

# IoT, CONNECTIVITY AND SEPs

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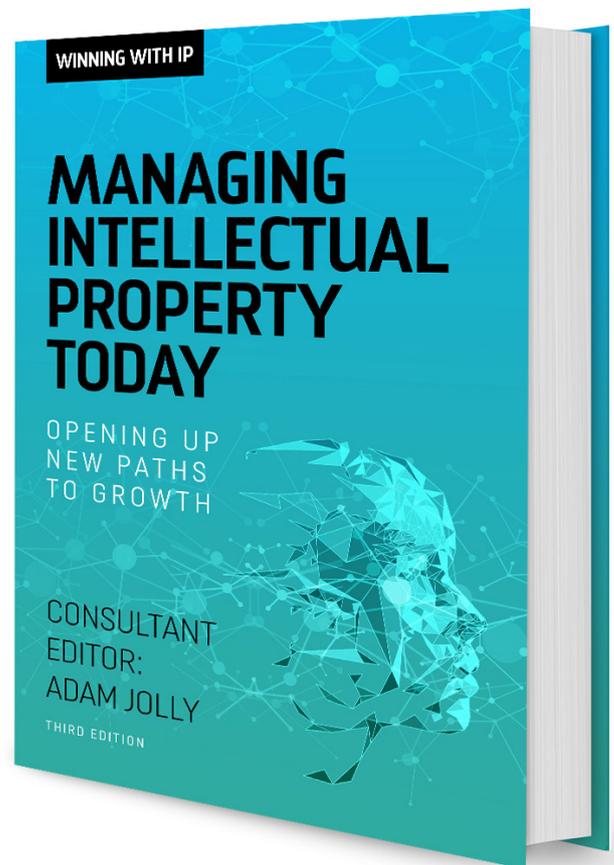
Innovate by connecting products to the internet of things, but don't get lost in the maze of standard essential patents, say Sebastian Ochs and Olivia Nemethova at Grünecker in a book inspired by the EPO and LESI's High Growth Technology Business Initiative

Many in the automotive industry were taken by surprise when the first complaints reached them about an alleged infringement of standard essential patents (SEPs) for connectivity by their cars. Traditionally, SEP disputes were either amongst competitors in consumer electronics, such as mobile phone manufacturers, or patent pools and non-practising entities (NPEs) against consumer electronics manufacturers.

As cars become more a smart phone on wheels, the actual functionality of driving from A to Z is less a selling factor than connectivity and convenient use of external devices. Suddenly, car manufacturers became an attractive group of future licensees for SEP owners. Their thinking was reinforced by the dwindling returns in traditional sectors like consumer electronics and the relatively high selling price of cars as a basis for royalty calculations.

You might think that car manufacturers were used to patent disputes. While it is true that they know how to litigate them, the actual playground has changed. It is now no longer primarily in mechanical engineering, but in a field where they have less experience, electrical engineering. Furthermore, car manufacturers do not really have their own patents that they could assert in return. So it makes it hard for them to react, when they find themselves forced outside their comfort zone.

The major car disputes will at some point come to an end. The next wave of SEP litigation will then loom on the horizon. All manufacturers now have to include electrical engineering into their mechanical products, notably in



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connecting to the internet of things (IoT). This chapter reviews the circumstances and challenges of these SEP negotiations, highlighting how manufacturers can react in these novel situations.

## IoT standards

IoT can be deployed in various scenarios including connected vehicles, eHealth, home automation, energy management, public safety, industrial process control and smart cities. For different scenarios, different standards may be applicable. There is no single standard for IoT. For example, standards supporting connectivity may be communication standards such as ZigBee, WirelessHART, 6LoWPAN, Bluetooth, wi-fi, DECT, cellular communication standards for machine type communication, or wired interface standards. Further standards that may be applicable include compliance, networking, data, and security protocols, such as CoAP (Constrained Application Protocol) or DDS (Data Distribution Service) etc. Another technology field that may be relevant for IoT is wireless charging, largely dominated by the Qi standard.

Particularly in the field of data protocols, there are standards intended to be open in the sense that no royalty needs to be paid to implement them. However, a standardization organization cannot force its non-members not to enforce their patents. Accordingly, even when implementing an open standard, there is a residual risk that it may be covered by a patent.

## An asymmetrical IoT game

The particular challenge that implementers may face is that making an IoT product, or merely adding connectivity features, can result in an asymmetrical situation. If a company that has its origin in mechanical engineering is now confronted with a less familiar field of technology, such as electrical engineering, and different opponents, namely NPEs or operations from a totally different sector, it creates a series of challenges that present themselves in ways that they might not originally expect.

### *New players*

SEP owners or licensing entities are typically either market participants from the electrical engineering market, such as consumer product manufacturers, or NPEs and licensing pools. These new players do not only have a different understanding of their own technology, they also are in a totally different position.

