

## **IS STANDARDIZATION FOR AUTONOMOUS CARS AROUND THE CORNER?**

By Shervin Pishevar

Given the recent focus on self-driving cars, it is only a matter of time before the industry begins to consider setting technical interoperability standards for such cars. The automated vehicle industry will need a mechanism to allow these cars to drive side-by-side with both autonomous and human-operated cars, communicate with each other, and avoid obstacles. One solution is to develop open technical interoperability standards, and establish a patent pool to facilitate the licensing of essential patents and avoid the expensive and time consuming litigation that has consumed the smartphone industry.

Standard-setting and patent pools can have procompetitive purposes, particularly when the goal is technical interoperability, which benefits consumers. Technical interoperability standards are needed for autonomous cars, but the industry must carefully implement the standard-setting process and any related patent pooling arrangements to satisfy well-established antitrust principles. Key will be to identify the aspects of autonomous driving technology that benefit from standardization, create a standard-setting organization to oversee the development of the relevant standards, and structure a patent pooling cross-licensing arrangement that facilitates widespread implementation of the technology. To that end, an option to request advance Justice Department review of these arrangements pursuant to 28 CFR 50.6 should be considered, as the Justice Department will issue a business review letter that sets forth its antitrust enforcement intentions with respect to the proposed arrangement before it has been implemented.

### **United States Antitrust Policy as to Intellectual Property Licenses**

Potential antitrust concerns can arise when two or more actual or potential competitors get together and seek to combine their intellectual property in some way, including through joint or pooled licensing. Obviously, actual fixing of prices or division of markets is not tolerated. But even indirect forms of restraints can have anticompetitive effects, such as when the merging of research and development activities lessens competition for the development of new goods and services, or if a pooling arrangement discourages participants from engaging in research and development, thus slowing innovation. As a general rule, licensing arrangements will raise antitrust concerns if they are likely to adversely affect prices, quantities, qualities or varieties of goods and services.

Standard-setting and patent pooling are normally evaluated by the Justice Department under the so-called “rule of reason,” where the conduct is evaluated within a relevant market to determine if it is reasonably necessary to achieve procompetitive benefits, and if the procompetitive benefits outweigh any potential anticompetitive effects.

**Pro-Competitive Benefits of Standardization:** Technical standards govern a wide range of technologies from WiFi and cellular telephones to electrical plugs and outlets, and there is no reason why standards might not an appropriate next step for the autonomous vehicle industry.

A need exists for cars to communicate with each other, for example, about perceived obstacles and to chart a path that avoids collisions, as well as with city and highway infrastructure for

access to road sign and traffic information. Just as cell phone standards emerged to allow users of different phones to communicate with one another over existing networks, standardized interfaces and means of communication are a natural next step for autonomous cars.

Standards are typically developed through an open collaborative process. Contributions from participants may contain patented technologies and other protected rights, which are commonly known as Intellectual Property Rights. Recognizing this, standards-setting organizations have taken various approaches to deal with the possibility that standardized technology might be patented. Some standards organizations bar the inclusion of patented technology and/or require that its members license their patents that might be included in a standard for free. Other standards bodies, like the European Telecommunications Standards Institute, which sets the telecommunications standards at the heart of the smartphone wars, seek to strike a balance by requiring owners of standard-essential patents to agree to license those patents on reasonable and non-discriminatory (“RAND” or “FRAND”) terms.

The Justice Department has emphasized that clear patent policies are needed to allow standards participants to make informed decisions about whether to promote and accept a particular technology for inclusion in the standard. To this end, a clear patent policy that sets forth the requirements for patent disclosure and licensing is necessary.

Thus, if the industry considers standardization, the goal should be to identify potential autonomous car standards, put together an organization to manage the standardization process, establish a process to determine what patents are essential to the standard, and ultimately define an appropriate pool of essential patents and the terms on which they will be licensed. And at one or more points in this process it might be advisable to seek advance Justice Department review of the proposed arrangement.

**Patent Pooling Arrangements:** The January 2017 Antitrust Guidelines (“Guidelines”), issued jointly by the Department of Justice and Federal Trade Commission, specifically address cross-licensing and pooling arrangements, as have several past Justice Department business review letters.

A patent pool is an aggregation of patent rights for the purpose of joint package licensing. “These arrangements may provide procompetitive benefits by integrating complementary technologies, reducing transaction costs, clearing blocking positions and avoiding costly infringement litigation.” (Guidelines, Sec. 5.5). But it is also recognized that such arrangements can be anticompetitive if they discourage participants from engaging in the actual competition that would have occurred in the absence of the patent pool.

The “starting point for an antitrust analysis of any patent pool is an inquiry into the validity of the patents and their relationship to each other.” (6/26/97 BRL p. 9). Patent pools based on invalid and expired patents cannot withstand antitrust scrutiny. Nor can patent pools aggregate technologies that would otherwise compete with one another. In contrast, the pooled licensing of “complementary” technologies, which might otherwise block the application for which they are jointly licensed, is generally considered procompetitive.

