Deal or No Deal: Licensing Negotiations By Standard Setting Organizations

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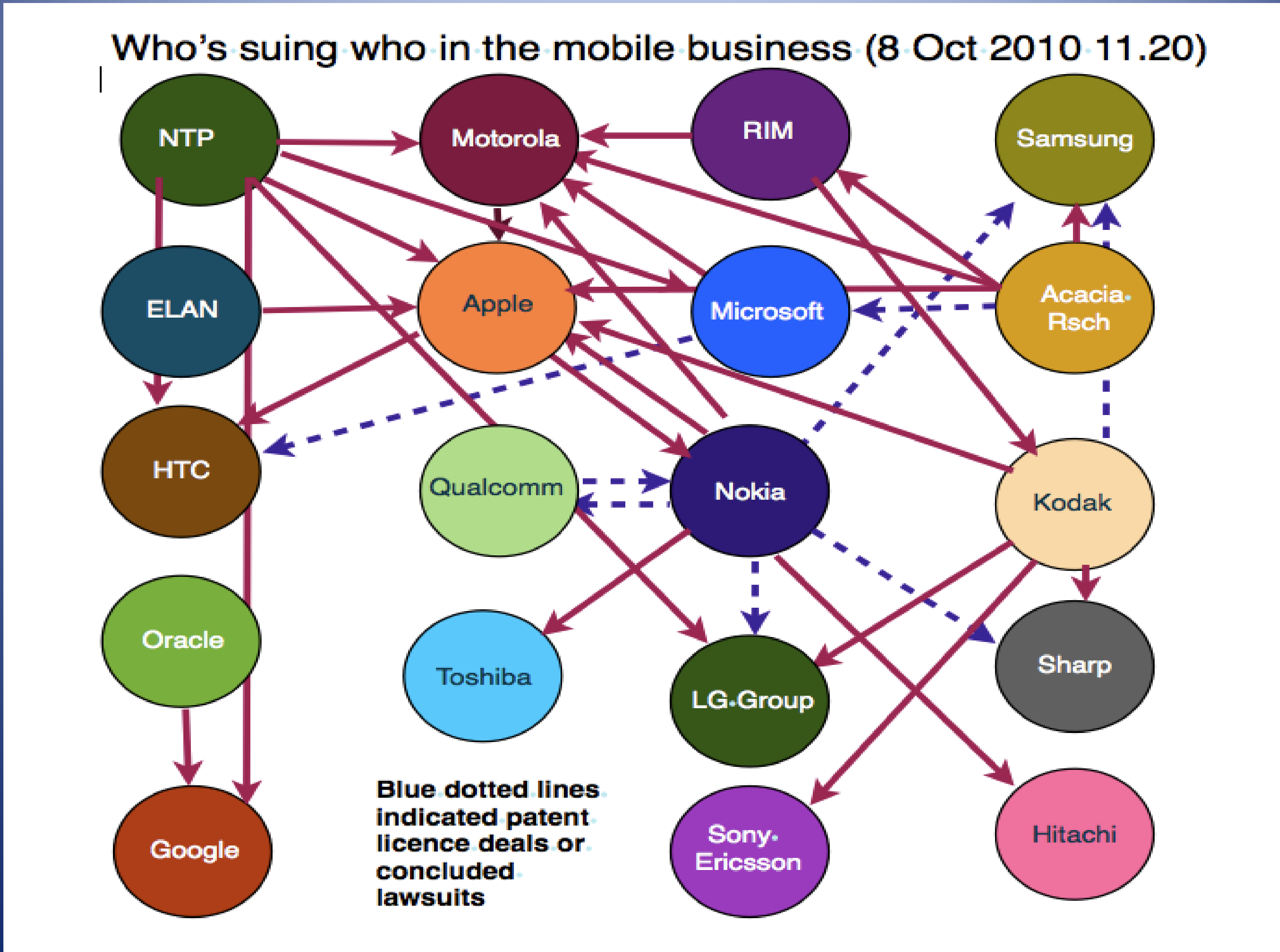


Source: The Guardian and New York Times

Two Types of Patents

- Standard Essential Patents (SEPs)
  – Patents that have been declared essential to make or use products that comply with a standard
  – Owners of these patents often commit to license them at terms that are "fair, reasonable, and non-discriminatory" (FRAND)
- Differentiation patents (DPs)
  – Utility patents that are not subject to FRAND licensing terms

Do SEPs and DPs Differ?

