



THE COMPLEMENTARITY¹ OF PATENTS AND STANDARDS ©

By Lawrence A. Kogan

Part 1 - of the Panel on the

Intersection of IP, Competition and International Trade

Presented at

The Inter-Pacific Bar Association 21st Annual Meeting & Conference

Kyoto, Japan

April 24, 2011

Unabridged Outline

¹ Oxford Dictionary defines a ‘complementarity’ as “a relationship or situation in which two or more different things improve or emphasize each other’s qualities”, and, as a physics concept holding “that two contrasted theories, such as the wave and particle theories of light, may be able to explain a set of phenomena, although each separately only accounts for some aspects.”

I. Intellectual Property Laws Contribute to Innovation and to the Creation of International Standards and Serve as the Basis of ‘FRAND’ Licensing

A. Invention, Innovation and IP

1. *Invention:*

The generation of a new idea or knowledge that aims to solve a specific technical problem. Can relate to products or processes and are characteristically protected by several forms of IP. Not all inventions are ‘commercialized’ and result in innovations. (WIPO)

2. *Innovation:*

Entails the process of taking a newly developed idea from the formulation stage to the successful launching of a new or improved product or service in the marketplace, or the result of that process, so as to meet the explicit or implied needs of current or potential customers.(WIPO)

- **Technological** – (resulting from scientific and/or technological R&D) - In terms of product or process, radical (basic or fundamental) vs. incremental (improvement), and disruptive vs. sustaining (sequential and/or complementary) (WIPO)
- **Non-Technological** - marketing innovation, institutional innovation, and complementary innovation. (WIPO)

3. *Intellectual Property:*

Unique, value-adding creations of the human intellect that result from human ingenuity, creativity and inventiveness. The legal right of IP is deemed to come into existence only after the substantive and procedural requirements of the relevant national IP law are met. (WIPO)

- **Patent** – A temporary (‘property’) right to exclude all others including government from making use, offering for sale, selling, or importing, an ‘invention’.
- **Trade Secret** - Anything that gives a competitor an advantage, edge or head-start that is not in the public domain. It typically includes opportunities that present themselves to a business, involves dedication of substantial time, cost, and effort, and often consists of the knowledge possessed by company executives and key employees.

4. *Value of Intellectual Property:*

- “In an intellectual economy...IP becomes the basis for value creation for firms, whether through its incorporation into innovation products and services or through its sale in the market place.”

- IP value is strongly influenced by the novelty of the invention and the availability of alternative routes to the same solution (i.e. inventing around a patent).
- Patent value is highly context-dependent and relates to the ability of a firm to extract the value from its patents through competent management, as well as on the particular market environment facing a patent holder. (OECD 2005)
- “The basic concept of intellectual asset management (IAM) is to increase the business value from intellectual assets via more comprehensive valuation and management. Firms use IAM to evaluate their patent portfolios and identify patents which have not been used for internal development, *but have the potential to be licensed to others* without risking their own profitability.” (OECD 2006)
 - “IAM is closely linked to a shift toward more open models of innovation in which firms increasingly rely on external sources of knowledge and technology to complement their internal innovation capabilities. Such a model of innovation management entails more collaborative research and greater in-sourcing of technology from other innovating organisations, *often through technology licences* or the acquisition of firms. The open innovation model is perhaps most evident in the information and communications technology (ICT) sector, where it enables firms to cope with accelerating innovation cycles, intensifying global competition, increasingly complex products and services that incorporate multiple technologies and the difficulty of controlling all the intellectual assets and qualified people needed for innovation”. (OECD 2006)
- Patents have been recognized to promote innovation and serve the public interest by performing several valuable functions:
 - Incentive Function - Patents can provide inventors with the necessary incentive to generate intellectual creations for economic and social gain.
 - Transactional Function - Protected “inputs to a collaborative research endeavor can facilitate [greater] inter-firm R&D collaboration”, that can result in the conversion of inventions into marketable products. In addition, protected patents also can “facilitate the division of profits among contributors to a given stream of research [which,] in turn, affects the extent of incentives available to successive inventors”.
 - Disclosure Function - A properly prepared patent application can and must publicly disclose all of the technical information concerning the invention, and such information must be described clearly enough to “enable a skilled person to reproduce the invention”.
 - Signaling Function - Valid ownership of a patent indicates to prospective investors “a firm’s innovative capabilities”, and thereby increases that firm’s ability to secure third-party financing, including from venture capitalists.” (WHO CIPIH)

B. Patent Licensing

- In the commercialization of patents the parties to a licensing transaction have several possible goals/strategies:

1. *Patentee Objectives/Strategies –*

- Offensive - Extract the most economic value possible thru royalty-based licensing. Generally used for technological basic/fundamental and radical/disruptive innovations to recoup large R&D and commercialization (including regulatory market authorization) costs.
- Defensive – Maximize ‘freedom to operate’ by maintaining rights to use patents in litigation. Implementers are rarely requested to execute a patent license, but patentee reserve the right to do so if threatened with a lawsuit. Generally used for improvement innovations - (also called an incremental, sustaining, sequential or complementary innovation) which may include the application of new and better production processes or techniques that allow old or new products to be made more reliably, of better quality, or simply in larger quantities, or at a lower price.
 - “In the case of an improvement innovation, not only are competitors for the class of product already in place, but since the improvement innovation typically amounts to a better, faster, or cheaper way to build the product, its advantages are far more quickly understood and replicated.” (WIPO)
- Harmony – Create cluster of patents around certain technology, e.g., general purpose components, while ensuring that they can differentiate their own products and services from their competitors’ products and services. (Herman)

2. *Licensee Objectives/Strategies –*

- Offensive/Defensive - If have own patent portfolios and/or their own products and services, may adopt similar strategies.
- Pay as Little as Possible - If lack patent portfolios or have weak patent portfolios, have little or no incentive to pay a patentee more than the lowest possible royalty to obtain the rights necessary to commercially manufacture or exploit their products and services.

3. *Types of Patent Licensing -*

- Cross Licensing – Achieves mutual sharing of patents between two or more patent holders, where each is granted the right to practice the other’s patents.

- May entail fixed fees or running royalties flowing in one or more directions, or no compensation may be provided at all to the parties.
 - May entail imposition of geographical restrictions which involve the parties' use of as few as two patents (one from each of the parties) to a specified number of patents to even an entire portfolio.
 - May arise out of practical necessity, as where the parties could not proceed with the practice of their respective patents because to do so would infringe on the other's patent in the absence of a license – i.e., in a “two-way blocking relationship”.
 - May result from a settlement of infringement litigation.
 - May reduce variable transaction and production as well as litigation costs, and provide parties with access to other and perhaps new ideas that can promote R&D and new innovations. (Raysman and Brown; Choi)
- Portfolio Licensing – Licensing or cross-licensing of up to thousands of patents may occur where technologies are so large that one company lacks the resources to bring the technology to market alone, or where the developing company is not interested in fully exploiting the technology.
- *Example 1: Processing Machine & Methods Outside Industry* - Used to license patents on unique processing machine developed and the related method to manufacture products useful outside industry.
 - *Example 2: Smartphones* - Used where a technology is large enough to be usable across an entire industry, in which case **it may serve as an industry standard** by which many companies' products may be interchangeable – e.g., as a foundational portfolio in the ‘smartphone market’. “A smartphone is a combination of IP - from computers, from wireless. They combine the results of R&D from lots of companies...”
 - *Example 3: Semiconductors* - Used by rival firms operating in complex industries (e.g., semiconductors where a single product incorporates many component technologies) which are often owners of complimentary assets. Cooperation via cross-licensing patent portfolios protects patents between them. (Mullin)
 - Can be quite profitable – at least one study has shown that the access and negotiating strength of a large portfolio provides companies with a powerful

market advantage (Wagner & Parchomovsky) – the threat of litigation can induce licensing and thus reduce litigation costs. (Mullin)

▪ **Portfolio Licensing Models**

- *Broad Portfolio Licensing Model* – Companies with diverse portfolios and prodigious capital and market presence can execute licensing programs that extract hundreds of millions in revenue from hundreds to thousands of licensees. A broad patent portfolio can provide company engineers with the freedom to experiment unhindered by concerns of infringing on others' patents.
- *Deep Portfolio Licensing Model* – Companies with narrower but deep portfolios can dominate a technology, as where an array of patents on a new technology standard and patents on related technologies covering diverse applications of that standard. Well capitalized licensing programs tap hundreds of licensees for IP revenues in the millions of dollars. **Examples:** cellular telephony, memory chip designs, semiconductor technology.
- *Patent Pool Licensing Model* – Companies agree to create a collection of patents in support of a technology and then cross-license each other's patents pursuant to arrangements that reflect the relative strength and impact of each company's overall portfolio. **Examples:** MPEG video, DVDs. (Wagner & Parchomovsky; Detkin)
A patent pool operates under an agreement enabling the participating patentees to use the pooled patents and providing a standard license for permitting others to use the pooled patents. The agreement also provides for the allocation of a portion of the licensing fees among members of the pool. As regards standard-related patent pools, in order to ensure non-discrimination among licensees, a most-favorable royalty clause is typically included. (WIPO SCP/13/2)
- *New Models* – pioneered primarily by startups that are not originally product companies.
 - **Patent Aggregators, Distributors & Financiers** – several forms:
 - Licensing consultants that help principally large companies to evaluate and exploit their IP assets. Their corporate clients typically have healthy patent portfolios built up over the course of many years, but simply do not have the in-house expertise or resources to exploit such assets.



- Auctioneers that help small inventor, large company and universities to sell their patents.
- Financiers that create investor patent stock funds tracking ‘patent strength’ of large company patent asset portfolios in preparation for development of an IP secondary market via a centralized patent exchange.
- Publicly trade companies that purchase patents and small portfolios and then license them individually.
- Private firms that invest in companies that own compelling IP assets but lack financing for later-stage development or for litigation.
- Private firms that assemble patent portfolios by purchasing IP from small inventors and large companies and couple with their own inventions and market and technology analysis for purposes of licensing those technologies in markets where products rely on multiple technologies from multiple sources. (Detkin)

▪ **Benefits of Portfolio Licensing**

- Can reduce problem of dispersed ownership of technologies and reduce likelihood of ‘patent thicket’ that could result in patent ‘hold-up’. (Mullin)
- *Example:* In a new technology ‘patent portfolio race’, even though the winning firm holds the largest proportion of new patents, ***the complementarity of technologies*** in a complex product industry implies the losers of a patent portfolio race will be able to hold-up a proportion of the gains accruing to the winner.
- But, firms are driven towards ex ante licensing by an increase in the blocking strength of patent portfolios if technological opportunity is high and firms are product market rivals. (Seibert & Graevenitz)

C. Technical Standards and Innovation - Generally

- Technical standards are technical specifications allowing the replacement of one part of a given product with another part, or the assembly of such parts. Standards play an important role in promoting compatibility and interoperability of products or parts from different companies.

