



LEADING IN PRODUCTION EFF

- HOME
- COMMERCIAL VEHICLES
- ELECTRONICS
- MANUFACTURING
- OEMS & MARKETS
- POWERTRAIN
- SAFETY
- SUPPLIERS

Home > Analysis > The future of high tech patent litigation in the auto industry

The future of high tech patent litigation in the auto industry

April 26, 2017

New auto tech and the arrival of new auto industry players is sure to increase the patent litigation landscape, writes Bill Robinson of Foley & Lardner

Over 250 patent suits were filed against car manufacturers between 2012 and 2017. An even higher number were filed against their suppliers. By some estimates, 10% of all patent litigation concerns the automotive OEMs and their suppliers.

Development and growth of new technologies is having a significant, if not disruptive, impact on the design and manufacturing of cars. The OEMs and their suppliers have filed hundreds of patents for these new technologies, including connected car devices, driver assist systems, radar, and autonomous vehicle solutions. Alternative drivetrain technology is an example of an area where thousands of patents have been filed. In addition, major West Coast technology companies not traditionally associated with the automotive industry, such as Google, Apple, and Microsoft, are moving into the automotive space and developing extensive patent portfolios on various technologies used in cars and trucks. Automotive is now the third most active sector for worldwide patent filings behind telecoms and computing – and the rate of growth is faster than in any other industry.

With autonomous vehicles in development and the ever-increasing use of computers to run all sorts of car systems, cars are quickly becoming simply large computer systems with sensors, motors, and wheels attached. Indeed, the software development on the C7 Corvette took more time than the mechanical development. As with any new area of rapidly changing technology, there is likely to be a new round of patent wars in the automotive area as the OEMs and their suppliers struggle for dominance among themselves in these new areas, or pursue newer companies such as Tesla. The new presence in the automotive space of the West Coast technology companies, which have always been aggressive about protecting and exploiting their intellectual property, is likely to increase the likelihood of such suits.

In addition, the patent trolls will continue their efforts to cobble together portfolios in order to shake down the OEMs and others for license fees. A patent troll is a company that obtains the rights to one or more patents in order to profit by means of licensing or litigation, rather than by producing its own goods or services. The last five years have seen an increase in the number of trolls targeting the automotive industry, a trend that generally bucks a number of other industry segments, such as software-based business industries, which have seen a sharp litigation decrease due to the Supreme Court's Alice decision (Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 134 S. Ct. 2347 (2014)) and the resulting quick invalidation of many software patents at the pleading stages of many district court suits.

“ *As with any new area of rapidly changing technology, there is likely to be a new round of patent wars in the automotive area as the OEMs and their suppliers struggle for dominance among themselves in these new areas, or pursue newer companies*

This article first examines high-technology patent litigation in the automobile industry that has occurred from 2012-2017, divided by troll and non-troll litigation and based on the type of patents asserted. The selection criteria for the cases were primarily those that involved patents in Classes 180 (motor vehicles) and 701 (data processing involving vehicles and navigation), although potentially other relevant classes were also covered such as 340 (electrical communications), 382 (image analysis), and 348 (television). The parties (plaintiffs and defendants) discovered in the searches were then cross-referenced against the nationwide information in Justia Dockets to discover additional parties and technologies to ensure an accurate dataset.

The second part of the article deals with the impact of the entry of the West Coast technology companies into the automotive space.

Note that throughout, federal court abbreviations are used. EDMi is the Eastern District of Michigan; EDTx

<http://www.automotiveworld.com/analysis/future-high-tech-patent-litigation-auto-industry/>

LOGIN

Welcome **Martin Kahl**



Do you have a question?
Email us or call +44 (0)
2921 287 116

QUICK LINKS

- News
- Analysis
- Research
- Data
- Magazine
- Webinars
- Conferences

RECEIVE UPDATES

- Commercial Vehicles
- Electronics
- Manufacturing
- OEMs and Markets
- Powertrain
- Safety
- Suppliers

