally unencumbered and will be devoted
7 all to 5G, right?

8 A. "Unencumbered" means not being used yet?

9 Q. Not used, correct.

10 A. I think Dish has been holding onto spectrum for a while,
11 yes.

12 Q. Whereas Sprint has to accommodate on its low band spectrum
13 2G and 3G users, therefore cannot convert that spectrum to and
14 5G without disadvantaging those 2G and 3G users.

15 A. I accept that.

16 Q. Dish is not part of the coordinated group that you have
17 included in your analysis, is that right?

18 A. That's true.

19 Q. You do believe that Dish's presence in the market as an
20 MVNO, all else equal, will reduce the incentives to coordinate,
21 don't you?

22 A. To some degree, in comparison with if they didn't exist in
23 the market at all.

24 Q. Right. And the divestiture of Boost to Dish also is a
25 factor, all else equal, that disrupts coordination in the

JCCTSTA2

Shapiro - Cross

1 market, correct?

2 A. Well, I don't want to have more to say than the previous
3 answer. I don't think it will disrupt coordination, but it
4 would -- I think what I said was have some probably small
5 moderating impact on the coordination.

6 Q. Well, I think what you said was it reduces the benefits of
7 coordinating among the other three.

8 A. That's fine. That's the same idea, yes.

9 Q. And that's true for the presence of the other MVNOs as
10 well, isn't it?

11 A. Well, they have some impact, but for reasons I explained on
12 my direct testimony, because the primary concern about
13 coordination is to not lower prices, and since MVNOs cannot
14 initiate price cuts, given their cost structure, I don't
15 believe it will -- they will have -- MVNOs will have any
16 meaningful impact in preventing that type of coordination,
17 although other types they could possibly have more of an
18 impact.

19 Q. You said that the MVNOs cannot initiate price reductions?
20 Are you familiar with TracFone's prices?

21 A. With TracFone's prices?

22 Q. Yeah.

23 A. Yeah, we showed their ARPU of around \$25 a month.

24 Q. What is Verizon's ARPU?

25 A. Much higher.

JCCTSTA2

Shapiro - Cross

1 Q. Much higher?

2 A. Right.

3 Q. TracFone can initiate price reductions, right?

4 A. So maybe I need to be clear. What I mean by that term is
5 given their margin is so small, about one percent or less, they
6 can't lower the price and still be making money. That's what I
7 meant by initiating a price reduction. They're acting very
8 competitively. They're basically thin resellers with no
9 margins. They can't lower the price further. That's what I
10 meant by initiated a price cut.

11 Q. But if others were to raise prices, they would be in a
12 position to discipline those price increases during the period
13 that their wholesale agreement is in place with a fixed price.

14 A. That's why we need to distinguish between this coordination
15 to raise prices versus coordination to simply hold prices fixed
16 and not lower them. I was talking about the latter. That's
17 what I emphasized in my direct testimony. You want to talk
18 about the former, coordination to raise prices, nominal prices.

19 Q. Let's be very clear about this: Are you or are you not
20 predicting that there will be coordination to raise prices as a
21 result of this transaction?

22 A. So the coordination will be that -- my first and foremost
23 concern is the coordination to stop the price reductions that
24 consumers have been benefiting from. I think I have been quite
25 clear about this. And that was the calculation with the

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Shapiro - Cross

1 6.3 percent of preventing price reductions for the next year.
2 That is, in merger lingo, higher prices as a result of the
3 merger than not. So we call that raising prices, but to be
4 more precise, it means not lowering them. That's the first and
5 foremost pricing concern about coordinated effects. And the
6 MVNOs and Dish -- well, let's say the MVNOs like TracFone, they
7 cannot disrupt that type of coordination, given their wholesale
8 prices.

9 Q. Again, I want to be clear, you are not giving the opinion
10 that as a result of this transaction AT&T, Verizon and T-Mobile
11 will coordinate to raise prices above current levels?

12 MR. POMERANTZ: Objection, your Honor, asked and
13 answered.

14 THE COURT: Sustained.

15 Q. Well, let's go to your chart.

16 MR. CARY: And again, I apologize, your Honor, we have
17 some numerical confusion because the deck that was used
18 yesterday was different from the one provided to us.

19 Q. But I'm looking for what we have in our tab 14. This is
20 your chart from yesterday illustrating your point about --

21 A. I think the public display is still off.

22 Excuse me.

23 Q. Yes. So this is the chart you had yesterday to illustrate
24 your point about the price increments not preventing an
25 anticompetitive effect that prices will not fall as rapidly as

JCCTSTA2

Shapiro - Cross

1 they otherwise would, correct?

2 A. Correct.

3 Q. Now I want a better understanding of this line. It says
4 planned prices, but it has no numbers on the vertical axis.
5 This is a hypothetical that you're reporting to us?

6 A. I called it conceptual.

7 Q. Conceptual. Okay. And in your conceptual you show that
8 the line has fallen, right?

9 A. The blue -- yes, the plan prices under this illustration
10 are falling from one year to the next.

11 Q. So I'm going to put up another hypothetical. Now in this
12 hypothetical the line is not falling, it's slightly increased
13 but mostly flat, right?

14 A. I see what you've done.

15 Q. In this hypothetical, since you told us you you're not
16 predicting the three carriers network operators are going to
17 coordinate to raise prices, in this scenario price commitment
18 would preclude the anticompetitive --

19 MR. POMERANTZ: Objection, your Honor, he misstated
20 the testimony about higher prices.

21 THE COURT: Clarify, Mr. Cary.

22 Q. In this example, the price commitment would prevent --
23 strike that.

24 In this example, the consumer harm that you showed in
25 your conceptual drawing does not exist, right?

JCCTSTA2

Shapiro - Cross

1 A. That is true. As you've drawn it, you have eliminated it.

2 Q. Well, it wasn't me who eliminated it. Are you aware of the
3 producer price index?

4 A. Certainly.

5 Q. The producer price index is generated by the Department of
6 Labor statistics?

7 A. That's correct.

8 Q. And so if we go to the next chart, this chart shows the
9 producer price index for the period from 2018 to 2019 for
10 cellular and wireless communication. Doesn't that indicate
11 that prices have been flat over that last year?

12 A. That's what you're showing.

13 Q. And in terms of your analysis of this industry, you have
14 seen documents where carriers have in fact predicted that
15 prices would be flat or turning up as a result of capacity
16 constraints, have you not?

