

Comments On Patent Pools and Standards For Federal Trade Commission
Hearings Regarding Competition & Intellectual Property

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I. Introduction

I am a registered patent attorney who has been involved with patents since starting my career as a patent examiner at the United States Patent and Trademark Office in 1988. A portion of my practice is directed to obtaining patents for clients that read on technical standards (e.g., MPEG-2), and working with patent pool evaluators to show how specific patents are essential to the implementation of a standard.

All of my experience in the area of patent pools has been in private practice at the Virginia law firm of Oblon, Spivak, McClelland, Maier & Neustadt (Oblon Spivak), where I am a partner. The views that I am presenting are my own personal views, and are not necessarily the views of the Oblon Spivak law firm, or any client of the firm. I have not been paid by any entity to prepare or present this testimony.

Under the proper circumstances, I am highly in favor of the use of patent pools. Companies that spend extensive resources to develop an industry standard in order to implement new technology should be able to recoup, through patent royalties, at least some of the money spent developing those standards and technology. A patent pool is the most cost effective and efficient way of collecting and distributing royalties for patents that are essential to an industry standard.

II. Patent Pools and Cross Licensing

A. The Important Elements Of A Patent Pool

It is my understanding that the patent pools that have been approved by the Department of Justice since the 1997 approval of the MPEG-2 Patent Pool have been implemented in a common manner. Features of these patent pools include:

1. A technology standard that is definite and well defined;
2. An evaluator/independent expert to determine which patents are essential to the implementation of the standard, thereby defining a group of essential patent holders;

3. A license drafted and approved by the essential patent holders that allows the technology to be licensed on a reasonable and nondiscriminatory basis;
4. A patent pool administrator appointed by the essential patent holders to handle administrative tasks such as signing up licensees, collecting royalties from the licensees, and distributing the royalties to the essential patent holders; and
5. The essential patent holders retaining the right to license the patents outside of the patent pool.

Patent pools that conform to the above criteria should be approved and promoted by the government, industry, and the public, as they provide a win-win situation for all involved. If one of the above factors is not included in the patent pool, it does not necessarily mean that the patent pool is anticompetitive or in violation of the antitrust laws. It merely means that the patent pool will need to be more carefully scrutinized.

B. Types of Technology Best Suited For Patent Pools

1. Technology Conforming With A Defined Standard

Patent pools are not necessarily well suited for all areas of technology. They are, in my opinion, very well suited to those technologies where there exists a well-defined standard. Where there is not a standard or other document defining what is required to implement a compliant product, it may become challenging to determine what patents should be included in the patent pool (i.e., essential patents).

As an example of a well-defined standard, the MPEG-2 video standard¹ defines how to represent a digital video data stream for use in digital cable television systems, digital satellite for televisions, and DVD players, for example. If a company wants to sell equipment that will be capable of decoding a digital video stream on a DVD, it must make its product compliant with the MPEG-2 standard.² It is straightforward to define what is necessary to have an MPEG-2 compliant product or data stream; it is defined in the standard.³ If a patent covers a feature required by the standard, then the patent is essential to the standard. An independent expert/evaluator can readily determine whether the technology is essential to the standard, and consequently, whether a patent should be included in the pool.

¹ MPEG stands for Moving Pictures Expert Group, and the current version of MPEG-2 video is defined by the document ISO/IEC 13818-2.

² Additionally, data is stored on the DVD in a specific format, and the manner of storing this data is specified in the DVD standard.

³ It may also be possible to have essential features of technology not defined in the standard, but inherently required to practice the standard. For example, suppose the laws of physics prevent the proper reading of a DVD unless the laser used in the DVD player has a specific wavelength, or smaller. It is appropriate to include in the pool patents limited to a predetermined wavelength, if it can be shown that there is no way to implement the DVD standard without using a laser having such a wavelength. However, if something is not required by the standard and there are viable alternative manners of implementing the technology, caution must be exercised in considering patents related to that technology to be essential to the practice of the standard.

Standards are typically developed for communications, computers, and electronics areas of technology where interoperability of equipment and software is critical for acceptance and operation of the technology. Technology areas such as chemical compositions, medicines, and mechanical devices are often irrelevant to standards, but if an industry were to develop and accepted standards for one of these areas of technology, then a patent pool similar to the MPEG-2 patent pool may be applicable to these areas of technology as well.