Email address

Go

MEGATRENDS MAGAZINE



Automotive
Megatrends
Magazine – Q1
2017

March 14, 2017

CONFERENCES

- 28 NOV** **HD Truck Pune by Automotive Megatrends**
The Westin Pune Koregaon Park, Gh... Pune, Maharashtra, India
- 29 NOV** **Connected Car Pune by Automotive Megatrends**
The Westin Pune Koregaon Park, Gh... Pune, Maharashtra, India
- 13 MAR** **Connected Car Detroit by Automotive Megatrends**
The Henry, Dearborn, Detroit
- 14 MAR** **Autonomous Car Detroit by Automotive Megatrends**
The Henry, Dearborn, Detroit
- 15 MAR** **Powertrain Detroit by Automoc Megatrends**
The Henry, Dearborn, Detroit

SOCIAL



FOLLOW US ON TWITTER

- The all-new Hyundai KONA: sleek, sharp progressive <https://t.co/3bV35B7y2L>
- Volvo Cars' first quarter 2017 operating p rises 11 per cent to SEK3.5 billion <https://t.co/H2CUIC0exC>
- Safety aside, repair licensing could prove to EV uptake <https://t.co/ccsgz8Sdjb>
- FEV presents solutions for connected and autonomous driving and efficient power to the 38th Vienna Motor... <https://t.co/9EbLWNQuWn>
- Honeywell showcasing its transportation technology future at Vienna Internationa

is the Eastern District of Texas. DE is the District of Delaware; CDCal, NDCal, and SDCal are the Central, Northern, and Southern Districts of California, respectively; MD is the District of Maryland; MN is the District of Minnesota; SDNY is the Southern District of New York; and ITC is the International Trade Commission.

Symposium <https://t.co/w63CZXHufm> 12

The cases

A. The patent troll cases

The majority of all patent litigation in the last 15 years has been troll cases, and the automotive sector is no exception. If anything, that sector has seen trolls formed rapidly, particularly in the EDTx, to exploit various high-technology aspects of cars. Some of these trolls hold just one patent. Others, who trace ownership back to such mega trolls as Acacia Research, hold many.

The major trolls that have targeted the automotive OEMs are described below, ranked by number of suits filed in the last five years. The trolls and other non-practicing entities (NPEs) listed are those that have focused on the vehicles. The automotive industry has been hit with suits during 2012-2017 by other trolls dealing with the on-line advertising and sales of cars and parts. Such trolls have included Phoenix Licensing LLC (form letters and emails), Pragmatum Telecom LLC (call centers), and 911 Notify LLC (911 call notifications).

As a review of Justia Dockets will indicate, many have also targeted the OEM suppliers and even companies outside of the automotive industry. Most have been resolved by settlement, dismissal, IPR proceedings and the like. No resolved case ever reached the jury trial stage. While that is not to say that one might not in the future, the nature of most trolls and their generally contingent-fee counsel is that they do not have the resources to fully pursue every case that they file and plan for a series of cost-of-defense settlements.