17 A. I have seen some things like that, but I don't even know
18 what price we're measuring here now. I understand ARPU. I
19 don't know what this index is. What are we measuring? Are we
20 measuring dollars per gigabyte or usage? I don't know what
21 we're measuring.

22 Q. It shows the producer price index is the source, down at
23 the bottom says for --

24 A. Price of what?

25 Q. Wireless telecommunication carriers.

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Shapiro - Cross

1 A. That seems rather broad to me. I just want to know what
2 we're measuring. If you tell me it flattened out, what to make
3 of it. Because the BLS, they have a consumer price index, they
4 have a producer price index, these tend to be pretty broad
5 buckets, and I would not tend to go there, but maybe this is a
6 good measure. But I can't tell because I need to see what is
7 in this bucket that wireless industries -- I don't know what
8 we're including here.

9 Q. But you didn't look at the real data, the BLS on wireless
10 carriers, in coming up with your conceptual drawing which
11 showed the decline, right?

12 A. I used -- I think that that is not -- I'm not -- actually I
13 might have looked at those data, I can't remember, but much
14 better data that I did look at I've got in my reply report a
15 number of different measures of data of price drops. The ARPU
16 is a good one, that's been dropping. What's really dramatic is
17 the price drops dollar per gigabyte, because the usage is going
18 up so much and we're not paying more per month. So in terms of
19 quality adjusted prices, it's dropping more rapidly than I
20 showed in my diagram, and certainly not flattening out.

21 Q. In terms of the ARPUs, the reality there is there was a big
22 drop between 2013 and 2014, and even that then started to
23 moderate, correct?

24 A. I think there was -- I think in terms of we measured 2014
25 to 2017, that was the most recent three-year period from the

JCCTSTA2

Shapiro - Cross

1 FCC data. There might have been a larger drop before that, but
2 then I wouldn't have been picking that up if I remember my time
3 period right.

4 Q. I think I misspoke, 2014 and '15 it went down and
5 flattened, isn't that right?

6 A. So I could accept there are some other measures that
7 show -- I used the 6.3 percent annual drop, there are some
8 other measures that show somewhat smaller drops, but the
9 history is pretty clear here that prices have generally been
10 falling and quality adjusted prices have been falling a lot.

11 Q. You gave us another illustration yesterday. Tab 14,
12 please. Do you recall this illustration you gave us?

13 A. I do.

14 Q. Now when this was put on the screen you said that this was
15 evidence that prices had declined significantly from
16 November 2018 to November 2019, right?

17 A. Well, those are the dates at which these screen shots
18 were -- I have to double-check, but yes, I put this forward as
19 indicating a reduction in plan price by T-Mobile, yes. I don't
20 know that I said -- I don't exactly what dates those reductions
21 actually went into force, this is just, I believe, what was
22 observed at these different dates.

23 Q. Observed by you?

24 A. I have to check my reply report. I think it would be going
25 to website. I would have to double-check that.

JCCTSTA2

Shapiro - Cross

1 Should I look it up or not?

2 Q. Well, let me ask, are you aware -- I don't know how well
3 you could read this, I'm having a little bit of trouble.

4 MR. CARY: Maybe we could make the names of plans a
5 little bigger so everybody could see the names of the plans.

6 THE WITNESS: Yep.

7 Q. Do you see that it shows -- let's take the middle one, it
8 says Magenta \$40, per line.

9 A. I see that.

10 Q. Are you aware that there was no Magenta plan in November of
11 2018?

12 A. No, my understanding was that this was, again, the plans
13 that were offered at those times. If that's not correct, it's
14 a mistake and I have to withdraw it. That's my understanding.

15 Q. Let's look on the right side, the November 4, 2019. Are
16 you aware that this is a promotional plan, not the wrap rate
17 plan?

18 A. I don't know the details here. I guess I can tell you more
19 detail what I do know, but I am not sure promotional -- I
20 thought this was signature unlimited plan, my understanding was
21 this was a primary offering by T-Mobile.

22 Q. The offering is primary, but the pricing is promotional
23 pricing.

24 A. And is it any different than the one in the previous year
25 in that respect?

JCCTSTA2

Shapiro - Cross

1 Q. Yes, the previous year was a wrap rate.

2 Turn to tab 9 at page 5.

3 A. Okay. I see that.

4 Q. This is a document -- this is the real document that shows
5 prices of T-Mobile's post-paid plans, right?

6 A. I don't know. I'm not familiar with this document.

7 Q. I'm going to refer you to the T-Mobile One plan, which was
8 the plan that was in place in November of 2018, because there
9 was no Magenta plan at that time, and I will refer you to the
10 bottom where it is showing the price. Do you see that?

11 A. I see that.

12 Q. And this is for four lines. Do you see that over on the
13 left there, four lines for 140?

14 A. I do.

15 Q. And four lines at 140 is how much per line?

16 A. \$35.

17 Q. So the price in November of 2018, \$35, is the same as the
18 price in November 2019 that you showed on your exhibit for \$35,
19 correct?

20 A. Well, I don't know what -- I'm not following, to tell you
21 the truth. You're slowing me a document that says they have
22 the One plan and it was \$35 a line for this four line as shown
23 here, and now I think you're telling me that was their -- what
24 the promotional rate is in November 2018?

25 Q. Yes, sir.

JCCTSTA2

Shapiro - Cross

1 A. Okay. Okay. If you're telling me that, and you're telling
2 me that the \$35 rate that was in my exhibit was also a similar
3 promotional rate a year later, is that what you're saying?

4 Q. Yes, sir.

5 A. Well, then if that's all true, then this would not
6 illustrate what I was putting it forward to, and that would
7 need to be corrected. I may be missing something here, but I'm
8 following you and taking your representations, that's my
9 reaction.

10 Q. Okay. You spoke yesterday about geographic market
11 definition.

12 A. Yes.

13 Q. And you used a slide that showed a map of the New York
14 metro that I would like to put up on the screen.

15 So the CMA that's on the screen is the New York CMA,
16 and you've testified that you believe that that is a relevant
17 geographic market for antitrust purposes for examining this
18 transaction?

19 A. Yes, that's a relevant geographic market, the New York CMA.

20 Q. And you came to that conclusion by applying the
21 hypothetical monopoly test?

22 A. I applied that test to this region and it was satisfied.

23 Q. Did you apply that test for smaller regions within the New
24 York CMA?

25 A. No, I did not do that. I did not need to do that to reach

JCCTSTA2

Shapiro - Cross

1 the conclusions that this was a relevant market.

