

APEX STANDARDS

Standard Essentiality Effectuation Strategies (SEES)

SEP Effectuation [1][2]

Mobile communications and related industries that have been globally standardized have resulted in significant innovation, consumer choice, and industrial expansion. Participants in the industry, who are often direct competitors, collaborate to select technologies for inclusion in a standard that provides guidance for implementing the technology, such as allowing communication between systems and devices.

From the standpoint of the ecosystem, industrial standards lower the barriers to implementation for companies that have not made massive R&D and coordination investments - the standards allow companies to manufacture products without holding the essential patents. Standard setters, on the other hand, benefit from strategic advantages such as: (1) while others are still figuring out the blueprint for next-generation infrastructure, standard setters who are intimately familiar with the technology are already building it; and (2) as an industry adopts a standard, it becomes straightforward for relevant patent holders to detect infringement, introducing the concept of Standard Essential Patents (SEP).

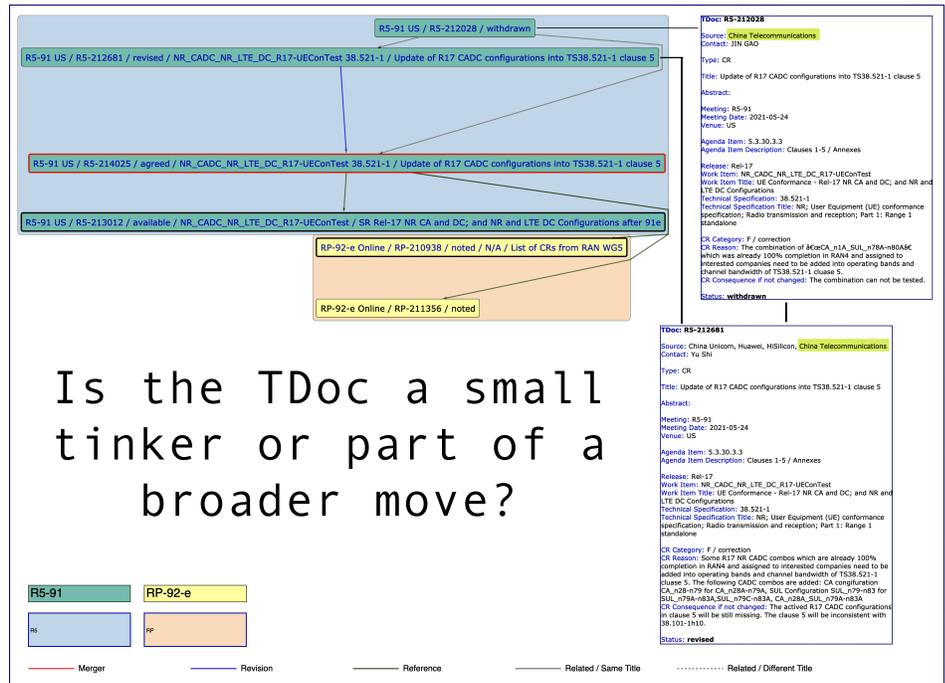
As the need for cross-industry standardization and interoperability grows, SEPs are becoming an increasingly important component of patent portfolios and corporate IP strategies. Companies invest in order to obtain and maintain patents. If a patent is declared a SEP, it can be licensed to other entities within the industry under Fair, Reasonable, And Non-Discriminatory (FRAND) terms, enabling companies to profit from their R&D efforts. While anyone can "declare" that a patent is essential for the practice of a standard, identifying SEP can be a lengthy and complex process for both standardization participants and followers. As a result, it is critical for companies to evaluate standard essentiality in a more efficient and effective manner.

SEP a Priori [3][4][5][6][7][22]

The European Telecommunications Standards Institute (ETSI) is one of the largest Standards Setting Organizations (SSO) in the telecommunications industry, with over 900 member companies in 65 countries. 3GPP, or the Third Generation Partnership Project, was founded in December 1998 by the ETSI in collaboration with other standard development organizations (SDO), including the ATIS in the United States, the CCSA in China, the ARIB/TTC in Japan, the TTA in South Korea, and the TSDSI in India, to develop new technical specifications (TS) for the third generation (3G) of cellular networks at the time. To date, 3GPP has progressed to standardize successors of 3G: 3G UMTS (2000), MBMS (2004), HSPA (2008), 4G LTE (2008), 4G-Advanced (2011), LTE Unlicensed (2016), V2X (2016), NTN (2017), UAS (2018) [22], 5G NR (2018), 5G-Advanced (2021), and on to 6G.