- **American Vehicular Sciences (AVS):** AVS is an Acacia troll and owns the 300-patent portfolio of Automotive Technologies International (with David Breed as the inventor) and Intelligent Technologies International. The patents relate to displays, navigation systems, sensor-based vehicle control, optical pattern recognition and external object detection, diagnostic management, airbag deployment, and a variety of seat controls. AVS has filed 58 suits since 2012. *Comment: AVS's suits have been filed in the EDTx, CDCal, and EDMi, and against Kia, Hyundai, Toyota, Honda, Mercedes, Mazda, Subaru, and BMW, but no US companies.*
- **Beacon Navigation GmbH (BNG):** BNG is a prolific troll with a complex foreign ownership that filed 40 suits since 2012 (and almost an equal number before that time) on its portfolio of navigation patents. *Comment: Virtually every OEM has been sued by Beacon, which has brought actions in DE (which were then transferred to the EDMi), and the ITC.*
- **Cruise Control Technologies LLC (CCT):** CCT is a Delaware troll whose patents not surprisingly relate to cruise control systems. CCT has filed 28 cases in since 2012. *Comment: CCT's cases have been filed in DE and the EDMi and against Honda, Nissan, Chrysler, GM, Porsche, Toyota, Ford, Volvo, Jaguar, Subaru, Hyundai, VW, Mercedes, Audi, and BMW.*
- **Signal IP (SIP):** SIP is a Marathon Patent Group troll that acquired patents from Delco and Delphi that concern object sensing, vehicle coverage zones, hybrid vehicle control, airbags and tyre sensors. SIP has filed 22 suits since 2012. *Comment: SIP's cases have all been in the CDCal and against Hyundai, Toyota, Fiat, Ford, Jaguar Land Rover, Mercedes, Porsche, VW, BMW, Volvo, Suzuki, Nissan, Subaru, Honda, Mazda, Kia, and Mitsubishi.*
- **Manitto Technologies (MT):** MT is a Texas troll with patents relating to GPS-based car tracking. It has filed 21 cases since 2012. *Comment: MT's cases have all been in the EDTx and against both car stereo manufactures and OEMs GM, Volvo, Kia, Toyota, Jaguar, Honda, Subaru, Chrysler, Hyundai, Nissan, and Ferrari.*
- **Delaware Radio Technologies LLC (DRT):** Delaware patent troll DRT and its partner Wyncomm LLC filed 13 suits over a patent dealing with HD radio technology. *Comment: Not surprisingly, DRT's cases have all been in DE and against Ford, Chrysler, General Motors, Toyota, BMW, Mitsubishi, Mercedes, Kia, VW, Porsche, Tesla, Volvo, Tata, Mazda, Bentley, and Honda.*
- **NovelPoint Security LLC (NPS):** NPS, another Texas patent troll, filed 13 over a patent relating to using a GPS module to determine a vehicle or product's location. *Comment: NPT's suits have all in the EDTx and against Ford, Mercedes, Mitsubishi, Toyota, Nissan, Chrysler, Mazda, Subaru, Bentley, Jaguar, BMW, Volvo, and Honda.*
- **Joao Control and Monitoring (JCM):** JCM, a Texas-based troll owned by patent attorney Raymond Joao has filed 12 cases since 2012 on patents generally concerning device control and monitoring. *Comment: Joao's cases have been filed in DE, EDTx, EDMi, SDNY, and the CDCal and against FCA, Ford, VW, Nissan, Chrysler, Mazda, Mitsubishi, Jaguar Land Rover, and Hyundai.*
- **Voxathon LLC (VOX):** VOX, a Texas troll, filed ten cases on a patent relating to hands-free telephone systems. *Comment: VOX's suits have been filed in the EDTx and against GM, FCA, Ford, Hyundai, Honda, Toyota, Jaguar, Subaru, Nissan, and VW.*
- **Jakuat Diodes LLC (JD):** JD, a troll run by Nicholas Labbit, filed nine suits on a patent relating to LED headlights. *Comment: JD's suits have been filed in the EDTx and against Ford, GM, and Honda.*
- **Innovative Display Technologies LLC (IDT):** IDT is another Texas troll and Acacia subsidiary that has filed eight patent suits relating to an integrated LCD screen. Some of the patents traced back all the way to semiconductor and IP company Rambus. *Comment: IDT's suits have been filed in the EDTx and against GM, VW, Mercedes, Mazda, Toyota, Nissan, Hyundai, and BMW.*
- **Affinity Labs of Texas (ALT):** ALT, a Texas troll, filed eight patent suits concerning connecting media players to car audio systems. *Comment: ALT's suits have been filed in the EDTx and against Nissan, Toyota, GM, Ford, Jaguar, Honda, and Volvo.*
- **PJC Logistics LLC (PJC):** PJC, a Texas troll, filed seven suits on a patent dealing with vehicle tracking

systems. *Comment: PJC's suits have been filed in MN and against Toyota, Hyundai, GM, Rolls-Royce, Mercedes, and BMW.*

