# Lessons Learned From Litigated RAND Royalty Rates on Standard Essential Patents

*Microsoft v. Motorola* (Judge Robart)
*In re Innovatio IP Ventures* (Judge Holderman)

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## Overview

- **In a Nutshell**: Litigating RAND royalty rate on standard essential patents (SEPs) is a factually and evidentiary intensive undertaking that accounts for the RAND obligation in applying otherwise routine patent damages theories.

- **Two U.S. Judicial Bench Trial Determinations** (so far …)
  - *Microsoft v. Motorola* (W.D. Wash. Apr. 25, 2013) (Judge Robart)
  - *Innovatio IP Ventures* (N.D. Ill. Oct. 3, 2013) (Judge Holderman)
- **Modified *Georgia-Pacific* Hypothetical Negotiation**
  - No competitor or exclusivity factors that tend to raise royalty
  - *Ex ante* alternatives at time standard adopted

# Judge Robart's RAND Method



## *Microsoft v. Motorola* (W.D. Wash) (J. Robart)

- Motorola SEPs on H.264 (video compression) and 802.11 (WiFi)
- Declaratory judgment action for breach of RAND obligation brought by Microsoft after Motorola initial license offer of 2.25% of end-product price (e.g., Xbox)
- Bench trial RAND determination (Apr. 25, 2013)
  - Motorola 802.11 WiFi SEPs had minimal technical contribution to standard and Microsoft products
  - 802.11 WiFi RAND rate of 3.471 cents per end-product
  - 802.11 WiFi RAND range of 0.8 to 19.5 cents end-product
- Jury trial found Motorola breached RAND obligation (Sep. 2013)

## Judge Robart RAND Methodology

- **Modified *Georgia-Pacific* Hypothetical Negotiation**
  - Remove competition/exclusivity factors
  - Hypothetical at time infringement started/license offered EXCEPT alternatives considered at time standard adopted
  - Cognizant of RAND-obligation's purpose:
    - Encourage widespread adoption of standard
    - Encourage innovators to contribute valuable technology to standard
- **Three-step Analysis**
  - First – Importance of SEP portfolio to standard
  - Second – Importance of SEP portfolio to accused product
  - Third – Consider comparable licenses



## Robart's Modified *Georgia-Pacific* Factors

**Factor 1**: Royalties patentee received licensing these SEPs in other circumstances comparable to RAND-licensing circumstances

**Factor 2**: Royalties prospective licensee has paid for comparable patents

**Factor 3**: Nature and scope of the license

**Factor 4**: Eliminate (patentee's policy to preserve monopoly)

**Factor 5**: Eliminate (commercial relationship as competitor)

**Factor 6**: Patented technology's effect in promoting sales of other products, taking into account value of the patented technology and not the value associated with being incorporated into the standard.

## Robart's Modified *Georgia-Pacific* Factors (cont'd)

**Factor 7**: Eliminate (license/patent term is life of patent)

**Factor 8**: Established product profitability, commercial success and current popularity under the patent, taking into account only the value of the patented technology and not the value associated with being incorporated into the standard.

**Factor 9**: Utility and advantages of patented technology over **alternatives** that could have been written into the standard before the standard was adopted.

**Factors 10-11**: Patented technology's contribution to the standard and licensed product, taking into account only the value of the patented technology and not the value associated with being incorporated into the standard.



## Robart's Modified *Georgia-Pacific* Factors (cont'd)

**Factor 12**: Portion of product profit/selling price customarily used in this or comparable industry for paying royalty on these or analogous RAND-obligated SEPs.

**Factor 13**: Portion of realizable profit that should be credited to the patented technology as distinguished from non-patented technology, manufacturing process, business risks, licensee's own features/improvements or the value of patent's incorporation into the standard.

**Factor 14**: Opinion of qualified experts.

**Factor 15**: Amount that reasonable and willing licensor and licensee would have agreed upon (at the time the infringement began) if both were considering the RAND commitment and its purposes.

## Robart Step 1 – SEPs' Value To Standard

SEP Portfolio


- Patent family is single innovation
- Core feature or tangential
- Pioneering or incremental improvement to known technology
- Available alternatives when standard adopted
- Essentiality – evidence that claim reads onto standard
- Disagree on importance factored into hypothetical negotiation



## Robart Step 2 – SEPs' Value To Product

SEP Portfolio

- SEPs' features compared to product as a whole
- Primary function of Xbox is running video games, not WiFi
- SEPs WiFi encryption is between device and access point, but not needed for Xbox that encrypts from device through internet

## Robart Step 3 – Comparable Licenses

**RAND Negotiation**

**Comparable Negotiation**

- Clear understanding of RAND obligation?
- Settling litigation or ordinary course of business?
- Small part of larger licensed portfolio?
- Successful patent pool (large number of patents, licensors and licensees)?



