

SEP Litigation Trends: What Does the Data Say?

Tim Pohlmann CEO IPlytics

April 2021

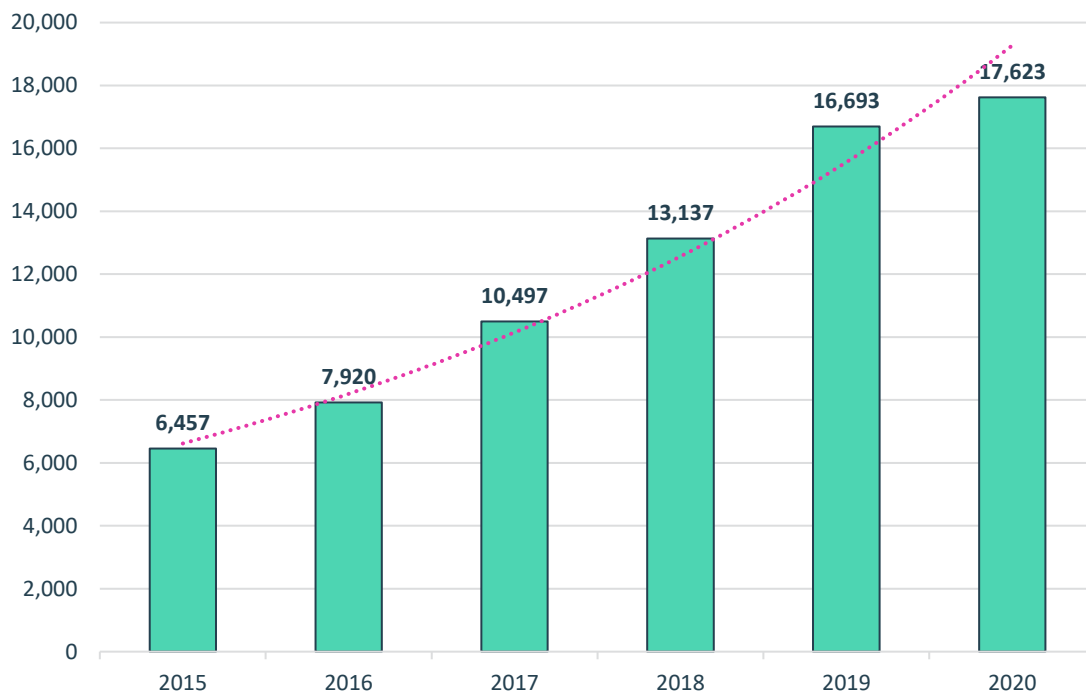


Standard Essential Patents in Litigation

Licensing SEPs will be more difficult to navigate outside of the smartphone industry. Each sector will apply connectivity differently, so licensing mechanisms will need to become more flexible, as there is no one-size-fits-all model that will work across all industry verticals.

Standard-essential patents (SEPs) are on the rise as the number of yearly newly declared patents has almost tripled over the past five years; there were 6,457 net new declared patent families in 2015 compared to 17,623 yearly net new declared patent families in 2020 (see figure 1). The [5G standard alone counts over 150,000 declared patents](#) since 2015. Similarly, litigation around SEPs has increased. One of the driving factors of recent patent litigation is, on the one hand, the sharply increasing number of SEP filings, and on the other, the shift from connectivity standards (e.g. 4G/5G, Wi-Fi) mostly incorporated in computers, smart phones, and tablets to new industry applications where standards are implemented in [connected vehicles](#), [smart homes](#), [smart factories](#), smart energy and/or healthcare applications.

Figure 1: Declared patent families as to year of declaration (IPlytics Platform, 2021)