2. Technology Where Essentiality Is Not Readily Defined And There Are No Blocking Patents

Suppose a company today wants to build a jet. While there certainly are patents owned by different companies that cover various features of a jet, I doubt that there are any non-expired patents on jets that cannot be designed around and avoided (i.e., blocking patents).⁴ True, some patents may make the jet more efficient to operate or build, but these patents are probably not absolutely essential to the creation of a jet.

It is my opinion that there *may* be anticompetitive dangers if today, various owners of patents on jets were to pool their patents. For example, it may be arbitrary or difficult to decide what patents should be part of a jet patent pool. If the patent pool were set up as most patent pools are today such that taking a license from the pool meant that all patents that are part of the pool must be licensed, then taking a license from the pool could force a company to license patents or technology that it did not use. A company should not have to license technology that is part of the pool when there is no requirement to use such technology and in fact the company does not use the technology. Such a licensing requirement amounts to an improper tying. If the patent pool could be structured so that a license was not required for technology that was not being used, then a potential anticompetitive problem could be eliminated.

3. New Technology Where There Exists Blocking Patents From Different Companies That Are Not Part of A Standard

Suppose there is developed and patented by a first company a basic concept related to air transportation which is three times as fast and twice as efficient as any current form of air transportation. However, further suppose that there are safety concerns with this new technology and the new mode of air transportation is not safe to use in the form developed by the first company. A second company subsequently develops and patents an improvement to the basic concept that solves all safety issues, yet maintains the speed and efficiency of the technology from the first company. In order to practically and safely use this new mode of air transportation, patent licenses from both companies must be obtained.

In the above scenario, (1) there is no industry standard defining how to use the technology; and (2) there exists alternative technology (e.g., conventional jets) for air

⁴ It is most probable that all basic patents on jet technology have expired by now. However, it is theoretically possible that some patents could still be in force because of the concept of "submarine patents." Submarine patents are no longer possible for patent applications filed after 1995 because of a change in the law that measures the term of a patent from its filing date.

transportation. Under these conditions, should the first and second companies be permitted to pool their patents and grant one license to the patents from both companies? In my opinion, the answer is yes, unless there are anticompetitive effects from the pooling that outweigh the benefits.

What type of anticompetitive effects could result from the pooling? Since the technology may be readily implemented with licenses from both the first and second companies, there may be little incentive to innovate and improve upon the safety or efficiency of the technology. On the other hand, without a license from both the first and second companies, it may be impossible to develop a commercially feasible implementation, and the public could have fewer suppliers of the new technology. Without knowing further facts, it does not appear to be possible to make a decision as to whether the patent pool would be harmful or actually benefit the public or the air transportation industry. Further exploration of this example is conducted below to help resolve the issue of whether the patent pool would be helpful or harmful.

4. Blocking Versus Nonblocking Patents

It should be acceptable to have a patent pool for new technology where there are blocking patents from multiple companies. However, where there are improvement patents that are not truly blocking and a standard is not involved, a patent pooling arrangement should undergo more careful scrutiny. A problem that I foresee with a rule or distinction for the approval of a patent pool based on whether a patent is blocking is the difficulty in accurately defining and determining whether or not a patent is truly blocking (i.e., is essential to the technology). If there exists an industry standard, it is possible to readily determine whether a patent is essential or a blocking patent. However, if there is no industry standard, it may be difficult to determine whether or not a patent is blocking. Moreover, when there is no industry standard, the entities that will determine what patent should be part of the pool must to a certain extent subjectively decide which patents are essential to the pool. Such subjectivity provides the gatekeeper of the patent pool with incredible power and potential for abuse.

Take as an example the fictitious new technology explained above related to the new air transportation technology. It is easy to conclude that the technology for safety developed by the second company is a blocking technology. However, it is quite possible that an alternative technology could be developed to implement a better solution to the safety concern. Once new safety technology is developed, the original safety technology may no longer be blocking. Thus, it is possible that in certain circumstances the classification of whether or not a patent is blocking may change.