Technology standardization is a collaborative and competitive process. Participants constantly make strategic decisions including:

1. Is it possible to argue for the adoption of my compa-



Is the TDoc a small tinker or part of a broader move?

ny's technology as a standard, i.e., having my contributed TDocs widely agreed upon?

2. If not, and there are other companies' technologies being considered: X, Y and Z -- which one should I otherwise support that is more closely aligned with my company's interest?

3. How do I construct credible counter-arguments against competitors by reviewing a large pile of historical CR Reason, Summary, "Consequence if not Changed" and CR Affected Clauses records? [5][8]

4. On average, 3,000 TDocs are collectively uploaded for each RAN1 Meeting, of which 10% may relate to my area of expertise; how do I review the 300 TDocs one week before the 3GPP Meeting and provide insightful feedback?

5. When providing feedback, do I have an effective method for tracing back relevant prior TDocs to learn how similar topics have been handled in the past? Topics are frequently cross-referenced across Working Groups during the same meeting week; is there a tool that always provides me with firsthand information so that I can track down these parallel topics and figure out dependencies? [9][10]

“ I chose Apex Standards because the integrated solutions provide me with structured intelligence that allows me to think five steps ahead of my competitors. ”

6. To fulfill professional due diligence, is it possible to filter out pivotal TDocs for a particular TS as mentioned in the secretary remarks, spreadsheet metadata, title, abstract, agenda item descriptions, chairman notes, text proposals, inline references, cross references, or CR specifications, etc? [11]

7. Can TDoc maturity be evaluated in terms of their position in a standardization genealogy? While it is tempting to use TDoc status as a simple criterion ("Approved", "Agreed", "Endorsed", "Noted" as a commonly used indicator of TDoc importance) for

determining whether more time spent along each TDoc is worthwhile, the second order effects reveal contextual insight that are otherwise hidden from the first cut. For example, the number of prior/posterior TDocs along a focal TDoc, or the order of WI Meetings (discussed in the kth meeting for the same Work Item, therefore a lower number to indicate an early stage and a higher number to indicate a late stage). Furthermore, the number of co-sources (company contributors) can be used to estimate the success rate of TDocs as consensus consolidates, the likelihood that it will be agreed upon during WG meetings, be approved during TSG Plenary Meetings, and finally be included in future ETSI TS Publications, so that delegates can advise their companies on next steps better. [12]

8. How can I identify novel and patentable subject matters as TDoc debates evolve? How do I strategically fill out the Information Disclosure Statement (IDS) such that I have the best chance to prevail on retaining the planned scope of claim languages? Is it possible to cross check similar wireless technologies discussed in 3GPP with those discussed in IEEE 802.11? [13]

9. How can I tell whether any of my patents have the potential to be read vis-à-vis a future TS as relevant discussions move forward and particular TDocs start to show a potential in a future TS inclusion?

10. As dynamic 3GPP meetings progress, so does the varying degree of essentiality of my ongoing patent filings - is more investment justified for a request for claim amendments or expedited filing processes?

“ Less time sorting TDoc, more time strategizing—I work with Apex Standards because I am tired of getting secondhand information that is usually noisy, vague and described in questionable terms. High quality intelligence inspires high quality thinking—both are difficult to come by. ”

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SEP a Posteriori [14]

While most SEP holders are also active TDoc contributors, which provides them with apriori information for detecting SEPs within their patent portfolio, there are times when a corporation will want to identify SEPs a posteriori by comparing the claim languages of their patents against the ETSI TS Publications after each TS-Version is frozen.

Scenario 1: A corporation is not a 3GPP member and does not attend 3GPP meetings. This includes new entrants to the IoT space, universities, research institutes, and non-telecom manufacturers whose patented technology was not initially intended for a SEP use. The company further wishes to know to which TS its patents may have a better chance to be essential.

Scenario 2: A corporation is a 3GPP member and attends 3GPP meetings, but has a specialized focus or is not always active during 3GPP standardization, i.e., not always contributing to frontline discussions or playing a leadership role, often a small team of 1-3 delegates. This includes manufacturers of IoT devices where standardized interoperability matters, wearable electronics makers, auto makers and UAV makers.

Scenario 3: A corporation is a 3GPP member and has established a mapping between several of its patents and familiar TS, i.e., having the structural knowledge of patent-TS mappings, allowing it to validate and declare as SEP with. However, with reference to the unfamiliar TS, it is not clear whether any existing non-SEPs might be related to them.

Scenario 4: A corporation that manages effective internal communication between its R&D and IPR teams and maintains an accurate mapping of its SEPs and TS. However, it is often the case that a TS is cross referenced with one or more different TS that technical staff are unaware of, resulting in overlooked multiple TS-essentiality. Is it possible to see a complete picture?