- Plausible presumption of market power for SEPs when standard has market acceptance
- FRAND is a bargain – accept FRAND commitment in return for including patented technology in a standard
- FRAND commitment can be interpreted to deny the patentee power of injunction
- Many DPs have little market power
  - Little differentiation or easy to invent around
- But some DPs can confer significant market power

Business Strategies Involving SEPs and DPs for Mobile Devices

Apple Computer

- Portfolio of patents on smart-phone technologies that are not essential to a wireless standard
  - E.g. touch displays
- Few SEPs (prior to recently announced acquisitions)
- Does not want to license its DPs
- Needs access to SEPs for defensive purposes
- Business strategy is to acquire SEPs to enhance its bargaining power and enforce FRAND commitments

Samsung

- Large portfolio of patents on technologies declared essential to wireless standards
- Wants access to smart-phone DPs
- Wants to trade its SEPs for Apple’s smart-phone DPs
- Constrained by FRAND commitments
- Business strategy is to interpret FRAND loosely and trade SEPs for DPs

Google

- Earns revenues from ads on mobile devices and has no direct need for smart-phone patents or for SEPs
- Business strategy is to “protect the Android ecosystem”
  – Wants a competitive market for full-featured handsets and other mobile devices
- By acquiring SEPs, Google can:
  – license SEPS to device manufacturers
  – Pressure Apple to license Apple’s smart-phone patents to other device manufacturers

Mobile Patents Are Big Business

- CPTN – Novell
  - CPTN consortium of Apple, EMC, Microsoft, Oracle
  - ~900 patents for $450 M
- Apple, Microsoft, RIM – Nortel
  - ~4,000 patents and 2,000 applications for $4.5 B
- Google – Motorola
  - ~17,000 patents + HW for $12.5 B
- Many of these patents are SEPs with FRAND commitments
  - How will they be used?

Standard-Setting and SEPs

- Standards benefit consumers and producers by promoting the adoption and implementation of technologies
- But may create opportunities for the exercise of market power
  - Abuse of market power can take different forms
  - My subject today is market power relating to patents that are essential to a standard

Standard-Setting and SEPs

- Two opportunities for the exercise of market power
  - (a) Ex post holdup from investments that are specific to the standard
    - Ex post = after standard issues and firms and consumers make investments that are specific to the standard
  - (b) Ex ante holdup from sunk R&D
    - Ex ante = before the standard issues
- Policy focus has been on (a), but both are important

Hold-up

See Oliver Williamson:

- Holdup can occur when parties make investments that are *specific* to their relationship
- Asset-specificity reduces the value of the assets in alternative uses,
- Which can allow parties to bargain opportunistically to extract a large share of the available surplus
- Such bargaining can distort prices and investment incentives

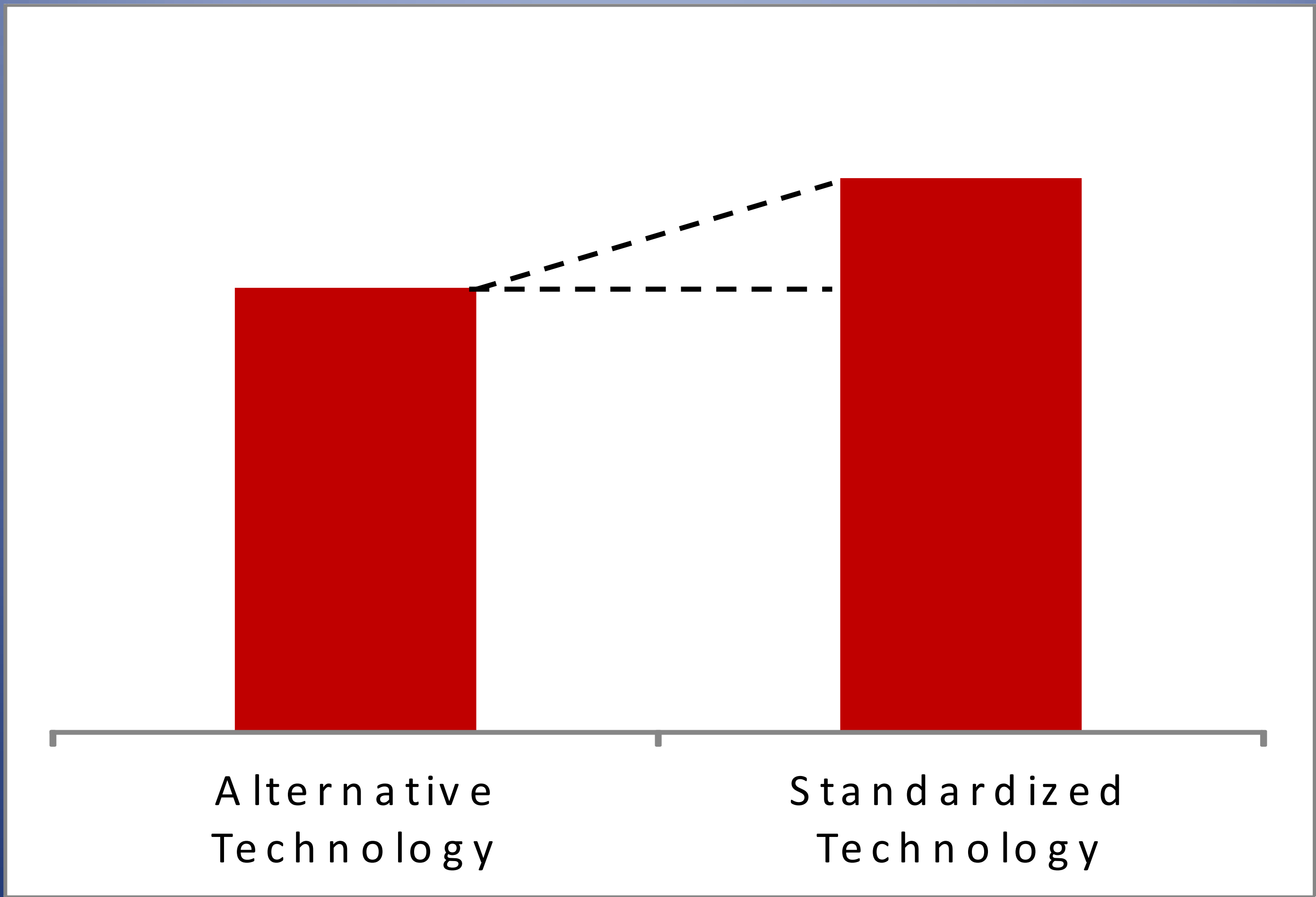
Ex Post Market Power From Standard Setting

