APEX STANDARDS

GLOBAL INTER/INTRA-INDUSTRY SEP CHARTING & LANDSCAPING

FACT SHEET

Jan 28, 2021

Apex Standards maintains its commitment to supporting the larger community of standardization. Therefore, we have expanded our services and products towards global industry standards. This enables the ever-connected industries to cross reference standards, terms, norms, technical specifications, and the dynamics of standardization, and to evaluate the impact of standards along both vertical and horizontal market segments. Our latest offering includes:

- ▶3GPP TS / Radio Access Network
- ▶3GPP TS / Telecom Services
- ▶3GPP TS / Security
- ▶3GPP TS / 5G TS 38 Series
- ▶3GPP TS / NTN & Satellites
- ▶3GPP TS / Mission Critical
- ▶3GPP TS / Infrastructure
- ▶ASTM F04 Series / Medical Device
- ▶ASTM F38 Series / UAV Drone
- ▶Banking / Blockchain (IEEE P2140)
- ▶Banking / Financial Information eXchange (FIX Trading)
- ▶Banking / Mobile Payment (ISO 12812)
- ▶Biochip
- ▶Display
- ▶Display Characteristics
- ▶e-Health Standards / ETSI TR 103 477
- ▶e-Health Standards / IEEE 11073
- ▶e-Health Standards / ITU-T H.800s
- ▶GS1 (Business Communications)
- ▶IEEE 802.11ax (Wi-Fi 6)
- ▶IEEE 802 LAN & WLAN Series
- ▶IEEE P1857 / Audio Video Coding
- ▶IEEE P1872 / Robotics and Automation
- ▶IEEE P2048 / Immersive AR & VR
- ▶IEEE P7130 / Quantum Computing
- ▶Industry 4.0 Smart Factory Standards
- ▶IoT Data Exchange Standards
- ▶ITU-T H.265 HEVC Codec Standards
- ▶JEDEC Semiconductor/Memory Standards
- ▶Open RAN (O-RAN)
- ▶Qi Wireless Charging
- ▶SAE Electric Vehicle Charging, Public Key Infrastructure (PKI) and Interoperability Standards

Dissolving Boundaries

For equipments and devices to work together within the same industry or across industries, they must be able to communicate using pre-agreed standards. Standardization is where companies negotiate for their technology to become the standard. Those who set the standards secure royalties for years to come. More importantly, those who define the standards are the ones most intimately familiar with the technology that will form the core of the next wave of commercial deployments.

Leaders who stay on the cutting edge of industry standards development gain critical strategic advantages directly: (1) while others are still trying to figure out the blueprint of next-generation infrastructure, the standard setters are already building it, and, (2) maximized Return on Investment (ROI) over Research & Development (R&D) spending to further fuel future innovation.

While (1) is straightforward to understand, tapping into (2) to generate more and new royalty revenue is no easy task. A crucial step is via the concept of "Standard Essential Patents (SEP)".

Patent-standard relationships can be extracted from a public declaration through a Standard Setting Organization (SSO), stated in a reference to a specific standard document (Non-Patent Literature), recorded in the technical disclosure of a patent, documented along the background of the invention, self-reported via a product patent marker, or simply come from none of the above (submarine as defined by Unified Patents in reference [1]) by remaining unknown to the patent owner. When a patent is verified as essential to a standard, it becomes a Standard Essential Patent (SEP) and may have a higher economic value because manufacturers implementing that standard have no choice but to license the SEP to meet interoperability requirements.

