Automotive Tech In 2018: Legal Trends And Developments

By **David Cavanaugh, Arthur Coviello, Natalie Hanlon Leh, Michael Summersgill and Timothy Syrett** (January 14, 2019)

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The legal landscape for the automotive sector continued its evolution in 2018 with the development of new technology becoming a focal point for litigation, patenting and regulation. As we did at the close of 2017, we look back at 2018 to provide an overview of the major intellectual property and regulatory trends in the industry, as well as lingering areas of uncertainty.

Patent Litigation

As automobiles become more integrated with computing power, the landscape of automotive litigation adapts and responds to those innovations. Over the last year, patent litigation in the automotive industry has focused on aspects of computer integration with automobiles in addition to other noteworthy issues.

Several cases illustrate litigation trends. One trend is litigation related to autonomous driving technology, e.g., cruise control and driver-assistance technology. Disputes over this technology have been litigated in district courts and the U.S. International Trade Commission. For example, Jaguar Land Rover Ltd. accused rival luxury automaker Bentley Motors Ltd. of infringing a patent used in Jaguar's "driver assistance" terrain-selector feature in a suit filed in the Eastern District of Virginia.[1] Jaguar contends that Bentley's Bentayga SUV's "driver assistance" feature infringes U.S. Patent No. 7,349,776, a vehicle control patent that has since been reissued under U.S. Patent No. RE46,828.[2]

In another action, Broadcom Corp. brought claims in the Eastern District of Texas,[3] and requested that the ITC initiate an investigation[4] into alleged infringement of six patents by Toyota Motor Corp., Panasonic Corp., Denso Ten Ltd., Renesas Electronics Corp., Japan Radio Corp. and several related entities. Two of the Broadcom patents cover navigation systems, two cover the processing of videos and graphics and two cover the management of memory and power in the systems, according to the complaints. Broadcom alleges that infotainment systems and other technology included in vehicles such as the Toyota Avalon, Camry, Corolla, Highlander, Prius and Sienna infringe the patents. The district court stayed the action pending the ITC's determination.[5]

There were also several design-patent cases in 2018. For instance, on appeal at the Federal Circuit is Automotive Body Parts Association v. Ford Global Technologies LLC, where the Automotive Body Parts Association argues that the district court erred in holdings Ford's design patents for the hoods and headlamps of its F-150 truck valid, enforceable, and not exhausted.[6]

While much of the automotive litigation in 2018 was notable for its focus on the integration of technology in automobiles and design patents, it also raised more commonplace patent litigation issues. The question of proper venue following the U.S. Supreme Court's ruling in TC Heartland LLC v. Kraft Foods Group Brands LLC was addressed by the Southern District of California in West View Research LLC v. BMW of North America LLC.[7] The court held that BMW dealerships that are owned by other companies are not "places of business" for the automaker, leading the court to find venue improper in California and to transfer the

case to Delaware.[8]

Trade Secret Litigation

A rise in trade secret litigation is another important new trend in the automotive industry. This trend is consistent with an overall surge in trade secret litigation in recent years. Since passage of the Defense of Trade Secrets Act in 2016, trade secret litigation has increased by 30 percent — and has doubled in the last ten years. The recent growth of trade secret litigation in the automotive industry is being driven by multiple factors, including the convergence of many new technologies on the automotive platform and the emergence of new automotive technology competitors and suppliers. These rapid technological changes also have created new industry dynamics, including a variety of new partnerships between automotive companies and technology suppliers. At the same time, intense competition to create new automotive technologies, such as autonomous driving solutions and electric motors, has led to increased employee mobility, with engineers jumping to opportunities at new automotive startups. These dynamics of increasing competition, partnerships, and employee mobility have raised the possibility of trade secrets being shared or taken without authorization — and have produced growing numbers of trade secret disputes in the automotive industry.

These trends are highlighted in a case filed in January 2018, Faraday & Future Inc. v. Evelozcity Inc.[9] In this case, Faraday, a Chinese electric car company, brought a trade secret misappropriation case against its Los Angeles-based competitor, Evelozcity. Faraday was founded in 2014 and plans to release its first production electric vehicle — the "FF-91" — by the beginning of 2019. Faraday's complaint alleges that Faraday's former chief financial officer and former chief technical officer took Faraday's trade secrets with them when they left to start Evelozcity in 2017. In August 2018, Evelozcity filed an answer denying Faraday's trade secret allegations and asserting multiple affirmative defenses. This ongoing case highlights how the increased mobility of employees jumping to new automotive technology companies — in both the United States and China — is leading to more trade secret disputes.