- Investments by firms or consumers that are specific to a standard can cause firms and consumers to be "locked-in" to the use of products that comply with the standard
  - Specific investments contribute to low cross-elasticity of demand between products that comply with a standard and other products that may have been close substitutes "ex ante", before the standard issues
  - Coordination inefficiencies with economies of scale or network effects

    (coordination can be thought of as a different type of specific investment)

Ex Ante Technology Values

($ per licensed unit)



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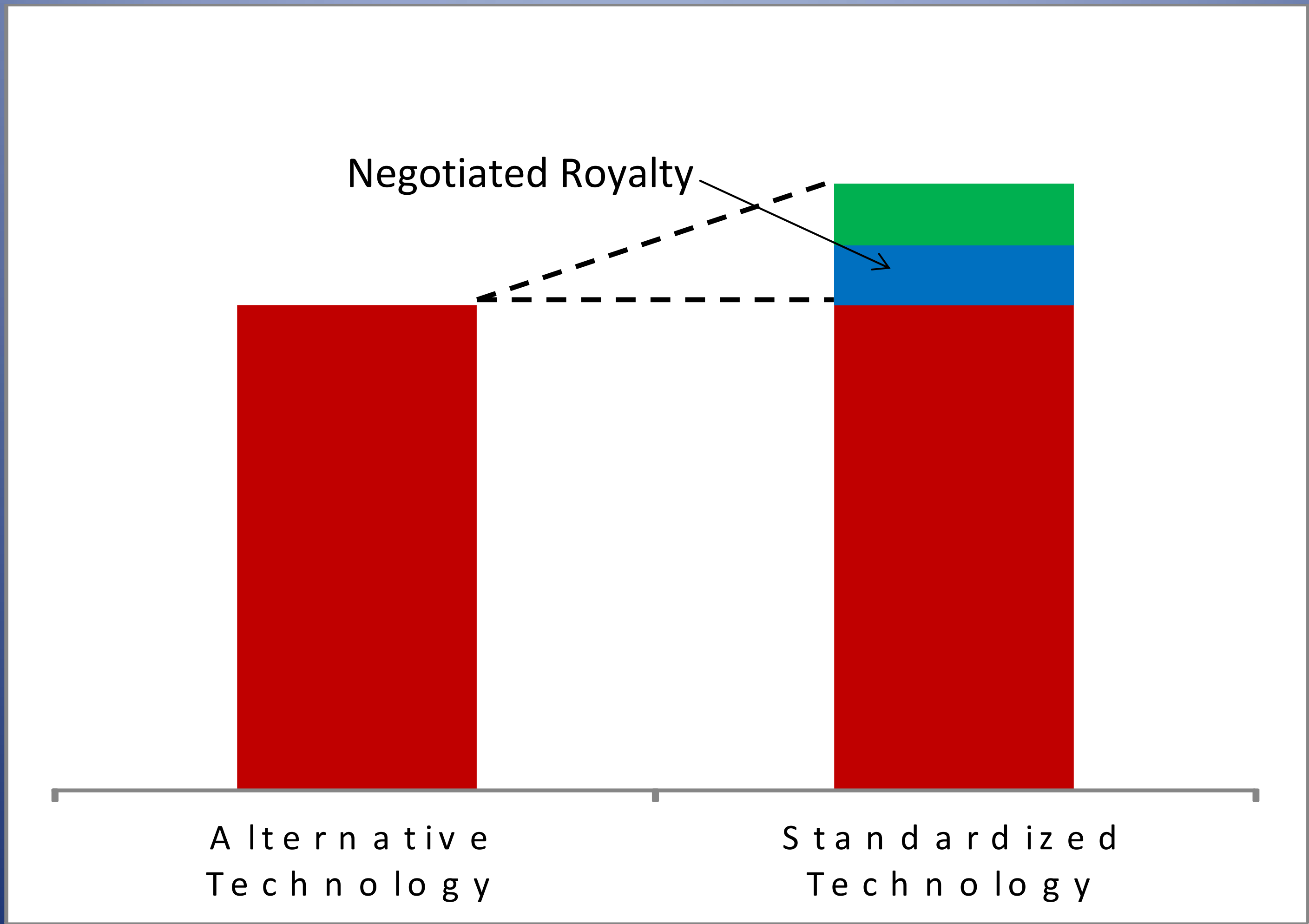