2 Q. So let's take an example of the Bronx. We have circled a
3 couple of geographies here, what is supposed to be the Bronx
4 but it's in the wrong place, should be lower and to the left.
5 The map is a little small. Would you agree with me that
6 applying the hypothetical monopoly test that you are using to
7 define markets that the Bronx would satisfy that test?

8 A. I think it would.

9 Q. And would you agree with me that Manhattan would satisfy
10 that test?

11 A. I think it would.

12 Q. Would you agree with me that a subsection of Manhattan
13 would satisfy that test?

14 A. Yes, some would, yes.

15 Q. Would you agree with me that a zip code would satisfy that
16 test?

17 A. I expect it would because people want service where they
18 live in their homes and where they work.

19 Q. Would you agree with me that a city block would satisfy
20 that test?

21 A. Small regions would satisfy that test. It would not be as
22 informative, but it would satisfy the test.

23 Q. So the extent to which the definition is informative is
24 relevant to you, right?

25 A. I don't understand the question.

JCCTSTA2

Shapiro - Cross

1 Q. There could be different levels of information provided by
2 looking at different geographic areas.

3 A. Certainly.

4 Q. Now you are testifying -- well, let me go a step further.
5 You would agree that a city block would satisfy the
6 hypothetical monopoly test?

7 A. I think it would in this industry, yes.

8 Q. Would you agree with me that the Northeast region would
9 satisfy the hypothetical monopoly test?

10 A. Yes.

11 Q. Would you agree with me that the Eastern United States
12 would satisfy the hypothetical monopoly test?

13 A. Yes.

14 Q. Would you agree that the entire of the United States
15 satisfies the test?

16 A. I would. I do.

17 Q. Basically everything from a city block to the United States
18 of America would satisfy the test?

19 A. That is correct.

20 Q. And then applying the methodology that you used, if we went
21 down to a city block and we found Herfindahls above 2,500, you
22 would say that the transaction is anticompetitive on the city
23 block.

24 A. No, I would not.

25 Q. You would not?

JCCTSTA2

Shapiro - Cross

1 A. No.

2 Q. Why wouldn't you?

3 A. Because as I --

4 Q. Withdraw that question.

5 There are wide variations in Hirfindahls within CMAs,
6 correct?

7 A. I don't know what you mean by "within." I have looked at
8 things at the county level and there is some variation there,
9 so I'm not quite sure what you mean.

10 Q. Let's take Washington DC, for example. Within the
11 Washington DC CMA there's a county with a Herfindahl of around
12 3,000 and another county with a Herfindahl of around 8,000,
13 right?

14 A. I don't know that. I don't have that county level CMAs
15 memorized, happily enough.

16 Q. But your position is --

17 A. County level Hirfindahls, I meant to say.

18 Q. To the extent that the entire CMA has a certain Hirfindahl,
19 you would condemn the transaction even in counties where the
20 Hirfindahl is much lower, right?

21 A. Finding high concentration and changes in concentration in
22 CMA levels I think is informative about the danger to
23 competition associated with consolidation in those regions.

24 The fact that there's variation within the CMA in terms of
25 market shares and Hirfindahls does not undermine that point, in

JCCTSTA2

Shapiro - Cross

1 my view.

2 Q. There's wide variations within the CMA and there's wide
3 variations across CMAs, right?

4 A. I think that is true, yes. To be clear, we're talking
5 about in let's say the levels of Hirfindahl and the change in
6 Hirfindahl, the two metrics we're focusing on.

7 Q. Right.

8 A. Yes.

9 Q. Now economists looking at mergers across geographic markets
10 occasionally will do an analysis of the pricing across those
11 markets to determine whether those really are areas of
12 competitive concern, don't they?

13 A. Could you be more specific? To a lot of things that sounds
14 reasonable, but I'm not sure what you meant.

15 Q. So one of the ways that economists looking at mergers that
16 are in multiple markets, one of the techniques that they use to
17 determine whether there are going to be anticompetitive effects
18 is to look at markets where there are high concentration and
19 other markets where there are low concentration and see whether
20 there's a differential in the competitive outcomes in those two
21 geographies, right?

22 A. Well, that is a method used for some purposes, but that's
23 not so good for merger analysis, really, because we want --
24 much better would be to look at the effective mergers in
25 different local markets, if I could.

JCCTSTA2

Shapiro - Cross

1 Q. I was going to get to that as well. And that's another
2 technique, to look at cross markets to see if concentration is
3 correlated with performance, and they look within the market to
4 see whether over time with mergers there's a change in
5 performance or exit and entry, right?

6 A. Those two types of methodologies are definitely included in
7 literature, yes.

8 Q. Not only the literature, but in the real world analysis of
9 mergers by the DOJ of FCC.

10 A. In those cases those techniques can be and are used, that's
11 correct.

12 (Continued on next page)

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JCCPSTA3

Shapiro - Cross

1 Q. Now, here we have a situation, for example, where you have,
2 let's say, Milwaukee, Wisconsin, where the pre-merger HHI is
3 2000, and then you have Rochester, New York, where the HHI is
4 close to 4000, 3788 to be precise. Did you look to see whether
5 the competitive outcomes in Rochester v. Milwaukee are any
6 different as a result of those differences in HHIs?

7 A. I have not looked across CMAs in the way you've described.
8 I don't think that would be a fruitful line. I have not done
9 that.

10 Q. Okay. And if you looked, for example, in Miami, when
11 T-Mobile bought Metro PCS, the market shares went up. Did you
12 look to see whether competitive performance in Miami was better
13 or worse as a result of that increase in concentration?

14 A. I have not conducted case studies in different CMAs that --
15 it could be informative, I'm not quite sure how you would do
16 it. It's not part of the analysis I presented to the Court.

17 THE COURT: Mr. Cary, how much longer do you think you
18 need on this subject?

19 MR. CARY: Your Honor, if you're looking for a time to
20 take a break, this would be it.

21 THE COURT: All right. Let's take a ten-minute break.

22 (Recess)

23 THE COURT: Thank you. Be seated.

24 Mr. Cary, do you want to resume, please.

25 MR. CARY: Yes, your Honor. Thank you.

JCCPSTA3

Shapiro - Cross

1 THE COURT: Before you proceed, let me acknowledge
2 that the Court received a memorandum from defendants dated
3 December 11th, regarding that controversy related to
4 Exhibit No. 1034.