With technology competition in the automotive industry growing ever more intense, we expect to see more automotive trade secret litigation in 2019.

Design Patents

In 2018, design patents continued to be of great importance to the automotive industry. According to data from Derwent Innovation, over 2,500 design patents within the D12 class — which is the class for "transportation" design patents — were issued as of Dec. 4, 2018. These represent nearly 9 percent of all design patents issued this year, making this transportation class the second most frequently issued class behind design patents for "Recording, Communication, or Information Retrieval Equipment" (subclass D14).

Class	Class Title	Patents Issued (2018)
D14	Recording, communication, or information retrieval equipment	4,304
D12	Transportation	2,528
D07	Equipment for preparing or serving food or drink not elsewhere specified	1,951
D24	Medical and laboratory equipment	1,717
D06	Furnishings	1,637

Analysis of these design patents offers insight into the features on which automotive manufacturers have focused their attention. Within the transportation class, one out of

every 10 issued design patents were related to a bumper or guard for the front or back of a vehicle (subclass D12169). Other frequently issued subclasses include radiator, grille, or bumper (D12163); distinct hood or cowl (D12091 and D12092); exterior panel or door (D12196); and aperture or simulated aperture for a wheel (D12209 and D12211).

Subclass #	Subclass Title	Patents Issued (2018)	% D12 Patents
D12169	Radiator, grille, or bumper – Bumper or guard – Vehicle-attached front or rear type	261	10.32%
D12209	Wheel or wheel cover (includes hub or rim) – Aperture or simulated aperture	189	7.48%
D12163	Radiator, grille, or bumper	134	5.30%
D12092	Motorcar or body – Distinct hood or cowl – With distinct trunk or notched back	98	3.88%
D12211	Wheel or wheel cover (includes hub or rim) – Aperture or simulated aperture – Aperture has two straight sides	97	3.84%
D12091	Motorcar or body – Distinct hood or cowl	91	3.60%
D12196	Exterior or interior trim – Exterior panel or door	73	2.89%

The major automotive manufacturers continue to be the primary owners of transportation design patents. Of the top 10 assignees of such patents, eight are major automotive manufacturers with tire manufacturers holding two top-10 spots. However, despite the high volume of patent filings, none of these patentees asserted any D12 design patents in 2018 in a patent litigation proceeding.

Top 10 Current Assignees	D12 Patents (2018)
GM Global Technology Operations LLC	145
Ford Global Technologies LLC	133
Jaguar Land Rover Limited	87
Bayerische Motoren Werke Aktiengesellschaft	87
Honda Motor Co. Ltd.	65
Goodyear Tire & Rubber Company	65
Volvo Lastvagnar AB	63
Fiat Chrysler Automobiles US LLC	52
Sumitomo Rubber Industries Ltd.	47
Nissan Motor Co. Ltd.	47

Post-Grant Developments

Automotive sector participants were heavily involved in post-grant review proceedings in 2018. Inter partes review before the Patent Trial and Appeal Board is often employed by defendants in concurrent patent infringement actions. Automakers BMW and Toyota were among the most active IPR participants in 2018. Technology consortium Unified Patents also filed several petitions representing the interests of automakers. Most petitions were brought against patent assertion entities, and almost all petitions asserted obviousness as the

ground for unpatentability. This is consistent with overall IPR trends: 86 percent of final decisions invalidating claims issued this year involved a determination of obviousness.