1. *Standardization Process* - a voluntary cooperation among industry, consumers, public authorities and other interested parties for the development of technical specifications based on consensus. Standardization complements market-based competition, typically in order to achieve objectives such as the interoperability of complementary products/services, and to agree on test methods and on requirements for safety, health, organisational and environmental performance.

- Formal Standards Development - occurs through activities undertaken at recognized national, regional and international standards development organizations.
- Informal Standards Development - occurs through activities undertaken in hundreds of fora and consortia, with different characteristics in terms of longevity, sectoral coverage, and territorial scope, which is often global.

2. *Standards and Standardization Enable Innovation* - This occurs in different ways:

- Express the ‘State of the Art’ - give innovators a level playing field facilitating interoperability and competition between new and already existing products, services and processes.
- Promote Emergence of New Markets - New standards can accompany the emergence of new markets and the introduction of complex systems – e.g., the expansion of the Internet.
- Contribute to Knowledge Diffusion and Application of Technology - Standards can contribute to the diffusion of knowledge and facilitate the application of technology, thereby trigger new innovation, in particular, non-technological innovation in the service sector. (COM(2008) 133 final)
 - Standards function as building blocks of tried and true technical solutions which can be combined and linked together in new ways, freeing the innovator from starting back at square one. Rather than stifling innovation, standards allow leapfrogging of technical solutions which are based on well defined and operating current technology. (AIA Comments)

3. *Distinct Approaches to Standardization* –

- European Approach – (Top Down) - In Europe, though most standardization occurs on the initiative of market actors, the EU expects standardization to make an important contribution to ‘priority action areas’. For example, **standardization has increasingly been employed to promote the following public policy initiatives: 1) Sustainable Industrial Policy** – i.e., the improvement to the energy and resource efficiency of products, processes and services via eco-innovation and development of environmental technologies; 2) **Leading Innovative Markets** – i.e., acceleration of the emergence of

innovative market areas, such as eHealth, sustainable construction and recycling and renewable energies; 3) **Public Procurement Innovation** – i.e., by calling for advanced performance and functional requirements; 4) **Integration of ICT in Industry and Administrations** – i.e., promotion of more efficient and effective use of ICT tools and societal applications of ICT, such as e-Identity, e-Health and RFID, focusing on *interoperability testing, access to standards and IPR issues* in order to enable the rapid uptake of standards in market solutions. (COM(2008) 133 final)

- U.S. Approach – (Bottom Up) - The U.S. adopts a private sector-led standardization approach. OMB Circular A-119, *Federal Participation in the Development and Use of Voluntary Consensus Standards in Conformity Assessment Activities*, confirms that close interaction and cooperation between the public and private sectors are critical to developing and using standards that serve national needs and support innovation and competitiveness and has allowed for continuation of the extensive participation of all interested parties in standards development. The National Technology Transfer and Advancement Act of 1995, Public Law 104-113 (NTTAA) also encourages the agencies to be active participants in the standards development process, by directing the National Institute of Standards and Technology (“NIST”) to “*bring together federal agencies as well as state and local governments to achieve greater reliance on voluntary standards and decreased dependence on in-house standards.*” “Voluntary consensus standards bodies” are defined in the Circular broadly so as to include both ANSI-accredited Standards Developing Organizations (“SDOs”) and a wide range of non-ANSI-accredited consortia. In accordance with the tenets of the United States Standards Strategy (see below), ANSI recognizes a “multiple path” approach to standardization. (ANSI Comments)
 - “In our view, **the standard setting process should be voluntary and market-driven. Unnecessary government intervention can impair innovation, standards development, industry competitiveness, and consumer choice...**The U.S. is a market – driven, highly diversified society, and its standards system encompasses and reflects this framework. Individual standards typically are developed in response to specific concerns and constituent issues expressed by both industry and government. **The United States is not in favor of a mandatory single set of uniform guidelines which will deprive the U.S., its diverse standard setting community and its innovative industries of its current flexibility in developing standards according to different processes and policies.** These are driven by the objective of the particular standards project and the related market factors. The U.S. government recognizes its responsibility to the broader public interest by providing financial and legislative support for, and by promoting the principles of, our standards setting system globally. **U.S. industry competitiveness depends on standardization, particularly in sectors that are technology driven. The United States doesn’t encourage government intervention. The issues [including ‘open standards’] have long been**

discussed and are rejected because they hinder innovation, standards development, US industries' competitive advantage and attendant benefits to consumers. The United States remains a strong supporter of our policies that allow U.S. standards developers to participate in international standards development activities **without jeopardizing their patents**, copyrights and trademarks.” (U.S. Statement to WIPO)

4. *ICT standardization –*

- Facilitates the exchange and mutual use of information among connected parties, thereby enabling different products to work together. In other words, standards facilitate development of compatible and interoperable products by providing technical platforms and interfaces, and promote efficient development, manufacturing and supply of products to the market. (WIPO SCP/13/2)

II. Comparing Voluntary, Compulsory, Statutory and FRAND Licensing Terms

A. Views Regarding the Impact of Voluntary Patent Licensing on Standardization

1. *Predominant View – Similar Motivations Whether or Not Patents ‘Read to’ Standard*

- The considerations of innovators participating in standards development activities and holding **standards-essential patent claims** are **not dissimilar to** other patentees. Patent claims on essential standards are licensed, like other patents, as part of cross-licenses, portfolio licenses, and as part of other business transactions.
 - Patentee Objectives –
 - Maximize the amount obtainable per license by combining non-essential and essential patent rights into a single portfolio - the more patents licensed, the more the licensee pays for the package.
 - License patents as part of a broader technology license that includes know-how and other valuable IP rights to benefit from the widest commercial implementation of its licensed technology.
 - Reference standardized technology as part of relevant patent portfolio, in the event patentee and infringer cannot reach agreement, to ensure infringer cannot participate in relevant market without licensing.
 - Licensee Objectives –

- Use SDO RAND or RAND-RF policy against patentee to pay as little as possible.
 - Ascertain whether or not any of innovator’s patents are or should have been subject to an Standards Development Organization (SDO) RAND or RAND-RF licensing commitment, so that may bind patentee to it. If such a commitment exists, argue that patentee has violated the relevant SDO policies, the licensing commitments, or both to negotiate down the value of the portfolio. (Herman)

- Different strategies may be employed if licensee is a manufacturer, distributor or customer of standardized technology (e.g., an ‘Implementer’) with a patent portfolio of its own, and seeks to reduce the litigation/injunction risk arising from the infringement of its products on patent-essential and non-essential standardized technology:
 - Implementer enters into RAND-RF license or patent non-assertion (covenant not to sue (CNS)) with respect to its essential claims, but only as long as the prospective licensee does not sue - i.e., a ‘defensive termination’ or ‘defensive suspension’ – this does not result in the Implementer obtaining a license.
 - Implementer licenses both essential and non-essential patent claims for standardized technologies on the condition that the prospective licensee grant a reciprocal license to the Implementer – i.e., offensive ‘reciprocity’. (Herman)

2. *Contra-View – Detrimental Reliance on Promises Raises Heightened Expectations –*

- A crucial element distinguishing patent licensing in a standard setting from a normal patent licensing situation is that: 1) the IPR owners have promised to license on FRAND terms; 2) the SDO has entered into an agreement to limit inter-technology competition that would otherwise have existed in reliance upon said promise; and 3) industry has relied on said promise by making investments in innovation. (Dolmans)

- Perceived Tensions Between Patents and Standards

While both intellectual property rights (IPRs) and standardization encourage innovation and facilitate the dissemination of technology, they contribute to these common objectives by different means. “IPRs are destined for private exclusive use. Standards are intended for public, collective use. Tension can lead to conflicts when the technical content of a standard falls within the scope of a patent as defined by its claims.” (Meinhold)

- Standards Development Organizations Have Established Self-Regulating Policies to Address Perceived Tension
 - ***SDO Self-Regulation*** - Many SDOs have established their own patent policies (which vary from SDO to SDO) in order to promote the wide implementation of standards without undue constraints on the access to patented technology covered by the standards, including rules on Ex-Ante Disclosure and FRAND/RAND licensing. SUCH POLICIES APPLY ONLY TO MEMBERS AND DO NOT BIND NON-MEMBERS. - LITIGATION BELOW CITED AS EXAMPLE OF SDO'S UNABLE TO PREVENT 'HOLD-UPS' WHICH RETARD STANDARDS DEVELOPMENT WITHOUT GOVERNMENT INTERVENTION. HOWEVER, THESE WERE EXAMPLES OF ABUSES WHICH COMMENTATORS HAVE FOUND TO BE RARE IN PRACTICE (Herman):
 - **Failure to Satisfy Ex-Ante Disclosure Rules –**
 - 'Patent Ambush' - “[W]hen an SSO participant intentionally fails to disclose a patent in violation of the relevant patent policy and then, after the standard is commercially adopted, seeks to extract excessive royalties from implementers, who are by that time said to be ‘locked in’ to the standard.” (Herman)
 - *FTC v. Rambus*: - Rambus, under investigation by the FTC, was alleged to have deceived fellow members of electronics industry SDO JEDEC by concealing relevant patent information during JEDEC’s development of the SDRAM computer memory standards, and later asserting patent claims and demanding royalties against firms employing the standard(s) developed. It was also alleged to have “amend[ed] various pending patent applications to obtain patents covering various technologies slated for inclusion in new JEDEC standards then being developed”, arguably in violation of JEDEC’s patent disclosure rules. “The Commission held that Rambus’s manipulation of the JEDEC standard-setting process allowed it to gain monopoly power.” In crafting its remedy, the FTC focused on the likely impact that disclosure would have had on JEDEC and its members. It reasoned that had they been fully informed at the appropriate time about the Rambus patents JEDEC members would likely have either negotiated ex ante RAND licensing commitments OR have designed the standard around the patent claims through substitution of alternative



technologies. In such case, it was likely that “Rambus would have been in a position to charge RAND royalties.” Consequently, the FTC prohibited Rambus from collecting royalties from JEDEC users above levels the Commission deemed “reasonable.” ((Royall, Tessar, and Di Vincenzo)

- Qualcomm v. Broadband: - Qualcomm was alleged to have deliberately failed to disclose ‘essential patents’ to secure royalties against standards participants, and it claimed ‘ambiguous’ SDO (JVT – video compression technology) policies as defense. Courts found defendant’s conduct, at a minimum, inconsistent with expectations of disclosure held by JVT members, and that it had clearly (‘intentionally’) failed to comply with JVT’s written disclosure policy – a failure to meet its affirmative duty to disclose. The Federal Circuit chose to apply *an anti-trust remedy*: **it barred Qualcomm from enforcing the relevant patents against any manufacturer or user of standard-compliant products.** “Qualcomm was found to have “intentionally relinquished its rights to enforce” the asserted patents or to have otherwise engaged in conduct “so inconsistent with an intent to enforce its rights as to induce a reasonable belief that such right has been relinquished.” This result was similar to that demanded by complainants in the Rambus action – i.e., that Rambus be restricted to granting royalty-free licenses. (Royall, Tessar, and Di Vincenzo)
 - Yet, there were both ‘essential’ and non-essential patent claims and “although Qualcomm had disclosed its patents *ex ante* and offered to negotiate licenses on RAND terms and conditions, the court still considered Broadcom’s antitrust counts given allegations that Qualcomm had intended not to comply with the commitment when made.” (Herman)
- **Failure to satisfy RAND/FRAND Licensing Terms** – Owners of an ‘essential patent’ must assure that the patented technology will be licensed on RAND (‘reasonable’ and non-discriminatory’) or royalty-free (RF) terms. If the patentee does not accept such a condition, the standard under consideration may not be adopted, or the SSO may decide to further review the standard. SDOs are reluctant to determine the exact amount of royalty payment. SDOs provide prescribed standardized forms and procedures to achieve such disclosures and licensing.