With regard to the issue of anticompetitive impact of a patent pool on the new air transportation technology, are there any real dangers of anticompetitiveness? A patent pool unrelated to a standard could be anticompetitive if the patent pool had a grant-back clause requiring any technology improving upon the new mode of air transportation to be licensed to the patent pool. In this situation, the grant-back could take away an incentive to improve upon the technology, as it may be difficult for companies to control their new intellectual due to the grant-back requirement. Thus, it appears that grant-back provisions must be carefully reviewed

outside of the context of patent pools relating to standards.⁵ However, as long as the grant-back clause is reasonable, and is limited to patents that could affect the original mode and original use of the technology, the grant-back clause should not create significant issues. If the grant-back clause outside of the context of patent pools related to standards does create an issue, then guidelines could be promulgated to address the proper manner of implementing a grant-back clause when the patent pool does not relate to a standard.

5. A Test To Determine If A Patent Is Blocking

Suppose it is determined that a patent pool does not create anticompetitive problems where an industry standard exists, or when there are multiple blocking patents to a particular technology from different companies. Further suppose that when existing patents are not blocking, then a patent pool is improper. Given this situation, it would be necessary to determine what constitutes a blocking patent.

A test I propose to determine whether a patent is blocking relates to the breadth of the field of technology relevant to the patent. I propose that a patent be defined as blocking if it is essential to the practice of the relevant technology field. In order to perform this test, the relative technology field must be defined before the patent could be determined to be essential. Patents would be categorized as blocking or nonblocking depending on how broadly the field of technology is defined. In the new mode of air transportation example, if the relevant field of technology is defined generically as air transportation, the patents from the first and second companies are non-blocking, as they do not block the use of conventional jets. If, on the other hand, the relevant field of technology is defined as the "new" mode of air transportation, then the patents from both companies are blocking. This flexibility of determining whether a patent pool includes blocking patents will allow valuable technology to be classified in an appropriate manner.

Under today's antitrust law, an antitrust violation could turn on how the relevant market is defined when analyzing market power. Similarly, if patent pools are determined to be acceptable when there are blocking patents from multiple companies, my proposed test related to the relative field of technology should work as well as the current manner in which a relative market is analyzed under antitrust law.⁶ While no test is perfect, the test I propose provides some flexibility, and I believe this test will provide a reasonable result.

C. Exemplary Patent Pools

There are currently in existence a number of patent pools operating efficiently to provide licenses to valuable technology to manufacturers on a reasonable basis. These patent pools

⁵ Such a potential anticompetitive problem with grant-backs does not exist when the patent pool relates to standards. The standard is usually defined or fixed at the time of the licensing of the essential patents. With the standard being fixed or defined, improvements developed after the fixing of the standard could not be essential to the standard as the standard would be prior art against the improvements.

⁶ When there is a relevant industry standard, there is no need to perform such a test as it is clear that when the patent is essential to the standard, the patent is blocking.

further provide a reasonable royalty to companies investing time and money in the development of technology. Patent pools currently in existence include:

- (1) MPEG-2 Video;
- (2) IEEE 1394 (fire wire);
- (3) DVD/Toshiba, Hitachi, Matsushita, Mitsubishi Electric, etc.; and
- (4) DVD/Sony, Philips, Pioneer, etc.

Other pools in the process of forming or attempting to form include:

- (5) MPEG-4 Video;
- (6) MPEG-4 Audio; and
- (7) 3G Partnership Project for mobile phones.

Each of these patent pools is based on an industry standard. I have had contact with each of patent pools 1, 3, 5, and 6 above, and have seen no evidence of them being anticompetitive. In order for companies to continue to work on improving technology and implementing additional standards, patent pools like the ones previously approved by the Department of Justice should continue to be approved.

D. Areas Where No Patent Pools Currently In Existence

To my knowledge, there are no modern day (post 1990) patent pools that have been officially approved by the Department of Justice that are not related to an industry standard. A paper entitled "Patent Pools: A Solution to the Problem of Access in Biotechnology Patents?", Clark et al, December 2000, which was published by the U.S. Patent and Trademark Office makes the case for establishing a patent pool to provide access to biotechnology patents at reasonable royalties. While I am not familiar with the details of the biotechnology patents that might be part of such a pool, as long as a blocking patent could be reasonably defined, and the terms of the biotechnology patent pool were fair and reasonable, I see no reason why a patent pool including biotechnology patents should not be approved.