5 Plaintiffs, do you contemplate a response to this
6 memorandum?

7 MR. POMERANTZ: Yes, your Honor, we do. If we may
8 have until Monday to submit the response?

9 THE COURT: All right.

10 MR. POMERANTZ: Thank you.

11 THE COURT: Mr. Cary?

12 MR. CARY: Your Honor, may I approach?

13 THE COURT: Yes.

14 MR. CARY: Thank you.

15 BY MR. CARY:

16 Q. Professor Shapiro, I've handed you a press release
17 announcing the introduction of the magenta plan, consistent
18 with our last conversation about your pricing comparison. I
19 wanted to refer you to page 3 of 7, where it says: Introducing
20 magenta, new name, same price, more benefits.

21 And I just wanted to put this before you, pursuant to
22 our conversation about your pricing data. You don't need to do
23 anything with it, but I will be introducing it into evidence.

24 A. All right.

25 Q. So before we broke, we were talking about geographic

JCCPSTA3

Shapiro - Cross

1 market, and I just wanted to confirm a few things with you.

2 You are aware that T-Mobile and Sprint price nationally, right?

3 A. I think generally their pricing plans are national, yes.

4 Q. So the price that a consumer gets in Milwaukee with a 2000
5 Herfindahl is the same price as they get in New York City with
6 a 3800 Herfindahl; there's no difference relative to the
7 concentration ratio, correct?

8 A. Before we would factor in local promotions and the like,
9 that's correct.

10 Q. And the local promotions, have you looked at the magnitude
11 of those local promotions?

12 A. I've seen some documents related to them, some localization
13 plans and the like, yes.

14 Q. Is it fair to describe the total dollar value of those
15 local promotions as miniscule?

16 A. I don't -- that sounds rather demeaning.

17 Q. Very, very, very small, right?

18 A. I don't know what you mean by that. I've seen individual
19 documents, if I remember them right, that were talking about
20 promotions in the millions, single-digit millions and handfals
21 of CMAs, for example. If that's minuscule, that's the sort of
22 thing that I've seen.

23 Q. You know that T-Mobile's marketing budget is in the
24 billions, right?

25 A. I don't know off the top of my head their marketing budget,

JCCPSTA3

Shapiro - Cross

1 but I'm saying in specific CMAs I don't think that's minuscule
2 when you look at it, but I accept that in the overall scheme of
3 this industry or the total revenues, you know, in the whole
4 country, it's a small -- it's a small item compared with, you
5 know, the national efforts in terms of pricing and marketing.
6 I'm not disputing that.

7 Q. It's about 2 percent or less, right?

8 A. I don't know that number.

9 Q. Have you studied whether the amount that is spent in
10 high-concentration CMAs, as a percentage of revenue, is
11 different from the low-concentration CMAs?

12 A. I've not related the spending to Herfindahls. I've seen
13 how it relates to strategy. Sometimes building on strength.
14 Usually companies are marketing where their speed is good.

15 Q. My question was with respect to Herfindahls.

16 A. So, no, I have not related it to Herfindahls.

17 Q. Right. And in terms of where their speed is good, where
18 their speed is good, the consumer there gets higher-quality
19 service, right?

20 A. That's usually what's being touted in terms of the
21 promoter -- not the discounting but in terms of the messaging.

22 Q. Right. So the messaging is you're getting more for less,
23 not less for less?

24 A. Well, for example, the Boston, the thing we showed for
25 Boston with the higher speeds, there was touting the higher

JCCPSTA3

Shapiro - Cross

1 speeds.

2 Q. Right. And it's your view, actually, as expressed in
3 deposition, that higher market share will tend to be associated
4 with higher quality network performance, right?

5 A. Certainly, yes. That's why the overlap, when we have CMAs
6 where the two companies have a high combined share, we're
7 especially worried.

8 Q. But CMAs where one company has a low share and another has
9 a high share, and they can improve their performance by adding
10 those network assets together, consumers are going to get more
11 for less, right?

12 A. Well, if there are merchant-specific efficiencies, those
13 could very well arise at the CMA level, and that would offset
14 the effects I've talked about.

15 Q. You do understand, do you not, that T-Mobile has a single
16 national standard for its network performance?

17 A. I'm not quite sure what you mean by a "single national
18 standard."

19 Q. What I mean is that they set a floor of megabits per second
20 that is their benchmark, below which if the speeds fall, they
21 will invest. Are you familiar with that?

22 A. I've seen documents about their investment plans, and I
23 understand that element. I wasn't quite sure about whether
24 they go and successfully bring up all these areas to that
25 benchmark, but I get the point.

JCCPSTA3

Shapiro - Cross

1 Q. The point is that they don't set -- that benchmark that
2 they try to achieve everywhere is not set by reference to local
3 competitive conditions, correct? It's a national standard?

4 A. Yes, what you've described, it sounds to me like the floor
5 may be set, or at least aspirationally, set on a national
6 basis, but of course, you do a lot better in some areas to
7 attract customers who are located there and particularly care
8 about the speed in that area.

9 Q. You don't have any evidence -- you don't have any evidence
10 that T-Mobile strives to achieve higher performance in a
11 particular area because of competitive conditions in that area,
12 do you?

13 A. I think there's plenty of documented evidence that
14 T-Mobile, when they're thinking of investing, that they're
15 looking at their local performance and they want to improve
16 their speeds in certain areas.

17 Q. Okay. Well, we'll have Mr. Kapoor who will come in and
18 testify and explain that they have a uniform national standard.

19 A. Well, that's --

20 MR. POMERANTZ: Objection, your Honor. He's not --

21 THE COURT: Sustained.

22 Q. In any event, you don't have any evidence that their
23 investment decisions at T-Mobile are based upon CMA-level
24 concentration?

25 A. No, I don't think that's how their planning is done. I

1 agree with that.

2 MR. CARY: Okay. Thank you, Dr. Shapiro.

3 Oh, your Honor, I need to introduce --

4 THE COURT: Yes, some documents, exhibits?

5 MR. CARY: Okay. Your Honor, at this time, we'd like
6 to move Defendant's Exhibits 7057 and Defendant's Exhibit 5489
7 into evidence.

