Executive Summary

1. SEP Basics
2. Building an SEP Portfolio
3. SEP Statistics & Trends
4. SEP Licensing & Litigation Considerations
5. Looking To the Future
Standard Essential Patents | Basics

• What is an SEP?
  – Just like any other patent, except unavoidable for the implementation of a standardized technology
    ▪ Usually claiming only incremental changes & small portion(s) of a standardized technology
  – SEP holder identifies patents/applications that *may* be essential & makes a commitment to SSO to license on FRAND
    ▪ Constitutes a binding contract between SEP holder, SSO, and implementer
    ▪ Ensures that SEP holder does not extract greater than fair value of its patented technology
    ▪ **SSOs do not evaluate patents to determine if they are essential or not**
  – Obligation to negotiate in “good faith” – both sides
    ▪ SEP holder cannot refuse license to implementer willing to pay the FRAND rate
  – SEP holder’s remedy is limited to collecting FRAND royalty consistent with obligation – historically **no injunctive relief**
Standard Essential Patents | Basics

• Why are SEPs potentially valuable?
  – Large number of potential infringers
    • Targets all along supply chain & at various levels of implementation (service provider / user)
  – Large number of potentially infringing products
    • End (consumer) products
    • Individual components within end products
    • Platform / network elements facilitating use of end products
  – Clearer path for proving infringement
  – Difficult for SEP implementer to design around
  – Strengthens negotiating position
  – Establishes strong defensive position
Factors that will dictate strength of SEP portfolio

- Emerging technology or legacy technology?
  - Impact on scope of potential infringers and infringing products, design around availability
- Applicable to multiple entities along supply chain and/or service implementation levels?
- Applicable/importance to other industries (*connected cars, smart homes, etc.*)
- Strength of claims (*breadth, divided infringement, written description support*)
- Strength of read on standard
  - E.g., mandatory or optional features, patent or application subject of declaration to SSO, time between declaration and finalization of standard
- Source of acquisition (*home grown, practicing entity, member of SSO*)
Patent Infringement Cases with SEP Issues

Source of Data: Lex Machina
## SEP Patent Infringement Suits

<table>
<thead>
<tr>
<th>Plaintiff</th>
<th># of Cases</th>
</tr>
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<tbody>
<tr>
<td>Intellectual Ventures</td>
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<tr>
<td>Cellular Communications Equip.</td>
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<td>Philips</td>
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<tr>
<td>Realtime Data</td>
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<tr>
<td>Ericsson</td>
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<td>WiLan</td>
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<td>TQ Delta</td>
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<td>Chrimar Systems</td>
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<td>Sony</td>
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<td>Nokia</td>
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<table>
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<th>Defendant</th>
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<tr>
<td>Apple</td>
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<tr>
<td>Samsung</td>
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<td>AT&amp;T</td>
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<td>Sprint</td>
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<tr>
<td>T-Mobile</td>
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<tr>
<td>Motorola</td>
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<td>HTC</td>
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<tr>
<td>Verizon</td>
<td>25</td>
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<tr>
<td>Huawei</td>
<td>22</td>
</tr>
<tr>
<td>ZTE</td>
<td>22</td>
</tr>
</tbody>
</table>

Source of Data: Lex Machina
SEPs | Difficult Environment in U.S. District Court

- Injunction grant rates and requests are at record lows
    - Removed presumption favoring entry of injunction
    - More difficult for NPEs to demonstrate irreparable harm
  - *TC Heartland* (2017)
    - Limiting where corporate defendants can be sued
    - Shifts cases away from patent owner-friendly and injunction-friendly venues

- U.S. District Courts: FRAND-encumbered SEPs illicit fact patterns inconsistent with justifications necessary to obtain equitable relief
  - *Qualcomm Inc. v. Compal Elecs., Inc.* (S.D. Cal. 2017); *Apple Inc. v. Motorola, Inc.* (Fed. Cir. Apr. 25, 2014)
    - Injunctive relief is generally available only if legal remedies are inadequate
    - Promise of FRAND licensing is an admission that monetary damages are adequate compensation (*Realtek Semiconductor Corp. v. LSI Corp.* (N.D. Cal. May 20, 2013))
SEPs | Difficult Environment in U.S. District Court

- Institution rates of IPRs have dropped recently, but remain high (~70.2% in 2018)
- Increasing likelihood of district court stays
  - *SAS Institute Inc. v. Matal* (IPR institution must be on *all* challenged claims)
  - Claim construction standard at the PTAB changed to match district court
- Result: sophisticated filers are turning to the ITC and global forums for threat of injunctive relief
  - ITC: injunction is Commission’s primary remedy, so more likely
  - ITC will consider essentiality, and evidence of hold-up or reverse hold-up as public interest factors in determining whether to issue an exclusion order
SEPs | Overall Trends