Ex Post Technology Values

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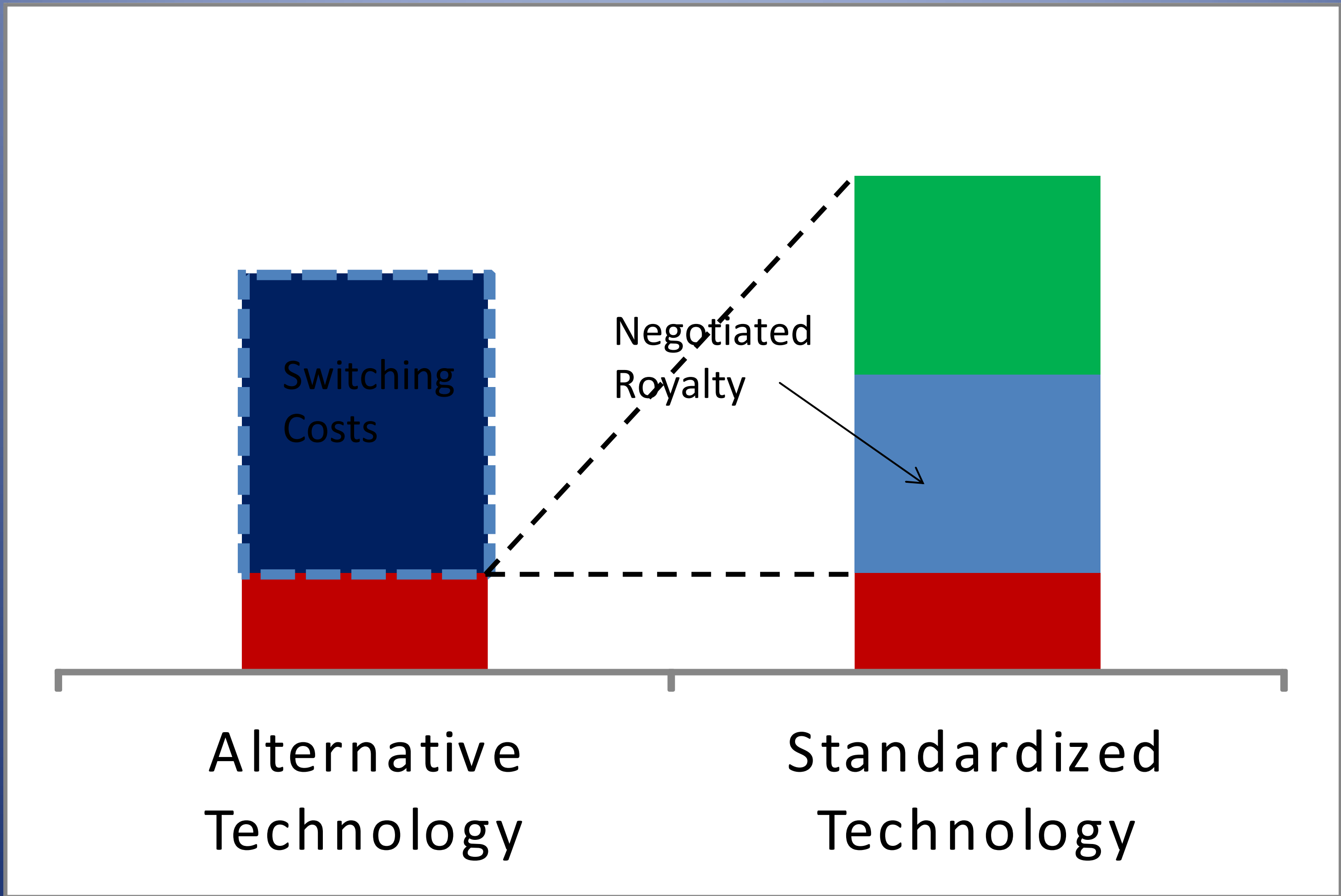
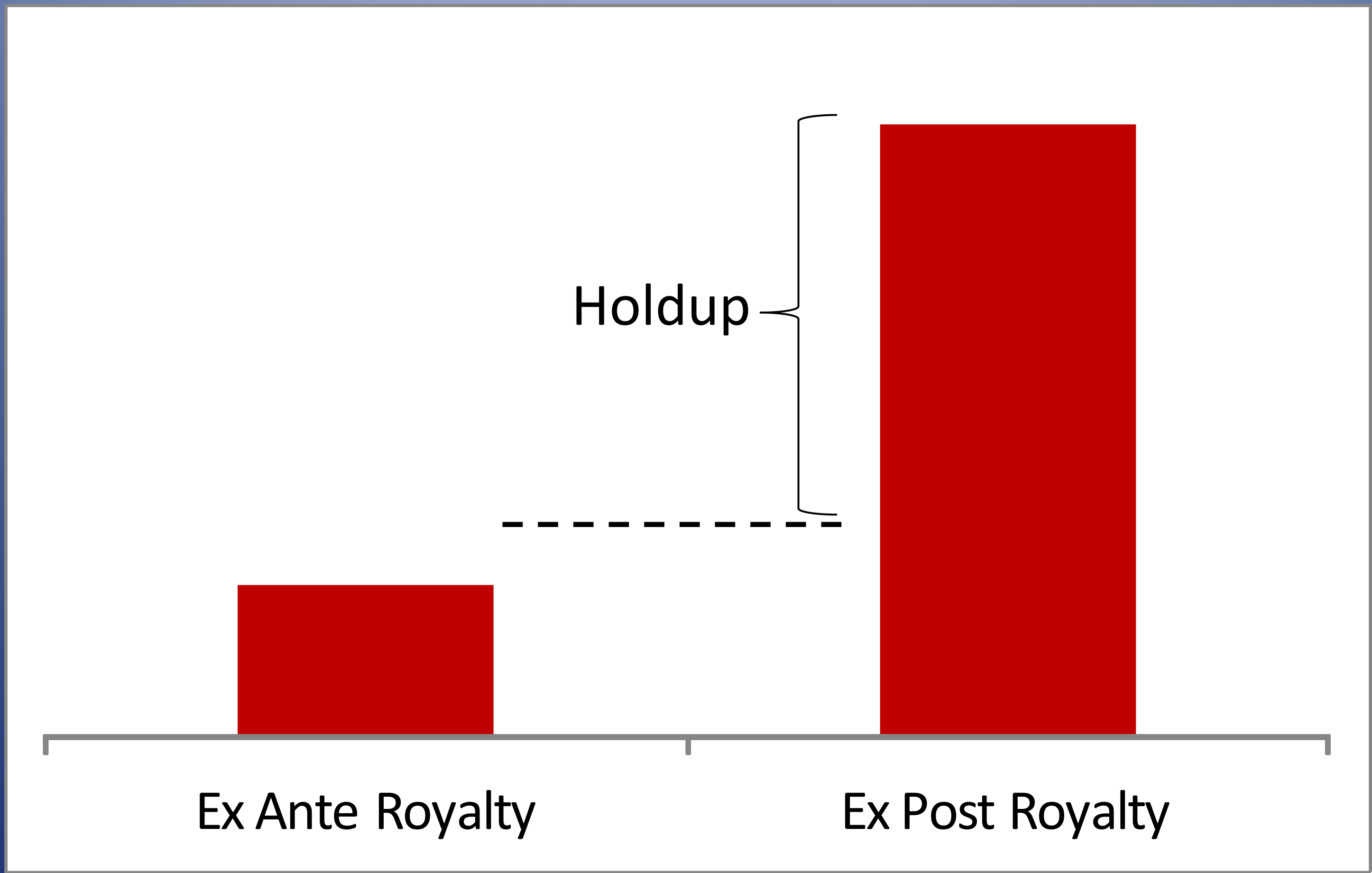