8 MR. POMERANTZ: Your Honor, I think Exhibit 7057 is a
9 Verizon document.

10 MR. CARY: Correct.

11 MR. POMERANTZ: Am I correct?

12 MR. CARY: Yes.

13 MR. POMERANTZ: And I believe -- so with respect to
14 Verizon, Verizon has provided a certification, a declaration
15 that would establish -- intended to try to establish the
16 business records exception, and they have provided us with a
17 declaration signed by Verizon that attempts to satisfy it.

18 We, too, have obtained a declaration from Verizon that
19 attempts to establish the business record exception for other
20 Verizon documents. We have asked them to agree -- they both
21 establish it or they both don't. It's the same declaration. I
22 think it's word for word the same declaration. It's just
23 simply different documents.

24 I will not object to them offering the Verizon
25 document in this manner, so long as it goes both ways, your

JCCPSTA3

Shapiro - Redirect

1 Honor.

2 MR. CARY: Your Honor, I'm not aware or familiar with
3 the documents that Mr. Pomerantz is talking about. When those
4 documents come up, we'll take a look at them, and if they're
5 legitimate business records, you know, we'll deal with it.

6 This document, obviously, is. It's their 5G strategy
7 update for their core team. I think we've established a
8 predicate for this. If Mr. Pomerantz can do the same for his
9 documents when we see them, we wouldn't object.

10 MR. POMERANTZ: Your Honor, I would ask that you
11 reserve your ruling on this. There is no Verizon witness here
12 to lay any foundation. They could have deposed a Verizon
13 witness in this matter. They did not. I think we can work it
14 out, but I want it to go both ways.

15 THE COURT: All right. Let's proceed. I will assume
16 that if the principle is the same for both documents, then I
17 will ask that they be admitted on the same basis.

18 MR. CARY: Thank you, your Honor.

19 REDIRECT EXAMINATION

20 BY MR. POMERANTZ:

21 Q. Professor Shapiro, a few follow-up questions. Mr. Cary
22 started his examination with unilateral effects and, in
23 particular, he asked you questions about UPP, upward pricing
24 pressure. Is upward pricing pressure, or UPP analysis, a
25 methodology that is widely used by antitrust economists?

JCCPSTA3

Shapiro - Redirect

1 A. Yes, it is.

2 Q. In fact, is it so widely used that it was expressly added
3 to the merger guidelines?

4 A. Yes. Although, I would think it goes both ways. The
5 presence in the merger guidelines has spurred additional usage
6 as well.

7 Q. And is it fair to say that both the FTC and the DOJ use UPP
8 analysis when they're assessing unilateral effects in a merger?

9 A. Yes, when it's appropriate. Of course, it has to fit the
10 case. The UK's Competition and Markets Authority also does
11 this similar thing.

12 Q. And just in general terms, why do antitrust economists, the
13 FTC and the DOJ use UPP to analyze price effects of a
14 horizontal merger?

15 A. So this is -- in terms of quantifications that are workable
16 in practice and in court, we have Herfindahls. We've had those
17 for a long time. Herfindahls fit better with coordinated
18 effects, that's really where they come from intellectually in
19 this field.

20 Unilateral effects have become increasingly a large
21 part of merger enforcement over the past 20 years, and this
22 methodology is a way of quantifying them. It's better than
23 Herfindahl for that. The change in Herfindahl is also
24 informative for coordinated effects -- excuse me, for
25 unilateral effects.

1 But this is our best methodology that's relatively
2 simple. It may not feel that way to you, your Honor, but
3 relatively simple for quantifying these things. There are more
4 complicated methodologies, such as merger simulation, but this
5 one is relatively simple. Many people even believe it is quite
6 reliable. There is still some academic debate about that, and
7 it's workable in practice.

8 Q. All right. Let me turn to a different subject, the subject
9 that Mr. Cary concluded on, and that is local markets and, in
10 particular, CMAs. The defendants have retained two economists
11 to look at your initial testimony, correct, your initial
12 report?

13 A. Yes, that's correct.

14 Q. And that's Dr. Katz and Dr. Asker, correct?

15 A. Yes.

16 Q. And they're both here today, correct?

17 A. Yes, I believe so.

18 Q. Did either Dr. Katz or Dr. Asker, say in their reports that
19 there is no local market that's a relevant market for assessing
20 this merger? Did either of them say that affirmatively?

21 A. Well, as best -- in my mind, what they say in their reports
22 that responded to mine, they criticized my use of CMAs as local
23 markets. I don't know that they said there could not be any
24 local market, but they were attacking this use of CMAs.

25 Q. Okay. So that's the point. That is, they didn't say there

JCCPSTA3

Shapiro - Redirect

1 is no local market competition out there; they just said that
2 CMAs may not be the right way to define that local market,
3 correct?

4 A. That is how I have remembered and responded to their
5 reports, yes.

6 Q. And then, did they identify a different way to define the
7 local market, like it should be a county or a borough or a
8 neighborhood or a street? Did they define a different local
9 market?

10 A. No, they did not.

11 Q. Okay. Now, Mr. Cary suggested that there may be smaller
12 regions than a CMA that may satisfy the HMT, the hypothetical
13 monopolist test. Do you remember that question?

14 A. And I acknowledged that there would be.

15 Q. And then Mr. Cary also asked you whether there would be a
16 larger region than a CMA that would satisfy the hypothetical
17 monopolist test, and you agreed with that, too, correct?

18 A. Yes, such as the United States.

19 Q. So does that mean that because there are smaller local
20 markets that satisfy the test and larger regional markets that
21 satisfy the test, does that mean that the CMA is not a relevant
22 market for analyzing this merger?

23 A. No, it does not. That question, I think, goes to that it's
24 informative to look at these geographic regions. They do
25 satisfy the test, but since other regions do, you want to look

JCCPSTA3

Shapiro - Redirect

1 at this region if it's informative. And I've explained, I
2 hope, on the witness stand here why I believe it is regarding
3 local dimensions of competition.

4 Q. All right. And then when we turn to the national market,
5 Mr. Cary noted that there are wide variations of HHIs in
6 various local markets; do you remember that?

7 A. I do.

8 Q. And then he also noted that nominal prices, that is, let's
9 say, the rate plans, those are set nationally by T-Mobile and
10 Sprint; do you remember that?