E. Advantages Of A Patent Pool

1. Patent Pools Greatly Reduce Transaction Fees To Obtain Technology

Patent pools promote efficiencies by allowing one-stop-shopping for the licensed technology. Such one-stop-shopping allows a company using the technology to avoid negotiating separate licenses with every company owning a patent that is essential to the standard. Take for example the MPEG-2 video standard, which defines how to represent a digital video data stream used in digital cable television systems, digital satellite for televisions, and DVD players. If a company wants to sell equipment that will be capable of decoding a

digital video stream on a DVD, it must make its product compliant with the MPEG-2 standard.⁷ As of January of 2002, there were at least 14 separate companies owning 75 U.S. patents that have been determined to be essential to the MPEG-2 standard.⁸ Imagine the transaction costs both to patent owners and licensees for establishing and completing separate license agreements for each of the 14 companies that hold an essential patent. When you factor in a legal and technical analysis, on top of the negotiating the terms of licenses for so many patents from many different companies, the cost rivals the cost of a patent litigation. A patent pool certainly facilitates the licensing and dissemination of valuable technology.

2. Patent Pools Reduce The Probability Of Litigation

My experience is that a typical patent litigation that includes a trial can easily cost \$2 to \$5 million. If a company can obtain a license for a very modest fee to most or all patents related to a standard, then litigation makes little financial sense. However, if a company must enter into individual licenses with each essential patent holder, the costs for such licenses could become expensive. A small company that could not afford the transaction costs associated with so many license agreements may simply decide not to take licenses. The small company, or a company with small sales, may decide not to pay a license fee for the technology, believing that the chances of litigation are very small since the financial rewards would probably not be worth the litigation costs. However, when there is a patent pool with a reasonable royalty, the number of unlicensed infringers and the chances of litigation are reduced.

III. Do Not Prohibit Patent Pools for Patents Which Are Essential To An Industry Standard

Joel Klein's letter of June 26, 1997 approving the MPEG-2 patent pool by the Department of Justice, Antitrust Division, outlines why patent pools for patents on standards are beneficial. The letter explains why the patent pool (1) does not disadvantage patent pool licensees; (2) does not facilitate collusion; and (3) does not impose an anticompetitive restraint on rival products and technology. Similar advantages are explained in the Department of Justice letters approving the DVD patent pools. What has happened since the approval of the MPEG-2 patent pool (and the approval of the DVD patent pools)? Consumers have benefited by having inexpensive access to DVD and digital set-top decoders for viewing television signals from digital satellites and digital cable providers. Did companies stop developing new technology because of the existence of MPEG-2 (and DVD patent pools)? Absolutely not! Companies have and continue to develop new digital video standards such as MPEG-4 and MPEG-7 that provide advantages not found in MPEG-2. Also, new and better DVD standards have been and continue to be developed such as standards defining recordable DVD, and high-definition DVD. Small or new manufacturers can enter the DVD player market after performing no research and development regarding MPEG-2

⁷ Additionally, data is stored on the DVD in a specific format, and the manner of storing this data is specified in the DVD standard, which is separate from the MPEG-2 standard.

⁸ Count based on the patent list from the WWW.MPEGLA.COM website on January 12, 2002. Note that the number of companies and patents listed on WWW.MPEGLA.COM only includes companies that have decided to join the MPEG-2 Patent Pool. There are other companies that may hold essential patents that are not included on MPEGLA's list and it may be necessary to obtain a separate license from these companies.

and DVD technology, simply by licensing the technology from the patent pools at a very reasonable rate. The Department of Justice approved patent pools allow DVD players to be sold today to consumers at a street price of \$89 to \$99, even after paying royalties to the DVD and MPEG-2 patent pools.

Thus, the current form of patent pools that have been approved by the Department of Justice have been highly beneficial to the public, and have had not had anticompetitive effects. Please do not change a system in which everybody is benefiting.

IV. Conclusions

These hearings do not appear to have been called to broaden or strengthen patent pools or the protection provided by patents, but the rumblings on the street indicate a crackdown on patents and patent pools. Before any restrictions are placed on patent pools, the Department of Justice letters explaining the benefits of the MPEG-2 and DVD patent pools should be studied, and the benefits to both consumers and the inventors of the technology of these patent pools should be considered.

Thank you.