Scenario 5: A corporation wishes to improve its cross-licensing position. Can there be effective and economical methods for identifying more SEPs inside one's own portfolio (if under-declared), while also investigating the SEPs' essentiality as declared by the counterparty (if over-declared)?

Scenario 6: A corporation wishes to make sure of the duration of a counterparty's SEP essentiality by searching through the various versions and releases of a particular TS, i.e., a procedure may be amended due to errors or inefficiency; when a feature is added to or removed from a standard at a particular version, patents incorporating that feature may become more or less essential to that standard following the addition or removal of a feature. [14]

Scenario 7: A corporation wishes to determine the maturity of a particular feature, i.e., has this feature been included in a standard over the past fifty versions, or is it an emerging technology just newly added in this version of a TS? [14]

Scenario 8: A corporation wishes to make timely declarations along the dynamic standardization timelines and at each stage of the patent filing process. For example, the estimated standard essentiality of a particular claim language can inform decisions such as: whether to spend money to secure a priority date by filing WIPO-PCT (WO) application or an US provisional application; whether to continue spending

by advancing a potentially essential WO to a national stage in order to protect my company's interest in my domestic market; and finally, whether to pursue global patent family protection by increasing my expenditure on multi-jurisdiction filings covering major markets, including US, EP, CN, and JP. What would be my overall expected Return on Investment (ROI)?

Scenario 9: A corporation wishes to join a licensing program offered by a patent pool by claiming some of its patents as SEPs, and portfolio managers are asked to shortlist quickly and investigate patent-standard essentiality at a granular level, i.e., precise mappings from claim feature teams to (TS, Release, Version, Section, Page Number) combinations.

Scenario 10: A corporation is concerned with prioritization over IP asset classes with proof of standard-essentiality, such as what (SEPs), where (TS), whom (to seek in/out licenses, acquisitions/divestitures), when (to fit with product commercialization cycles), and ultimately the ROI calculations (at what cost vs how much revenue generated over time).

“ For each question and scenario, we provide key insights by directly addressing what works, what doesn't work, and what hasn't worked, yet. Our clients report a 20% increase in SEP declaration and a 12% increase in SEP out-licensing and sale revenues combined.

SEP a Fortiori [15][16][17][18][19]

When it comes to declaring my patents as SEPs, having a comparative perspective, both within my portfolio and outside of my portfolio, both before and after the declaration, is beneficial. The following are frequently asked questions:

1. Which patents has my company declared as essential? To which TS? When? What strategic considerations were given at the time of declaration?
2. Which patents have been declared essential by competitors? To which TS? How do I look in a SEP landscape? Any position that I can exploit? Or, alternatively, are there any missed declarations or any weak points I should take action on sooner rather than later? Based on competitors' declaration history, which directions have they taken over the last few years?
3. What types of competitors' hidden motives can I detect? Was the version specified when a SEP was declared? Were pertinent sections included? For example, a blanket declaration or disclosure is usually intended for defensive rather than assertive purposes.
4. How do I evaluate the validity of licensors' patents that remain undeclared and hidden from the SEP dashboard? Was it for a lack of essentiality, or was it intended to avoid ex ante competition by weaponizing these undeclared patents to be licensed on RAND rather than FRAND terms ("Fair" is required by SSOs upon SEP-declaration)?
5. How do I sift through the enormous number of undeclared patents on the market to determine which are potential SEPs that the owners are unaware of? This occurs as a result of the high cost of essentiality validation, and so the patent remains undervalued and cost effective to buy. After identifying the hidden

nuggets, how can I structure an acquisition offer that aligns with my company's overall IP strategy?

6. Can I tell whether a declared SEP is associated with a mandatory or optional feature? How does a party strengthen its position with charted evidence that can move a licensing negotiations in one's favor? [20]

7. Is it worthwhile to conduct a cross-check to decide whether competitors' declared SEPs are comparable to my undeclared ones? What are my chances? Should I make timely declarations accordingly?

8. Can I have a list of cross-referenced technical terms handy to quickly examine the relationships between my patents and other already declared SEPs?

9. How do I establish direct SEP-TDoc-CR relationships, and, through them, investigate under-declaration and over-declaration implications [21]? SEPs are declared at the TS level, but the same TS can encompass numerous Change Request (CR) revisions, versions, clauses, sections, and features, leading to opacity.

10. Certain declarations occur during the patent filing stage; what are the ramifications if it does not survive prosecution and is not granted? Is it possible to use charted levers to determine whether it is worthwhile to pursue continuation, divisional, or continuation-in-part applications further?

References

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