

Why were Toyota, Honda, and GM sued by Intellectual Ventures? Connected cars and patent litigation

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A litigious and costly period of ‘automotive wars’ has only just begun, says Takanori Abe of Abe & Partners.

1. Introduction

On June 26, 2018, Akio Toyoda, President of Toyota Motor Corporation (Toyota), stated the following at “THE CONNECTED DAY”^[1]: The “automotive industry is currently facing an era of major

transformation said to occur only once every 100 years. It is said that within as few as 20 years since the appearance of the Model T (Ford), almost all horses were replaced by automobiles.

“Now, 100 years later, we are facing new competitors, technology companies which have entirely different views from the automotive industry. We are entering a phase in which the future of automobiles could change drastically. In order to survive this era of major transformation, said to occur only once every 100 years, I have decided to redesign Toyota from a company that makes automobiles into a mobility company.”

This paradigm shift was named CASE by Chairman of Daimler (at the time), Dieter Zetsche, at a press conference of the Paris Motor Show 2016 in September 2016^[ii]. CASE stands for Connected, Autonomous, Shared & Services and Electric.

In the midst of these major transformation in the automotive industry, Intellectual Ventures (IV) filed patent litigations against Toyota et al, Honda Motor Co, Ltd (Honda) et al, and General Motors Company (GM) et al in the United States (US) in 2021 (the litigations). The litigations were related to the C (Connected) of CASE.

What kind of company is IV? Why did IV file the patent litigations against Toyota and others? Where is the conflict between IV and Toyota and others? Will such patent litigations related to connected cars increase in the future?

2. What is a connected car?

According to the Ministry of Internal Affairs and Communications and the Ministry of Land, Infrastructure, Transport and Tourism in Japan, a connected car is a car that functions as an ICT terminal, which is expected to create new value by obtaining various data such as vehicle status and surrounding road conditions from sensors and then collect and analyse such data via a network.

At “THE CONNECTED DAY”, Akio Toyoda said that incorporating connected technology into the Crown and Corolla models, both of which are special to Toyota, means that Toyota is pursuing in earnest the widespread use of connected cars. Toyota also offers a connected service called T-

Connect^[iii] including the “Remote Connect (app),” which allows users to initiate the car's climate

control settings via a smartphone app before getting inside, making it more comfortable and safer to start driving.

“In-car Wi-Fi,” turns a vehicle into a Wi-Fi hotspot and allows users to use their smartphones while driving to search for information or to show videos to children sitting in the backseat with a tablet.

Honda also offers services using connected technology, called Honda CONNECT^[iv].

3. IV vs Toyota, Honda and GM, US patent litigation

Overview

On October 19, 2021, IV filed lawsuits against Toyota et al and Honda et al in the US District Court for the Eastern District of Texas, accusing both of infringing 11 patents, and against GM et al in the US District Court for the Western District of Texas, claiming infringement of 12 patents. On April 4, 2022, IV withdrew The Eastern District of Texas litigation against Honda et al and filed a new litigation in the US District Court for the Northern District of Texas. The purpose of this withdrawal and the filing of a new litigation appears to have been to address a venue issue^[v].

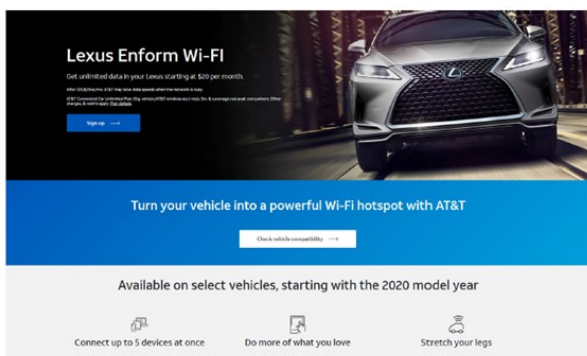
IV's patent rights

IV's patent rights relate to wireless network systems, mobile wireless hotspot systems, etc. According to the complaint, these patent rights are not asserted as standard-essential patents (SEPs).

However, Florian Mueller states in *FOSS PATENTS*, a well-known blog concerning software patents, that three of patent rights have been declared essential patents to the LTE standard, according to IPlytics^[vi].

Accused infringing products

IV alleges that the wireless network system incorporated in Toyota's Prius and Lexus, as well as in Honda's Odyssey and Accord, etc, infringe IV's patent rights. For example, in its complaint against Toyota et al, IV pasted the photograph below to allege that Toyota automobiles are equipped with mobile wireless hot-spot systems as claimed in IV's US patent 7382771.