Where a patent pool is limited to patents that are essential to a technical standard, the pool inherently will involve only complementary technologies:

Essential patents by definition have no substitutes; one needs licenses to each of them in order to comply with the standard. At the same time, they are complementary to each other; a license to one essential patent is more valuable if the licensee also has licenses to use other essential patents.

(12/16/98 BRL p. 10). In that regard, the Justice Department in an earlier Business Review Letter noted that the patent pool had been designed to include only patents, as determined by an independent expert, that were actually essential, i.e., patents that would necessarily be infringed by implementation of the standard. As the Justice Department explained, omitting nonessential patents from a patent pool is procompetitive because companies that make products that comply with the standard can nevertheless compete with each other by offering innovative implementations that ultimately benefit consumers.

On the other hand, the Justice Department noted that it would have been concerned if the Licensors could have used the pooling agreement to restrain trade in other ways, including using the license as a vehicle to (i) disadvantage competitors in downstream product markets, (ii) collude on prices outside the scope of the portfolio license (such as for downstream products), or (iii) impair technology competition either within the standard or from rival technologies.

### **Standard-Setting/Patent Pooling Best Practices**

There are a number of best practices that may be utilized in the process of developing a technical standard and creating a patent pool. Together, these practices may help achieve the pro-competitive goals of patent pooling: reduction in transaction and licensing costs; lower overall price for portfolio licensing; efficient access to technologies; elimination of blocking patents; and reduction in litigation costs.

- **Subject Matter of the Standards:** Identification of those aspects of autonomous car technology that would benefit from standardization. A number of areas seem to be likely candidates, including:
  - Vehicle-to-vehicle and vehicle to infrastructure communications
  - Standards to reduce the complexity of autonomous vehicle systems.
  - Simplify software systems and supporting chips to allow multiple suppliers of interoperable products.
- **Access to Standards:** Any technical standard should be made available to prospective implementers on fair and reasonable terms and conditions, if not for free. Access to such standards helps reduce barriers to entry for companies not invested in the autonomous vehicle space.
- **Essential Patents:** If a patent pool licensing scheme is adopted, it should be limited to patents that are essential to practice the standard. Non-essential patents and duplicative patents should be excluded from the patent pool.
- **Members:** There should be no arbitrary limitations on who may be a member of the patent pool.

- **Independent expert:** A competent independent expert authority should be retained to evaluate the essentiality of the patents to be included in the pool.
  - Patents included in the pool should be evaluated periodically to ensure that they are still essential to the relevant standards.
  - The expert's compensation should be structured to avoid incentives to find particular patents essential.
  - Members should retain the right to review the patents included in the pool, make an independent determination as to their essentiality, and challenge the pool's determination.
- **Potential Licensees:** Any third party that intends to make, use, sell, offer for sale or import products that comply with the standard should be eligible to obtain a license to essential patents needed to practice the standard.
- **License Terms:** Licenses should be made available on FRAND or even RAND-Z (royalty-free) terms. Thought must be given as to how to structure royalties for entities involved in different parts of the production chain (e.g., autonomous car makers vs. component suppliers).
- **Independent Licenses:** The patent pool should require, or at least permit, each member of the pool to make available individual licenses to prospective implementers of the standard on a standalone basis.
- **No requirement to practice the standard:** Although licensees obtain the right to practice the standards free from charges of infringement (at least from pool members), they should not be required to do so.
- **Retain right to pursue infringers:** Each licensor should retain the right to pursue infringers.
- **Avoid exchange of sensitive information:**
  - Neither the patent pool nor the standards development process should be used to obtain access to any competitively sensitive, proprietary information.
  - Pool members and standards participants should not discuss or exchange information, such as pricing information, that could result in an antitrust violation.
- **Duties to disclose/license Essential Patents:**
  - While membership in the potential SSO/pool is voluntary, the organization should consider policies that prohibit patent hold-up.
  - For example, licensors who participate in standards-development should be encouraged to disclose all of their potentially essential patents for evaluation and certification.
  - The organization should consider requiring members to make a general licensing declaration like that permitted by ETSI, which states that to the extent a member has patents that are essential to the standard, it will be prepared to license them in accordance with the patent policy.

### **Challenges and Practical Considerations**

Achieving a successful standards development process and patent pool will likely be challenging here because a number of companies in the space have been investing in self-driving technology for years, and have already developed proprietary technologies and related intellectual property in those areas. At the same time, federal or state laws and regulations, and the potential network

effects provided by widely adopted standards, may provide adequate incentives for participation in the standards development process.

And even if an initial standard and patent pool is ultimately implemented, a mechanism to fairly determine the credit that each relevant patent holder receives for its contributed patents is needed. Certain companies may want all essential patents to be treated equally for royalty sharing purposes, whereas others may want the patents to be weighted based on some objective criteria.

There are many complex issues that will need to be considered and ultimately resolved if the industry seeks to implement open standards and pooled patent licensing for autonomous cars and thereby avoid the fractious litigation that has plagued the smartphone industry since its inception.