

3 Trends That Could Lead To More Auto Patent Litigation

Law360, New York (December 20, 2018) –

Historically, there has been relatively little patent litigation between automotive companies, particularly when compared to competitors in other industries, such as consumer electronics and pharmaceuticals. This was perhaps largely driven by an industry dynamic in which established automotive manufacturers competed through incremental improvements and product differentiation, and generally avoided patent battles with each other.



Michael Summersgill

This long period of relative patent peace in the automotive industry may be coming to an end due to three new trends: the convergence of many new technologies onto the automotive platform; a significant rise in patenting related to automotive technologies; and the entry of many new technology companies into the automotive market. As a result of these changes, the automotive industry may be heading towards a new period of increased competition and patent litigation. In this article, we analyze these three trends and provide recommendations for preparing for a new period of heightened litigation risk.



Arthur Coviello

Technology Convergence on the Automotive Platform

One of the key drivers for increased patent litigation in any industry is the convergence of many technologies onto a single platform. The more technologies are included in a given product, the more patents might potentially read on that product, and the more different companies might hold such patents and seek to assert them.

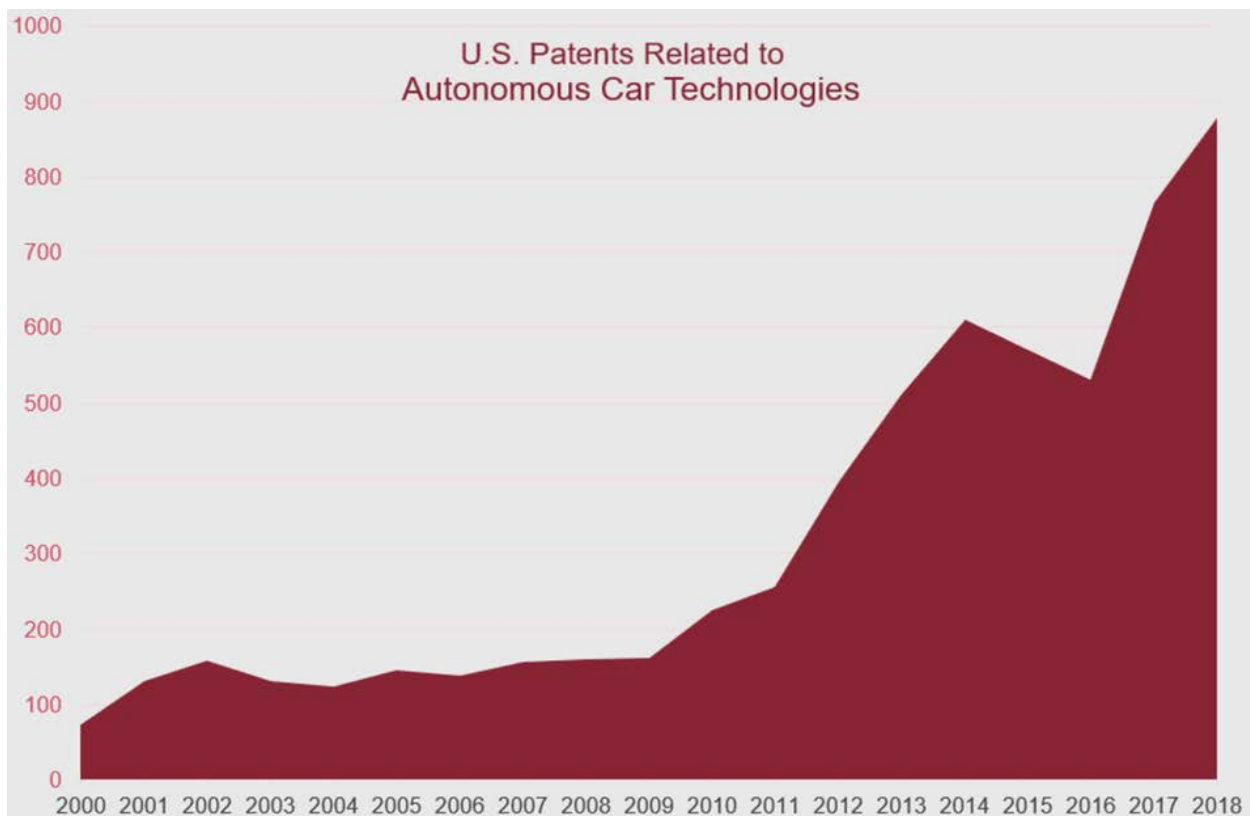
This dynamic of technology convergence has occurred before in other industries. For example, in the 2000s, the development of smartphones with an expanding array of new technologies and functionalities led to a significant increase in patent litigation. Smartphone makers have been involved in patent suits regarding myriad technologies, including cellular, Wi-Fi, microprocessors, operating systems, security, mobile payment systems, camera and image processing, touch screen technology, antennas, positioning systems and many others. These patent suits included both major patent wars — such as between Apple, Samsung and Nokia — as well as many more patent suits brought by smaller technology companies and patent assertion entities. The convergence of many technologies onto the smartphone platform led to collisions of patent rights among many players that had once operated largely in separate spheres.