- Bad Faith - “[W]here a patentee offers to license its patents on certain terms and conditions as the standard is being developed, but it or a subsequent owner of the patent refuses to comply with that commitment once the standard is adopted.” (Herman)
 - In re Negotiated Data Solutions LLC: - Patents essential to implement the Ethernet standard were first owned by National Semiconductor Corporation (National) which had made a licensing commitment during the standard setting process. N-Data obtained the patents from National, knowing about that prior licensing commitment, and refused to comply with that commitment after the industry became committed to the standard and instead demanded royalties far in excess of that commitment. The FTC found that Negotiated Data Solutions LLC (N-Data) had engaged in unfair methods of competition and unfair acts or practices regarding its enforcement of patents essential to implement a computer network standard. (SCP/13/2)

B. Defining the ‘Voluntary’ SDO Patent Policy Terms

1. *Ex-Ante Disclosure – Generally*

- **Ex-Ante Disclosure of Patents** – Members must disclose to other members the existence of any relevant patents (and, sometimes, also patent applications) in technologies essential for the implementation of the technical standard under consideration, so that this fact can be taken into account during the standard setting process.
 - Companies Cannot Easily Determine Patent Relevance or Essentiality - participating in the standard making process may not be clear on whether their patents are “reading on” a standard (i.e., relevant to it), let alone, whether they are “essential” for a standard. (Layne-Farrar, Padilla & Schmalensee).
 - SDOs Are Reluctant to Make Determination - Detailed arrangements arising from such patents are left to the parties concerned (i.e., patentee and the standard implementer) *to negotiate outside the standardization process*. SDOs are reluctant to actively involve themselves in evaluation of disclosed patents’ validity, patent relevance or ‘essentiality’, assessment of declared licensing term compliance or which potential disputes. There are also anti-trust concerns if the SDO itself, reflecting a number of vendors and vendor interests, engages in negotiation against a single patent holder. (SCP/13/2)

2. *SDO Policies on Ex-Ante Disclosure – (SCP/13/2)*

○ ITU²/ ISO³/IEC⁴ Common Patent Policy - (formal Int'l Standards Organizations)

Members participating in standards development process should, as early as possible alert the organizations to *any known* 'essential' patent *or* pending application which may be owned or applied by them or by another party.

- The definition of 'essential' patent is left to the person who submits the patent disclosure statement.

○ ETSI⁵ Rules of Procedure, Annex 6 - Intellectual Property Rights Policy; ETSI Guide on Intellectual Property Rights - (formal European regional standards development organization)

- Members shall make 'reasonable endeavors' during the standards development process in which they participate to inform ETSI of 'essential' IPRs in a timely fashion. *A member submitting a technical proposal for a standard* shall, on a bona fide basis, draw attention of ETSI to any of his IPRs which might be essential if that proposal were to be adopted.

➤ **Duration of Obligation** - This obligation to notify applies both during the standard development phase *as well as* after adoption of the standard.

➤ **'Reasonable Endeavors'** – Is measured in terms of the knowledge of the representatives of an ETSI member who are involved in standard-setting activities.

➤ **'Essential' Patent** - **Any patent** that is not possible on technical grounds to make, sell, lease, otherwise dispose of, repair, use or operate equipment or methods which comply with a standard without infringing it. Neither ETSI nor its members are required to research prior art to make this determination.

○ ANSI⁶ Umbrella Patent Policy and "Guidelines for Implementation of the ANSI Patent Policy" – (U.S. national standards representative at ISO, accredits the procedures of formal SDOs which work cooperatively to develop voluntary national consensus standards)

² International Telecommunications Union

³ International Organization for Standardization

⁴ International Electrotechnical Commission

⁵ European Telecommunications Standards Institute

⁶ American National Standards Institute

- American Standards Developer (ASD) policies should: 1) make clear that any participant in the process, and *not only a patent holder*, is permitted to identify or disclose essential patents; 2) encourage disclosure of as much information as possible concerning the patent, such as the identity of the patent holder, patent number, information regarding how it may relate to the standard being developed and relevant unexpired foreign patents; and 3) encourage disclosure of existing *pending* U.S. applications.
 - **‘Essential’ Patent** – A **patent** whose use would be required for compliance with that standard.
 - **Scope of ANSI Policy** - applies to essential patents: 1) *discovered subsequent to* the adoption of the standard; AND 2) *issued after* the adoption of the standard.
- IEEE-SA⁷ Patent policy – Section 6 of IEEE-SA Standards Board Bylaws // IEEE-SA Standards Board Operational Manual – (formal U.S. national standards organization)
 - Participants in the standards development process must inform the IEEE of the holder of any potential ‘essential’ patent claims *of which they are personally aware*.
 - **‘Essential’ Patent - any patent claim** the use of which is necessary to create a compliant implementation of either mandatory or optional portions of the *normative clauses of the (proposed) IEEE standard* when, at the time of the (proposed) IEEE standard’s approval, there was no commercially and technically feasible non-infringing alternative.
- W3C⁸ Royalty-Free License Requirements – (informal web consortia)
 - Ex-Ante Disclosure of known ‘essential’ patents NOT required as long as there is a commitment to license those patents in accordance with the W3C *Royalty-Free* Licensing requirements.
 - **‘Essential’ Claims** – **all claims** in any *patents or patent applications* in any jurisdiction in the world that would necessarily be infringed by implementation of the Recommendation. A claim is necessarily infringed only when it is not possible to avoid infringing it b/c there is no non-infringing alternative for implementing the normative portion of the Recommendation.

⁷ The Institute of Electrical and Electronics Engineers Standards Association

⁸ World Wide Web Consortium

3. *'FRAND'/'RAND' Licensing - Generally*

- **'FRAND' ('Fair', 'Reasonable', and 'Non-Discriminatory')** - The economic principle underlying 'FRAND' is that 'essential' patent holders should not exploit the added market power gained as a result of being included in the standard.
 - 'F' = 'Fair' - 'Fair' licensing terms should not be anticompetitive or otherwise deemed unlawful were they imposed by a dominant firm in a comparable market. (Layne-Farrar, Padilla & Schmalensee)
 - There should be no requirement that licensees cross-license their IP to licensor free-of-charge (i.e., free grant-backs).
 - There should be no 'bundling' of undesirable product licenses with desired product licenses as a condition for licensure.
 - There should be no mandatory exclusivity limitations preventing licensee from dealing with competitors.
 - 'R' = 'Reasonable' – 'Reasonable' licensing terms should be comparable to what negotiations could have achieved 'under the conditions of an open market' – especially royalties. (Layne-Farrar, Padilla & Schmalensee)
 - A 'Reasonable Royalty' should:
 - Reflect the existence and viability of technical alternatives ex ante.
 - Not exceed incremental value compared to next-best alternative.
 - Be comparable to royalties other companies charge for 'essential' patents of like number and value or to royalties licensor charges in similar or competitive markets.
 - Reflect the greater contribution of 'essential' patents to the overall value of the standard where there are no close substitutes before the standard is adopted, and is entitled to receive higher royalty payments after the standard is adopted.
 - 'ND' = 'Non-Discriminatory' – Discrimination against and between licensees is prohibited, EXCEPT BASED ON PERFORMANCE (e.g., volume, creditworthiness). Otherwise, licensor must not refuse to license different parties who are similarly situated on materially similar terms. (Glader)

- Cannot discriminate against and between other technology providers –
 - By requesting unremunerated grant-backs from some licensees and not others.
 - By treating IP-rich licensees worse or better than IP-poor licensees.
 - By reducing innovation incentives or technology competition to some but not others.
- Cannot discriminate as against and between rival firms in downstream markets –
 - By refusing to grant reciprocal licenses to rival manufacturers of standardized components or products.
- Cannot discriminate as against and between downstream market licensees –
 - By offering royalty rebates, incentives, ‘exclusives’ or ‘preferred status’ to ‘primary lines’/ distributors.

4. *SDO Policies on ‘FRAND’/‘RAND’ – (SCP/13/2)*

○ ITU/ISO/IEC - Common Patent Policy - (formal Int’l Standards Organizations)

- A holder of patent ‘essential’ to the implementation of a standard under consideration (or any person or an entity that owns, controls and/or has the ability to license the ‘essential’ patent) is required to declare *any one of three* licensing mechanisms:
 - A non-exclusive grant a **free-of-charge license** to an unrestricted number of applicants on a worldwide, non-discriminatory basis and under other reasonable terms and conditions to make, use and sell implementations of the standard (**Royalty-Free**);
 - ‘Free-of-charge’ refers only to the issue of monetary compensation.
 - Licensor is otherwise entitled to seek a license agreement containing other ‘reasonable’ terms and conditions, such as those relating to governing law, field of use, reciprocity, warranties, etc.
 - A non-exclusive grant of a license to an unrestricted number of applicants on a worldwide, non-discriminatory basis and on reasonable terms and

conditions to make, use and sell implementations of the standard (**Royalty-based**); OR

- The patent holder is unwilling to grant licenses in accordance with the conditions under (i) or (ii), above.
- If patent owner commits to royalty-based or royalty-free ‘FRAND’/‘RAND’ licensing terms, **he is entitled to impose rule of ‘reciprocity’** – i.e., patentee will commit to those licensing terms provided a prospective licensee commits to license its ‘essential patent’ under the same terms for implementing the standard.
- ETSI Rules of Procedure, Annex 6 - Intellectual Property Rights Policy; ETSI Guide on Intellectual Property Rights - (formal European regional standards development organization)
 - When an ‘essential’ IPR is brought to the ETSI Director-General’s attention, the patent owner must provide, within 3 months, a commitment indicating he is prepared to grant irrevocable licenses on ‘FRAND’ terms and conditions under such IPR, entitling licenses to at least manufacture, sell, lease, or otherwise dispose of equipment so manufactured, repair, use or operate equipment and use methods. Patent owner may require that licensees agree to reciprocate.
 - If a patent owner indicates that he is not prepared to license his ‘essential’ IPR under ‘FRAND’ conditions ETSI will endeavor to reduce the potential for conflict by considering:
 - Whether the non-availability of a FRAND license was found prior to the publication of the standard or after the publication of the standard;
 - Whether a viable alternative to the technology under such IPR exists or not; and
 - Whether a party refusing to grant a FRAND license is a member of the ETSI or not.
 - It is the responsibility of each STANDARD user to contact directly the patent owner. ETSI is not in a position to provide guidelines for commercial negotiations.
- ANSI - Umbrella Patent Policy and “Guidelines for Implementation of the ANSI Patent Policy” – (U.S. national standards representative at ISO, accredits the procedures of formal SDOs which work cooperatively to develop voluntary national consensus standards)

- Under reasonable rates (**Royalty-Based**)

with reasonable terms and conditions that are demonstrably free of any unfair discrimination.

