# APEX STANDARDS

# It begins with a story.

As part of his job, Robert used to do manual, spot checking of new patents as they were issued each week. Sometimes, he got lucky and found relevant information. Most other times, not so much. The same routine continued on and on. As a portfolio manager of intellectual property assets, Robert constantly faces questions such as:

- What unique value does this patent deliver to my company?
- How competitors' similar patents affect our business operations? What alternatives do my customers have?
- Am I aware of our dynamic or relative positioning in the technology landscape and over time?
- How does our portfolio look today? Can I assure our customers that we are solid and protected?
- Other than the intended field of applications, can our patents be used in other market segments?

These questions, even with an abundance of analysis tools available today, are hard to answer.

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#### Apex Standards Innovation Landscape Weekly

Robert can now see clearly how the existing and new patents may be useful for.

#### Patent-Standard Crosswalking Made Easy.

#### Example 1: Cross-Standard Essentiality of a 5G SEP

**US 9,860,914 (Qualcomm)** is a patent that controls timing for Carrier Aggregation and is declared essential to 3GPP TS 38.133. It may be useful for the patentee to have a short list of other candidate specifications for which the same patent may prove essential to, e.g., TS 38.331 (5G), TS 38.321 (5G), or, TS 36.321 (LTE). Beyond 3GPP, it may also prove essential to IEEE 802.11ax (Wifi 6) in the context of the OFDMA function. Beyond 3GPP and IEEE 802, it may also prove essential to the adoption of Open RAN under the implementation of Indoor/Outdoor Picocells and O-CU/O-DU Base Stations, or, to the enabling of Network Function Virtualization vital to the Edge Computing Technology.

Patent portfolio managers used to rely on inventors to share relevant intelligence. Since sophisticated technology requires specialized area of expertise, limiting personal knowledge to a narrow field can mean missed opportunities outside of a personal scope. Wouldn't it be better to have a knowledge base that allows to see through a complete set of options and monitor the market effectively?

#### Example 2: A Cross Domain SEP

**US 9,852,645 (Boeing)** describes a self-steering vehicle technology without GPS, but using an array of optical sensors to keep track of its position. After

the patent is granted, managers may not know where it can be useful. Wouldn't it help if we could reference this patent to the ASTM UAV Drone Standards at F38.01 Detect and Avoid System or F38.02 Operational Risk Assessment of Small Unmanned Aircraft Systems, or, to a IEEE Virtual Reality and Augmented Reality at P2048.7, Self Mapping of Virtual Objects in the Real World that constructs maps on the fly, to a recent legal compliance issued by US FAA for Drone Remote Identification, or, to a critical localization function needed by every autonomous car that needs to accurately estimate its position without the GPS signal?

#### Example 3: Patent Driven Product Development

US 10,646,285 (Holo Surgical) discloses a 3D display system with see-through visor and navigation. It has a direct, intended use in the surgical field. Would it help if we establish its connection to a full range of standards and related use case scenarios? They may include: ASTM Medical Device - F04.31 Neurosurgical Instruments, e-Health IEEE - 11073 Point-of-Care Medical Device Communication, IEEE Audio Video Coding - P1857.9 - Immersive Visual Content Coding, IEEE Robotics and Automation - P1872.1 - Robot Task Representation, IEEE Robotics and Automation - P2751 - 3D Map Data Representation, IEEE Virtual Reality and Augmented Reality - P2048.2 - Immersive Video and Quality Metrics.

#### Example 4: From Technology to Business

US 9,349,095 (Amazon) describes a relational, contextual tagging method for industrial goods. Intuitively, we could imagine a general use case in a supply chain management system tied to a GS1 standard. Would it be helpful if we showed you its relevance to the GS1 specifications at Digital Link, Traceability and Smart Search? Furthermore, would it be helpful to know how it is used in the context of Industry 4.0 applications, e.g. in the context of IEC 62890 Life Cycle Management, or, in the context of healthcare under ITU-T H.860 e-Health Data Exchange Standard? Finally, do you know that this patent can be used in multiple emerging markets such as in Food Tech, Apparel Tech, Gig Economy, Pet Tech, Real Estate Tech or even the Travel Tech?

A SEP does not get us very far.
Responsible value proposition comes from focusing on how the industry moves forward by use of the invention in a particular context.

Apex Standards illuminats paths into the context of product commercialization and intellectual property monetization, allowing me to see where I stand and know exactly where to go.

Apex Standards helps me identify standard essentiality & industrial applications of my patents, so I clearly see where I stand and know where to go. As soon as I experienced the ability to see a holistic view, I will not want to go back to be trapped in a partial perspective again.

As technology becomes ever more intertwined, a patent can touch or enable people's day-to-day life. If you can choose, would you prefer random spot checking, or an ability to perform systematic cross checking? Furthermore, would you prefer to be able to communicate the use case scenarios of a patent effectively and efficiently?

# Systematic Cross Checking v.s. Random Spot Checking

Apex Standards enables the ever-connected industries to cross reference standards, terms, norms, technical specifications, and the dynamics of standards along both vertical and horizontal market segments. Our weekly updates of patent-standard relations include:

►Alliance for Open Media ►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 ►Automotive Communication Subsystems ▶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 ▶Emerging Technology Verticals ▶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
- ▶Qi Wireless Charging ▶SAE Electric Vehicle Charging, Public Key Infrastructure (PKI) and Interoperability Standards

▶JEDEC Semiconductor/Memory Standards

Virtualized 5G RAN

▶ITU-T H.265 HEVC Codec Standards

▶ITU-T H.266 VVC Codec Standards

▶Multi Access Edge Computing

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

# ThinkBig

If a sample helps, contact support@apexstandards.com www.apexstandards.com

## References

▶IoT oneM2M

▶Open RAN (O-RAN)

▶IoT MIOTY

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