What is FRAND?
A Law and Economics Approach

Workshop XX
Competition Issues in International Licensing and Litigation

Jonathan D. Putnam
CRA International

September 10, 2008

Disclosure and disclaimer

- CRA acts for and against producing and non-producing entities in ETSI-related litigation
- I act for InterDigital in ETSI-related litigation against Nokia
- My views are my own, not InterDigital's or CRA's

CRA INTERNATIONAL

Background

- Standard-setting organizations (SSOs) impose 2 obligations on members:
  - Declare patents essential to the standard
  - Commit to license patents on fair, reasonable and non-discriminatory (FRAND) terms

- Alleged violations assume 2 forms:
  - Failure to declare / refusal to license
    - Antitrust ("patent misuse"): Dell, Rambus, UNOCAL
  - Failure to offer FRAND terms
    - Unenforceability: Nokia, Samsung *et al* v. licensors

Large licensee position

- Offers by InterDigital are "not FRAND"
  - Price
    - *Ex post* rate is too high relative to hypothetical *ex ante* rate
  - Non-price
    - Single price for multiple essential patents
    - Bundling of essential with non-essential patents
    - Bundling of multiple standards (WCDMA; CDMA2000)
    - Bundling of joint development / OEM agreements with patent license

- Find all these terms (including *ex post* rates) in large licensee contracts when acting as licensor

Standard-setting and net asset positions

- Under a standard, every producing member is a net buyer of technology
  - Example: If X patents are required to practice the standard, it is unlikely that any individual patentee has more than $X / 2$ patents
  - Therefore, each producing patentee must license in more patents than he licenses out
- Exception: non-producing members
  - Non-producing members need not license in patents, because revenue does not depend on products

CRA INTERNATIONAL

Net asset position and political position

- Producing members: favor high prices when licensing out and low prices when licensing in
  - But on balance, producers favor low prices, because they are net purchasers of technology
  - Non-producing members: favor high prices because they are net sellers of technology

- Producing members favor aggregate royalty caps and other concerted action ("buyers' cartel") to reduce net technology payment outflow

Large licensee solution: aggregate cap

- Court should find that there exists an aggregate cap on the sum of all royalties
  - E.g., aggregate royalty payments capped at 15% of sales
- Court should evaluate licensor's royalty demand as a share of this cap
  - E.g., Licensor *A* should receive no more than 10% of aggregate royalties, or 1.5% of sales
- Licensor's share is proportional to the number of essential patents
  - Perhaps weighted by patent citations
  - Numerous empirical problems
  - Fundamentally non-market approach

CRA INTERNATIONAL

Antitrust implications of royalty cap

- Price-setting by firms that also produce technology is tantamount to horizontal price-fixing

> "… a collective *ex ante* royalty cap regime in combination with the royalty allocation mechanism …does not appear to allow for any such price competition. Indeed, it would appear to precisely preclude any such price competition from occurring …."[1]

- *Ex post,* becomes a form of "buyer's hold-up"

[1] Letter from Angel Tradacete Cocera (DG-Comp) to Karl Heinz Rosenbrock (ETSI), 6/21/2006

What is “essential”?

- ETSI: declare patents that “are or may become” essential
- Asymmetric liability
  - If under-declare, run substantial antitrust risk (Dell, Rambus)
  - No penalty for over-declaring

The "expert studies"

- Experts determine which patents are essential (E) or not (NE)
- Problem: of 4 leading studies, no two studies agree

	1		2		3		4	
	E	NE	E	NE	E	NE	E	NE
Qualcomm	26	113	30	249	52	526	40	429
Nokia	150	26	40	54	203	71	108	107
InterDigital	0	88	4	7	72	174	12	27

- Statistical tests reject the claim that the proportion of patents determined to be essential is constant for a given patentee

CRA INTERNATIONAL

Is package licensing anticompetitive?

- *Philips v. International Trade Commission*[1]

> "We conclude that the Commission erred when it characterized the package license agreements as a way of forcing the [accused infringers] to license technology that they did not want in order to obtain patent rights that they did."