Petitioners successfully invalidated patent claims in the automotive space in approximately 82 percent of cases in 2018, above the overall rate of 70 percent. Notably, the automotive industry secured two major victories against PAEs in the area of sensor-based collision avoidance technology. In one case, BMW and Mercedes-Benz secured an unpatentability determination after a PAE sued for infringement.[10] In the other, Unified Patents invalidated claims in another PAE's patent after the PAE brought infringement actions against several automakers.[11]

Perhaps given the high success rate that IPR petitioners experience, PAEs often either settle or disclaim challenged claims after the board institutes proceedings. For instance, after the board instituted proceedings in an IPR challenging a PAE's patent on a technology for in-vehicle displays of nearby attractions, restaurants, and the like, the PAE filed disclaimers.[12] The same was true in the conventional mechanical design space. Automakers such as BMW, Toyota, and Honda, along with parts manufacturers such as Denso, all brought petitions against the PAE Intellectual Ventures challenging its patent on an engine design. In each, either before or after the PTAB instituted proceedings, Intellectual Ventures disclaimed or, in the BMW case, settled.

These results show that petitioning for IPR can be a very effective strategy for automakers facing infringement actions by PAEs. But the success rate for IPRs brought against product companies is more mixed. BMW won a determination of unpatentability on a patent owned by a firm developing a chassis prototype,[13] but Toyota lost an IPR instituted against it by a materials manufacturer.[14] This suggests that product companies may be, at the very least, more determined litigants in the IPR process than PAEs.

Unsuccessful IPR parties can appeal final decisions of the PTAB to the Federal Circuit. That court uses a deferential standard of review for the board's factual determinations. While the sample size is limited, the data suggest that the Federal Circuit affirms the board's decisions, at least in part, approximately 85 percent of the time. For instance, the Federal Circuit affirmed an inter partes re-examination decision involving two competitors in the collision-avoidance field.[15] It also affirmed 13 PTAB determinations of unpatentability on a design for hybrid car technology in IPRs brought by Ford against PAEs Paice LLC and The Abell Foundation, except as to one claim.[16] One PAE even voluntarily dismissed an appeal of a determination of unpatentability secured by autoparts makers Toyoda Gosei and Takata.[17]

But the Federal Circuit does not always affirm the PTAB. The court looks closely at the board's methodology and has reversed a number of its determinations. For instance, in Paice, the court reversed and remanded to the board with respect to one claim, holding that PTAB incorrectly interpreted the scope of an incorporation by reference in the application for the patent at issue.[18] In another case involving ATV design, the court reversed and remanded because the board did not properly consider whether prior art "taught away" from the design described in the challenged patent claim.[19]

Post-grant activity at the PTAB and the Federal Circuit from 2018 shows that instituting IPRs against PAEs can be a very effective way for automotive industry participants to resolve infringement claims or charges. Participants run the full spectrum of the industry — from large automakers, to parts manufacturers, to smaller technology firms, to third-party industry groups like Unified Patents. While the institution of IPR proceedings requires a significant threshold showing, petitioners can take advantage of the both relatively high success rate after the board institutes proceedings and the settlement pressure that puts on adversaries. Prevailing parties can expect vigorous Federal Circuit review of PTAB legal

decisions, but deferential review of its factual conclusions.

Regulatory

2018 saw some developments in determining how autonomous vehicles will be regulated but there remains much uncertainty.

On Capitol Hill, legislation directed to establishing federal oversight of safety for autonomous vehicles, including preemption of certain types of state and local laws, stalled in the Senate. In September 2017, the House passed the Safely Ensuring Lives Future Deployment and Research In Vehicle Evolution Act (SELF DRIVE) Act (H.R.3388). But a similar bill — the American Vision for Safer Transportation through Advancement of Revolutionary Technologies Act (AV START) Act (S.1885) — remained stuck in the Senate in 2018. A year-end effort to pass a modified version of AV START, including changes to address concerns by some that the initial draft did not offer sufficient safety protections, did not succeed. It remains to be seen whether the new Congress will take up legislation of autonomous vehicles in 2019.

On the regulatory front, the U.S. Department of Transportation released a wide-ranging report in October 2018 titled "Preparing for the Future of Transportation: Automated Vehicles 3.0." AV 3.0 is directed at addressing three areas. First, the report outlines a variety of steps aimed at ensuring the safety of autonomous vehicles, including encouraging automated driving systems developers to make public their voluntary safety self-assessments to promote transparency, and supporting the development of voluntary technical standards. Second, AV 3.0 is intended to reduce policy uncertainty, including explaining that the DOT will adopt definitions of "driver" and "operator" that do not refer exclusively to a human, and reaffirming the DOT's commitment to self-certification for autonomous vehicles instead of type approval. Third, AV 3.0 outlines how the private sector and state and local agencies can partner with the DOT on issues relating to autonomous vehicles, including announcing an upcoming proposed rule-making for determining exceptions to safety standards that are applicable only when a human is driving a vehicle.