• 4th Industrial Revolution: Creating a group of core technologies that are spanning across traditionally separate industries
  – Digital, Biotechnology, Energy & Environment, Advanced Materials
• This core group of technologies (e.g., connectivity, big data, AI, etc.) goes hand-and-hand with the standardization developments in the electronics, wireless, and telecom industries:
  – 3G, 4G, 5G
  – Internet of things (IoT)
  – Audio/video
  – WiFi
  – Z-Wave, Zigbee (smart home)
  – V2X communications
• More players, more crossover, more exposure in each industry
• Expect rise in SEPs and SEP litigation; particularly in injunction friendly forums
Case Study | Auto Industry

**Smarter Cars**
Number of patents filed in the U.S. for new vehicle technology skyrocket

- Laser radar
- Image processing
- Computer vision
- Intelligent vehicle system
- Vehicular communication
- Advanced driver assistance
- Automatic parking
- Other

Note: Includes BMW, BYD, Daimler, Faraday Future, FCA, Ford, GM, Honda, Hyundai, Isuzu, Mazda, Mitsubishi, Nissan, PSA, Renault, Suzuki, Tata, Tesla, Toyota, VM & Volvo. Data shows patents filed by auto OEMs that contain language relating to autonomous tech.
Case Study | Auto Industry

• The rise in the number of patents applications and lawsuits involving core technologies is reflective of the increase in **standardized technologies** and the rise of **autonomous vehicles / connected cars**

• Same trends can be seen in other industries as standardized technologies begin/continue to be adopted:
  − Home appliances
  − Smart sensors
  − 3D printing
  − Robotics
SEPs | Pre-Suit Considerations (SEP Implementer)

• Indicate willingness to negotiate in good faith with SEP holder
• Demand detailed infringement allegations
  – Reasonable to demand infringement claim charts drawn to underlying technology
• Demand enough time to sufficiently examine infringement and standard essential claims
• Concurrently, develop long term strategy:
  – Take license now
  – Negotiate down to an acceptable license
  – Rely on suppliers (indemnification, exert influence, gather evidence)
  – Never take license
  – Hybrid approach
• Develop roadmap to reduce exposure
SEPs | Pre-Suit Considerations (SEP Holder)

• Indicate willingness to negotiate in good faith with SEP implementer
• Ensure that infringement allegations are sufficiently definite (identification of end product may not be enough)
  – *If possible* prepare infringement claim charts drawn to underlying technology at outset
• Set defined deadline for SEP implementer to respond to initial offer
• Ensure that SEP implementer responds with counter offer
• Have long term strategy in place
  – Define acceptable licensing terms and royalty rates
  – Set short and long term deadlines
  – Understand willingness to litigate
  – Develop plan for dealing with suppliers (direct communications, behind the scenes, location of necessary documentation)
# SEPs | Pre-Suit Considerations (SEP Implementer)

## Reduce number of patents

<table>
<thead>
<tr>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Platform / network element v. End product</strong></td>
<td><strong>Mandatory v. Optional features</strong></td>
<td><strong>Invalidity Issues</strong></td>
</tr>
</tbody>
</table>
| - End product manufacturer may not infringe platform / network patents | - Not all standardized features are mandatory  
- If feature is only optional, infringement is more difficult to prove  
- Declared patent may not reflect finalized standard | - Written description issues (common in SEPs)  
- Earlier dated draft specifications (working groups)  
- Incremental changes can be obvious from drafts |
| **Round 1** (read on product) | **Round 2** (read on standard) | **Round 3** |
SEPs | Pre-Suit Considerations *(SEP Holder)*

- Identify correct patents to assert
  - Directed to platform / network element, end product, or both
- Identify correct target(s)
  - Who to target along supply chain & at various levels of implementation (service provider / user)
- Understand history of asserted SEPs
  - Landscape at time of filing, prosecution history, history with respect to finalization of standard
- Understand SSO’s IPR policies
- Understand the applicable standard
  - Development of the standard, changes, differences from prior standards, draft specification
SEPs | Licensing Considerations *(SEP Holder & Implementer)*

- Does licensing offer satisfy FRAND (Fair Reasonable And Non-Discriminatory) Obligations?
  - Initial offer does not have to be FRAND; but ultimate result must be FRAND
- What is a “reasonable” royalty rate?
  - No “one-size-fits-all” list of factors to consider *(Ericsson v. D-link (Fed Cir.))*
  - Based on the economic value of the patented technology itself (not including the value due to incorporation into the standard)
  - Accounts for importance of the SEPs to the standard, and importance of the standard and the SEPs to the product
  - Uses only comparable patents as benchmarks
  - Accounts for royalty stacking
  - Rates charged by SEP holder and/or other patent pools may be relevant indicators
    - Offering different rates to different licensees may well be FRAND
SEPs | Licensing Considerations (SEP Holder & Implementer)

- Determining Royalty base
  - Royalty is often based on the number of infringing units
  - **Only** based on entire market value of accused multi-component product (e.g., end product) **when** the patented feature creates the basis of customer demand
  - Default rule is apportionment
    - applies even when the accused product is the smallest saleable unit