> "There is no basis for the Commission to conclude that a smaller group of the licenses—the so-called 'essential' licenses—would have been available for a lower fee if they had not been 'tied to' the so-called nonessential patents."

[1] 424 F.3d 1179; 2005 U.S. App. LEXIS 20202; 76 U.S.P.Q.2D (BNA) 1545 (Fed. Cir. 2005)

CRA INTERNATIONAL

Is "[non] essentiality" grounds for liability?

"Over time, the development of alternative technology may raise questions whether some of the patents in the package are essential or whether, as in this case, there are alternatives available for the technology covered by some of the patents…. an agreement that was perfectly lawful when executed could be challenged as *per se* patent misuse due to developments in the technology of which the patentees are unaware, or which have just become commercially viable. Such a rule would make patents subject to being declared unenforceable due to developments that occurred after execution of the license or were unknown to the parties at the time of licensing. Not only would such a rule render licenses subject to invalidation on grounds unknown at the time of licensing, but it would also provide a strong incentive to litigation by any licensee, since the reward for showing that even a single license in a package was 'nonessential' would be to render all the patents in the package unenforceable."[2]

[2] *Philips v. International Trade Commission*

FRAND: What is "fair"?

- **Grounded in actual market behavior**
  - **"Fair market value" is**

    "the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts"[1]

    - **(1) voluntary**
    - **(2) informed**
    - **(3) arm's length**
    - **(4) exchange**

[1] ***United States v. Cartwright*, 411 U.S. 546 (1973)**

FRAND: What is "reasonable"?

- Framework: hypothetical licensing negotiation attempts to reproduce market behavior
  - *Georgia-Pacific* factor 15

    "The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been <u>reasonably and voluntarily</u> trying to reach an agreement …

    "the amount which a prudent licensee -- who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention -- would have been willing to pay as a royalty and yet be able to make a <u>reasonable profit</u>*…*"

FRAND: what is "reasonable"?

- Yardstick: actual market behavior
  - *Georgia-Pacific* factor 1

    "The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an <u>established royalty</u>."

- What is an "established royalty"?

    "a royalty paid by such a number of persons as to indicate a <u>general acquiescence in its reasonableness</u> by those who have occasion to use the invention"[1]

[1] *Rude v. Westcott*, 180 U.S. 152, 165, 9 S.Ct. 463, 468, 32 L.Ed. 888 (1889)

CRA INTERNATIONAL

What is an "established royalty"?

- **Established royalties are generally dispositive**

  "An established royalty is usually the best measure of a reasonable royalty for a given use of an invention because it removes the need to guess at the terms to which parties would hypothetically agree. When the patentee has consistently licensed others to engage in conduct comparable to the defendant's at a uniform royalty, that royalty is taken as established and indicates the terms upon which the patentee would have licensed the defendant's use of the invention."[1]

- **Summary**
  - (1) paid to the patentee
  - (2) for use of the patent
  - (3) by a sufficient number of rivals

[1] *Monsanto Company v. Homer McFarling*, 05-1570, -1598 (Fed. Cir. 2007)

CRA INTERNATIONAL

FRAND: what is a "non-discriminatory" ("uniform") royalty?

- Considerable jurisprudence from "most-favored licensee" (MFL) clauses
- Under MFL, licensee is granted the best available terms
- But licensee can't "pick and choose" terms
  - if a lower royalty rate is accompanied by a less favorable condition, the licensee must accept the condition to get the lower rate

CRA INTERNATIONAL

FRAND: What is "non-discriminatory"?