Typically, they do not produce anything the mechanical engineer manufactures. Hence, any counterattack on the basis of patents owned by the mechanical engineer cannot be made.

When looking at NPEs and the pools, the situation is even more difficult. Since they do not have any product other than other patents they want to license, counterattacks on the basis of patents are non-existent.

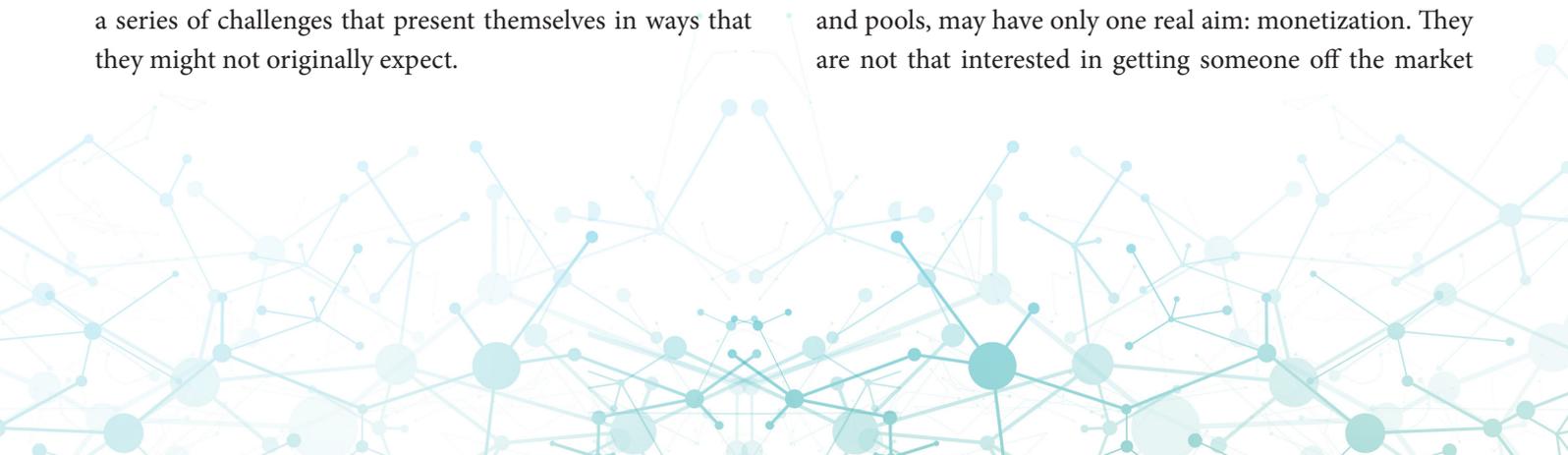
### *New playground*

IoT and connectivity are not closely related to mechanical engineering. Their implementation, at least at the current stage, is by use of third parties, such as integrated circuit manufacturers and suppliers and other vendors that provide the compatibility and interface to the already existing product.

For instance, products that were mainly mechanical now get an add-on, making them suddenly compatible with a wi-fi, Bluetooth or even LTE standard. The issue is that this technology is typically something that is not yet a familiar field for the implementer. In most cases, particularly for smaller companies, such functionality is bought from an external vendor and is not something it has created from scratch itself. So an understanding of the technology can be a challenge in itself.

### *New rules*

Another challenging aspect is that SEP litigation has its own rules. The new players who have arrived, particularly NPEs and pools, may have only one real aim: monetization. They are not that interested in getting someone off the market



or stopping them using a specific technology. For them, SEPs, which others cannot avoid using, are for monetizing. It is a different attitude to the standard situation where two competitors in the same sector are fighting each other about a specific technology in their daily business.

Another major challenge is that it is not just one or two patents that are asserted against a specific product, but multiple ones, typically in various jurisdictions. As well as significant resources being required to make a defence against such allegations, the risks increase too. The SEP owner only has to succeed in one of its multiple lawsuits, whereas the defending party needs to win them all.

SEP litigation also has a specific characteristic: FRAND (fair, reasonable and non-discriminatory). It springs from courts who want to balance the need of the implementers to gain access to those patents and use the technology to enter the market, but also of course the interest of SEP owners to rely on their patents. It has resulted in a regime or framework, which obliges the involved parties to negotiate a licence that is fair, reasonable and non-discriminatory.

## Do's and don'ts

### *Don't ignore threats, but don't panic*

One of the core don'ts is to ignore threats that come with IoT implementation or connectivity. It is true that they can result in significant interference and disruption of the regular business; the good news is that there is no need to panic. In particular, if reasonable parties are involved, there will always be a possibility to settle the matter.

If there is one unreasonable party, the case law is relatively clear, that in such matters, either the SEP owners gets their right or the implementer cannot be subject to injunctive relief, reliefs for destruction and withdrawal from the market.

