An Economic Argument for Flexibility in IPR Licensing

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An Idealized World for Exposition

- With no transaction costs, information asymmetries or frictions
- Consider the production of a bicycle:
  - An NPE with a patent on a new bike pedal design
  - A bike pedal manufacturer
  - A bike assembly firm that acquires components from upstream manufacturers

Patent Licensing in the Ideal World

- Scenario 1: Patent holder can license only one production layer
  - Patent holder licenses the bike assembler only
  - Assembler pays component manufacturers input price c(i) and pays patent holder royalty r
  - Assembler charges bike purchasers (retailers or end consumers) p = c(i) + r + m, where m is the profit margin

Multilevel Licensing in the Ideal World

- Scenario 2: Patent holder can license any and all levels of production
  - Patent holder charges pedal maker r1, bike assembler r2
  - Pedal maker raises its input price to c(i) + r1 to recoup its increased costs
  - The assembler now charges bike purchasers p' = c(i) + r1 + r2 + m

Have Retail Bike Prices Increased?

- No:
  - Patent holder sets r, r1 + r2 to maximize profits
  - If r1 + r2 > r, then p' > p and the quantity of bikes sold will fall
  - But if higher aggregate r were profitable, patent holder would have raised rate under scenario 1
  - To maintain optimal profits, r = r1 + r2
- In this ideal world, wholesale prices adjust perfectly and patent exhaustion has no role for business to business licensing

How Things Change with Information Frictions

- Multiple sales observations for improved info
  - Limit licensees' ability to underreport royalty base
- Splitting the royalty burden to lower incentives to underreport
  - Each production level pays a lower rate when more levels are licensed
  - Lower burden means lower incentives to misrepresent
- Sharing risk of demand uncertainty
  - For new products, may be difficult for upstream level to anticipate appropriate downstream burden

Cost Pass-Through Frictions

- With zero pass-through, downstream royalties set at same rate w/ single or multi level licensing
- May need multiple level licensing to obtain appropriate value-based royalty
- Any “double dipping” would come at upstream levels
- Firm to firm transfer
  - Upstream royalties not passed through so no affect on consumer prices
  - No consumer harm

Conclusions

- With information frictions in multilevel production, strict patent exhaustion for B2B licensing can be harmful to welfare
  - Need to improve overall information on demand
  - Lower licensees' incentives/ability to underreport
- "Double dipping" is not an issue when cost pass through is substantial
- When cost pass through is not substantial, the issue is one of firm-to-firm transfers
  - Patent exhaustion is not the best tool for patent holdup