11 A. I do.

12 Q. Now, are we missing something here with respect to why the
13 local HHIs vary significantly compared to the national? If we
14 just look at the nominal prices that are set nationally, are we
15 missing something there? Is there something that explains why
16 the HHIs vary so much locally compared to the national market?

17 A. Well, there's a -- I think we understand why. It's not
18 because prices are different in one area over the other, it's
19 national pricing. So one of my exhibits I showed in the
20 New York CMA, the combined share of the merging firms is
21 58 percent.

22 Q. Are you referring to a slide?

23 A. I am.

24 Q. What's the number on the slide?

25 A. Slide 26 from the deck we presented yesterday.

JCCPSTA3

Shapiro - Redirect

1 Q. Mr. Nickels, could you put slide 26 up?

2 Okay. Yes?

3 A. Yes, that's the one. So, your Honor, hopefully you can see
4 this. We saw this before. So just look at New York. So the
5 combined share is 58 percent for the two firms. That's
6 substantially larger than their national combined share, which
7 I think is about 38 percent.

8 So that is not because of local promotions in
9 New York. It's not because of price differences. It's, I
10 infer, that it's the quality. It's the speed, that I think
11 they've got -- they're more competitive in New York CMA than in
12 the country as a whole because of the quality of their service
13 in this area. And we see considerable variation, and this is
14 why certainly unilateral effects locally would be particularly
15 concerned, and -- in a CMA such as New York because the
16 combined share is so high.

17 Q. All right. And if we could, Mr. Nickels, if you could put
18 slide six up on the screen. So this is another slide. This is
19 Plaintiff's Exhibit 160, that we looked at during the course of
20 your direct examination. Mr. Cary was asking you questions
21 about whether T-Mobile tries to come up with the same quality
22 requirements across the United States.

23 In fact, all of the carriers have differences in their
24 qualities in different localities around the country, correct?

25 A. That's the reality of this industry, yes.

JCCPSTA3

Shapiro - Redirect

1 Q. And, in fact, the carriers compete with each other locally
2 based on quality, correct?

3 A. I think so. Yes, they do.

4 Q. And Exhibit 160 is an example of how Sprint is using its
5 speed in the Boston area to compete for consumers in Boston,
6 correct?

7 A. Yes, that's what I think this is about. It's a press
8 release touting their speed in Boston.

9 Q. Now, Mr. Cary also asked you some questions about
10 competition relating to AT&T and Verizon; do you remember that?

11 A. Yes.

12 Q. And he showed you a Verizon document, strategy document
13 that addressed 5G, correct?

14 A. I recall that.

15 Q. And he was trying to suggest from that document, I think
16 through his questioning, whether Verizon would really have any
17 interest in coordinating with AT&T and the new T-Mobile if this
18 four-to-three merger actually occurred; do you remember that
19 line of questioning?

20 A. I do.

21 Q. So he selected one document that was produced to the
22 parties and to us by Verizon. I'm going to ask you to look at
23 a different document.

24 A. Okay.

25 Q. Can you, Mr. Nickels, put this only on the private screen,

JCCPSTA3

Shapiro - Redirect

1 not publicly.

2 Could you take a look at Exhibit 1234?

3 MR. POMERANTZ: Your Honor, would you like a copy? I
4 have a --

5 THE COURT: Yes.

6 MR. POMERANTZ: And, Mr. Nickels, if you could
7 highlight the first sentence of the top e-mail.

8 BY MR. POMERANTZ:

9 Q. Now, I'm not going to ask you to read it out loud,
10 Professor Shapiro, but is it fair to state that the contents of
11 that first sentence would not suggest that this -- that Verizon
12 is opposed to the merger?

13 A. I very much agree with that, based on this sentence that I
14 will not read.

15 Q. And indeed, is it fair to say that you read this first
16 sentence as being totally consistent with the testimony that
17 you have provided here with respect to coordinated effects?

18 MR. CARY: Your Honor, I'm going to object to the
19 question, and I'm going to move to strike the last answer as
20 well. This is a document -- it took us a minute to read it,
21 but this is a document not within Verizon, but to a Boston
22 Consulting Group, and I think we're now getting into that area
23 of the conversation. This document, upon review, seems to be
24 Boston Consulting Group trying to sell their services to help
25 Verizon strategize, and Verizon is saying, no thank you. It's

JCCPSTA3

Shapiro - Redirect

1 not a business record.

2 MR. POMERANTZ: Your Honor, to the contrary. You can
3 see the document. The top e-mail is from Verizon. It is not
4 from Boston Consulting Group, and this is somebody, a senior
5 executive at Verizon, offering a view about the merger. It's
6 clearly a business record, and we have a -- in fact, a
7 declaration on this very document from Verizon that is
8 identical to the declaration that they have offered for the
9 documents they seek to enter into evidence from Verizon.

10 MR. CARY: Your Honor, the difference is apparent on
11 the face of these documents. One document is the official
12 Verizon strategy update, with facts and figures and data and
13 proposals for the company to move forward in response to a
14 competitive threat.

15 The other is one individual's e-mail to a third-party
16 consultant, who's soliciting him for business to consult and
17 strategize, and the Verizon executive says, no, thank you, and
18 expresses a personal opinion. It is not a document created in
19 the ordinary course of business by someone with knowledge of
20 the facts, kept in the ordinary course, and used as a
21 decision-making document as the Verizon plan is.

22 MR. POMERANTZ: Your Honor, to the contrary. The
23 evidence here is exactly the opposite of what Mr. Cary just
24 said. Verizon has sworn, in a declaration, that this is a
25 business record, No. 1, and No. 2, Mr. Cary is looking at a

JCCPSTA3

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1 document that he relied on and then assuming things, as opposed
2 to actually getting testimony from Verizon, if he wanted to
3 offer it, saying all the things that he just said.

4 They had the opportunity to do that. They didn't take
5 the deposition. We both have declarations that say exactly the
6 same thing, which establish the business records exception.

7 THE COURT: Do we know who Mr. --

8 MR. POMERANTZ: I would ask you not to say the name.

9 THE COURT: The individual who is sending this, where
10 he places in the organization, whether he has authority to make
11 the statement like this and have that statement be attributed
12 to Verizon?

13 MR. POMERANTZ: Yes, I understand. And again, I don't
14 want to -- I understand that he is a -- I want to say the title
15 is Senior V.P. of Marketing. I may not have it quite accurate,
16 but he's of that level.