However, cases where a FRAND objection is successful are rare. In light of the head start the SEP owners have, they can rely not only on significant resources but also point to various decisions in their favour and to a large group of

licensees to support that what they believe is an appropriate royalty rate is actually reasonable. So do take these points into account as early as possible.

### *Do check the landscape*

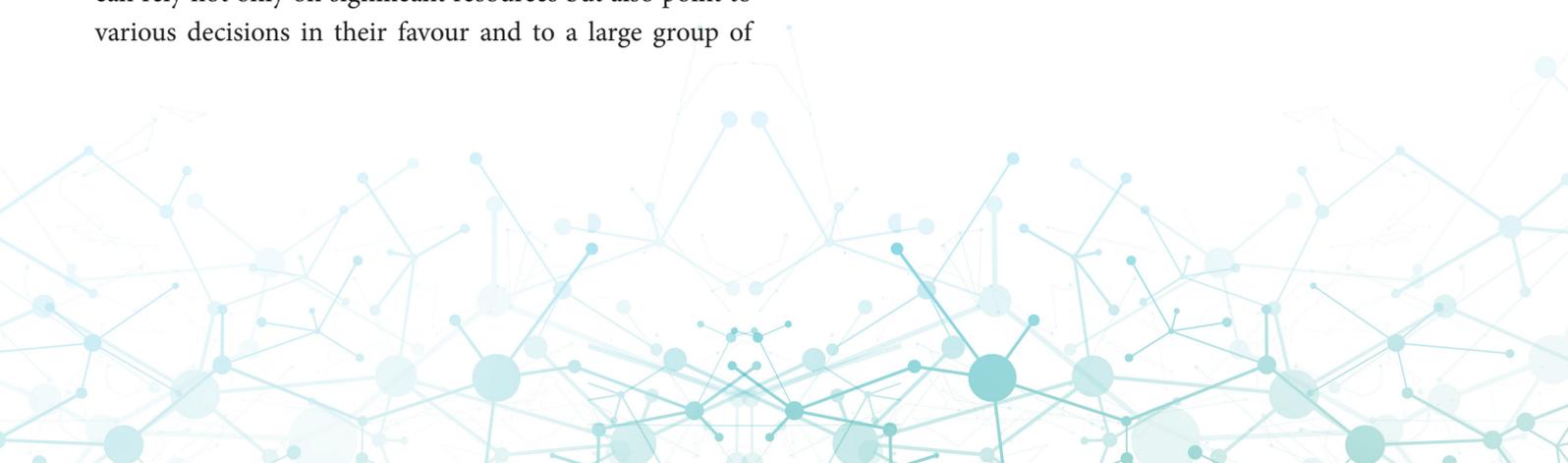
To assess risks, check the landscape of patents in the field that you are entering as early as possible. The SEPs for a specific standard are not static but rather dynamic. Even if a standard has long been established, new patents can be considered standard essential and certain patents will lapse or declare non-essential in the course of litigation. However, keeping an eye on the landscape is something that makes it easier to assess the potential risks and the exposure in this context. As well as using your searching tools, it is also worth gaining an overview of the litigation and the royalties that could be paid.

### *Do be aware of potential attacks*

Being aware of potential attacks is in close connection with knowing the landscape of the patents. Here, it is of particular relevance to get an understanding of who the active players are and how they acted in the past.

### *Do factor in licensing fees*

Even though it may only be a small amount, the licensing fees that may need to be paid to SEP owners can have a significant impact on your margin. Hence, it is advisable to include into your sale price also a specific allocation for litigation, but also to investigate to what extent such licensing fees need to be paid. It will help later if the product is sold and back royalties have to be applied for those which have not yet been licensed.



## Summary

IoT requires connectivity which is typically achieved by some standardized interfaces. Accordingly, there may be multiple SEP owners requiring royalties for their patents. Thus, when planning an IoT product, it is advisable to check the landscape and estimate, as far as possible, additional costs resulting from potential negotiation or even litigation with SEP owners.

In any event, implementers must not turn a blind eye to this issue. Even though the whole patent issue around IoT has certain risks, it comes along with some great benefits and may even be a chance for companies that are new to this technology. So don't get lost in the maze of standard essential patents. There is always at least one way out.

**Grünecker** is a combined firm of patent attorneys and attorneys-at-law with offices in Munich, Berlin, Cologne and Paris. **Sebastian Ochs** is attorney-at-law and associate partner, who handles patent infringement suits in a variety of technical fields. Sebastian has a focus on interferences between patent and antitrust law. He is currently engaged in various litigation matters in the field of electrical engineering, including SEPs. **Olivia Nemethova** is patent attorney and partner at Grünecker. She is an expert in technical IP rights in the field of electrical engineering, in particular wireless communication, networks, signal processing, coding and artificial intelligence. Olivia has been handling patent prosecution, as well as pre-litigation and litigation including cases concerning SEPs. Further details at: [www.grunecker.de](http://www.grunecker.de).

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