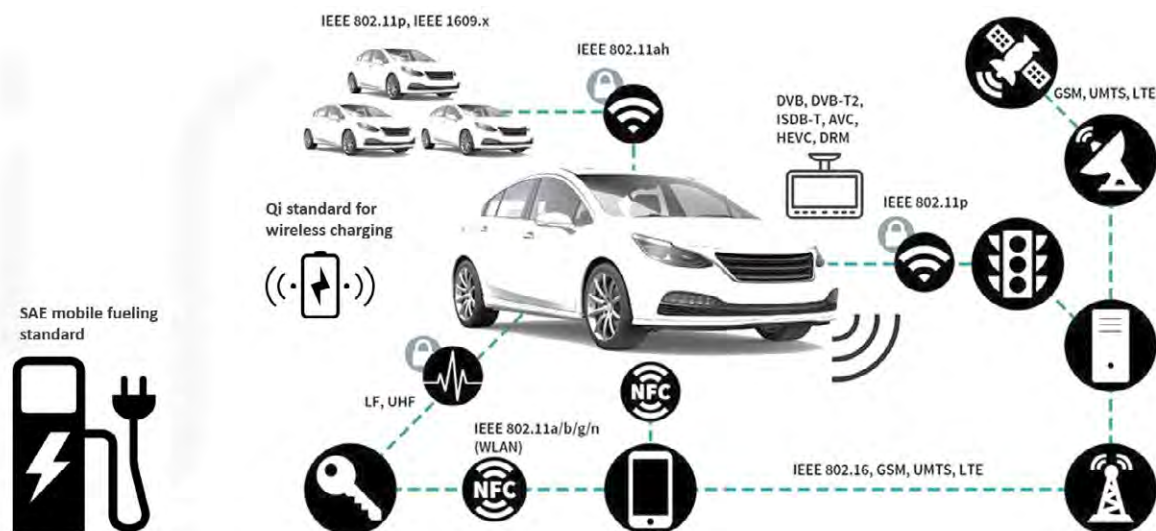




SEP Litigation Beyond Smartphones

In fact, the automotive sector has been implementing standards for various connectivity applications (figure 2) since over a decade now. Anyone who drives a Tesla or anyone who is a frequent car sharing user has for some while now been able to open and close vehicles using a smartphone application. This smartphone application uses 3G, 4G and now 5G to connect and communicate with the vehicle. Also, navigation system or safety features such as eCall implement cellular technologies in cars. The inner vehicle communication is based on standards such as Bluetooth, RFID or NFC to connect infotainment devices or utilize new technology standards, such as the Qi standard, to wirelessly charge phones. All of these standards are subject to SEPs, and the licensing negotiations with SEP holders who have requested royalties from auto makers has been ongoing for several years, yielding multiple litigation cases, especially for SEPs in the cellular communication space (2G-5G). With cars being more and more fully connected to their environment, e.g. for autonomous driving applications, the use of standards [subject to thousands of SEPs](#) – such as the IEEE 802.11p, or V2X (4G or 5G) – will further increase (figure 2).

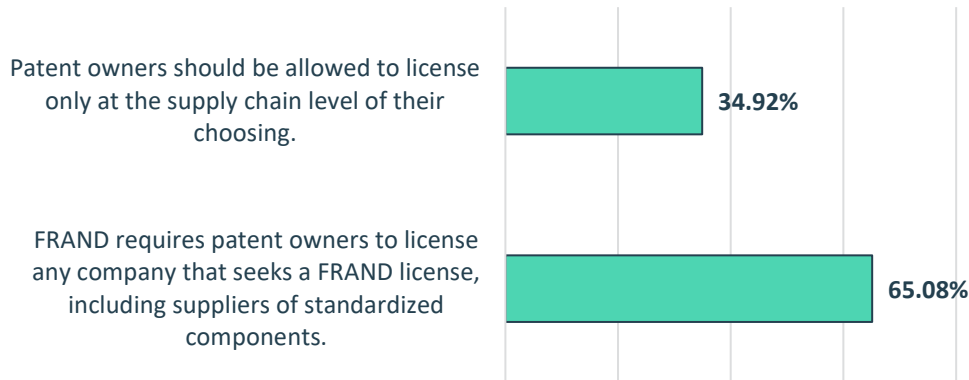
Figure 2: Standards subject to SEPs implemented in cars (IPlytics, 2021)



A recent [IPWatchdog webinar](#) discussed the main SEP litigation trends with leading industry experts. The panel was well-balanced among SEP owners and SEP licensors, and discussions went back and forth about where in the value chain SEPs should be licensed. During the webinar, the attendees were asked about their opinion with respect to FRAND in a live poll questionnaire. Figure 3 shows that out of 351 answers submitted by webinar attendees, 34.92% found that patent owners should be allowed to license only at the supply chain level of their choosing, while 65.98% were in favor of FRAND requiring patent owners to license any company that seeks a FRAND license, including suppliers of standardized components.