- W3C – Royalty-Free License Requirements – (informal web consortia)
 - A W3C Royalty-Free License must:
 - Extend to all ‘essential’ claims owned or controlled by licensor;
 - Be available to all, worldwide whether or not they are W3C members;
 - NOT be conditioned on payment of royalties, fees or other consideration;
 - Neither be assignable nor sublicensable.
 - A W3C Royalty-Free License may:
 - Be limited to implementations of the Recommendation, and to what is required by the Recommendation;
 - Be conditioned on a grant of a ‘**reciprocal RF license**’ to all essential Claims owned or controlled by the licensee, and a reciprocal license may itself be conditioned on a further reciprocal license from all;
 - NOT impose any further conditions and restrictions on the use of any technology, IPRs or other restrictions on the behavior of the licensee, save for reasonable customary terms relating to operation and maintenance of the license relationship, such as choice of law and dispute settlement.

C. The Search for ‘Compulsory’ Patent Policies

1. *The Debate Concerning ‘FRAND’/‘RAND’ Standards* – (SCP/13/2)

- One aspect of SDO patent policies that has become controversial is that relating to the definition of “open standards”. Certain stakeholders have complained that current SDO ‘FRAND’/‘RAND’ policies:
 - Exclude non-members, especially those that seek other than FRAND/RAND terms, from participating in the development of a standard;
 - Are not adequately enforceable against both members and especially non-members;

- Promote FRAND/RAND licensing terms that are too imprecise and not fixed;
 - Encourage excessive royalties and impose draconian licensing limitations and conditions that ‘hold-up’ the development of a standard, thereby making it unaffordable/noncompetitive (i.e., royalty–stacking);
 - Conflict with and discriminate against royalty-free (RF) licensing terms and conditions usually prevalent in Free and Open Software (‘FOSS’) applications and ICT technologies that use them;
 - Maintain ICT specifications that effectively dominate the considerations of federal agencies seeking to fulfill national and regional government procurement needs which, in turn, locks-out competing non-FRAND/RAND model ICT specifications, promotes ongoing market dominance of FRAND/RAND-based ICT specifications within governments, and thus, assures future ‘vendor lock-in’ to imprecise and restrictive FRAND/RAND terms at the expense of the ‘public interest’.
- In other words, they complain that the FRAND/RAND licensing terms and conditions currently practiced need further clarification, and that the ICT standards development/setting self-regulation process is NOT ‘OPEN’ ENOUGH, do NOT PRODUCE ‘OPEN’ STANDARDS, and ARE NOT responsive enough to general market and government procurement needs. (LITTLE ANECDOTAL PROOF, BUT MUCH PUBLIC ADVOCACY NOISE, HAS BEEN PROVIDED IN AN EFFORT TO SUBSTANTIATE THESE CLAIMS.)
 - Fixed Maximum Royalties – Stakeholders have unsuccessfully called for SDO policy changes that impose fixed royalty provisions on ‘essential’ patent holders. (SCP/13/2)
 - Industrial Royalty Pie Model - To bring more transparency and predictability to the overall royalty price for the implementation of standards, some have proposed a new unproven royalty model (the “Industrial Royalty Pie” model).
 - Pursuant to this model, a patent owner who makes a FRAND commitment also makes an ex ante commitment to a framework in which the maximum aggregate licensing costs are reasonable (“Aggregated Reasonable Terms (ART)”) and his individual royalty claim will not exceed the proportional contribution they make to the patented technology in the standard. (SCP/13/2)
 - Critics have refuted the appropriateness of the ART method of “counting the numerical share of ‘essential’ patents to a given technology standard held by each different patent owner...for measuring the relative value of the patents and determining the appropriate level of royalties that each patent owner should be

able to obtain.” They argue that ART “is not an appropriate, let alone, accepted methodology, as it bears no relationship to patent value”. (Martin and De Meyer)

- One Recommended **Redefinition of ‘Open’ Standards’** – To qualify as “open”, the process for standards adoption, quality, and access to the standard must meet a number of conditions (some of which are controversial*):
 - *Open access to the decision-making process.* No interested party should be excluded, unless on the basis of published, objective, relevant, proportionate, and verifiable criteria for admission.
 - *Open (transparent and undistorted) procedures.* Governance rules for standards bodies should ensure that technology decisions, voting, and dispute resolution are representative, objective, and protected from undue influence.
 - *Open (published, pro-competitive) goals.* ***Standards unnecessary for or not reasonably related to clearly defined, legitimate [PUBLIC] objectives such as interoperability, are naked restraints of inter-technology competition, and should not be allowed.**
 - *Open (published, objective, relevant, qualitative, and verifiable) criteria for technology selection.* Standard agreements should be based on the relative merits and price of the technologies involved, to the extent possible.
 - *No overstandardization.* ***A standard should be no more restrictive than necessary to meet the objective, and should allow maximum consumer choice without lock-in to a single vendor’s product.**
 - *Open access to the standard.* A standard is “open” only if it is well-documented and published, and available for implementation for all interesting parties, members of the standards body **and outsiders alike.**
 - *Open information on ‘blocking patents’* - to the maximum extent possible, patents, patent applications, and other IPRs that could block implementation should be made known as soon as reasonably possible before the standard is selected. (Ex-Ante Disclosure)
 - *No unjustified refusal to license* - ***The right to refuse to license or obtain an injunction at will...should be limited to situations where a refusal is necessary to prevent the opposite (the tragedy of commons, discouraging investment in R&D).** A refusal or injunction is **justified**, in other words, **if licensee refuses in turn to license essential IPR on FRAND terms**, or where the licensee cannot pay or refuses to pay a FRAND rate.

- *Fair pricing* – According to EU Commissioner Neelie Kroes: “rates [must be] fair, and [...] **based on the inherent value of the interoperability information** (rather than the information's value as a gatekeeper)”. **How to define ‘inherent value’:**
 - Competition law now allows ex ante open disclosures of prices and license terms, and even technology auctions, though not helpful with complex standards with long development horizons.
 - However, IPR owners have an incentive to:
 - Delay disclosures of their patents and the license terms until they have achieved a blocking position;
 - Buy, swap or develop blocking patents for each alternative in order to prevent real inter-technology competition; and
 - Rush to the table to claim the highest fee once they have achieved a blocking position, in an attempt to pre-empt other IPR owners’ claims.
 - Recommended Solution - ***Impose a clear and enforceable policy of fair, and reasonable pricing.***
 - Define ‘fair and reasonable royalty’ ***not*** as the rate that the market can bear ex post or that the first mover demands, BUT as *the lower of*:
 - The rate that the IPR owner could have obtained in an ex ante inter-technology auction, with different technologies competing for the standard, before the investments are finalized; **OR**
 - If the IPR owner had an ex ante blocking patent, **a share of the royalties that is proportionate to the technical contribution the IPR owner made to the standard** compared to that of other ‘essential’ patent owners and taking into account the investments made and risks borne by the licensees.
 - The total royalty should be no more than the value of the benefits/value that licensees can derive from using the selected technology over and above the

value they could have derived from the next best alternative.

- If insufficient information to determine inter-technology auction value or the value of the technology’s proportionate contribution to the standard, *then*:
- Compare with royalties and terms that other owners of ‘essential’ patents reading on the same standard charge for their complementary patents (“proportionality analysis”); OR
- Compare with royalties and terms that the patent owner itself charges for other, comparable, technologies (“proxy analysis”); OR
- Limit IP owners in the aggregate to about 25 percent of the downstream gross profits made on the licensed product (“Goldscheider analysis”). (Dolmans)

2. *Efforts to Redefine ‘FRAND’/‘RAND’ Licensing Terms via Legislative & Judicial Means*

- Applying Legal Measures Internal to the Patent System to Ensure the ‘Public Interest’ of ICT Interoperability - Exclusions, Exceptions, Limitations to the Patent Rights; Compulsory Licenses
 - A number of countries provide in their national legislations certain exceptions and limitations to the exclusive patent rights. However, [t]o the knowledge of the International Bureau, ***no national legislation includes a specific provision limiting the right conferred by a patent the exploitation of which is essential for the implementation of a standard.***
 - On the other hand, ***existing provisions under national laws concerning exceptions and limitations, including a compulsory license provision, may be applicable to essential patents relating to standards*** in the same manner as to other classes of patents ***for refusal to issue a license on ‘reasonable terms and conditions, especially where such refusal can be characterized as an ‘abuse’ of the patent right and/or in contravention of a ‘public interest’.***

3. *Compulsory Licenses in the ‘Public Interest’ in the Event of a Refusal to License on ‘Reasonable Terms and Conditions’*

- **WIPO Paris Convention (SCP/13/2; SCP/13/3)**

It is widely DISPUTED that Article 5 of the WIPO Paris Convention provides each Member with sufficient latitude to issue compulsory licenses for on other than ‘abuse’ of the patent right grounds – i.e., on ‘public interest’ grounds.