17 MR. CARY: So, your Honor, I think that makes the
18 point, a marketing guy responding to a consulting group saying
19 we want to work for you, as opposed to 60 pages --

20 THE COURT: I'm going to agree with the defense.
21 This, as I see, is somewhat different than the principle that
22 applies to the prior Verizon document.

23 MR. POMERANTZ: Your Honor, if I may. As you allowed
24 some briefing on the other exhibit, I really do think that
25 there is no basis under the rules and under the evidence that

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1 we have here, to include theirs and not ours, and I would like
2 the opportunity, if I may, to brief it.

3 THE COURT: If you wish to brief and spend your
4 valuable time on those technical issues, which on appeal, as
5 you know, Court rulings are very seldom reversed, you may. But
6 I just don't think it's a productive use of your time. There
7 are material differences that I see between the two issues,
8 but --

9 MR. POMERANTZ: No, your Honor, I certainly don't want
10 to waste our time right now. I certainly understand your
11 message. I just want to be clear that what this document says
12 goes to the heart of the issue in this case.

13 MR. CARY: Your Honor?

14 THE COURT: Let's not prolong it. The other thing is
15 that Verizon may tell you that this is a business document, but
16 the business document, as you know, is a legal principle under
17 the rules of evidence, and it's to the Court to determine
18 whether or not something is or is not a business record, and I
19 am not necessarily bound by a determination of a third party.

20 MR. POMERANTZ: I'll move on, your Honor.

21 THE COURT: All right.

22 BY MR. POMERANTZ:

23 Q. Professor Shapiro, Mr. Cary was asking you questions about
24 spectrum and the difference between addition and
25 multiplication; do you recall that testimony?

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1 A. I do.

2 Q. I think it was something about the law of physics, and I
3 think what he said was that if you combine the spectrum of
4 T-Mobile and Sprint, you get excess capacity through
5 multiplication, not addition. Do you recall that line of
6 questions?

7 A. Yes.

8 Q. So if you combine the spectrum of AT&T and Verizon, then
9 you would also get excess capacity through multiplication and
10 not addition, correct?

11 A. If the same principles apply, that sounds correct, yes.

12 Q. And if you combined the spectrum of AT&T and Verizon and
13 T-Mobile and Sprint, you would get an even higher result from
14 that multiplication rather than addition, correct?

15 A. As I understand the formula, unless there was some other
16 factor, yes.

17 Q. Do you think that the fact that you can combine these
18 companies, whether it's AT&T and Verizon or the entire industry
19 into a monopoly, do you think the fact that that multiplication
20 leads to, let's say, better service? Do you think -- as an
21 economist, do you think that that answers the question of
22 whether there will be a substantial lessening of competition?

23 MR. CARY: Your Honor, I'm going to object on the
24 basis of foundation. This witness has testified that he's not
25 their efficiencies expert, he is not looked at the physics,

1 he's not looked at the network combinations, and he, therefore,
2 cannot answer that question without any scientific foundation.

3 THE COURT: All right. Mr. Pomerantz, perhaps you
4 want to take another stab at the foundation.

5 MR. POMERANTZ: Your Honor, Mr. Cary asked him that
6 same question, only he limited it to T-Mobile and Sprint, and
7 he very much asked him multiplication versus addition, and what
8 that means to the antitrust analysis -- the economic analysis
9 here.

10 I'm just going to the next step. It's hard for me to
11 imagine how there cannot be foundation for Professor Shapiro to
12 answer this question, when Mr. Cary elicited the exactly the
13 same testimony, but he chose to limit just to T-Mobile and
14 Sprint, and I'm trying to show the logic of his argument and
15 what that means to competition.

16 I have an antitrust economist on the stand, and his
17 whole point is to talk about how do economists look at these
18 kinds of issues in the context of assessing whether competition
19 is improved or lessened?

20 THE COURT: All right. Thank you. Overruled.

21 MR. POMERANTZ: Thank you.

22 A. I feel like after all that, I'm supposed to have something
23 really good to say. But, look, if you accept those network
24 physics and those formulas, and this is, I think, the important
25 part of the efficiency claims, those could qualify as

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1 efficiencies, but we would always want to see whether they
2 would be of a magnitude to offset the anticompetitive effects,
3 and you're talking about, as the industry increasingly
4 consolidates, that it would be a heavier and heavier lift.

5 BY MR. POMERANTZ:

6 Q. All right. Let me turn to a different subject. You
7 understand that defendant's position is that after this merger,
8 the prices for new T-Mobile's services will go down?

9 A. I'm sorry, I lost you. The absence of the merger, is that
10 what you said?

11 Q. No, I'm sorry. Defendant's position.

12 A. I didn't hear that.

13 Q. You understand that defendant's position is that after the
14 merger, new T-Mobile's prices will go down?

15 A. I do.

16 Q. And you understand that their position is based upon the
17 efficiencies that they claim will arise from the transaction?

18 A. I think it is.

19 Q. Now, you say that if new T-Mobile does not have the kind of
20 efficiencies that are claimed by the defendants here, the kind
21 of efficiencies that are recognized by economists and the law,
22 then new T-Mobile's prices will go up, as compared to the
23 prices that would prevail without the merger, correct?

24 A. Yes, that's what I'm saying.

25 Q. So they say prices will go down, and we say prices will go

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1 up, correct?

2 A. Again, up could mean not falling as rapidly, but up,
3 compared with the merger not taking place.

4 Q. Okay. So if we are right, that new T-Mobile's prices will
5 go up, what do economics tell us about whether AT&T and Verizon
6 would have any incentive to lower their prices?

7 A. So even if we just took the unilateral effects part of my
8 analysis, that the new T-Mobile would raise the price of their
9 brands, the -- what are normal, I would say, standard way of
10 thinking about oligopoly is that AT&T and Verizon -- first off,
11 they would welcome that because they've got a competitor
12 raising price, and they would tend to raise their price
13 somewhat without any coordination, just to -- in response
14 somewhat. So it would tend to be a broader set of price
15 increases. This is what the merger simulation models and our
16 oligopoly models typically say.

17 Q. So if there are no cognizable efficiencies in this case, do
18 economics tell us that not only will new T-Mobile raise its
19 price compared to pre-merger, but AT&T and Verizon have no
20 incentive to lower their price?

21 A. That's correct. They have no incentive to lower their
22 price, and they would tend to have some incentive to partially
23 follow the price increase that T-Mobile would initiate as a
24 result of the merger.