Figure 3: Webinar Live Pool result: With respect to FRAND, which best reflects your view?" (IPWatchdog Webinar Polls, March 2021, N=351)



While the importance of various connectivity standards has been increasing over the past decades, patent litigation still mostly concentrates around the cellular technology standards 3G, 4G and 5G. Figure 4 ranks all standards where declared patents have been subject to litigation, while figure 5 shows the share of standards subject to litigated patents over time. The underlying data is based on worldwide patent declaration information from various standards bodies that is cross correlated with worldwide litigation data of the past 20 years based on the IPlytics Platform database. While the number of 5G patents in litigation seems very high, given the only quite recent implementation of 5G, one must consider that figures 4 and 5 also list patents litigated for a 4G implementation under the 5G standards, as these have been declared for the 5G standard also.

Figure 4: Share of standards subject to litigated patents (IPlytics Platform, April 2021)

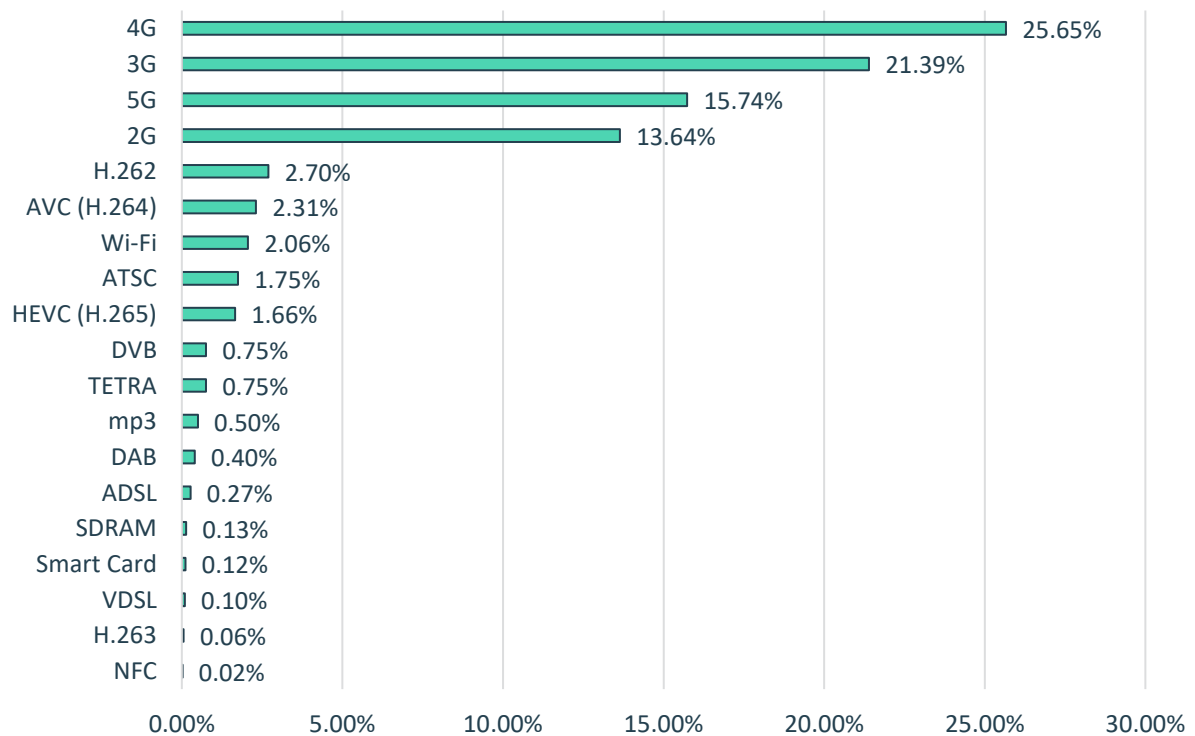
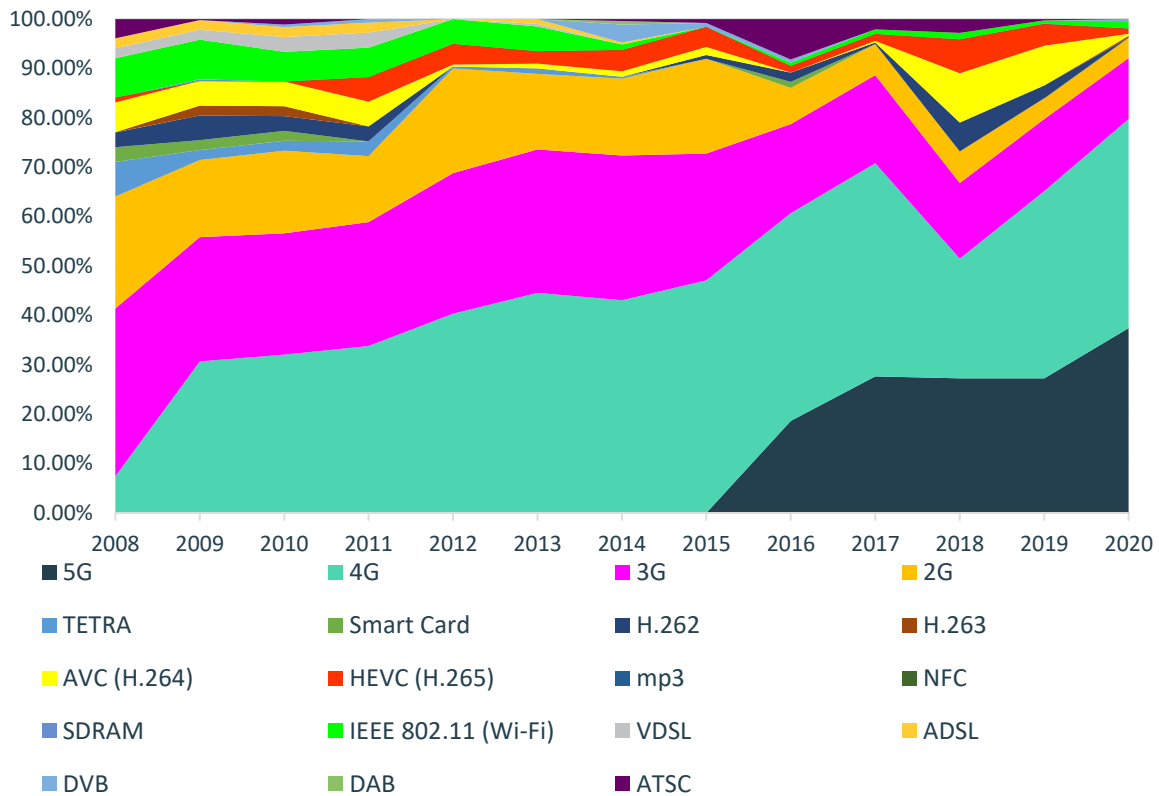