Governments have broadened the availability of compulsory licenses *beyond* the initial agreement of Paris Convention Parties over the application of Convention Article 5A to those circumstances involving the ‘*abuse* of exclusive rights conferred by a patent’ – i.e., the “failure to work or [the] insufficient working” of a patent now is said to encompass also:

“the refusal [to] grant[] a license on reasonable terms and conditions;”

- “the failure to supply the national market with sufficient quantities of the patent product;”
- “demanding excessive prices for such product;” and
- “anti-competitive behavior.” (SCP/13/3)

➤ During the 1990’s, many governments expanded the scope of Article 5A to also cover *non*-abuse situations “which can be grouped together under the general heading of ‘**compulsory licenses in the public interest**,’” which include compulsory licenses:

- “in the field of military security”;
- “in the field of public health”; and
- “to protect the public interest in unhampered technological progress...[as in the case of]... so-called *dependent patents*.”
 - A ‘dependent patent’ is a patent which as a matter of law cannot be worked without falling within the scope of protection of another patent. The latter patent will be referred to as the dominant patent. (AIPPI)

➤ However, at least one international IP law expert has opined that **governments’ resort to compulsory licensing in cases of *non*-abuse was an “unintended consequence”** practiced mostly by countries “seeking to regulate patents covering medicinal products and food products,” and later justified by reference to “...Article 31 [of the WTO TRIPS Agreement which they alleged]...indirectly vindicated the public interest as a ground

separate from the category of abuse [...]” (Reichman & Hasenzahl; ITSSD Comments to SCP/13/3)

- Voluntary ‘Licenses of Right’ By Statute to Arrive at ‘Fair’ & ‘Reasonable’ Royalty – UK Section 46, The Patents Act 1977
 - An ostensibly voluntary decision on the part of the patent owner to register a patent following its grant with a national Patent & Trademark Office as *a nonexclusive license available to all interested prospective licensees on ‘reasonable terms,’* in exchange for receiving significantly reduced registration and renewal fees.
 - Any prospective licensee who is interested in taking a license is effectively deemed, for purposes of the law, as possessing a ‘license of right,’ even though the terms of such a license may not have been conclusively settled.
 - Where reasonable terms cannot be agreed upon, a designated national patent office official will make such determination.
 - Licensees of right are entitled to request that the patent owner legally defend the patent, or may defend the patent itself by instituting an infringement action against an unauthorized third party user or even the patent owner itself.
 - If during the course of an infringement action a defendant elects to take a license of right under the terms demanded by the patentee, or by the licensee on behalf of the patent owner, “no injunction...shall be granted against him.
 - The amount of recoverable damages, if any, shall not exceed double the amount which would have been payable by him as licensee if such a license on those terms had been granted before the earliest infringement.” (SCP/13/2)
- Promote Usage of De Facto Compulsory Licenses By Courts via Legislative Means
 - Require courts faced with component inventions to consider the importance of other components of the product sold that are not covered by the patent at issue...[thereby, effectively] cementing in the law the obligation to consider other parts of a multi-component invention” and the relative values thereof when computing a ‘fair and reasonable royalty’ as damages for infringement. (Riley in PRA 2005)

- Promote Judicial Curtailment of Exercise of Patent Right in Cases of ‘Abuse’
 - Courts have sometimes curtailed the exercise of patent rights in the few cases identified as involving ‘abuses’ of the patent right, mostly in the area of competition law. NGOs and academicians have championed the wider use of remedies – that they allege amount to ‘de facto’ compulsory licenses: judicial restriction and/or denial of availability of patent injunctions; issuance of judicial consent decrees.
4. *Government Procurement Preferences for Royalty and/or Proprietary-free ICT ‘Open Standards’*
- Acknowledging that numerous legal and political conditions/limitations circumscribe and retard the effective availability and use of WTO TRIPS-sanctioned compulsory licensing, the FOSS movement has been somewhat successful in persuading EU Member State and ‘BRICS’ nation national governments (and formerly the regional government of the EU) to impose general ‘public interest’ restrictions *a priori* on the exercise of patent rights deemed to impair ICT ‘interoperability’. These restrictions essentially redefine the term ‘open standards’ to require that any ICT standards specification containing intellectual property submitted in connection with a government procurement activity be made available royalty-free, or alternatively, without reference to any IP at all.
- Reliance on Definition of ‘Open Standards’ Contained in Former Rejected European Interoperability Framework (EIF)v1.0 (2004) –
 - **EU EIFv.1.0:** An ‘open standard’ is one where:
 - “The specification document [is] available either freely or at a nominal charge...[and]...all [are able] to copy, distribute and use it for no fee or at a nominal fee;”
 - **“The patents possibly present [in the standard or part of it are] made irrevocably available on a royalty free basis;”** and
 - The standard may be reused without any constraints.”
 - The EIFv1.0 definition has been reproduced in various forms within the ICT interoperability frameworks proposed and/or enacted by ‘BRICS’ nations, which also include ex-ante disclosure requirements:
 - Brazil: *e-Ping Electronic Government Interoperability Standards* (final/evolving);

- China: Standardization Administration of the People’s Republic of China (SAC) *Regulations for the Administration of the Formulation and Revision of Patent-Involving National Standards (Interim) (Exposure Draft)* (evolving), and implementing *Disposal Rules for the Inclusion of Patents in National Standards* (draft/evolving);
 - India: *Policy on Open Standards for e-Governance* (final/evolving);
 - Russian Federation: Executive Order № 2299-p, *Transition of Federal Executive Bodies and Agencies of the Federal Budget [to] the Use of Free Software from 2011 – 2015* (proposed/evolving);
 - South Africa: *Minimum Interoperability Standards (MIOS) for Information Systems in Government* (final/evolving). (Kogan WLF; Kogan GTCJ; Kogan SDILJ)
- The FOSS Movement LOST THE BATTLE at the European Commission, which adopted new EU EIFv2.0 on December 16, 2010. ***New EIFv2.0 is decidedly technology and business-model neutral as concerns ICT specifications.***
- **Key Differences with EIFv1.0:**
 - Eliminates all references to the term ‘open standards’ and in its place employs the term ‘**formalized specifications**’.
 - (In Europe only technical specifications approved by a recognized standardization body can qualify as ‘standards’. Consequently, *the* term ‘formalized specification’ was selected to cover both the proprietary specifications developed mostly by recognized standardization bodies and the non-proprietary specifications developed mostly by informal ICT consortia and fora).
 - An ‘open standard’ specification need **no longer** be ‘made **irrevocably available on a royalty-free basis.**’
 - Emphasis on concept of ‘**Full Openness**’:
 - Where available, requires public administrations to grant all stakeholders the **same possibility of contributing to the development of a standard specification** relating to a software component(s);

- Where available, requires that **any intellectual property rights associated with such specification are licensable on fair, reasonable and non-discriminatory (FRAND) or royalty-free terms that permit the specification's implementation in both proprietary and open source software.**
 - Where *unavailable*, **or unsupported** by the market, **or** if incapable of satisfying functional interoperability needs, government agencies **can seek less open specifications.**
- Prior the adoption of new EIFv2.0, a number of EU Member States had long expressed preferences for open source software in government procurement bids:
- Germany (2001); Spain (2002); France (2004); the United Kingdom (2004); the Netherlands (2005); Denmark (2006); Belgium (2009); Hungary (2009) (Kogan WLF; Kogan GTCJ; Kogan SDILJ);
 - However, at least two EU Member States have expressed such preferences since the adoption of EU EIFv2.0:
 - The United Kingdom (which at least one commentator has likened its position to that of India) (Kogan Mondaq)
 - Portugal (which is no surprise given its 'developing country' status within the EU. (Trond)

III. The Potential WTO Implications of Emerging Voluntary, Compulsory and/or Statutory Standards Patents and Other Initiatives

- Overview - The proposed, adopted, applied and/or enforced initiatives discussed above may impact international trade in various ways, depending on the objective and the effects of the rule. In the case of each of the following agreements an analysis must be undertaken to assess whether the particular measure(s) in question, either individually or in combination with other measures, directly or indirectly amounts to a violation of one or more key treaty obligations: national treatment; no less favorable treatment/non-discrimination; no unnecessary obstacle to trade to achieve a legitimate objective; transparency; notification. The focus of the inquiry may be different depending on the treaty.
- Discrimination may exist even if a measure on its face applies to domestic as well as foreign intellectual property owners. De facto discrimination, i.e., less favorable treatment, may exist if a measure that on its face treats IPR owners identically nevertheless alters the conditions of

competition to treat one group of foreign IPR owners less favorably than another group of local competitors.

- **WTO TRIPS – Focuses on the proposal, adoption, application and/or enforcement of IP (and arguably also health and anti-competition) laws that adversely impair the exercise and protection of foreign IP rights.**
- **WTO GPO – Focuses on the proposal, adoption, application and/or enforcement of government procurement regulations that adversely impair the exercise and protection of foreign IP rights.**
- **WTO TBT – Focuses on the proposal, adoption, application and/or enforcement by governments of mandatory technical measures (regulations – e.g., environment, health & safety, deceptive practices, national security, etc.) that could potentially serve as barriers to trade in products incorporating IP rights integral to the success of ICT products in the marketplace Also focuses on governments’ ensuring that voluntary product standards proposed, adopted and/or applied by recognized standards bodies (formal regional and national standards development organizations as well as informal consortia) operating within a member Party’s jurisdiction and control do not serve as barriers to trade in products incorporating such IP.**
- **GATT 1947, as amended/GATT 1994**
- **GATS?**

A. WTO Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement

1. **Patentability Exclusions, Exceptions and Limitations to the Right (Including in Cases of ‘Abuses’ or ‘Public Interest’ – i.e., Compulsory Licenses, Anti-Competition Remedies) Must Comply With the WTO TRIPS Agreement**

- *TRIPS Preamble Paragraph 4* – IP laws must take into account that patents and related trade secrets are foremost PRIVATE PROPERTY RIGHTS
 - ... *Recognizing* that intellectual property rights are private rights”;
- *TRIPS Article 31* – Compulsory Licensing Opportunities are Tightly Restricted
 - Although WIPO Paris Convention Article 5A was incorporated by reference into the WTO TRIPS Agreement via Article 2(1) and the Preamble to Article 31, compulsory licensing practices permissible under this provision are circumscribed by a robust statutory framework that “imposes strict conditions and procedural requirements for such issuance:

- Article 31(a) - each grant of a compulsory license must be considered on a case-by-case basis;
 - Article 31(b) - The government must first make reasonable efforts to obtain a voluntary license.
 - Article 31(c) & (g) - The “scope and duration” of the license must be “limited to the purpose for which it was authorized,” and must be liable to termination if the reasons underlying that authorization cease to exist.
 - Article 31(d) - The license must be non-exclusive.
 - Article 31(h) - The patent holder must receive “adequate remuneration.”
 - Article 31(f) - Production must be predominantly for the domestic market.
 - Article 31(i) - Judicial review must be afforded for any decisions related to the compulsory license.
- HOWEVER: Article 31 provides certain derogations from these conditions, namely, Article 31(b) does not apply in the case of:
 - ‘National Emergency’ – Procedural requirements of Article 31(b) do not apply in such case. (prior efforts to license on reasonable commercial terms NOT required)
 - But, who determines and what evidence, if any is required?
 - ‘Anti-Competitive’ Patent Use Administratively or Judicially Determined – (prior efforts to license on reasonable commercial terms are not required to limit license to domestic issue before issuing CL) Articles 31(k) and 62.4.
 - YET, those derogations do not apply to abrogate TRIPS Articles 31(h) or 44.2 which continue to ensure that the patent holder receives ‘adequate’, ‘just’, and ‘complete’ remuneration’ in the event a CL is issued.
 - Arguably, these provisions individually and/or collectively require that a government’s determination of ‘adequate remuneration’ avoid prejudicing a patent holder’s “legitimate expectations of commercial opportunity”. (Taubman)

- They are also consistent with the “‘market compensation theory’ followed by the United States in determining the accountability of the federal government for unauthorized use of a patent invention [pursuant to] U.S.C. § 1498...” (Cahoy)

2. **Must Provide Adequate Transparency and Notice of Proposed Legislation and Regulations Affecting Trade (Licensing) in IP Rights**

- *Article 63.1* - (relating to Transparency)
 - Laws and regulations... and administrative rulings of general application, made effective by a Member pertaining to the subject matter of this Agreement (the availability, scope, acquisition, enforcement and prevention of the abuse of intellectual property rights) shall be published, or where such publication is not practicable made publicly available...
- *Article 63.2* – (relating to notification)
 - Members shall notify the laws and regulations referred to in paragraph 1

3. **Must Not Adopt Measures to Promote the ‘Public Interest’ of Securing of Technological Development and Transfer at the Expense of Foreign Patent and Trade Secret Rights**

- *Article 8.1* – Principles
 - In formulating or amending their laws and regulations, members may adopt measures necessary *to protect and/or promote the public interest in sectors of vital importance to their socio-economic and technological development, provided they are consistent with the provisions of this Agreement.*
 - Must evaluate the issuance of any CL or the enactment of any ICT Interoperability Framework requirements which are intended to promote a vital ‘public interest’ – e.g., ‘interoperability’; consumer access to public information; securing technology development/transfer.
 - What is the extent of member states’ legal obligation to ensure technology transfer from developed to developing countries through public or private means? In light of the TRIPS Preamble? In light of the overall spirit of Doha?
 - Is this obligation not limited by U.S. constitutional concerns such as the obligation of the U.S. government to protect the exclusive private property rights of U.S. rights holders no matter where they

are situated, as against the expropriation or indirect regulatory taking by foreign governments?