- Misrepresentation that Patents are SEPs
  - A misrepresentation that claims are standard essential (i.e., mandatory features) when claims cover only optional or implementation-specific features may be evidence of sham licensing. (*In re Innovatio IP Ventures, LLC Patent Litigation*)
SEPs | Licensing Considerations (*SEP Implementer*)

- **Develop pre-suit licensing strategy**
  - Cut down on potential royalty payments (number of patents and royalty rate)
  - Determine smallest saleable unit/apportionment
  - Decide appropriate aggressiveness
    - Desired length of negotiations?
  - Leverage relationships with suppliers/patent pool participants to reach more favorable terms
  - Compare license offer to other SEP holder licenses
  - Monitor status of other SEP holder negotiations and litigations
SEPs | Enforcement Considerations (SEP Holder)

- **Develop pre-suit enforcement strategy**
  - Establish technical knowledge and willingness to fight
  - Due diligence on targets
  - Understand litigation history of targets
  - Understand and be ready to distinguish SEPs from universe of prior art
  - Be ready for targets to file IPRs
  - Develop support for secondary considerations arguments (industry praise, commercial success, copying, long-felt but unsolved needs, failure of others)
    - Identify appropriate experts and fact witnesses
SEPs | Litigation Considerations (SEP Implementer)

• Prepare IPRs asap
• Look for creative ways to win early
  – Analyze patents in SEP holder’s portfolio for high-value targets, and deficiencies
• Challenge essentiality, FRAND compliance, adherence to SSO obligations
• Be aggressive in offensive discovery
  – Broad third-party efforts, i.e., SEP holder’s investors, entities with likely prior art, SSO, original assignee of SEP
• Always reinvent, i.e., no “one size fits all” approach
## SEPs | Litigation Considerations (SEP Holder & Implementer)

<table>
<thead>
<tr>
<th>Defense</th>
<th>Defense Raised*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Infringement</td>
<td>100%</td>
</tr>
<tr>
<td>Invalidity</td>
<td>100%</td>
</tr>
<tr>
<td>Estoppel</td>
<td>84%</td>
</tr>
<tr>
<td>Laches</td>
<td>81%</td>
</tr>
<tr>
<td>Implied/Express License</td>
<td>68%</td>
</tr>
<tr>
<td>Unclean Hands</td>
<td>55%</td>
</tr>
<tr>
<td>No Entitlement to Injunctive Relief</td>
<td>42%</td>
</tr>
<tr>
<td>Patent Misuse</td>
<td>26%</td>
</tr>
<tr>
<td>Violation of FRAND Terms</td>
<td>26%</td>
</tr>
<tr>
<td>Failure to Mitigate Damages</td>
<td>10%</td>
</tr>
<tr>
<td>Antitrust</td>
<td>3%</td>
</tr>
</tbody>
</table>

* Estimates based on initial analysis of a small, randomly-selected sampling of SEP cases
## SEP Holder Win Rate:

<table>
<thead>
<tr>
<th>Venue</th>
<th>Per Case/Per Defendant</th>
<th>Per Patent/Per Defendant</th>
</tr>
</thead>
<tbody>
<tr>
<td>District Court</td>
<td>28%</td>
<td>12%</td>
</tr>
<tr>
<td>ITC</td>
<td>49%*</td>
<td>31%</td>
</tr>
<tr>
<td>Combined (D. Ct./ITC)</td>
<td>44%</td>
<td>25%</td>
</tr>
</tbody>
</table>

* Drops to 33% if Rambus’s 337-TA-661 ITC proceeding is excluded (settled – remedial orders rescinded)

**Source:** RPX

## Non-SEP Plaintiff Win Rate

<table>
<thead>
<tr>
<th>Venue</th>
<th>Per Case/Per Defendant</th>
<th>Per Patent/Per Defendant</th>
</tr>
</thead>
<tbody>
<tr>
<td>District Court</td>
<td>68%</td>
<td>38%</td>
</tr>
<tr>
<td>ITC</td>
<td>41%</td>
<td>32%</td>
</tr>
<tr>
<td>Combined (D. Ct./ITC)</td>
<td>57%</td>
<td>36%</td>
</tr>
</tbody>
</table>
Looking To the Future

• Expect to see an increase in:
  – SEP litigation
  – Lawsuits in injunction-friendly forums
  – Lawsuits involving a discrete number of core technologies
  – Mergers, acquisitions, joint ventures, and patent portfolio purchases

• Compare with recent smartphone wars (last major technology convergence)

• Potential for massive cross-licensing end product manufacturers? Suppliers? Wireless/telecom companies?

• New entrants into unfamiliar industries (e.g., tech-based companies entering traditionally non-tech industries) could lead to SEP litigation uncertainty
SEPs | Evolving Considerations

- What makes a patent standard essential? Assessment of key standard body SEP procedures?
- What constitutes fair and reasonable royalties?
- What constitutes non-discriminatory royalty rates?
- What constitutes good faith negotiation obligations?
- How to demonstrate SEP invalidity?
- Comparative SEP analysis between US, European and Asian SEP treatment?
- Recommendations as to how to address SEP opportunities and challenges within particular industries?
- What are your concerns?
Thank You

For more information:

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