Figure 5: Share of standards subject to litigated patents over time (IPlytics Platform, April 2021)



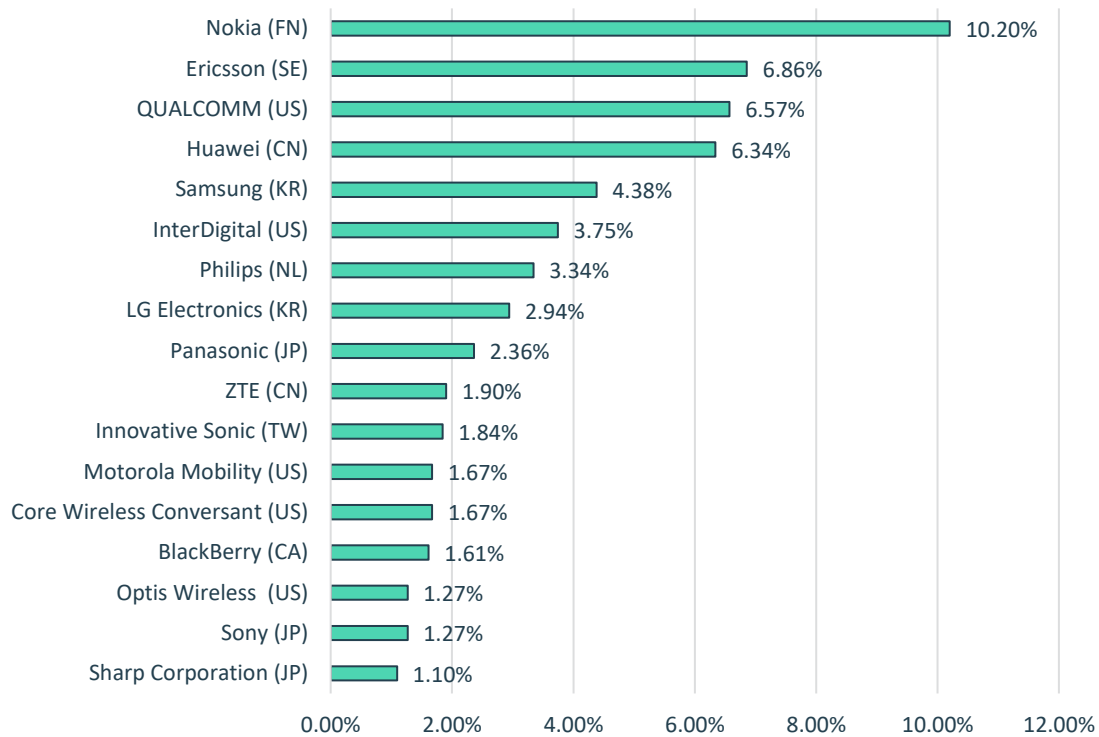
Who Drives SEP Litigation?