4. **Must Not Adopt Measures to Prevent ‘Abuse’ of IP Rights, to Prevent Anti-Competitive Practices and Practices that Prevent Technology Transfer that Unduly Restrict or Abrogate the Right Holder’s Enjoyment of IP Rights in Violation of this Agreement**

○ *Article 8.2 – Principles*

- Provided, they are consistent with the Agreement, members may employ appropriate measures (apart from and including CLs) needed: i) to prevent the *abuse* of intellectual property rights by right holders (e.g., refusal to license on ‘reasonable’ terms); or ii) to prevent resort to practices which unreasonably restrain trade (anti-competition) or which adversely affect the international transfer of technology (development aspects).

➤ What types of ‘FRAND’/‘RAND’ licensing terms accepted in the U.S. are considered an anti-competitive or other unfair trade practice/ restraint-of-trade ‘abuse’ of the patent right in other countries?

- *Article 40.2 - Control of Anti-Competitive Practices in Contractual Licenses*

- “Nothing in this Agreement shall prevent Members from specifying in their legislation licensing practices or conditions that may in particular cases constitute *an abuse* of intellectual property rights having an adverse effect on competition in the relevant market. (e.g., a Member may adopt, consistent with this Agreement, “appropriate measures to prevent or control such practices, **which may include for example [but which are not limited to,]** exclusive grant-back conditions, conditions preventing challenges to validity and coercive package licensing, in the light of the relevant laws and regulations of that Member.”

5. **IP Measures Proposed, Adopted, Applied and Enforced Must Satisfy the Essential Treaty Obligations**

○ *National Treatment – Articles 1.3; 3.1*

- Members shall accord the treatment provided for in this Agreement to the nationals of other Members.”

- “Each Member shall accord to the nationals of other Members treatment no less favourable than that it accords to its own nationals with regard to the protection [fn3] of intellectual property...”
 - (**FN 3 - For the purposes of Articles 3 and 4, ‘protection’ shall include matters affecting the availability, acquisition, scope, maintenance and enforcement of intellectual property rights *as well as those matters affecting the use of intellectual property rights* specifically addressed in this Agreement.”)
 - *Non-Discrimination – Article 27.1*
 - “...patents shall be available *and patent rights enjoyable without discrimination* as to the place of invention, the field of technology and whether products are imported or locally produced.”)
 - *No Unnecessary Obstacles To Trade – No Creation of Barriers to Legitimate Trade – Preamble; Article 41*
 - Preamble - “*Desiring* to reduce distortions and impediments to international trade, and taking into account the need to promote effective and adequate protection of intellectual property rights, and *to ensure that measures and procedures to enforce intellectual property rights do not themselves become barriers to legitimate trade;*
 - Article 41- “Members shall ensure that enforcement procedures as specified in this Part are available under their law so as to permit effective action against any act of infringement of intellectual property rights covered by this Agreement, including expeditious remedies to prevent infringements and remedies which constitute a deterrent to further infringements. These procedures shall be applied in such a manner as *to avoid the creation of barriers to legitimate trade*
- B. The Government Procurement Agreement (Plurilateral) – (No ‘BRICS’ Nations are Parties)
1. **Government Procurement Measures Proposed, Adopted, Applied and Enforced Must Satisfy the Essential Treaty Obligations**
 - Foreign government requirements that limit/preclude (by intent or effect) agency choice in procuring ICTs depending on whether the IP incorporated within such technology specifications are made available on royalty-free and/or proprietary-free terms may be interpreted as either bestowing a benefit to local FOSS software developers (and development) or as treating non-domestic software developers (foreign proprietary software development) *less favorably* than their domestic competitors. Given the considerable size of national government procurement

markets, if such differential treatment rises to a certain threshold it may actually alter the competitive relationship between national and foreign suppliers, and perhaps, even the fundamental ‘conditions of competition’ and overall ‘expectations’ of competitive relationships/equal competition in the marketplace, such that it violates the provisions of the GPO Plurilateral Agreement. And, if such government ICT procurement specifications require by law the public disclosure of the specific terms of the IP(patent, trade secrets, copyrights & know-how) licenses reached between the right holders and the SDO that created the technology standard(s) in question such rule may also run afoul of TRIPS.

2. Key Treaty Obligations:

- *National Treatment; Non-Discrimination* – Article III.2(a) and (b)
 - Article III.2.a – “Each Party...shall ensure...with respect to all laws, regulations, procedures and practices regarding government procurement covered by this Agreement...that its entities *shall not treat locally-established supplier less favorably than another locally-established supplier on the basis of degree of foreign affiliation or ownership.*”
 - Article III.2.b – “Each Party... shall ensure...[w]ith respect to all laws, regulations, procedures and practices regarding government procurement covered by this Agreement...that its entities *shall not discriminate against locally-established suppliers on the basis of the country of production of the good or service being supplied, provided that the country of production is a Party to the Agreement...*”
- *No Unnecessary Obstacles to Trade* – Article VI.1 – *Least Restrictive Trade Alternative Available*
 - Article VI.1 - “*Technical specifications laying down the characteristics of the products or services to be procured, such as quality, performance...or the processes and methods for their production... shall not be prepared, adopted or applied with a view to, or with the effect of, creating unnecessary obstacles to international trade.*”
 - Article VI.2 – “*Technical specifications prescribed by procuring entities shall, where appropriate: (a) be in terms of performance rather than design or descriptive characteristics; and (b) be based on international standards, where such exist; otherwise, on national technical regulations, recognized national standards...*”
- *Transparency* – Article XVII

- Article XVII – “Each Party shall encourage entities to indicate the terms and conditions, including any deviations from competitive tendering procedures or access to challenge procedures, under which tenders will be entertained from suppliers situated in countries not Parties to this Agreement...[particularly,]... *specify their contracts in accordance with Article VI (technical specifications); publish the procurement notices...*

C. WTO Technical Barriers to Trade (TBT) Agreement

1. **Other Technical Measures Causing SDOs to Change their ‘FRAND’/‘RAND’ Licensing and/or Ex-Ante Disclosure Rules or SDO Self-Initiated Changes to ‘Voluntary’ IP Licensing and/or Ex-Ante Disclosure Rules Initiated to Achieve Government ‘Public Interest’ Objectives, Must Satisfy the Essential Treaty Obligations**

- **Mandatory government procurement and ‘other’ regulations integrally related to governmental initiatives promoting ‘public interest’ objectives *including, but not limited to, ‘environmental [SMART Grid] sustainability’, ‘ICT interoperability’, ‘access to health information’, national security, etc., may not be employed intentionally or with the effect of serving as disguised barriers that impair trade in products incorporating proprietary patents, trade secrets, etc. Similarly, governments must ensure that the ICT standards created by recognized national or regional standards bodies (including informal consortia) operating within their national jurisdiction and control do not directly or indirectly, by serving government ‘public interest’ objectives, create barriers to trade in products incorporating proprietary IP***
 - ‘Technical Regulation’ – A “[d]ocument which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory.” (Annex I.1)
 - ‘Standard’ - A “[d]ocument approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is *not* mandatory. (Annex I.2)
 - ‘Central Government Body’ – A “[c]entral government, its ministries and departments or any body subject to the control of the central government in respect of the activity in question.”
 - ‘Local Government Body’ – A “[g]overnment other than a central government (e.g. states, provinces, Länder, cantons, municipalities, etc.), its ministries or departments or any body subject to the control of such a government in respect of the activity in question.”

- ‘Non-Governmental Body’ - “A [b]ody other than a central government body or a local government body, including a nongovernmental body which has legal power to enforce a technical regulation.”

2. Key Treaty Obligations Relating to ‘Technical Regulations’:

- *Non-Discrimination* –
 - Article 2.1 – “Members shall ensure that in respect of *technical regulations*, products imported from the territory of any Member shall be accorded treatment no less favourable than that accorded to like products of national origin and to like products originating in any other country.”
 -
- *No Unnecessary Obstacles to Trade* –

Article 2.2 - “Members shall ensure that technical regulations are not prepared, adopted or applied *with a view to or with the effect of* creating unnecessary obstacles to international trade. For this purpose, technical regulations *shall not be more trade-restrictive than necessary* to fulfill a legitimate objective *taking account of the risks non-fulfillment would create.*” (See GATT 1947 Article III and Article XX case law for definition of concept)

 - Such legitimate objectives are, *inter alia*: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment.
 - Article 2.3 – Technical regulations shall not be maintained if the circumstances or objectives giving rise to their adoption no longer exist *or if the* changed circumstances or *objectives can be addressed in a less trade-restrictive manner.*”
- *Transparency and Notification* –
 - Article 2.9.1 – “Whenever a relevant international standard does not exist or the technical content of a proposed technical regulation is not in accordance with the technical content of relevant international standards, *and if the technical regulation may have a significant effect on trade of other Members*, Members shall:....publish a notice...”
 - Article 2.5 – Enquiry - “A Member preparing, adopting or applying a technical regulation *which may have a significant effect on trade of other Members* shall, upon the request of another Member, explain the justification for that technical regulation in terms of the provisions of paragraphs 2 to 4.”

