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## **INSIGHT: What to Expect in Licensing and Litigation as the Internet of Things Comes to the Automotive Industry**



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*This is the third article in a series of five articles written by WilmerHale lawyers discussing how the emergence of IoT technologies will impact the automotive industry. The first article, “The Developing Landscape of Internet of Things Standards for Cars,” published on November 5, and the second, “Internet of Vehicles Technologies as Patentable Subject After Alice,” on November 20.*

### **Introduction**

As outlined in prior articles in this series, the Internet of Things (IoT), or the connection of a variety of devices to collect and exchange data through the internet, has broad potential to impact the automotive industry. The IoT is changing how users interact with cars, for example by connecting smart devices to cars or incorporating sophisticated user interfaces that can control everything from navigation to streaming music and self-driving and parking features. Moreover, the IoT appears set to fundamentally change how technology is developed for the automotive industry. Instead of relatively few automobile manufacturers dominating all aspects of the industry, new players are emerging, including established software and technology companies as well as new companies. With this emergence, new questions arise as to how companies will integrate technology into cars to maximize user experience. The addition of new companies providing technology to the automotive industry also implicates potential litigation, since traditional industry relationships between companies are now shifting and growing more complicated with an expanded set of players.

This article explores how innovation trends may impact current licensing of technology in the automotive

space, then how it may shape future licensing models. Finally, it examines how these innovations and licensing trends may implicate future litigation.

### **The Role of Licensing in the Automotive Industry and the Emergence of IoT**

Licensing in the automotive industry by automobile companies has historically been relatively limited. Automotive-specific technologies such as transmissions, braking systems, on-board diagnostics, and fuel systems, are typically developed by the automobile companies themselves. Software-based technologies have generally been proprietary rather than standards-based, and were specifically designed for individual car companies. More recently, where automobile companies have licensed technologies such as infotainment systems, the Tier One, i.e., component part suppliers that create those systems have been approached by automobile manufacturers (OEMs) to handle licensing issues for their components.

Technology advancements in the automotive industry have become more software based, whether they be entertainment features such as music and video streaming, or safety features such as lane location, collision detection, automatic braking. The IoT and vehicle to everything (V2X) communications have led to standards-based frameworks beginning to take shape. This shift has led to more and different types of companies getting involved in automotive industry.

To take advantage of these new technologies, implement standardized technology, and offer the latest advancements to customers, automobile companies may need to shift how they have typically viewed licensing

and become more directly involved. Already this trend has led to new relationships between traditional car companies and traditional technology companies. For example, Toyota and Microsoft recently announced a patent license agreement related to connected car technologies. The trend may also lead to licensing agreements between large established car companies and new small software companies that, for example, develop standardized IoT features. These smaller companies may be more agile and creative than more established companies in terms of formulating licensing plans and strategies to incorporate their technologies into cars.

## **Licensing Standardized IoT Technology in the Automotive Industry**

As outlined in the first article of this series, standards are likely to play an important role in the development of IoT in the automotive industry, including in V2X communications and infotainment systems. As was seen for example in the smartphone industry, regardless of which standards are adopted, companies will debate what framework for licensing standard essential patents should be implemented in the automotive context.

Fair, reasonable and non-discriminatory (FRAND) licensing is often used in industries adopting standards. FRAND licensing aims, among other things, to strike a balance in royalties between compensating owners of technology that is standardized and promoting widespread adoption. The two leading candidates for the V2X standard are Cellular-V2X (C-V2X) and Direct Short Range Communication (DSRC) based on the 802.11p standard. Each of the two candidates is based on prior technology that has a FRAND or RAND licensing regime.

As an example, smartphones were not ubiquitous when the cellular FRAND licensing scheme was developed. As they became more prevalent, companies spent years in litigation debating how the FRAND principles that had been developed for traditional cell phones should also apply to smartphones that had a lot of additional features. One reason for the rise in litigation as smartphones became more popular was—as is now being seen in the automotive industry—new players were coming into the cell phone market, and often these new companies had different ideas about licensing compared to traditional cellular companies.