In the past years, litigation around SEPs was often driven by very active patent commercialization teams of major SEP patent owners. And the statistics around litigated declared patents (see figure 6) confirm this trend, with companies such as Nokia, Ericsson, Huawei, Qualcomm, Samsung and Interdigital leading the list of plaintiffs for SEP litigation. Yet, litigation in the mobile sector only in a few, but still significant cases, included patent assertion entities (PAEs).

Beyond the smartphone world, Avanci – the patent pool that licenses 2G, 3G, 4G and 5G SEPs for the automotive application – managed to attract PAEs such as Conversant or Unwired Planet to join as licensors. This led the auto industry to believe that SEP litigation may thus not be driven by PAEs for the automotive sector anymore.

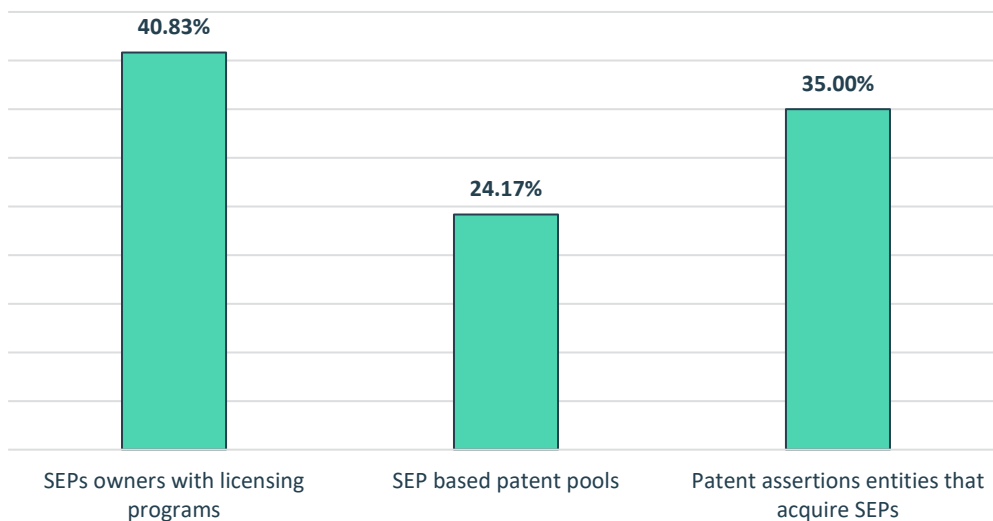


Figure 6: Plaintiff share as to litigated declared SEPs (IPlytics Platform, 2001-2021)



Still, the industry believes that PAEs will be among the driving factors for increasing SEP litigation in future (figure 7), as webinar participants in 35% of the cases voted PAEs will drive SEP litigation, compared to about 40% who voted for SEP owners and about 24% SEP patent pools (as shares from a total of 294 answers).

Figure 7: Who will drive SEP litigation in the upcoming years on the plaintiff side? (IPWatchdog Webinar Polls, March 2021, N=294)