## Judge Holderman's RAND Method

## *Innovatio IP Ventures* (N.D. Ill) (J. Holderman)

- Innovatio 23 SEPs on 802.11 (WiFi)
- MDL includes declaratory judgment action brought by WiFi manufacturers based on assertions against their end-user customers (e.g., coffee shops, hotels)
- Bench trial determined all patent claims essential (July 26, 2013)
  - Essential even though claims included "extra" elements not in the standard, but were the only "commercially feasible" way to implement the standard (per IEEE Bylaws)
- Bench trial determined RAND (Oct. 3, 2013)
  - Innovatio SEPs of moderate to high importance to 802.11
  - 802.11 RAND rate of 9.56 cents per WiFi chip "comfortably within" Judge Robart's range for less valuable Motorola SEPs



## Judge Holderman Applies Robart's Method

- Adopted Judge Robart's *Georgia-Pacific* hypothetical negotiation modified for RAND obligation and three-step method
- Modified Judge Robart's method for circumstances of this case:
  - **RAND Rate**: Would determine single RAND rate, but no need to determine range of RAND rates.
  - **Essentiality**: Would not downwardly adjust RAND rate based on pre-litigation uncertainty of patents' essentiality, because Judge Holderman already ruled Innovatio's patents are essential.
  - **Royalty Base**: Royalty base is WiFi chip – whose purpose is to provide 802.11 functionality – so perform steps 1 and 2 at same time (i.e., SEPs value to standard and product)
  - **Comparable Licenses**: Found no comparable licenses, so used "Top Down" valuation method

## Holderman RAND Policy – Patent Holdup

- RAND rate should reflect value of patented technology and not value of standardization.
- Question whether this is theoretical possibility or actual real-world problem.
- Prior patent owner Broadcom testified about its real-world patent holdup experience with 802.11 standard [specifics redacted].
- Difficult to separate patents' value from value of standardization
  - Patents' value may be its ready integration with standard's other technology

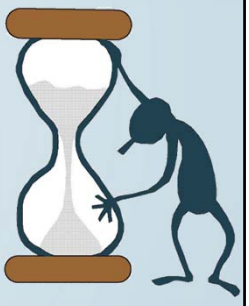


## Holderman RAND Policy – Royalty Stacking

- Will cumulative royalties to all SEP holders be so excessive it discourages standard's adoption
- May only be a concern if technology not accurately valued?
- "Practically speaking" royalty stacking checks RAND royalty's relationship to SEP's value
  - If SEPs provide 25% of standard's functionality, then remaining 75% of functionality should be 3 times the SEPs' value.
- Court accepted argument that 10% of patents provide 84% of functionality in electronics

# Holderman RAND Policy – Reward Innovators

- **Incentivize Innovators**
  - RAND rate high enough to motivate innovators "in the future" to invest in further innovations and contribute them to standards to create valuable standards.
- **Reverse Hold-Up**
  - Unwilling licensee forces litigation if injunctive relief not available for RAND-obligated patents
  - SEP injunction availability is "muddled", unsettled issue
  - Will not consider reverse hold-up a concern unique to SEPs beyond the typical concern in patent cases.





# Holderman RAND Policy – Alternatives

- Consider *ex ante* alternatives that SSO **actually considered** by the time the standard adopted
- **Patented Alternative**: Reject as "implausible … in the real world" that a patented alternative leads to negotiated royalty of "effectively zero"
- **Public Alternative**: Publicly available alternatives discount RAND rate more than patented alternatives

## Holderman RAND Policy – NonDiscrimination

- Profit based on WiFi chip, rather than end-product using WiFi chip, supported by **non-discrimination** part of **RAND**:

licensing. Considering the profit of the chip manufacturer on the chip, rather than the profit margins of the Manufacturers on the accused products, is appropriate because a RAND licensor such as Innovatio cannot discriminate between licensees on the basis of their position in the market. Thus, the RAND rate that the court determines here should be the same RAND rate that Innovatio could charge to chip manufacturers on its patent portfolio. If the royalty is excessive in



## Holderman RAND Policy – Royalty Base

- Not unique to RAND-obligated patents
- What is "smallest salable patent-practicing unit" – WiFi chip or end-product
- Found Innovatio did not present reliable method/evidence to apportion SEP technology value from end-product as a whole.
  - Judge Robart gave credit to report using WiFi weighting factor applied to end-product


# Applying RAND Method



## Applying the Methodology

- Essentiality of the Patents at Issue to the 802.11 Standard

Patent Portfolio ? → IEEE Std 802.11™-2012 (Revision of IEEE Std 802.11-2007)

- Setting the Royalty Rate/Range

## Essentiality in General-Judge Robart

- 24 patents Motorola claimed were essential to 802.11
- Motorola contended that 11 of its 24 SEPs were used by Microsoft's XBOX product


- Hypo. Negotiation would not include the 13 not used by Microsoft



## Essentiality in General-Judge Robart

- Were there alternatives to Motorola's alleged SEPs?
- Court conclusion: No reliable evidence on alternatives
- As a result, parties in hypo. negotiation would "simply disagree as to the technical contribution of Motorola's SEPs."

