

## 3 Areas Look Ripe For New SEP Licensing, Litigation

By **Brian Johnson and Michael O'Mara** (August 29, 2023)

Litigation over standard-essential patents, or SEPs, can be a cyclical phenomenon, where litigation follows a generational change in technology.

We saw it with 3G and 4G technology, where each generational change led to a flurry of litigation focused on smartphones. Now, many assume that 5G litigation is poised to follow, but so far the volume of 5G-related litigation has not followed the trends seen for previous generations.

An explosion of 5G smartphone litigation may still be around the corner, but as we wait, other technologies too have quietly developed the elements necessary to be attractive to patent holders, namely a complex development history with many invested companies and widespread adoption of the standard.

In particular, there are three areas to watch for increased licensing and litigation in the near term: 3G and 4G for devices connected to the Internet of Things, Wi-Fi 6 and data compression codecs.

### Next Likely Litigants for Cellular SEPs

One logical direction for future litigation lies with the same SEP holders and patents that spurred the prior waves of smartphone litigation. Rather than focus on the next generation of cellular in 5G, these SEP holders have instead sought to capture a growingly diverse set of products that now use 3G and 4G.

This trend has already played out in 3G and 4G in the auto industry. For years now, cellular SEP holders have pursued auto original equipment manufacturers, reflecting the increasing adoption of connected car technologies.

Following a full court press of parallel litigations by licensors to the auto patent pool run by Avanci, most auto OEMs caved to this pressure and have taken a license with the Avanci platform, wrapping up the majority of 3G and 4G smart car installations.[1]

Now, SEP holders have shifted their focus into the next IoT segment, moving from auto OEMs to licensing makers of IoT devices, such as smart meters and asset tracking devices, a progression that Nokia Corp. has called its vertical by vertical approach.[2]

The IoT device segment has reached high levels of cellular adoption that make it well positioned for increased licensing and litigation activity; consumers continue to buy IoT devices that increasingly use cellular technology.

In 2022, there were more than 14 billion active IoT device endpoints, 20% of which connect to the internet using cellular technology, and these cellular IoT connections grew 27% from 2022 to 2023.[3]

Indeed, even beyond auto, SEP holders are actively publicizing their ambitions and



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successes in IoT. For instance, Nokia has announced that it entered into licenses with three IoT OEMs, including a large point-of-sales terminal maker, mobile payment company Block Inc. and smart meter maker Landis + Gyr Group AG.

Sisvel International Inc. has announced an IoT-focused cellular SEP pool. Avanci too has announced an IoT platform.

While the structure of the Avanci IoT platform is not yet public, it is reasonable to assume that Avanci and its licensors will utilize the same successful playbook and IoT device makers may find themselves the target of a rash of litigations from Avanci licensors.

### **An Expanded Set of Potential Litigants**

The same trends in IoT adoption driving interest from cellular SEP holders for 3G/4G licenses also apply to increasingly widespread adoption of Wi-Fi 6. As a result this segment also has the right mix of ingredients for increased licensing and litigation activity.

Of the more than 14 billion connected devices in 2022, 31% were connected using Wi-Fi, and more than half of new sales of Wi-Fi-enabled IoT devices used Wi-Fi 6 technologies.[4]

Like cellular, the development of Wi-Fi is undoubtedly complex. In fact, the set of SEP holders may be even broader. Wi-Fi is promulgated by the Institute of Electrical and Electronics Engineers, rather than 3GPP.

However, because Wi-Fi 6 shares many core technologies with cellular standards, particularly 4G and 5G, it may include many of the same patents and SEP holders at the center of prior 4G licensing efforts. So, the same SEP holders that led the wave of 4G SEP litigation may have an increased role in the licensing and potential litigation for Wi-Fi 6.

Wi-Fi standards historically have not seen the same rate of litigation as cellular standards. However, this may have been due in part to certain policies and legal precedents that have recently changed.

For example, the fair, reasonable and nondiscriminatory rate setting in litigations like the 2013 Microsoft v. Motorola decision in the U.S. District Court for the Western District of Washington and the 2013 In re: Innovatio IP Ventures LLC decision in the U.S. District Court for the Northern District of Illinois set widely applicable public benchmarks on FRAND rates for Wi-Fi technologies that arguably favored implementers ahead of SEP holders.[5]

However, because Wi-Fi 6 was developed with particular attention to addressing the increasing demand on Wi-Fi networks from the growing number of IoT devices, SEP holders for Wi-Fi 6 will likely seek royalties reflecting their perceived increase in value of Wi-Fi 6 over previous Wi-Fi releases — value no longer tied to the benchmarks in Microsoft and In re: Innovatio.

Moreover, in the aftermath of the U.S. Court of Appeals for the Federal Circuit's 2019 TCL v. Ericsson decision, which required that past damages for an SEP portfolio be determined by a jury instead of a judge, there are fewer litigation scenarios where a court-determined FRAND benchmarks would be completely dispositive.[6]

The previous lack of Wi-Fi litigation may also have been due in part to IEEE's 2015 policy that both discouraged SEP holders from seeking injunctions against potential licensees and directed that the value of the SEPs should be determined by the value the technology

contributes to the smallest saleable compliant unit.