[View full size](#)

Venue

The Eastern District of Texas and The Western District of Texas, where IV has chosen to file litigations, are very well-known venues for patent cases.

Marshall in The Eastern District of Texas is about a two-hour drive from Dallas and is a rural town with mostly single-story houses, with a landscape of cows on the right and horses on the left along the way. It has a population of only about 25,000.

This rural town was once flooded with patent cases from all over the world. The reason was that in the Eastern District of Texas, plaintiff patentees won patent cases at an extremely high rate of 88% in jury trials[vii].

This was during the reign of Judge John Ward (at the time), and although the plaintiff patentees' winning rate has gradually declined, the trend in favour of plaintiff patentees has not changed significantly in the subsequent reign of Judge Rodney Gilstrap.

The Western District of Texas is a venue that has recently emerged. After Judge Alan Albright was nominated by President Trump (at the time) and approved by the US Senate in 2018, the number of patent litigations in Western Texas increased from 89 in 2018, to 289 in 2019, and to 857 in 2020.

In 2020, the rate of patent litigation in The Western District of Texas accounted for 21.1% of all patent litigations in the US. Judge Albright himself handled more patent litigations than any other judge, accounting for 19.5% of all patent litigations handled by all judges. Judge Albright's goal is to have a jury trial within 2 years after the complaint is filed, which means he leads proceedings expeditiously. As such, he will not stay a case for a Patent Trial and Appeal Board (PTAB) proceeding unless there are exceptional circumstances[viii].

What kind of company is IV?

What kind of company is IV, the company that sued Toyota and others?

IV was founded in 2000 by Nathan Myhrvold, former CTO of Microsoft, and others. IV is said to be backed by Bill Gates[ix].

Myhrvold entered university at the age of 14 and received a master's degree in geophysics and space physics and a bachelor's degree in mathematics from the University of California, Los Angeles (UCLA), followed by a PhD. in theoretical and mathematical physics and a master's degree in mathematical economics from Princeton University.

He worked under Professor Stephen Hawking at University of Cambridge. During his time at Microsoft, he studied cooking at École de Cuisine La Varenne in France and gave a TED talk titled "Cooking as never seen before".

IV claims on its website to have generated more than US \$2 billion in licensing revenue 10 years after its founding[x]. Although slightly out of date, IV announced in its news release in 2008 that it had raised \$5 billion through investment funds, out of which \$1 billion had been returned to investors[xi].

IV has been criticised as a patent troll because it makes money by enforcing patent rights purchased from others. Some have called it "public enemy #1"[xii] or "the most hated company in tech"[xiii]. In response, Myhrvold argued, "IV is not a patent troll."

“If Facebook can buy Instagram, why shouldn’t Facebook be able to buy patents”^[xiv], he said, and “two of IV’s inventors will almost certainly get the Nobel Prize, and IV does do its own inventions fostering innovation”^[xv].

5. Why were Toyota, Honda, and GM targets of patent litigations? – IV’s intention in filing the Litigations

The *Nikkei* (online edition) published an article titled “Why were Toyota and Honda targets of patent litigation?” on December 9, 2021, regarding the litigations. Why? Normally, it is difficult to know the details of the plaintiffs' intentions in filing a litigation, but it is possible in these litigations.

The reason is that the litigations were filed just six days after Arvin Patel, COO of IV's fund, had expressed his views on the automotive industry in an article published on 13 October 2021^[xvi]. The article is provocatively titled “Why the auto sector is heading for an IP reckoning.” “IP reckoning” is assumed to mean “the automotive industry will be forced to pay and liquidate for the unauthorised borrowing of technology developed by other industries by way of exercise of intellectual property rights.” It is going to be a bit long, but let's look at Patel's view.

Patel states as follows: “Before the smartphone revolution, patent litigation was relatively uncommon in the mobile phone space, but the modern smartphone implemented numerous features and technologies that, crucially, were developed in other industries. The arrival of the smartphone set off an explosion of litigation that took more than a decade and billions of dollars to resolve. Today, the automotive industry is heading for a similar reckoning.

“As a result of the arrival of the connected car, the automotive sector has borrowed technology wholesale and is now completely reliant on technology that it didn’t develop and doesn’t own. These borrowed technologies are no longer 'nice to have'—they are essential to delivering the features and performance that consumers expect.