➤ Rebuttable Presumption in Favor of Government:

- Whenever a technical regulation is prepared, adopted or applied for one of the legitimate objectives explicitly mentioned in paragraph 2, and is in accordance with relevant international standards, *it shall be rebuttably presumed not to create an unnecessary obstacle to international trade.*
- Article 10.1 - “Each Member shall ensure that an enquiry point exists which is able to answer all reasonable enquiries from other Members and interested parties...” relating to technical regulations, standards and conformity assessment procedures.
- *Obligations Above Applicable Also to Local Government Bodies and Non-Government Bodies –*
 - Article 3.1 – Generally, “Members shall take such reasonable measures as may be available to them to ensure compliance by such bodies with the provisions of Article 2...”
 - Article 3.2 – Generally, “Members shall ensure that the technical regulations of local governments on the level directly below that of the central government in Members *are notified...*”
 - Article 3.4 - “Members shall not take measures ***which require or encourage*** local government bodies or nongovernmental bodies within their territories to act in a manner inconsistent with the provisions of Article 2.”

3. **Key Treaty Obligations Relating to ‘Standards’:**

- *Code of Good Practice for the Preparation, Adoption and Application of Standards – Annex 3 -*
 - Article 4.1 - “Members shall ensure that their central government standardizing bodies accept and comply with the Code of Good Practice for the Preparation, Adoption and Application of Standards in Annex 3 to this Agreement (referred to in this Agreement as the ‘Code of Good Practice’”)
 - Annex 3.D – “In respect of standards, the standardizing body shall accord treatment to products originating in the territory of any other Member of the WTO no less favorable treatment than that accorded to like products of national origin and to like products originating in any other country.”

- Annex 3.E – “The standardizing body shall ensure that standards are not prepared, adopted or applied *with a view to, or with the effect of, creating unnecessary obstacles to international trade.*”
- Annex 3.I – “Wherever appropriate, the standardizing body shall specify standards *based on product requirements in terms of performance* rather than design or descriptive characteristics.”
- Annex 3.J – “At least once every six months, the standardizing body shall publish a work programme containing its name and address, the standards it is currently preparing and the standards which it has adopted in the preceding period.”

4. GATT 1947, as amended/GATT 1994 Case Law:

- **GATT Case Law – Articles III.4 (relating to national treatment on internal taxation and regulation), XI (relating to general elimination of quantitative restrictions), and XXIII (relating to nullification and impairment) supports interpretation of WTO Agreements discussed above with respect to national government mandates or ‘preferences’ for the procurement of IP-free or royalty-free ICT specifications indirectly favoring FOSS, or to private standards body activities concerning same in the absence of explicit regulations.**
 - WTO Members cannot avoid violating a WTO Agreement merely because they did not directly issue procurement or other ‘technical’ regulations mandating certain behaviors from the private sector that are intended to or have the effect of creating barriers to trade. Notwithstanding the fact that private party activities or initiatives may have created barriers to trade, governments may still be held accountable under WTO law if it can be established that there was sufficient governmental involvement in the promotion, encouragement, facilitation, promulgation and application of private activities, including standards development, such that it can be concluded that the government *indirectly compelled* specific private party behavior. (Kogan – *Discerning the Forest*)
 - *Report of the Panel on Canada – Certain Measures Affecting the Automotive Industry* paras. 10.106-10.107 –
 - “10.106 It is evident from the reasoning of the Panel Reports in *Canada – FIRA* and in *EEC – Parts and Components* that these Reports do not attempt to state general criteria for determining whether a commitment by a private party to a particular course of action constitutes a ‘requirement’ for purposes of Article III:4. While these cases are instructive in that they confirm that both legally enforceable undertakings and undertakings accepted by a firm to obtain an advantage granted by a government can constitute "requirements" within the meaning of Article III:4, we do not believe that they provide support for the proposition that either legal enforceability or the existence of a link between a

private action and an advantage conferred by a government is a necessary condition in order for an action by a private party to constitute a "requirement." To qualify a private action as a "requirement" within the meaning of Article III:4 means that in relation to that action a Member is bound by an international obligation, namely to provide no less favourable treatment to imported products than to domestic products.”

- “10.107 A determination of whether private action amounts to a ‘requirement’ under Article III:4 must therefore necessarily rest on a finding that there is a nexus between that action and the action of a government such that the government must be held responsible for that action. We do not believe that such a nexus can exist only if a government makes undertakings of private parties legally enforceable, as in the situation considered by the Panel on Canada – FIRA, or if a government conditions the grant of an advantage on undertakings made by private parties, as in the situation considered by the Panel on EEC – Parts and Components. We note in this respect that the word ‘requirement’ has been defined to mean ‘1. The action of requiring something; a request. 2. A thing required or needed, a want, a need. Also the action or an instance of needing or wanting something. 3. Something called for or demanded; a condition which must be complied with.’ The word ‘requirements’ in its ordinary meaning and in light of its context in Article III:4 clearly implies government action involving a demand, request or the imposition of a condition but in our view this term does not carry a particular connotation with respect to the legal form in which such government action is taken. In this respect, we consider that, in applying the concept of ‘requirements’ in Article III:4 to situations involving actions by private parties, it is necessary to take into account that there is a broad variety of forms of government of action that can be effective in influencing the conduct of private parties.” (Panel Report on Canada-Autos).

List of Resources Consulted

Articles:

Nuno Pires de Carvalho, *The TRIPS Regime of Trademarks and Designs* (Kluwer Law International © 2006)

Daniel R. Cahoy, *Confronting Myths and Myopia on the Road from Doha*, 42 GEORGIA L.REV. 1, 156 (2007), at: Available at SSRN: <http://ssrn.com/abstract=989817>

Jay Pil Choi, *Patent Pools and Cross-Licensing in the Shadows of Patent Litigation*, October 2002, revised September 2003, at: <http://www.msu.edu/~choijay/Patent%20Pools-Choi.pdf>

Peter N. Detkin, *Leveling the Patent Playing Field*, 6 J. Marshall Rev. Intell. Prop. L. 636, 636 (2007), at: <http://www.jmripl.com/Publications/Vol6/Issue4/Detkin.pdf>

Maurits Dolmans, *A Tale of Two Tragedies – A plea for open standards*, 2 International Free and Open Source Software Law Review 115, (Issue 2, 2010) at: <http://www.ifosslr.org/ifosslr/article/view/46/72>

Marcus Glader, *FRAND licensing obligations and industry standards*, presented at Jevons Institute for Competition law and Economics (London, May 10, 2007) at: http://www.ucl.ac.uk/laws/jevons/papers/colloquium_2007/jevons07_glader.pdf

Michelle K. Herman, *Negotiating Standards-Related Patent Licenses: How The Deal Is Done*, presented at the 25th Annual Intellectual Property Law Conference (April 2010), at: <http://apps.americanbar.org/intelprop/spring2010/coursematerials/HermanMicheleNegotiatingStandards-Related.pdf>

Christopher M. Kalanje, *Role of Intellectual Property in Innovation and New Product Development*, WIPO website at: http://www.wipo.int/export/sites/www/sme/en/documents/pdf/ip_innovation_development.pdf

Shigeki Kamiyama, Jerry Sheehan, and Catalina Martinez, *Valuation and Exploitation of Intellectual Property*, STI Working Paper 2006/5 Statistical Analysis of Science, Technology and Industry DSTI/DOC(2006)5 (June 30, 2006) at: <http://www.oecd.org/dataoecd/62/52/37031481.pdf>

Lawrence A. Kogan, *Commercial High Technology Innovations Face Uncertain Future Amid Emerging 'BRICS' Compulsory Licensing and IT Interoperability Frameworks*, San Diego International Law Journal, Vol. 13, No. 1 (Fall 2011), (hereinafter referred to as 'Kogan SDILJ') available at SSRN: <http://ssrn.com/abstract=1759655>



ITSSD

INSTITUTE FOR TRADE, STANDARDS,
AND SUSTAINABLE DEVELOPMENT

Lawrence A. Kogan, *Discerning the Forest from the Trees: How Governments Use Ostensibly Private and Voluntary Standards to Avoid WTO Culpability*, *Global Trade and Customs Journal* Vol. 2, No. 9, at 319-337 (2007), at: http://www.itssd.org/GTCJ_03-offprints%20KOGAN%20-%20Discerning%20the%20Forest%20from%20the%20Trees.pdf

Lawrence A. Kogan, *Emerging Risks For U.S. High Tech: How Foreign "Public Interest" Regulation Threatens Property Rights And Innovation*, Washington Legal Foundation Critical Legal Issues Working Paper Series No. 175 (Dec. 2010), (hereinafter referred to as 'Kogan WLF'), available online at: <http://www.wlf.org/Upload/legalstudies/workingpaper/KoganWP.pdf>

Lawrence A. Kogan, *Growing Foreign Investment and Regulatory/Policy Risks Facing High Technology Innovations*, *Global Customs & Trade Journal*, Vol. 6, No. 2 (Feb. 2011), (hereinafter referred to as 'Kogan GTCJ') available at SSRN: <http://ssrn.com/abstract=1721267>

Lawrence A. Kogan, *UK's Promotion of Royalty-Free Government Procurement Standards Not as Reported*, Mondaq (April 14, 2011) at: http://www.mondaq.com/article.asp?article_id=129510

Anne Layne-Farrar, Jorge A. Padilla, and Richard Schmalensee, *Pricing Patents for Licensing in Standard Setting Organisations: Making Sense of FRAND Commitments*, CEMFI Working Paper No. 0702 (Jan. 2007), at: <ftp://ftp.cemfi.es/wp/07/0702.pdf>

Donald L. Martin and Carl De Meyer, *Patent Counting, a Misleading Index of Patent Value: A Critique of Goodman & Myers and its Uses* (Dec. 4, 2006), Available at SSRN: <http://ssrn.com/abstract=949439>

Karsten Meinhold, *The ETSI IPR Policy: A key element for the success of ETSI's globally applicable standards*, EC Workshop on "Intellectual Property Rights in ICT Standardisation" (Brussels, Nov. 19, 2008), at: http://ec.europa.eu/enterprise/newsroom/cf/_getdocument.cfm?doc_id=3635

Joe Mullin, *Big Patent-Licensing Deals Push Acacia Earnings to a Stunning High*, *Patent Litigation Weekly Corporate Counsel* (Oct. 25, 2010) at: <http://www.law.com/jsp/cc/PubArticleCC.jsp?id=1202473826340>

Richard Raysman and Peter Brown, *Patent Cross-Licensing in the Computer and Software Industry*, *New York Law Journal*, Vol. 233, No. 7 (Jan. 11, 2005) at: http://www.thelenreid.com/resources/documents/NYLJ_0501111.pdf

Jerome H. Reichman and Catherine Hasenzahl, *Non-voluntary Licensing of Patented Inventions: Historical Perspective, Legal Framework under TRIPS, and an Overview of the Practice in Canada and the USA*, UNCTAD-ICTSD Project on IPRs and Sustainable Development (June 2003) at: http://ictsd.org/downloads/2008/06/cs_reichman_hasenzahl.pdf