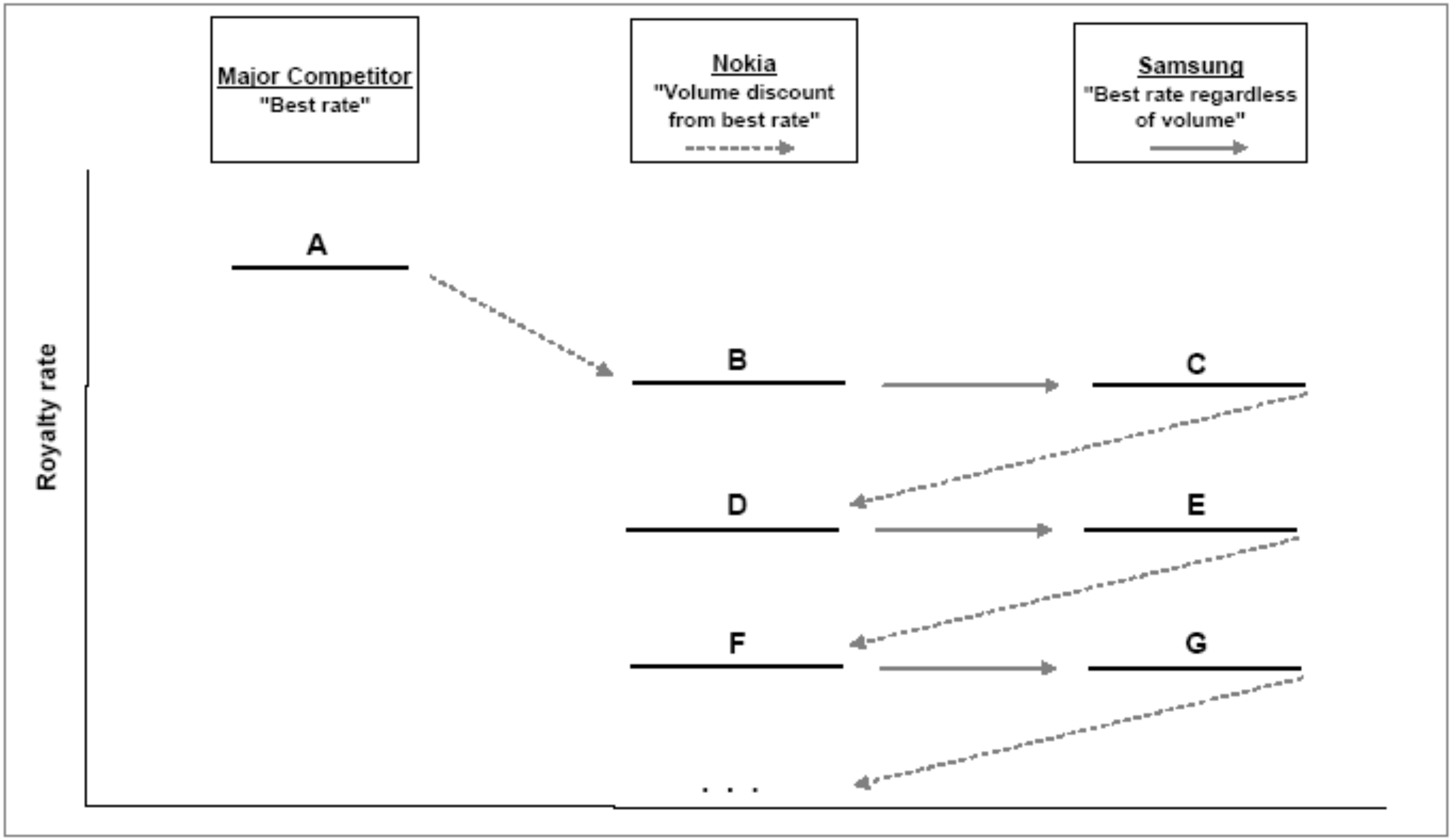
- Conditional vs. unconditional uniformity
  - Unconditional: licensees pay the same nominal rate regardless of economic conditions
  - Conditional: licensees pay rates determined by a common formula
  - Volume discounts etc.

- Which is it?
  - The "downward licensing spiral"

- InterDigital v. Nokia; InterDigital v. Samsung

Figure 6

Inconsistent definitions of "non-discrimination" cause a downward spiral of royalty rates



Downward royalty rate spiral : A > B = C > D = E > F = G ...