Discussion of “Entrepreneurial Innovations in Network Industries”
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Goal of the Paper:

- examine the role of network effects and compatibility of standards on the incentives to innovate and whether the innovator prefers to enter or sell the innovation
- examine the role of bidding competition on the incentives to innovate
Summary of Findings

- **Stronger Network Effects**
  1. Increase likelihood of sale versus entry
  2. Increase Incentives to Innovate under sale
  3. Ambiguous effect of innovation under entry

- **Stronger Compatibility**
  1. Increases the likelihood of Entry versus sale
  2. Decreases Incentives to Innovate under sale
  3. Ambiguous effect of innovation under entry

- **Bidding Competition Increases Innovation Incentives**


Review of Model and Assumptions

- **Timing**
  - innovation
  - entry/sale - via auction
  - product market interaction

- **Assumptions**
  - profits of owner of innovation *increase* in **network effects**; profits of non-acquiring incumbents *decrease*
  - profits of owner of innovation *increase* in **quality**; profits of non-acquiring incumbents *decrease*
  - profits of owner of innovation *decrease* in **compatibility**; profits of non-acquiring incumbents *increase*
  - entry costs *increase* with **network effects**, *decrease* with **compatibility**
  - market structure is entry-neutral
Reinterpretation

- paper studies an auction with externalities
- all bidders other than entrant symmetric
- 3 relevant valuations determine the reward of innovation $R_E$
  - $v_{ii}$ preemption valuation
  - $v_{ie}$ entry deterrence valuation
  - $v_e$ value of entry (no sale)
- entrepreneurs innovation effort at stage one determines likelihood of success (NOT quality of innovation)
- depending on level of network effects/compatibility/quality $R_E$ can be one of $\{v_{ii}, v_{ie}, v_e\}$
- assumptions imply that $v_{ii}, v_{ie}$ increase with network effects, decrease with compatibility, whereas the effects on $v_e$ are ambiguous
Question addressed of fundamental importance

"Although it is still under development, Boxee has unnerved lots of internet-television providers. Hulu has even demanded that its content be removed from Boxee's offerings. But the open-source community that has taken Boxee to its heart is far too smart to let Hulu spoil the fun......Boxee will be one of the most disruptive things to happen to television in ages—and not before time.” ....Apr 24th 2009, From Economist.com

Analysis provides a nice link between efforts to innovate and industry characteristics (network effects, compatibility etc) that affect the reward of innovation

However, tractability comes at cost - we do not really see how network/compatibility effects determine payoffs

No real role for quality
Final Remarks

- Paper is a step into the right direction - we need to think about standard IO questions in “new economy models”
- Using our standard models could be vastly misleading
- Dramatic Innovations can make traditional regulations, and institutions detrimental

...“It’s hard to say whether the prediction that Google will be the next king of the hill and that the Microsoft Windows/Office gravy train will run off the tracks sooner rather than later will prove correct. For all we know, a new crowd of IT samurai will soon displace Google—just as Microsoft displaced IBM in the 1980s. What is clear, though, is that technology in general and information technology in particular is changing faster than government competition policies have adapted....” by R. Hahn and P. Passell, Economists' Voice

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