- **Adaptive Headlamp Technologies, Inc. (AHT):** AHT, subsidiary of patent troll Wi-Lan Technologies, filed seven suits on a patent concerning self-leveling headlamp lights. *Comment: AHT's suits have been filed in DE and against Volvo, GM, Mazda, Toyota, Hyundai, BMW and Nissan.*
- **West View Research, LLC (WVR):** WVR, a California-based NPE, filed six suits on a series of patents relating to computerised information presentation. *Comment: WVR's suits have been filed the SDCal and against VW, BMW, Tesla, Hyundai, Audi, and Nissan.*
- **Vehicle Interface Technologies LLC (VIT):** VIT, a Delaware troll, filed five suits on a patent related to touch screens. *Comment: VIT's suits have been filed DE and against Ford, Jaguar, Porsche, and Ferrari*
- **Digital Stream LLC (DS):** DS, a Texas troll, filed five suits on a patent concerning access and display of program information from a digital music service. *Comment: DS's suits have been filed in the EDTx and against BMW, GM, Honda, Nissan, and Mercedes.*

From this data, it is apparent that the trolls will continue to focus, as they have before, on the electronics systems in the vehicles. This means that the trolls will continue to find older patents that the car companies have dumped (such as Signal IP has done with the Delco and Delphi patents) and try to twist the claims to cover the newer technology or assert patents that have broad claims facially unrelated to cars (e.g., the Joao patents) and argue that they cover car technology. Most trolls do not have cutting-edge technology patents. On the other hand, many of the troll patents in the automotive space are hardware based and do not have the easy Alice non-statutory subject matter defence against software patents. The continued adoption of traditionally non-automotive technology into cars will continue to expose the OEMs and their suppliers to increased risks from trolls.

The troll landscape is changing however. In the TC Heartland LLC v. Kraft Foods Group Brands case, the Supreme Court is likely to overturn the Federal Circuit's long-standing interpretation of the general venue statute 28 U.S.C. § 1391(c) that allows patent cases to be brought virtually anywhere and thereby affirm that § 1400(b) is the exclusive venue statute. Section 1400(b) limits patent suits to the district where the defendant resides or has committed acts of infringement and has a regular and established place of business. That change will have the primary effect of eliminating the EDTx as a haven for patent trolls. Trolls were able to exploit the EDTx with a plaintiff-friendly court and rural jurors. A change in patent venue will result in more cases shifting to the EDMi and other venues where automotive cases have been brought, such as the CDCal and DE. That change is likely to have the most impact on the single-patent trolls, rather than those with substantial portfolios.

The available tactics for resisting trolls are well established. First, do not be an easy target because the quicker you pay off a troll the more often you will pay off trolls. Trolls succeed primarily because most defendants would 'rather pay than fight'. Early case assessment of infringement and validity risks is critical and should be done before the case gets into a litigation posture. One RPX study stated that half of the companies spend less than eight hours reviewing a case before turning it over to outside counsel.

 *Trolls will continue to find older patents that the car companies have dumped and try to twist the claims to cover the newer technology or assert patents that have broad claims facially unrelated to cars and argue that they cover car technology*

Second, where appropriate, aggressively respond to pre-litigation troll letters: demand to know the basis for the claims and what pre-filing investigation was done. Do a quick invalidity search and ask the troll why the patent is not invalid over the art. Look for unique defences such as a non-infringement defence that does not apply to the rest of the industry, strong prior art unknown to others (e.g., internal systems/processes), minimal accused sales, and licenses/exhaustion. Many of the author's clients have had cases dropped by the trolls at the demand stage after receipt of a letter making a detailed showing of non-infringement and invalidity. Trolls have to decide whom to pursue. If you look like you are ready to put up a strong defense, the troll may decide that the pursuit will not be cost effective.

Third, if it looks like the troll is not going away easily at the outset, consider what a settlement would cost. Your strategy may be different depending whether the patent covers a core aspect of the vehicle. If not, then settlement may be more driven by cost of defense issues if corporate policy considerations allow settlement to be even entertained.