“The car buying decision is no longer based primarily on driving performance, but on features including connectivity, driver assist functionality and entertainment systems. When the auto sector was an oligopoly with a few major players and a group of large and highly concentrated Tier 1 suppliers, things were stable and the industry experienced relative patent peace. The result was a long period of IP détente.

“Unlike the suppliers of the past, the companies that own the IP underlying the modern automobile are going to want to be compensated. The bill comes due. Concerns over coming IP disputes in the automotive industry between automakers and technology companies are not theoretical, they’ve already begun. Members of the Avanci^[xvii] licensing platform including Qualcomm, Nokia, Ericsson, Interdigital, Philips, Panasonic, Sharp, and nearly two dozen more, are looking for compensation from the auto industry for its use of wireless standard essential patents.

“Since Avanci doesn’t own or control the patents it licenses, individual members have begun to assert on their own. These lawsuits over wireless technology in the auto industry are just the tip of a very large iceberg of coming disputes. Wireless SEPs are only the most obvious and readily provable

examples of technology that has been borrowed by the automotive industry. Below the surface are dozens of other technologies that are owned by others and now widely deployed in vehicles.

“Automotive OEMs and suppliers alike must recognise that they will face a much more complex competitive and IP environment in the future. By and large, the leading OEMs have operated in a ‘patent peace’ environment where large automakers and suppliers provide implicit (through non-assertion) or explicit cross-licences.

“However, like the smartphone patent wars, the coming wars in the automotive industry will take at least a decade and billions of dollars to finally resolve. Auto companies have become tech companies. Tech companies may become auto companies. It is clear that the radical change in automotive technology must result in a radical change in the way that technology is licensed in the industry. Automakers need to be proactive in obtaining licences—whether as part of supply agreements, through indemnifications from suppliers or in individual deals.

“If not, they will end up facing increasing levels of patent assertions and litigation, with the potential for injunctions and exclusion orders.” (Author's extract)

How about it? It is clear that Patel and eventually IV are in a very clear position on the automotive industry. In particular, it is interesting that their views on the positioning of communication technology in the automobile completely contrast with the following comment by Hirokazu Bessho, Intellectual Property and Standardization Supervisory Unit, Head of Supervisory Unit at Honda made at the Intellectual Property Committee of Industrial Structure Council, Ministry of Economy, Trade and Industry in Japan, which symbolises the conflict between the two parties: "Unlike mobile phones, the basic function of automobiles is to move and stop in the first place. As such, information and communication technology is only a part of the functions of automobiles, no matter how automobiles develop in the future. Therefore, no royalties should be based on the end product."^[xviii]

In addition, the subject of negotiations in the supply chain (components manufacturers or end-product manufacturers) being discussed, Toyota issued a press release^[xix] in response to the litigation filed by Nippon Steel Corporation in Japan, stating that such matters should be discussed between material manufacturers, implementers assert that the License to All^[xx] approach should be adopted, while Patel clearly states that the automotive manufacturers themselves need to be proactive in obtaining licenses. The conflict between the two is clear.

Examples of assessments of the litigations considering Patel's view are as follows: “The suits signal IV’s focus on auto as a potential growth area for its licensing business”^[xxi] and “It looks an awful lot like round two in an attempt to leverage OEMs into an IV license based on the failed campaign of years past.”^[xxii]

It is unusual to publish a detailed article before filing a litigation while press releases after filing a litigation are common. Patel's article appears to be a second declaration of war against the automotive manufacturers.

6. Intention that the majority of the patents in the litigations are not SEPs

Patel states that SEP litigations over wireless technology are just the tip of a very large iceberg of coming disputes. Some of the patent rights enumerated in the complaint in the litigations can be called SEPs, but the majority are not SEPs. IV's true intention in using ordinary patent rights that are not SEPs in the litigations is unknown, but it may be that IV is attempting to make it easier to win the litigations by discarding issues specific to SEP litigation such as whether a defendant is an unwilling licensee (an implementer who is unwilling to enter into a licensing agreement) and to lead the amount of damages higher than that in an SEP case^[xxiii].

7. Conclusion

When technological innovation occurs, so do patent disputes. As Patel states, IP détente in the automotive industry has come to an end and a war similar to the past smartphone patent litigations have begun, which means that the war between the telecom industries and automotive industries may continue for at least 10 years and cost billions of dollars to reach a final resolution. Patent disputes related to connected cars are expected to increase in the future, whether or not they relate to SEPs.

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