Difference Between Ex Post and Ex Ante Royalty: "Holdup"



Comment

- Royalties negotiated ex post can be so large that licensees and consumers would have been better off with the alternative, unpatented technology
- E.g.:
  - Patented technology has value = 100
  - Alternative technology has value = 60
  - Ex post royalty = 50
  - Net value of 50, compared to 60 for alternative
- This can lead SSOs to discourage adoption of patented technologies, which is not efficient

Mitigation of Ex-Post Market Power

- Fair, Reasonable, and Non-Discriminatory Royalties (FRAND)
- What is FRAND?
  - Any outcome from arms-length bargaining?
  - The Georgia-Pacific factors for determining a reasonable royalty?
  - Auction outcomes (Baumol-Swanson)?

A Workable Standard For “Fair And Reasonable”?

- U.S. Federal Trade Commission
  - Courts should cap the royalty at the incremental value of the patented technology over alternatives available at the time the standard was chosen. (FTC, The Evolving IP Marketplace)
- European Commission
  - Assessment of fair and reasonable should be based on “whether the fees bear a reasonable relationship to the economic value” of the IP right. (EC Guidelines on Horizontal Co-operation Agreements)

A Workable Standard For “Fair And Reasonable”?

- Courts have not endorsed a specific definition of “fair and reasonable”, notwithstanding many opportunities to do so
  – Broadcom v. Qualcomm (2007) [wideband CDMA/ETSI: US]
  – Nokia et al v. Qualcomm (2007) [wideband CDMA/ETSI: European Commission]
  – Apple v. Nokia (2009) [GSM, UMTS, 802.11/ETSI: US]
  – Microsoft v. Motorola (2010) [WLAN, AVC/H.264/IEEE, ITU: US]
  – Zoran v. DTS (2009) [Blu-ray: US arbitration]
  – Commonwealth Sci. & Indus. Res. Org. v. Buffalo Tech. (2007) [802.11/ANSI: US]

The Search for Alternatives

- Ex ante joint negotiation of license terms
- Is joint negotiation the same as collusion?
  - R&D costs are sunk investments and the marginal cost of patent licensing is close to zero
  - Joint negotiation can suppress royalties below levels that would occur if rights holders and licensees bargained in the absence of ex post lock-in effects

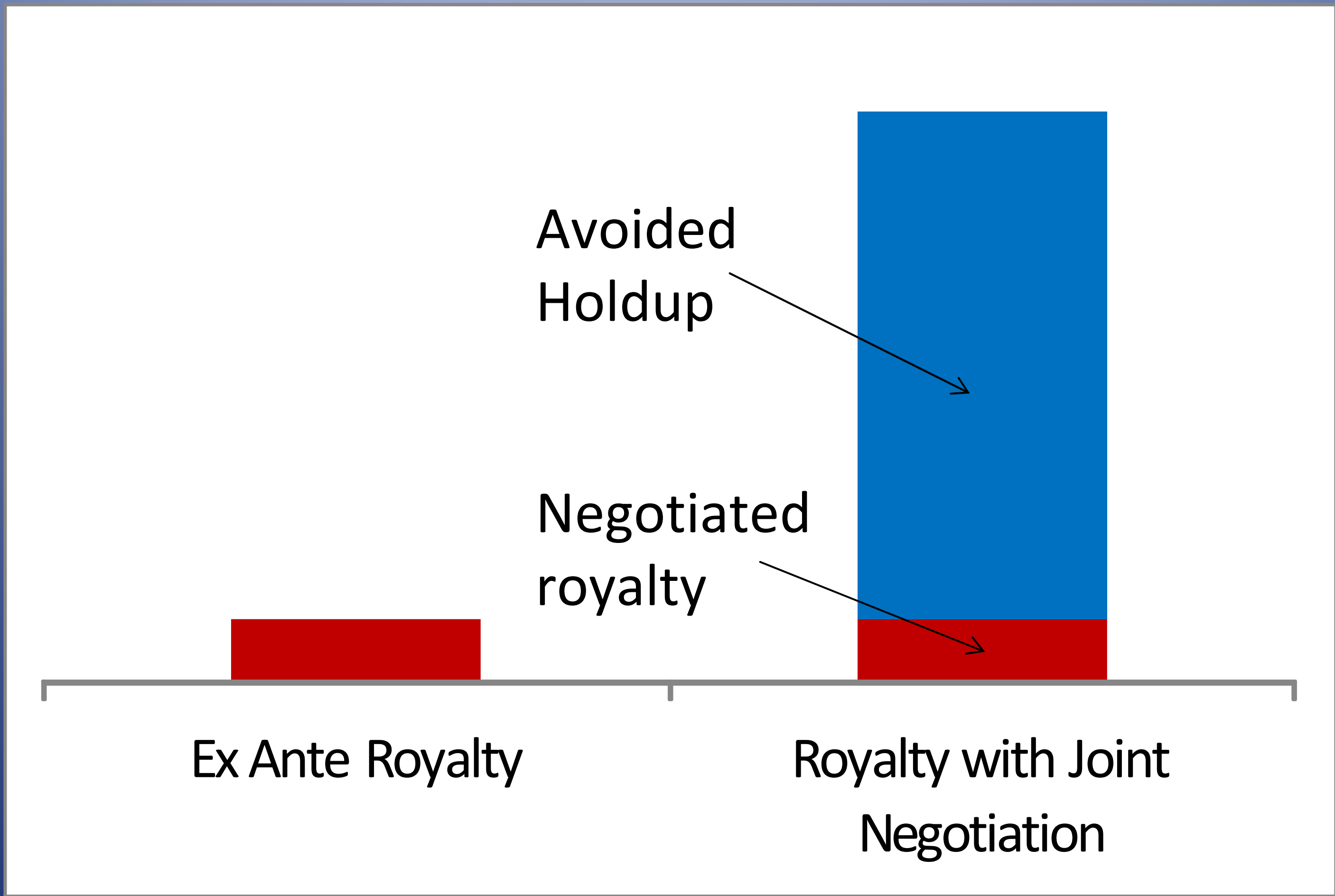
Does Joint Negotiation = Collusion?