Sean Royall, Amanda Tessar and Adam Di Vincenzo, *Deterring 'Patent Ambush' in Standard Setting: Lessons from Rambus and Qualcomm*, *Antitrust*, Vol. 23, No. 3, (Summer 2009), at: <http://www.gibsondunn.com/publications/Documents/Royal-Tessar-DiVincenzo-DeterringPatantAmbush.pdf>

Ralph Siebert and George Von Graevenitz, *Jostling for Advantage: Licensing and Entry into Patent Portfolio Races* (July 2006). CEPR Discussion Paper No. 5753. Available at SSRN: <http://ssrn.com/abstract=924938>; (updated March 31, 2008) at: <http://www.inno-tec.bwl.uni-muenchen.de/files/forschung/publikationen/graevenitz/0408vgs.pdf>

R. Polk Wagner and Gideon Parchomovsky, *Patent Portfolios* University of Pennsylvania Law Review, Vol. 154, No. 1, November 2005; U of Penn Law School, Public Law Working Paper No. 06-15; U of Penn, Inst for Law & Econ Research Paper No. 05-25. Available at SSRN: <http://ssrn.com/abstract=874445> or doi:10.2139/ssrn.582201

Antony Taubman, *Rethinking Trips: 'Adequate Remuneration' for Non-Voluntary Patent Licensing*, 11 Journal of International Economic Law 927 (Dec. 2008), Abstract available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1305049

Trond Arne Undheim, *Portugal's New Interoperability Law*, Trond's Opening Standard Blog (April 13, 2011) at: http://blogs.oracle.com/trond/2011/04/portugals_new_interoperability.html

Cases:

In re Negotiated Data Solutions LLC, No. C-4234 (F.T.C. 2008), Complaint available at <http://www.ftc.gov/os/caselist/0510094/080923ndscomplaint.pdf>; *In re* Negotiated Data Solutions LLC, No. C-4234 (F.T.C. 2008), available at <http://www.ftc.gov/os/caselist/0510094/080923ndscomplaint.pdf>

Opinion of the Commission on Remedy, Rambus Inc., FTC Docket No. 9302, at 28 (Feb. 5, 2007), available at <http://www.ftc.gov/os/adjpro/d9302/070205opinion.pdf>

Qualcomm Inc. v. Broadcom Corp., 2007 U.S. Dist. LEXIS 28211, (S.D. Cal. Mar. 21, 2007); *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 311 (3d Cir. 2007); *Qualcomm Inc. v. Broadcom Corp.*, 548 F.3d 1004 (Fed. Cir. 2008).

Reports:

European Interoperability Framework for Pan-European eGovernment Services Version 1.0, European Communities Brochure (2004) at: <http://www.apdip.net/projects/gif/country/EU-GIF.pdf>; *European Interoperability Framework for Pan-European eGovernment Services Version 1.0*, European Communities (2004) at: <http://xml.coverpages.org/IDA-EIF-Final10.pdf>

European Interoperability Framework (EIF) for European Public Services, Annex 2 to the Communication from the Commission to the European Parliament, the Council, the European Economic

and Social Committee and the Committee of Regions 'Towards interoperability for European public services', COM(2010) 744 final (12/16/10) at: http://ec.europa.eu/isa/strategy/doc/110113_iop_communication_annex_eif.pdf

Exclusions From Patentable Subject Matter and Exceptions and Limitations to the Rights, Report of the WIPO Secretariat, World Intellectual Property Organization Standing Committee on the Law of Patents Thirteenth Session (SCP/13/3), (Feb. 4, 2009), at: http://www.wipo.int/edocs/mdocs/scp/en/scp_13/scp_13_3.pdf

Intellectual Property as an Economic Asset: Key Issues in Valuation and Exploitation, EPO-OECD-BMWA Conference Summary Report, Organisation for Economic CoOperation and Development (6/30-7/1/05) at: <http://www.oecd.org/dataoecd/18/2/35519266.pdf>

Patents and Standards (SCP/13/2), Report of the WIPO Secretariat, Standing Committee on the Law of Patents, World Intellectual Property Organization (Feb. 18, 2009), at: http://www.wipo.int/edocs/mdocs/scp/en/scp_13/scp_13_2.pdf

Public Health, Innovation and Intellectual Property Rights, Report on the Commission on Intellectual Property Rights, Innovation and Public Health World Health Organization (April 2006), at: <http://www.who.int/intellectualproperty/documents/thereport/CIPIH23032006.pdf>

Report of the Panel on Canada – Certain Measures Affecting the Automotive Industry, WT/DS139/R, WT/DS142/R (Feb. 11, 2000) at: [http://www.worldtradelaw.net/reports/wtopanels/canada-autos\(panel\).pdf](http://www.worldtradelaw.net/reports/wtopanels/canada-autos(panel).pdf)

Towards an increased contribution from standardisation to innovation in Europe, COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE EUROPEAN PARLIAMENT AND THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE, COM(2008) 133 final (3/11/08) at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0133:FIN:EN:PDF>

Official Guidelines:

QUESTION 97: Dependent patents and their exploitation - Resolution, AIPPI Executive Committee of Barcelona, AIPPI Yearbook 1991/1 (Sept. 30 – Oct. 5, 1990), AIPPI website at: <https://www.aippi.org/download/committees/97/RS97English.pdf>

Revised ANSI Patent Policy (2007), ANSI website at: <http://publicaa.ansi.org/sites/apdl/Reference%20Documents%20Regarding%20ANSI%20Patent%20Policy/62-2007%20ANSI%20Patent%20Policy%20Revision.pdf> ; (Rev. 2008), ANSI website at: <http://publicaa.ansi.org/sites/apdl/Reference%20Documents%20Regarding%20ANSI%20Patent%20Policy/ANSI%20Patent%20Policy%20-%20Revised%202008.pdf>; *ANSI Guidelines for Implementation of the ANSI Patent Policy* (rev. Feb. 2011), ANSI website at: <http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/American%20National%20Standards/Pro>

[cedures,%20Guides,%20and%20Forms/Guidelines%20for%20Implementation%20of%20ANSI%20Patent%20Policy%202011.pdf](http://www.etsi.org/WebSite/document/Legal/ETSI_Guide_on_IPRs.pdf)

ETSI Guide on Intellectual Property Rights (IPRs), Version adopted by Board #70 (Nov. 27, 2008), ETSI website at: http://www.etsi.org/WebSite/document/Legal/ETSI_Guide_on_IPRs.pdf; *ETSI Rules of Procedure, Annex 6 - Intellectual Property Rights Policy* (April 8, 2009), ETSI website at: http://www.etsi.org/WebSite/document/Legal/ETSI_IPR-Policy.pdf

2007 IEEE-SA Patent Policy: Introduction to IEEE-SA Patent Policy, IEEE Standards Education Committee IEEE 802 Workshop (Nov. 30, 2009) at: http://www.ieee802.org/misc-docs/GlobeCom2009/Standards%20Association%20Patent%20Policy_David%20Law.pdf; *Section 6 – Patents*, IEEE-SA Standards Board Bylaws, IEEE-SA website at: <http://standards.ieee.org/develop/policies/bylaws/sect6-7.html>; *Section 6.3 – Patents*, IEEE-SA Standards Board Operations Manual, IEEE-SA website at: <http://standards.ieee.org/develop/policies/opman/sect6.html>

Common Patent Policy for ITU-T/ITU-R/ISO/IEC, International Telecommunications Union website at: <http://www.itu.int/en/ITU-T/ipr/Pages/policy.aspx>; *Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC* (March 2007) International Telecommunications Union website at: http://www.itu.int/dms_pub/itu-t/oth/04/04/T04040000010002PDFE.pdf

W3C Patent Policy (Feb. 5, 2004), W3C website at: <http://www.w3.org/Consortium/Patent-Policy-20040205/>

Public Comments:

Comments of the Aerospace Industries Association/Strategic Standardization Forum for Aerospace, Submitted as part of *A National Survey of United States Standardization Policies*, The Center for Global Standards Analysis (2009) at: [http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/Critical%20Issues/Survey-US%20Standards%20Policies/Center's%20Survey%20Report%20\(August%202009\).pdf](http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/Critical%20Issues/Survey-US%20Standards%20Policies/Center's%20Survey%20Report%20(August%202009).pdf)

Comments of the American National Standards Institute, Submitted as part of *A National Survey of United States Standardization Policies*, The Center for Global Standards Analysis (2009) at: [http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/Critical%20Issues/Survey-US%20Standards%20Policies/Center's%20Survey%20Report%20\(August%202009\).pdf](http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/Critical%20Issues/Survey-US%20Standards%20Policies/Center's%20Survey%20Report%20(August%202009).pdf)

ITSSD Comments Concerning SCP/13/2 – Standards and Patents, Institute for Trade, Standards and Sustainable Development (March 23, 2009) at: http://www.wipo.int/export/sites/www/scp/en/meetings/session_14/studies/itssd_1.pdf

Supplement to ITSSD Comments Concerning the WIPO Report on Standards and Patents (SCP/13/2) Paragraph 44 (Jan. 2010) at: http://www.wipo.int/scp/en/meetings/session_14/studies/itssd_supplement.pdf



ITSSD

INSTITUTE FOR TRADE, STANDARDS,
AND SUSTAINABLE DEVELOPMENT

ITSSD Comments Concerning Document (SCP/13/3) Patent Exclusions, Exceptions & Limitations, Institute for Trade, Standards and Sustainable Development (2009) at: http://www.wipo.int/export/sites/www/scp/en/meetings/session_14/studies/itssd_2.pdf

Prepared Statement of Ronald J. Riley, President Professional Inventors Alliance USA, AMENDMENT IN THE NATURE OF A SUBSTITUTE TO H.R. 2795, THE "PATENT REFORM ACT OF 2005" HEARING BEFORE THE SUBCOMMITTEE ON COURTS, THE INTERNET, AND INTELLECTUAL PROPERTY OF THE COMMITTEE ON THE JUDICIARY HOUSE OF REPRESENTATIVES, 109th Cong., 1st Session on H.R. 2795 (Sept. 15, 2005) at: <http://www.gpo.gov/fdsys/pkg/CHRG-109hrg23434/html/CHRG-109hrg23434.htm>

USPTO Statement to WIPO, Comments Submitted to the Chair of the Standing Committee on the Law of Patents, World Intellectual Property Organization (March 25, 2009) at: http://web.ansi.org/news_publications/other_documents/other_doc.aspx?menuid=7

Treaties:

Technical Barriers to Trade 15 April 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, Multilateral Agreements on Trade in Goods, 33 I.L.M. 1125 (1994), at: <http://www.worldtradelaw.net/uragreements/tbtagreement.pdf>

Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1c, Legal Instruments-Results of The Uruguay Round, 33 I.L.M. 1125, 1197 (1994), at: <http://www.worldtradelaw.net/uragreements/tripsagreement.pdf>

Agreement on Government Procurement, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 4B, Article III, Legal Instruments-Results of the Uruguay Round vol. 31, 1915 U.N.T.S. 103, at: http://www.wto.org/english/docs_e/legal_e/gpr-94_e.pdf