That too has changed. This year, the IEEE revised its policies to loosen its past restrictions on seeking injunctions and valuation based on the smallest saleable unit.[7]

This change will likely embolden SEP holders to demand increased royalties that reflect the value of the end-device technology — demands that may not be backed up with threats to litigate towards an injunction.

Against this backdrop, there are signs that things are heating up in Wi-Fi 6 licensing, and litigation is already increasing. For instance, Sisvel has created a Wi-Fi 6 pool. And last year Huawei Technologies Co. filed well-publicized Wi-Fi 6 cases against Amazon.com Inc., Netgear Inc. and AVM.

### **Developments in Data Compression Codecs and Potential for Litigation**

While developments in cellular or Wi-Fi technology have tended to focus on the demand for more and faster data, data speed is not everything. Simply, if one can make a big piece of data smaller, it too can transfer quickly. This technique is perhaps most critical when it comes to videos.

Videos, especially ultra high definition videos like 4K and 8K, involve an incredible amount of data — far more than can be feasibly transmitted on any network without compression involved. That's where these compression codecs shine: making big data smaller, but still usable.

Digging deeper, we can find a complex history with many invested companies. For video compression, the International Organization of Standardization and the International Electrotechnical Commission, using contributions from many companies, published what is known as H.265, capable of compressing ultra high definition videos efficiently.

In turn, H.265 was developed as an evolution of H.264, which itself is an evolution of H.263. Each of these, according to the ISO and IEC, are encumbered with FRAND commitments.

That alone may qualify as a complex development history, but that complication has been mitigated some by a successful patent pools, including the ones run by MPEG LA.

Indeed, MPEG LA has successfully organized some of the biggest video codec patent holders to be licensors in its pool, with some of the most prominent developers as licensees. With so many patent licenses in place, there has seemingly been less need for litigation.

Here is where things get interesting. Enter the Alliance for Open Media. Supported by the who's who of technology companies, AOMedia, by its own account, is tasked with the development of a next-generation royalty-free video coding technology, dubbed AV1. AV1 too is a codec designed for ultra high definition videos, comparable to H.265.

The show-stopper here is the so-called royalty-free part. According to AOMedia, in developing AV1, they intentionally avoided patented technologies of others. In their view, AV1 uses only older, unpatented technology or technology developed by members who have committed to royalty-free licenses.

Some patent holders, however, have taken issue with AOMedia's claim as to its use of

unpatented technology. The most vocal opposition perhaps comes from Sisvel, a patent pooling company with roots in asserting 3G and 4G patents in court.

Sisvel now refers to AV1 as so-called copycat codec, claiming that it has patents that cover the standard.[8] In fact, Sisvel now offers a license to AV1, while fully acknowledging it had no part in the development of that standard. In Sisvel's view, AV1 is based on prior codecs for which it has patents.

Others too are likely following closely, like MPEG LA. While MPEG LA has not announced the creation of an AV1 patent pool, it has taken similar steps in the past.

Years back, MPEG LA claimed a predecessor technology to AV1 was infringing and initially intended to form a patent pool covering that technology, backing down after entering a license agreement with its developer, Google LLC. And now, very recently, MPEG LA completed an unprecedented merger of patent pools by joining VIA Licensing, consolidating its potential enforcement power.

So we have the first ingredient: a complex history of heavily invested parties. The second, widespread adoption, is happening now too. Netflix has been using AV1 since 2021.[9]

Google has since been continuously rolling out AV1 in a variety of its products. Many others are following. This adoption shouldn't be surprising. Netflix and Google are founding members of AOMedia, along with companies like Apple, Samsung, Microsoft, Meta, Huawei, Intel and Amazon.

### **The Future for IoT Developers**

While the future of SEP disputes may take a number of different paths, one aspect appears inevitable: A new breed of companies will find themselves in the crosshairs.

Telecommunications companies have grown to be sophisticated users of SEP technology, in some cases having in house attorneys dedicated to monitoring and handling specifically these types of issues.

But other companies, particularly product developers that have increasingly found reason to incorporate standards-supported technology into their so-called smart products such as kitchen appliances, security and health devices, may be predictably unaware of the SEP subindustry that may soon make them targets, even if they have never heard the terms SEP or FRAND.

For that new breed of product developers, the key for now is to learn and prepare. Today, phone developers have generally accounted for presumed SEP royalties and baked those into the price of their products.

But that wasn't always the case. When SEP holders first approached telecommunications companies years ago, their licensing requests were a shock to the business model for many and an existential problem for others.

Recognizing the direction and impact of potential SEP disputes is the first step to avoiding a similar outcome.

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***Disclosure: Brian Johnson represented Microsoft in Microsoft v. Motorola.***

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