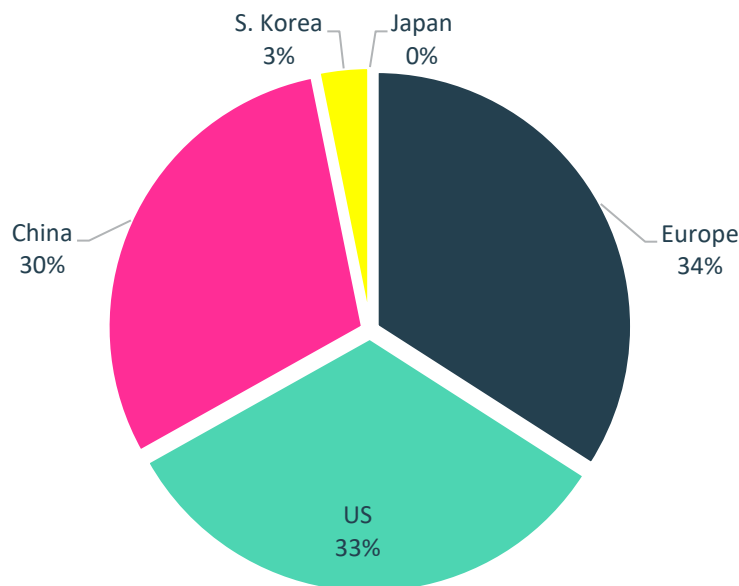




One reason PAE litigation around SEPs may increase again is the belief that large SEP owners such as Huawei and LG Electronics may soon sell parts of their SEP portfolios, which may likely end up in the hands of PAEs. In a statement earlier in April, LG Electronics announced it would close its mobile phone business, after suffering years of declining market share. As LG Electronics is among the top 10 worldwide SEP owners, many market experts fear that LG may change their licensing strategy around SEPs to e.g. more aggressively commercialize their own SEPs (which seems unlikely as LG Electronics is among the major suppliers to SEP implementors) or sell its portfolio to PAEs or other market participants. Also, Huawei could soon change their SEP licensing approach; due to the U.S. ban on the company, SEP commercialization in the United States will increase in importance. That said, a situation where Huawei is not selling smartphones in the United States anymore, makes them a pure out-licensing company that some see in a position similar to NPEs (non-practicing entities).

Litigation typically takes place in countries where most products subject to patents are sold (Europe and the United States) or produced (China). According to the webinar attendees, future litigation will take place in three major jurisdictions (figure 8): Europe with 34% of the votes, the United States with 33% of the votes, and China with 30% of the votes (as shares from a total of 384 answers).

Figure 8: Who will drive SEP litigation in the upcoming years on the plaintiff side? (IPWatchdog Webinar Polls, March 2021, N=384)





SEP Licensing Realities for IoT

While licensing SEPs in the smartphone industry is well understood, and 5G licensing negotiations are comparable to those of 3G or 4G, licensing SEPs will be more difficult to navigate outside of the smartphone industry. What is more, each sector will apply connectivity differently, so licensing mechanisms will need to become more flexible, as there is no one-size-fits-all model that will work across all industry verticals. For example, linking a refrigerator to other home appliances might be a much simpler application of 4G/5G or Wi-Fi than installing 4G/5G or Wi-Fi enabled security features in a car, which are crucial to avoiding road accidents. As such, a uniform licensing model will not work. Although flexibility is vital, the industry must also find mechanisms that allow companies to aggregate and package the licensing of SEPs to avoid licensing inefficiencies yielding lengthy negotiations or even patent litigation. Here, patent aggregation may take place on both sides of the table. On the one hand, patent pools that aggregate SEP licensors, and on the other hand, defensive aggregators who represent and negotiate SEP royalties for licensees.

While the telecoms industry and large SEP-owning companies are experts in standards development and worldwide SEP licensing, enforcement, and litigation, other sectors, such as the auto industry, consumer electronics, industrial manufacturing, energy, medical-healthcare and many more have little knowledge about connectivity standards such as 5G and how to deal with licensing SEPs. IP professionals in these sectors will need to gain more expertise around SEPs and standards to understand that by making use of technology advances around connectivity they will need to implement patents essential to standards and will thus at some point have to pay royalties for SEPs.

Future technologies that enable connectivity will increasingly rely on patented technology standards such as 4G and 5G, Wi-Fi, NFC, RFID, Bluetooth and many more and the number of declared SEPs is constantly rising. As such, IP decision makers should consider royalty costs and appropriate security payments in advance.

For further information, please contact us.



IPlytics - The Gold Standard for SEPs and Standards



Empowering IP professionals to understand the complexity of patents and standards in the connected world.

IPlytics is the first solution on the market to bring together comprehensive, highly indexed technical standards information, declared SEPs, patent pools, global patents and standards contribution data, to provide industry-leading analysis on the past, present and future of standards-essential technology. Unlike other tools that are overly complex, IPlytics provides fast, intuitive access to patents and standards to empower the user to strategically align patent portfolios to protect innovations and proactively engage in continuous strategic portfolio development as it relates to SEP assets, for initiatives such as licensing, acquisitions and joining patent pools, or to understand the respective positions of the competition. The next technology revolution will connect everything making it even more challenging to understand how technologies and IP rights overlap. IP professionals need to rethink – even revolutionize – how to approach both patent and standards data, to provide business-ready insights for actionable decision making across the organization.

LexisNexis® Intellectual Property Solutions.
Bringing clarity to innovation.

To learn more visit us at
www.LexisNexisIP.com/IPlytics