We now are seeing a similar trend emerging in the automotive industry. Cars now include an ever-increasing diversity of new and complex technologies, including: electric motors, autonomous driving, Wi-Fi and internet connectivity, Bluetooth capability, active safety technologies, smartphone integration, wireless charging, infotainment systems, navigation systems, heads-up display, voice recognition and control software, new lightweight materials, and numerous other computer hardware and software enhancements. With many new technologies developed by different companies all converging onto the automotive platform, a single car might now be considered a target-rich environment for patent assertion entities or competitors seeking to defend or expand their stake in the market.

Rise in Patenting in the Automotive Industry

Another important trend that is likely to lead to increased patent litigation is the increasing rate of patenting in the automotive industry — as well as in other industries whose technologies are being incorporated into cars.

For example, we have considered the growth of patents in technologies related to autonomous driving cars and advanced driver-assistance systems, or ADAS, and we have found that the number of such patents has grown dramatically in recent years. Specifically, we evaluated the rate of patenting in a range of technologies used in autonomous cars and ADAS, including (among others) short-range communications, adaptive cruise control, autonomous emergency braking, lane keeping/centering assist, light detection and ranging, or LiDAR, as well as multiple other classification codes commonly found in patents on autonomous cars and ADAS. Our analysis shows a nearly six-fold increase in the number of such patents in the last 10 years.[1]



This sharp increase in patenting indicates an increasing focus of those competing in the automotive industry on developing robust patent portfolios in new technology areas. Because one of the primary purposes of patents is assertion, this trend dramatically increases the probability that at least some of these many new patents will be asserted in litigation.

New Industry Players

A third trend in the automotive industry that could lead to increased patent litigation is a spawning of many new industry players. Historically, there has been little direct patent litigation between major automotive manufacturers. But with increasing numbers of companies seeking to bring new technologies to the automotive platform, and many more technology companies competing on an equal footing, it will be harder to maintain patent peace.

For example, our patent analysis has also revealed that, while many of the top holders of U.S. autonomous vehicle patents are established automakers, other technology companies such as Waymo LLC, Uber Technologies Inc. and Here Technologies are also developing significant portfolios in these technology areas. Thus, there is not only a sharp rise in the number of patents, but also a rise in the number of patent stakeholders in the automotive industry.

The emergence of new technology companies as players in the automotive industry is also producing a web of new and different relationships between automakers and technology companies. For example, Waymo has agreements to develop and supply autonomous driving systems for cars made by established car companies such as Fiat Chrysler and Jaguar Land Rover.[2] Other examples of collaboration between Silicon Valley and Detroit include General Motors Co.'s 2016 acquisition of Cruise Automation — now GM Cruise LLC — a San Francisco startup company developing self-driving-car software,[3] and GM's 2017 acquisition of Strobe Inc., a startup specializing in LiDAR technology.[4]

The increasing number of industry players and the complexity of the relationships they are developing is thus another factor that could lead to patent disputes. For example, an increasing number of close collaborations between automotive companies and other technology companies could lead to inventorship disputes. And product failures among new technology companies in the automotive industry could lead to pressure to monetize their patent portfolios through litigation.

Conclusion and Recommendations

We recommend that automotive companies take at least the following steps to prepare for a new period of increased patent litigation in the automotive industry.

- Develop patent portfolios strategically and with an eye to the competition. Companies should focus their patenting efforts on the key technologies that they have developed that will be difficult for their competitors to design around. Companies should also seek patents in other countries that are important to their competitors' supply chains. In addition, companies should consult with experienced patent litigators to identify and refine their strongest patent claims for litigation.
- Develop plans for litigation against likely adversaries before the need arises. Proactive litigation planning can help ensure that your company is prepared for IP litigation with key competitors and may even significantly reduce the likelihood of such litigation. It also provides the ability to respond quickly with defenses or

infringement claims when the need arises. Being caught unprepared in a high-stakes, fast-paced jurisdiction, such as the U.S. International Trade Commission, creates significant risks. These risks can be greatly reduced with the right preparation.

- Take advantage of your company's patent portfolio to develop a licensing plan that includes acquiring any necessary technologies at reasonable royalty rates while strategically licensing your company's own technologies.
- Automotive companies should also be prepared to mount a robust defense against patent assertion entities. Sending a message that your company will be a hard target can have a major impact in deterring suits from nonpracticing entities. Conversely, automotive companies that opt to settle early could see a rise in attacks from patent entities.

Through these and other proactive patent strategies, both established automotive companies and new technology entrants can put themselves in a strong position for a potential new era of instability and patent litigation in the automotive industry.

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[1] Chart created using Lexis® TotalPatent®.

[2] “Waymo and Jaguar Land Rover Announce Long-Term Partnership, Beginning with Self-Driving Jaguar I-Pace,” at <https://media.jaguar.com/news/2018/03/waymo-and-jaguar-land-rover-announce-long-term-partnership-beginning-self-driving>.

[3] “GM to Acquire Cruise Automation to Accelerate Autonomous Vehicle Development,” at <http://media.gm.com/media/us/en/gm/home.detail.html/content/Pages/news/us/en/2016/mar/0311-cruise.html>.

[4] “GM Advances Self-Driving Vehicle Deployment with Acquisition of LiDAR Developer” at <http://media.gm.com/media/us/en/gm/news.detail.html/content/Pages/news/us/en/2017/oct/1009-lidar1.html>.