One issue that stood out in AV 3.0 is the DOT's indication that it "will remain technology neutral" and will "allow the public — not the federal government — to choose the most effective transportation and mobility solutions." This approach appears to stand in contrast to a 2017 notice of proposed rule-making issued by the National Highway Traffic Safety Administration that based performance requirements for vehicle-to-vehicle communications on the Direct Short Range Communication standard. Although the NHTSA's proposed rule-making provides for the possibility of vehicles using technology other than DSRC, it requires that such technology must be interoperable with DSRC.

Notably, Cellular-V2X, the other leading candidate as a V2V standard, is not compatible with DSRC. C-V2X has gained a number of supporters in the automotive and cellular industry who view it as a more robust solution than DSRC. While the DOT has said it will remain technology neutral, some commissioners on the Federal Communications Commission last year questioned the viability of DSRC. In a May 10, 2018, letter to Toyota about its announcement that it would adopt DSRC for its 2021 models, Commissioners Michael O'Rielly and Jessica Rosenworcel commented on "several factors that Toyota should keep in mind when committing capital expenditures to DSRC technology," including that the FCC is considering "potential opportunities to advance automotive safety using newer technology, such as C-V2X systems." In an Oct. 16, 2018, statement, Commissioner O'Rielly observed more bluntly: "It is pure folly to believe that DSRC will ever work as envisioned, as time and technology advancements elsewhere have undermined previous use cases."

Conclusion

Because of the rapid change and introduction of new technologies in the automotive sector, this industry faced increased litigation, post-grant activity and regulatory attention in 2018. We expect these trends to continue and more new cases and issues to emerge in 2019.

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[1] Jaguar Land Rover Ltd. v. Bentley Motors Ltd. et al., No. 2:18-cv-00320 (E.D. Va. June 14, 2018), ECF No. 1.

[2] Id.

[3] Broadcom Corp. v. Toyota Motor Corp. et al., No. 2:18-cv-00190 (E.D. Tex. May 7, 2018), ECF No. 1.

[4] In the Matter of Certain Infotainment Systems, Components Thereof, and Automobiles Containing the Same, No. 337-TA-1119 (June 12, 2018).

[5] Broadcom Corp. v. Toyota Motor Corp. et al., No. 2:18-cv-00190 (E.D. Tex. June 21, 2018), ECF No. 26.

[6] Appellant Brief, Automotive Body Parts Association v. Ford Global Technologies, LLC, No. 18-cv-1613 (Fed. Cir. April 27, 2018).

[7] West View Research LLC v. BMW of North America LLC, No. 3:16-cv-02590 (S.D. Cal. Feb. 5, 2018), ECF No. 64-1.

[8] Id.

[9] Faraday & Future Inc. v. Evelozcity Inc., No. 2:18-cv-00737 (C.D. Cal.).

[10] BMW of N. Am., LLC v. Stragent, LLC (PTAB IPR2017-00677).

[11] Unified Patents Inc. v. Collision Avoidance Techs. Inc. (PTAB IPR2017-01355).

[12] Unified Patents Inc. v. Silver State Intellectual Techs., Inc. (PTAB IPR2017-01198).

[13] BMW of N. Am. v. Theodore & Assocs., LLC (PTAB IPR2017-01380).

[14] Reactive Surfaces Ltd., LLP v. Toyota Motor Corp. (PTAB IPR2017-00572).

[15] Mobileye Vision Technologies Ltd. v. iOnRoad, Ltd., 735 F. App'x 1029 (Fed. Cir. 2018).

[16] Paice LLC v. Ford Motor Co., 881 F.3d 894 (Fed. Cir. 2018); Paice LLC v. Ford Motor Co., 722 F. App'x 1015 (Fed. Cir. 2018).

[17] E.g., Toyoda Gosei Co. v. Am. Vehicular Sciences LLC (PTAB IPR2016-01790).

[18] Paice, 881 F.3d at 906–10.

[19] Polaris Indus., Inc v. Arctic Cat, Inc., 882 F.3d 1056 (Fed. Cir. 2018).