Fourth, if litigation is filed, file motions to dismiss (particularly for indirect infringement claims), transfer, de-consolidate, and expedite discovery where appropriate. Make the trolls work. A defendant should have its discovery ready as early as possible, as that removes the advantage that a plaintiff has during the first half of the case. Also, where appropriate, use Rule 11 and Section 285 against meritless assertions. Even the EDTx has issued Rule 11 sanctions – not often, but it has occurred.

 *Many of the troll patents in the automotive space are hardware based and do not have the easy Alice non-statutory subject matter defence against software patents. The continued adoption of traditionally non-automotive technology into cars will continue to expose the OEMs and their suppliers to increased risks from trolls*

Fifth, consider the use of IPRs. IPRs can be also very effective and have been used against many of the trolls identified above. Indeed, between 2012 and 2017, the OEMs filed in excess of 200 IPRs. IPRs have been particularly successful against the Beacon and AVS trolls and represent a new tool for automotive companies faced with baseless patent infringement litigation. However, an IPR, if not properly managed, can cost just as much as a small patent suit and there are the obvious estoppel issues that result from not invalidating claims. Therefore, IPRs are not always the best alternative to a district court litigation, as IPRs and other PTO procedures do not allow the same strategic options as those available in district court cases.

Sixth, where several OEMs are being sued, form a Joint Defense Group. The best practices for JDGs involve keeping them small, as JDGs work best for groups of highly motivated defendants who actually want to work together and with counsel who have decision-making authority. Dealing with 'slipstreamers' is another concern. A JDG should be about having a joint defense. Ensure real participation from everyone – otherwise, all you have is the appearance of a common defendant monolith without adding value. Also, be careful about common briefing and discovery as may occur when cases are consolidated for pre-trial proceedings. Keep the ability to present your own defense on the issues critical to your liability and do not be pulled or lulled into 'one-size fits all' briefing or discovery.

Alternative strategies involve joining patent aggregators such as RPX Corp., which will buy patent rights out of an active litigation via a patent license or even a direct purchase of the assets from the troll. The cost of RPX membership, however, can be much more than the cost of a vigorous defence at the outset of a suit. With the overall decrease in patent litigation in the last five years, RPX has seen its stock price drop by about 30%, reflecting a decreased need for its services.

B. The supplier/competitor cases

The high-technology patent cases between suppliers or competitors and the OEMs in the automotive industry from 2012-2017 have been smaller in number, but more significant from a technology standpoint. These kinds of cases are also much more likely to be aggressively litigated and reach the trial stage than are the troll cases. The more significant ones are the following.

- **Paice LLC:** Paice is a hybrid technology engineering with company that, along with its partner/investor the Abell Foundation, filed four district court suits against the OEMs on patents concerning hybrid vehicle powertrains. Paice has also pursued Ford in the ITC to prevent Ford's Mexico-built hybrid electric cars from entering the US. In 2015, a MD jury returned a US\$29m verdict against Hyundai and Kia. Toyota is a licensee of Paice's portfolio. *Comment: Paice's suits have been filed in in MD, the EDMi, and the EDTx against Toyota, Hyundai, Kia, and Ford.*
- **Magna International, Inc. (MII):** MII is an electronic systems supplier to the automotive industry and the holder of a series of patents dealing with vehicle image sensing and vehicular vision. It has filed eight suits against competitors. *Comment: Magna suits have been in in the EDMi since 2012 and against TRW Automotive, Valeo, and Hyundai Mobis.*
- **Waymo LLC:** Waymo, Google's autonomous car unit, is a developer of LiDAR (Light Detection and Ranging) Systems. In February 2017, Waymo sued Uber Technologies, Inc., Otto Trucking LLC and Ottomotto LLC in the NDCal for infringement of its patents and for trade secret misappropriation.
- **Collison Avoidance Technologies, Inc. (CAT):** CAT, a California company, filed two suits against OEMs over a patent dealing with a sensor-based system for avoiding collisions. *Comment: CAT's suits have been filed in the EDTx and against Ford and Toyota.*
- **Dynamic Research, Inc. (DRI):** DRI is a California-based company with patents concerning crash avoidance technologies; it filed a single case against competitor Dewetron in the CDCal.