## Essentiality of Specific Patents- Judge Robart

Group One: Channel Access Management Patent

- Minimal technical contribution to standard
- No evidence of relative importance
- Parties disagree over importance to Microsoft

Other Groups of Motorola Patents



## Calculating RAND Range-Judge Robart Licenses Motorola Claimed Were Comparable

- Motorola sought 2.25% of net selling price of XBox as royalty
- 2011 license between Motorola Mobility, Inc. and Vtech
- 2010 cross-license agreement between Motorola and Research in Motion Limited ("RIM")
- The Symbol License Agreements
- Royalty Stacking Concerns

## Calculating RAND Range-Judge Robart Licenses Microsoft Claimed Were Comparable

- Microsoft claimed 3 – 6.5 cents per XBox unit
- The Via Licensing 802.11 Patent Pool



## Calculating RAND Range-Judge Robart Relevant Data Points to Calculate RAND Range

- InteCap: .8 to 1.6 cents per XBox
- Marvell : 3-4 cents per XBox
- Via: 6.114 cents per XBox
- Microsoft Offer: 6.5 cents per XBox
- Court's Calculation:
  - Averaged the first 3 to arrive at RAND: 3.471 cents per XBox
    - This is what Microsoft and Motorola would agree to in hypo. neg.
  - Range: 0.8 – 19.5 cents per WiFi Chip
    - 0.8 (InteCap); 19.5 (Microsoft offer adjusted upward for benefits of Via patent pool)

## Judge Holderman v. Judge Robart

- Unlike Judge Robart, Judge Holderman determined a RAND rate and not a RAND rate range
- Essentiality
- RAND rate adjustment
- Importance of SEPs to Standard/Importance to Implementer
- Alternatives




## Judge Holderman: Importance of Innovatio Patents to 802.11 Standard

- Divided the patents into three families
- Channel Sharing Patent Family
- Multi-Transceiver Patent Family
- Sleep Patent Family
- Patents, as a whole, of moderate-to-high importance

## Judge Holderman: Alleged Comparable Licenses

- Innovatio License to Broadcom
- Innovatio's Proposed Comparables
  - Motorola/Vtech License
  - The Symbol Licenses
  - The Qualcom/Netgear License



## Judge Holderman: Manufacturers' Proposed Comparable Licenses (cont.)

- The Via Patent Pool
- Non-RAND Licenses

# Judge Holderman: Other Methods to Calculate RAND

- "Bottom-Up" Approach
- "Top Down" Approach



# Judge Holderman: Other Methods to Calculate RAND

- "Top Down" Calculation
  - o WiFi chip price = $14.85
    - ➢ Derived by averaging the price for chips from 1997-2013
  - o Profit margin per chip: 12.1%
    - ➢ Average profit margin on chips for Broadcom from 2000-2012
  - o No. of Potential 802.11 SEPs: 3000
    - ➢ But not all were actual SEPs
    - ➢ Innovatio's confirmed as SEPs = more valuable than others

## Judge Holderman: Top Down Calculation to Arrive at RAND

- "Top Down" Calculation (cont.)
  - Available evidence showed that 84% of value of all electronics is in top 10% of electronics patents
  - Moderate-to-High importance of Innovatio's patents put them in top 10% of SEPs to 802.11
  - Formula (Step 1):

| | |
|---|---|
| Price per chip: | $14.85 |
| Profit margin: | x 12.1 |
| Avg. profit per chip: | $1.80 |



## Judge Holderman: Top Down Calculation to Arrive at RAND

- "Top Down" Calculation (cont.)
  - Formula (Step 2):

| | |
|---|---|
| Avg. profit per chip: | $1.80 |
| % attributable to top 10%: | x 84% |
| | $1.51 |

  - Formula (Step 3):

| | |
|---|---|
| Value of top 10% 802.11 SEPs: | $1.51 |
| No. of Innovatio Patents/10% x 3000 | x 19/300 |
| Pro rata share of Innovatio's patents | **9.56 cents per chip royalty** |

## Judge Holderman: Top Down Calculation Compared to Other RAND Rates

- "Top Down" Calculation Results Consistent with Other RAND rates
  - 9.56 cents within Judge Robart's range of 0.8 to 19.5 cents
  - 9.56 cents is about 3x Judge Robart's 3.471 cents RAND rate, which is reasonable since Motorola 802.11 SEPs not deemed valuable, but Innovatio's were
  - *Ericsson v. DLink*: Court calculated 15 cents based on jury verdict that considered RAND



## Lessons Learned from These Two Cases

- Decisions are steps in a thousand mile journey providing guideposts, but will be developed case-by-case.
  - Outcome of each case may have been different with different evidence.
  - Each case decided in the context of circumstances presented.
- Courts may apply traditional damages theories with tweaks to account for RAND obligation—e.g., courts may eliminate factors that otherwise might give weight to whether patentee/licensee are competitors.

# Conclusion/Questions

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