25 MR. POMERANTZ: Your Honor, I have no further

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1 questions. Oh, I'm sorry. I have to move into evidence a
2 bunch of exhibits. Okay. 911, 655, 1042, 1242, 1235, 1031,
3 585, 813, 892, 1021, 273 and 856.

4 THE COURT: Any objections? No? These are admitted
5 without objection.

6 MR. CARY: We have no objection. We were just looking
7 over the list to make sure the other one isn't in there.

8 (Plaintiff's Exhibits 911, 655, 1042, 1242, 1235,
9 1031, 585, 813, 892, 1021, 273 and 856 received in evidence)

10 MR. CARY: Your Honor, we also have the press release
11 handed up, which we will mark as Defendant's 5490, and we move
12 that in.

13 MR. POMERANTZ: Your Honor, we would object to that.
14 While we had an agreement that we would withdraw objections to
15 press releases that were on the exhibit list, this is the first
16 time we had any notice. And we knew which ones those were.
17 This is the first time we were aware of this one being used as
18 an exhibit in the case.

19 MR. CARY: Your Honor, the only reason we used it as
20 an exhibit is because Dr. Shapiro put up that erroneous exhibit
21 that showed -- purported to show differences in prices for a
22 plan that didn't exist a year ago. This press release is the
23 announcement of the plan to demonstrate that it didn't exist a
24 year ago; so that's why it wasn't on the list. We were using
25 it to -- in response to the witness' testimony.

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1 MR. POMERANTZ: Your Honor, if I may ask. I may not
2 have any objection. I saw it for the first time this morning.

3 THE COURT: Do you want to wait on this one?

4 MR. POMERANTZ: If I could wait until tomorrow morning
5 and just let your Honor know?

6 THE COURT: All right. Mr. Cary, did you have any
7 further questions?

8 MR. CARY: No, your Honor.

9 THE COURT: Let me just ask one question.

10 Dr. Shapiro, coming back to the issue of unilateral
11 moves and whether or not T-Mobile would likely raise prices,
12 one difficulty that I have with this unilateral strategy is
13 that, and I alluded to this yesterday, it is unlikely that a
14 competitor in these circumstances is going to be so bold as to
15 on day one or day two or month one following the merger, say
16 we're going to increase our prices, period.

17 It seems counterintuitive that if they're going to do
18 that and know that the competition is going to also raise
19 prices and lose reputation, I think we talked about that
20 earlier, that they wouldn't do that.

21 If they're going to do it, they would probably say to
22 their customers, we're going to double the speed or we're going
23 to have many more network outlets, or we're going to give you a
24 plan that will combine other improvements to service, but for
25 that, you might have to pay a little bit more.

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1 There, conceivably, could be some people that say,
2 yeah, that sounds reasonable, and that's a way of raising
3 prices. And if the other side then comes back and says, all
4 right, they raised prices by this means, we're going to tinker
5 with a package that we'll say, yeah, we also will raise prices
6 but we're going to give you more speed. Isn't that a more
7 plausible scenario than just having a competitor raise price
8 from day one?

9 THE WITNESS: Absolutely. Look, first off, when you
10 have a high-profile merger like this, I don't think the
11 company, even if they thought it was in their interest, just in
12 terms of the demand elasticities, are going to come right out
13 and raise prices. It would look -- let me just emphasize, the
14 primary concern I've identified is not that they will raise
15 price, it's that they will pull back from some of the price
16 cuts or other initiatives and price cuts. I also mean quality
17 improvements at the same price.

18 So they could -- there's no real reputational harm if
19 they just sit back, don't offer new deals. The next cool thing
20 that I mentioned, Sprint and T-Mobile both as being Mavericks,
21 making pro-consumer. If they just pull back on those, it's not
22 like consumers were going to go, hey, what happened? Where's
23 that offer I thought I was going to get? People don't think
24 that way.

25 So it's not really raising price. Sitting back and

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1 not lowering prices or improving quality quickly, that would be
2 the more realistic scenario. Also, I don't think of these
3 things as happening in a week or quarter after the merger. A
4 merger is basically a permanent change in the industry, and if
5 it's for PR reasons or reputational reasons, you know,
6 companies would take time. They have to deal with transitions.
7 It's a complicated situation. I'm not predicting that, oh,
8 this is what's going to happen a week or month after the
9 merger. That's not how I think about it.

10 THE COURT: All right.

11 MR. POMERANTZ: Your Honor, may I ask one follow-up
12 question to your Honor's question?

13 THE COURT: Sure.

14 REDIRECT EXAMINATION RESUMED

15 BY MR. POMERANTZ:

16 Q. So, Professor Shapiro, I had asked you, I think in my first
17 question this morning, about something called quality adjusted
18 prices. And so in response to the Court's question, if new
19 T-Mobile after the merger does not raise its nominal price, the
20 rate plans have exactly the same dollar figures in there, is
21 there anything that new T-Mobile could do after the merger to
22 effect quality adjusted prices in a way that would be
23 meaningful to the consumers, that is, that might be, in fact,
24 of lesser value to the consumer even though the nominal price
25 doesn't change?

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1 A. Well, there are a lot of non-price dimensions such as, you
2 know, the speed, how much throttling you would get if you
3 exceed a certain amount of usage, things like that. So not
4 improving those elements over time would cause consumer harm.

5 THE COURT: All right. Thank you. You may step down.
6 You're excused.

7 (Witness excused)

8 Next witness?

9 MR. POMERANTZ: Your Honor, our next witness is
10 Mr. Schwartz from Comcast. Give me a minute to rearrange.

11 MR. GELFAND: Your Honor, while we're waiting, as our
12 Honor knows, I'm a fan of introductions. I would like to
13 introduce the Court to Tamara Wiesebron, a lawyer from my firm.

14 THE COURT: Welcome.

15 MR. POMERANTZ: Your Honor, this is my colleague,
16 Ms. Sarah Boyce and she'll be questioning the witness.

17 THE COURT: Welcome.

18 MS. BOYCE: Good morning, your Honor. My name is
19 Sarah Boyce from Munger, Tolles and Olson, on behalf of the
20 State of California. The States would like to call Mr. Samuel
21 Schwartz on behalf of Comcast.

22 THE COURT: The clerk will swear in the witness.

23 SAMUEL SCHWARTZ,

24 called as a witness by the Plaintiffs,

25 having been duly sworn, testified as follows: