PATENTED INTERFACES AS BARRIERS TO INTEROPERABILITY

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INTEROPERABILITY

- Interoperability among information & communications technologies (ICT) is a key feature of today's information infrastructure

- Interop is widely believed to bring about many benefits, including vibrant follow-on innovation

- Interoperability means the ability to transfer and render useful data and other information across ICT systems, applications, or components

- Interfaces (IFs) are components of ICT systems that are essential to achieving interoperability

ROLE OF IPR FOR IFs

- Many IFs (e.g., APIs) are published as open standards, allowing others to implement the IF without IPR barriers
  - Public domain or available royalty free (RF)
- Many software IFs are maintained as trade secrets
  - Often licensed to ISVs on reasonable terms
  - IFs can often be reverse engineered (but some are too complex)
  - Some use license terms to try to block reverse eng'g
- *Computer Associates v. Altai* (2d Cir. 1992): no © for IF specifications necessary to interoperability
- However, IFs, if novel & nonobvious, may qualify for patent protection
  - *Sega v. Accolade* suggested only sure way to protect IFs

INCENTIVES TO PATENT IFs

- Strong incentive for firms to patent IFs because they confer strong exclusive rights
  - IF patents can confer control over making complementary, as well as competing, products
  - If defendant's product successfully interoperates, it is easy to know of and prove infringement
  - It may not be possible to work around the patent, as one can generally do with other patents
  - If a patented IF becomes a standard, irreversible commitments make IF patent even more valuable
  - Even a very narrowly drawn patent may cover a component essential to interoperability

MARKET v. INTRINSIC VALUE

- Market power of interface patents may be out of proportion to the intrinsic value of the innovation
  - Tiny, arbitrary, trivial component of an IF may, if patented, have a commercial value that derives mainly from being a chokepoint once the IF has been widely adopted and irreversible investments have been made to implement the IF as a standard
  - Disproportionate rent can be captured from this patent as compared with the degree to which it is intrinsically valuable because it improves functionality
  - Example: Rambus charges > 4X more if standard
- Are patents necessary to spur innovation in IFs?

SURPRISING # OF RESPONSES

1. Trust the market to work things out
2. Abolish software patents, in part because of IFs
3. Exclude IFs from patent if essential to interop'ty
4. Narrowing patent SM to "technologies" may limit some IF patents under post-*Bilski* test
5. Heighten standards for nonobviousness for IF patents because of anti-competitive risks
6. Grant statutory immunity for use of IF patents if necessary for achieving interoperability
   – Was proposed in EU; akin to 35 USC 287(c)

OTHER PROPOSALS

7. Treat refusal to license IF patents as abuse of IP right
   – Japan considering
8. Post-*eBay* withhold injunctive relief as to patents essential to interoperability
   – Liability rule instead of property rule
9. Require licensing of IF patents if dominant firm has committed antitrust violation
10. Require antitrust violator to disclose IFs and to license IF IP on a RAND basis, as EC has done in MS case
11. Treat a refusal to license IF patents for interop as antitrust violation on essential facility-type grounds

PRIVATE INITIATIVES

12. Some SSOs require royalty-free (RF) terms for essential IF patents

   – W3C policy for patents on IFs essential to web interoperability

   – OASIS policy favors, but does not require, RF licenses for patents on webservices IFs

13. Other SSOs require disclosure of relevant patents; RAND terms if patents "read on" adopted standards

• Patent pooling to support open source innovation (e.g., Open Invention Network)

OTHER STEPS

15. Recognize reverse engineering or fair use privilege in patent law to allow access to IF information under patent law akin to *Sega*

16. Don't enforce anti-reverse eng'g clauses, at least in mass-market, as to IFs for interop

17. Thin scope of protection for IF, other SW patents

18. Better post-grant review process to challenge invalid IF patents

  – Less need to challenge other SW patents because goal is mainly defensive, & patents on internal design elements generally not detectable

IS THERE A PROBLEM?

- Only 1 US decision involving IF patents
  - Atari Games v. Nintendo: N had patent on authentication technique; AG infringed it, & enjoined from interop'g (1993)
- EC v. MS? this dispute was not mainly about IF patents, but MS argued that its patents on some IFs justified its decision not to license IP in IF info to Sun and others; EC and CFI rejected this argument
- FFII has identified some open source sw projects that didn't go forward because of IF patents
- Intermind claimed W3C's P3P standard infringed its patent on metadata control structures
  - Part of the reason that W3C initiated RF patent policy

MY PRAGMATIC RESPONSE

- Many firms publish IFs or make available on relatively open terms
- For web and webservices IFs, SSOs are likely to be involved in choosing which IF to standardize on, in which case their RF or RAND policies should mitigate IF patent problems
- Where a patented IF becomes a de facto standard, courts may withhold injunctive relief post-*eBay* on public interest grounds
- Other patent reforms, including narrowing patent SM & better post-grant review, may also help
- Antitrust violator could be required to license IF patents