Whether and how SEP licensing regimes will be adopted for IoT in the automotive industry is an open question. Years of negotiation and litigation have led to a body of case law that can help companies determine FRAND royalties, for example, for smartphones. Similar to the debate between traditional cell phone and smartphone companies, companies may debate whether cars present different considerations than smartphones and WiFi devices (such as hotspots or smart home devices) that would affect how to determine FRAND rates for standards essential patents related to IoT in cars. Given the price differential between cars and other types of consumer devices that typically implement standardized technologies, even SEP licensors that advocate for a percentage of the device-based royalty scheme for smartphones may recognize that a similar framework for cars will not be feasible. For ex-

ample, IoT patent pool licensor Avanci offers a flat rate licensing model for cars rather than a percentage-based model that many of its members advocate for smartphones.

Recently, companies and organizations in Europe debated how FRAND licensing models for IoT should be structured. Two potential licensing models emerged, (1) use-based licensing, which values a license based on how the technology that uses the SEP is used, and (2) license to all, in which a manufacturer can license an SEP from an owner once and that can be applied to any downstream use. Different companies and organizations were on opposite ends of the debate. On one end supporting the use-based model is IP Europe, a coalition of technology companies including Ericsson, Nokia, and Qualcomm. On the other end, organizations such as the App Association (ACT) and the Fair Standards Alliance (FSA), which includes car companies such as BMW, Ford and Honda, and technology companies such as Google, Apple and Cisco, support the license to all model. At the end of 2017, the European Commission issued a statement outlining its position on SEPs, stating that SEP holders should refrain from discriminating between implementers that are similarly situated, but fell short of taking an explicit position on the use-based versus license to all models. Organizations are continuing to work with the European Committee for Standardisation (CEN) and Electrotechnical Standardisation (CENLEC) to develop proposed licensing schemes and guidelines for implementing FRAND in IoT.

An alternative to licensing models that automotive companies have explored in other aspects of automotive technology is to open patents covering certain technology to the public, essentially making them “open source” and eliminating the need for licensing. One well known example in the automotive industry is Tesla’s announcement that, in an effort to encourage adoption and development of electric car technology, it would not enforce patent rights on innovations made using its lithium-ion battery technologies. Toyota made a similar announcement related to its fuel-cell technology related patents. Whether companies will do the same in the IoT space to encourage adoption of specific technology remains to be seen.

## **Potential Implications for Litigation**

Entrance of non-traditional automotive companies into the industry may shake up the patent litigation landscape for the automotive field. Where major automotive companies have co-existed for decades and could avoid litigation by cross-licensing technologies, a new software company with key IoT patents may have different incentives and leverage. For example, a cross-license from a car manufacturer may not be attractive to a small software company that does not make cars. This interaction between fundamentally different types of companies may force car companies to re-evaluate how to interact with potential suppliers.

IoT will lower barriers to entry into the automotive industry by allowing more companies to break into the industry with discrete contributions in a way that may not have been possible previously. With an increased number of companies that may have patents relevant to the automotive industry, and because those companies may or may not ultimately be successful, there may be

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an increased likelihood that patents will be transferred away from original owners to licensing or non-practicing entities. This could in turn lead to an increase in litigation involving non-practicing entities.

Several organizations currently exist that aim to curb litigation with non-practicing entities. One example is the LOT (License on Transfer) network, a consortia of companies agreeing that whenever they sell a patent to a non-practicing entity, all of the members will automatically receive a free license to the patent. Another example is Unified Patents, an organization that challenges patents at the PTO (and has an automotive sector focus), and a third is RPX Corp, a company that buys patents and challenges issued patents. If the number of patents held by non-practicing entities directed toward IoT with automotive applications increases, there may be more of a push by groups such as these to limit litigation, for example by filing more IPRs or using

other tools like Post Grant Proceedings to challenge patent validity at the Patent Office.

*Stay tuned for the fourth article in this series, "Monitoring Mobility: The Current and Future Regulatory Landscape for Advanced Automotive Tech," to publish next week.*

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