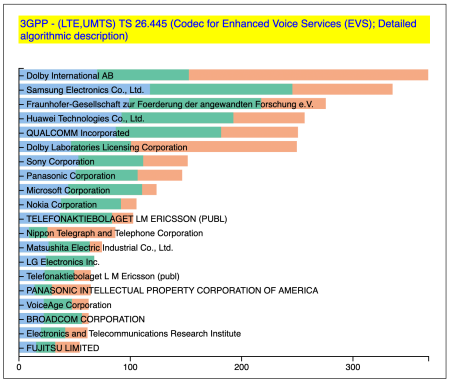
Super SEP

At a technical level, a beamforming patent may be essential for both 3GPP TS 38 series (5G) and IEEE 802.11ax (Wi-Fi 6). On a broader application level, a patent related to Picocell (a small cellular base station) may prove essential to a variety of standards such as 3GPP TS, Open RAN, IoT, Industry 4.0 and the IEEE Robotics local broadband standards, leading to Multi-Standard and/or Multi-Industry (Super) SEPs.

Varying degrees of essentiality of patent to standards drive the economic value of the patent across market segments where the corresponding products or services are valuable.

Systematic SEP Identification

Moving beyond piecemeal approach, Apex Standards leverages its extensive access to the standardization documents [2][3][4], its claim charting technology [5], its standards materiality review technology [6], and its global patent databases [7] to create patent landscapes for the aforementioned standards. Such landscapes are commonly used to support (Fair) Reasonable and Non-Discriminatory (F/RAND) licensing negotiations. Moreover, each of the standard-relevant patents is labeled in one of the three categories:



Self-declared/disclosed and Apex Standards verified

Self-declared/disclosed but not yet verified

Undeclared & undisclosed yet may be standard relevant or essential to a certain degree (submarine [1])

To compare the relative positioning of standard-relevant patentees, complete landscapes are grouped by standard and sorted by the number of global patent families owned by each company [8]:

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The Hidden Cost of Overlooking

Patents, if not licensed or used to protect the commercialized products or services, otherwise become liabilities as renewal fees incur every couple of years. If owners or portfolio managers can better and more quickly identify SEPs, he or she will be able to communicate the value of IP assets more effectively and efficiently, creating new revenue streams for the company.

Own Patents, with ROI-Focused Mindset

In addition to seeking direct out-licensing opportunities, SEP owners can participate in a licensing program offered by existing Patent Pools. While Pools offer a convenient way to monetize SEPs, they tend to focus on one set of standards most notably along the communication or video codec domains. Given the increasingly interconnected markets and industries, a horizon-broadening tool that allows to cross reference multi-industry standards can minimize missed opportunities. As an example, IPwe Smart Pooling has become the first cross-industry Pool provider this year [9].

Mine, Target, Chart and Communicate Value of SEPs with Clarity and Efficiency

Apex Standards is focused on client success and will continue to provide broad, in-depth, inter and intra industry standardization and patent standard essentiality analysis. Our experts will show you how to identify value in your IP portfolio and help you communicate that value with supportive charting and comparable evidences per standard and by industry, enabling you to monetize patents compellingly and effortlessly. Visit

www.apexstandards.com

References

[1] Unified Patents 5G Submarine Patents: www.unifiedpatents.com/insights/2020/8/26/5g-submarine-patents

[2] Apex Standards 3GPP TDoc Search: www.apexstandards.com/apex.3gpp.tdoc.pdf

[3] Apex Standards 3GPP TDoc Search & Motivation: www.apexstandards.com/apex.3gpp.motivation.pdf

[4] Apex Standards IEEE 802.11 Search: www.apexstandards.com/apex.ieee.802.11.pdf

[5] Apex Standards Pseudo Claim Charting: www.apexstandards.com/apex.pcc.pdf

[6] Apex Standards TS/TR Essentiality & Section Search: www.apexstandards.com/apex.etsi.tstr.pdf

[7] Apex Standards Global Patents & Standards Search: www.apexstandards.com/apex.sep/

[8] Apex Standards Global SEP Landscaping: www.apexstandards.com/global.landscaping/

[9] IPwe Smart Pooling: www.ipwe.com/solutions/smart-pooling/

[10] Apex Standards TDoc Landscaping - RAN 3: www.apexstandards.com/apex.3gpp.ran3.pdf