- Members of a SSO have joint interests in securing low royalty terms
- By negotiating as a single entity, they may be able to obtain lower royalties than if they bargained bilaterally with rights holders
- But joint negotiation can confer efficiency benefits
  - Particularly given the weaknesses of ex post mitigation of market power (“fair and reasonable”)

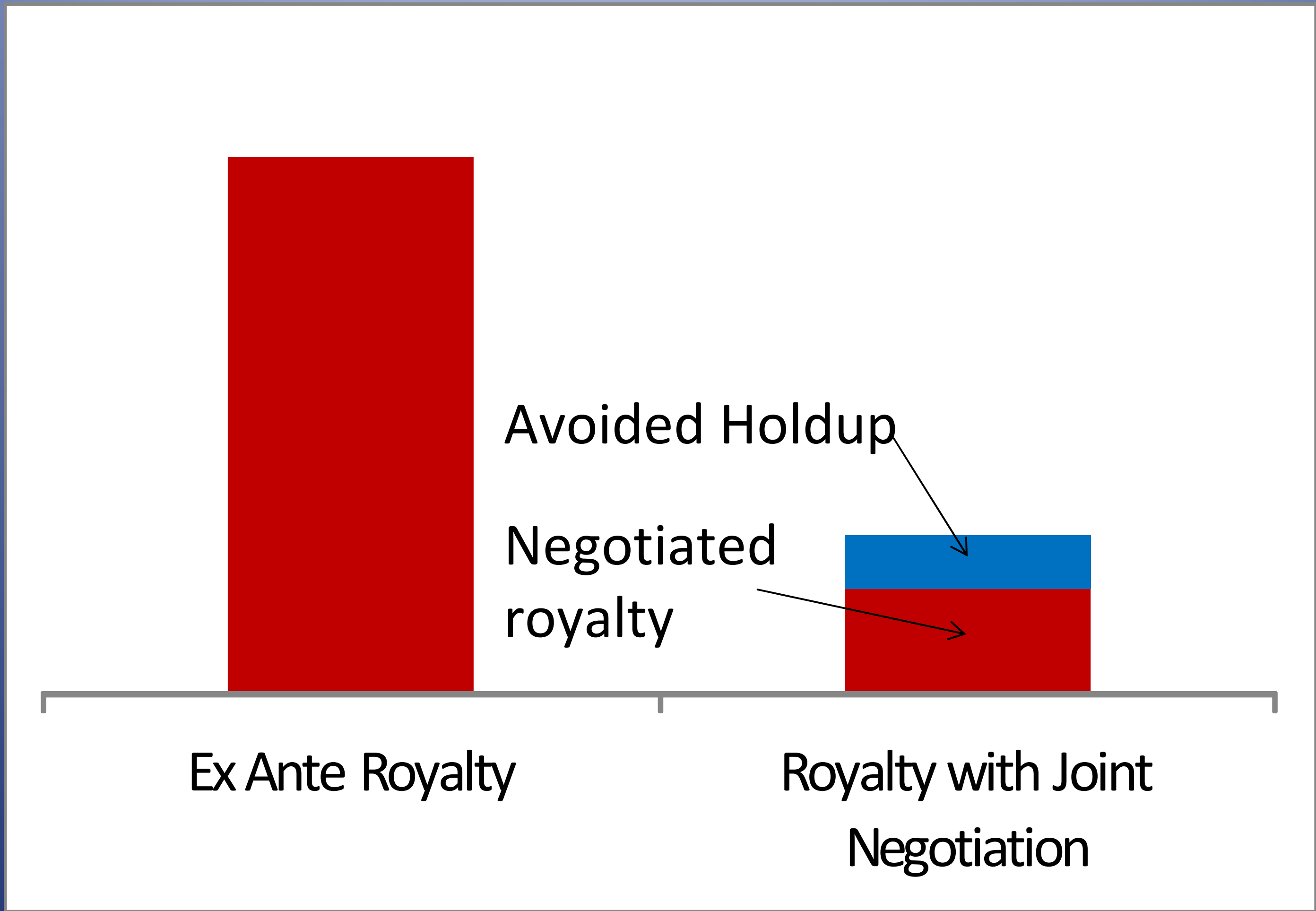
Rule of Reason Analysis of Ex Ante Joint Negotiation

- Under the rule of reason "The central question is whether the relevant agreement likely harms competition by increasing the ability or incentive profitably to raise price above or reduce output, quality service or innovation below what likely would prevail in the absence of the relevant agreement."
- Business review letters to VITA and IEEE; DOJ/FTC *Antitrust Enforcement and Intellectual Property Rights: Promoting Competition and Innovation*
  - "Given the strong potential for procompetitive benefits, the Agencies will evaluate joint *ex ante* negotiation of licensing terms pursuant to the rule of reason"

A "Good" Outcome from Ex Ante Joint Negotiation



A “Bad” Outcome from Ex Ante Joint Negotiation



Factors Relevant to a Rule of Reason Analysis of Ex Ante Joint Negotiation

- The likelihood that firms and consumers will face high costs of switching to alternative technologies after a standard has issued and they make investments that are specific to the standard
  - The greater the potential for ex post holdup, the greater are the potential efficiency gains from ex ante joint negotiation

Factors Relevant to a Rule of Reason Analysis of Ex Ante Joint Negotiation

- The licensing terms that would prevail in the absence of switching costs for technologies that are considered for ex ante joint negotiations
  - The “competitive royalty”
  - The larger the competitive royalty, the greater is the potential for anticompetitive effects from ex ante joint negotiation