Clearly absent in the listed cases are OEM v. OEM cases, and the supplier v. OEM cases are likewise few. Those companies have traditionally tried to play nice and are likely to continue to do so. As discussed below, there are some new and sizeable Silicon Valley players in the automotive space and it will be interesting to see if the same reluctance to litigate patent issues continues.

The new players

The changing paradigm in the automotive industry that has seen the development of smart and autonomous cars has brought West Coast (particularly Silicon Valley) technology companies into the automotive space. Google, Apple and Microsoft have large patent portfolios directed to automotive technology. Google and Fiat Chrysler (FCA) have a development agreement for minivans. Apple has a deal with FCA for its Beats by Dre audio brand. Microsoft has licensed many of its connected vehicle patents to Toyota and continues to look to collaborate with other vehicle manufacturers. Google, Apple, and Microsoft have also been traditionally aggressive about protecting their intellectual property.

Acquisitions are bringing Silicon Valley and the automotive OEMs closer. Intel recently closed a US\$15bn deal for Mobileye, an Israeli company that makes sensors and cameras for driverless vehicles. That sets the stage for increasing competition between Silicon Valley giants as well as traditional automotive OEMs over who will dominate the world of autonomous cars. Intel has signed partnership deals with BMW and Delphi Automotive to expand its presence in the field and it is now a Tier 1 partner for the automotive industry. Like Google, Apple and Microsoft, Intel has aggressively protected its IP. On the OEM side, GM paid US\$1bn to acquire San Francisco start-up Cruise Automation, which manufactures an aftermarket, roof-mounted autonomous-driving kit. Such acquisitions are continuing at a rapid pace.

 *The rapid adoption of new technologies by the automotive industry and the new players that provide them will bring with it an increasing focus on exploiting and protecting intellectual property*

The technology companies may be more aggressive about protecting their technology and making money back on their portfolios just because of their size. Google's parent company, Alphabet, has a market value near US\$500bn, and Apple's market value is over US\$750bn, compared to Ford and GM, with market values of US\$46bn and US\$53bn, respectively, and FCA at less than US\$21bn. Apple generated revenue of US\$215bn in 2016, almost US\$50bn more than Detroit's biggest OEM, GM, which reported 2016 revenue of US\$166bn. Google, for instance, has enough cash on hand to buy some of the automotive OEMs outright.

Even Amazon is looking to enter the autonomous car space, with patents for systems that help self-driving cars safely deal with reversible lanes that change direction depending on the volume of traffic at any given time. All of this points to patent collisions as autonomous and smarter cars roll off the assembly line. Such a collision is all the more inevitable because in the automotive space the patents are not standard essential. A patentee has no obligation to license them and can pursue injunctions against any rival that it suspects of infringement without any restrictions.

Conclusion

The rapid adoption of new technologies by the automotive industry and the new players that provide them will bring with it an increasing focus on exploiting and protecting intellectual property. The patent litigation landscape can be expected to expand accordingly. Planning now for that expansion will minimise the impact of such suits on the development and manufacturing of future vehicles.

About the author: Bill Robinson is a partner at Foley & Lardner LLP and Chair of the Intellectual Property Litigation Group. The views expressed herein are solely his and not necessarily those of Foley & Lardner LLP or of its clients

Edit

ABOUT US

Automotive World is a leading provider of automotive industry information. Our news, analysis, research and data have been informing the decisions of auto industry stakeholders, including all of the world's major vehicle manufacturers, since 1992.

SUBSCRIBE

We offer two types of membership:

- Single User Site License (1 user)
- Enterprise Site License (unlimited users)

Contact us for more information

ADVERTISE

Our targeted advertising solutions will enable you to engage your customers and prospects, wherever they are in the world.

[Click here to view our media pack](#)

CONTACT US

1 - 3 The Washington Building
Stanwell Road
Penarth CF64 2AD
Wales
United Kingdom

E: [hello\[at\]automotiveworld.com](mailto:hello[at]automotiveworld.com)