Factors Relevant to a Rule of Reason Analysis of Ex Ante Joint Negotiation

- The collective market power of the members of the SSO and rights holders that are engaged in ex ante joint negotiations
  - Are there viable alternatives to standardization by the SSO?
- The existence and adequacy of less restrictive alternatives

Ex Post Holdup

- Pro-competitive benefit of ex ante negotiation is the prevention of holdup from lock-in
- Lock-in may be inconsequential if
  - Close substitutes exist within the standard
    - E.g., Dolby and DTS: both in Blu-ray standard
  - Close substitutes exist for the standard
    - E.g., CDMA and GSM
      - Conditional on number portability, consumer contracts, and handset differentiation

Less Restrictive Alternatives

- Limit standards to non-proprietary technologies
- FRAND
  - Ambiguities of “Fair and Reasonable”
- Ex ante bilateral bargaining with a non-discrimination commitment (BBND)
  - Emphasis on non-discrimination (ND)

Non-Discrimination (ND)

- What does ND mean?
  - – Every licensee pays the same royalty?
    - Fixed fee
  - – Every licensee pays the same per-unit royalty?
- Every licensee faces the same royalty schedule
  - – Any other interpretation implies that many existing FRAND licensing programs are not FRAND

Limits to Ex Ante Bilateral Bargaining With Non-Discrimination (BBND)

- Is BBND more or less effective than ex ante joint negotiation in limiting ex post opportunism?
  - Pivotal licensee: A licensee whose preferences determine the choice of a standard
  - If there is a pivotal licensee, BBND should be similar to ex ante joint negotiation of licensing terms, measured by technology choices and royalties
    - But it is unlikely that a licensee will be pivotal or, if it is pivotal, that parties (including the licensee) will know its role with certainty

Does the Ability to Discriminate Increase Royalties?

- Arguably yes –
- Suppose there are two licensees, A and B, each willing to pay $100 for a license. Total value = $200.
- Absent discrimination, licensor and licensee will share the $100 value with a $50 royalty. Total royalty = $100.
- With discrimination, licensor can threaten to license A exclusively. Value to A is $200. Share value with royalty of $100.
- Licensor can make the same threat to B.
- Result is to license both at $100. Licensor gets all the value.
  – Similar to running an auction for a license

Does the Ability to Discriminate Increase Royalties?

- Arguably no –
- Suppose A is willing to pay $200 for a license and B is willing to pay only $50
- If licensor can choose different royalties, licensor shares the value with each licensee. Licenses A at $100 and B at $25.
- Absent discrimination, licensor has to set a single royalty. May choose $100.
  - Result is that B is faced with a high royalty, which it would not accept

Bilateral Bargaining with Non-Discrimination

- BBND allows late adopters to benefit from terms negotiated by early adopters that are not locked in to the standard
- BBND eliminates the threat of exclusive licensing or licensing at differential terms, which can advantage the rights holder and exacerbate ex post opportunism
- But ND is similar to a most-favored customer requirement, which can raise negotiated royalties relative to bargaining with discrimination

Factors That Affect Licensing Terms For Different Bargaining Arrangements

	Ex Ante Joint Negotiation	Bilateral Bargaining	Bilateral Bargaining with Non-Discrimination
Effects on potential ex post holdup	Depends on ability to commit to licensing terms over time	Potential for ex post holdup	Depends on ex ante licensing and ability to commit to licensing terms over time
Threat of differential licensing	No differential licensing	Threat to license differentially	No differential licensing
Threat to adopt an alternative technology	SSO can have credible threat	Difficult for individual firm to threaten to adopt alternative technology	Difficult for individual firm to threaten to adopt alternative technology
Overall Effects on Bargaining Power of Licensees	Substantial bargaining power	Low bargaining power for licensees that negotiate ex post	Depends on influential licensees that negotiate ex ante. Non-discrimination and weak threat to adopt alternative technology can increase bargaining power of rights holder.

Limits to BBND and Joint Negotiation

	Bilateral Bargaining with Non-Discrimination	Ex Ante Joint Negotiation
Patents must be disclosed	Yes	Yes
Non-discrimination must be defined	Yes	Yes
Incomplete contracts may limit commitment power	Yes	Yes
Outcomes may not reflect preferences of all licensees	Yes	Yes
License negotiations are complex and may involve other intellectual property	Yes	Yes
Disincentives to negotiate lower royalties	Yes	No

Concluding Remarks

- Ex ante BBND has benefits v. FRAND
  - ND component of FRAND already exists but is often overlooked
  - FR component of FRAND is unworkable
    - BBND drops the FR component of FRAND, but relies on ex ante v. ex post bargaining
- BBND reflects common licensing practices, and does not invite ex ante hold-up from coordinated conduct

Concluding Remarks

- BBND may allow some ex post opportunism
  - Fair price to avoid collusive conduct?
- Ex ante bargaining may be appropriate in some circumstances
  - But rule of reason analysis should consider potential benefits and costs in actual circumstances