

**EMERGING RISKS FOR  
U.S. HIGH TECH:  
HOW FOREIGN “PUBLIC INTEREST”  
REGULATION THREATENS PROPERTY  
RIGHTS & INNOVATION**

By

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Sustainable Development

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This WORKING PAPER was inspired by the side-bar event convened by this author in Geneva, Switzerland on October 12, 2010 during the 15<sup>th</sup> Session of the WIPO SCP entitled, *Can Government Intervention Sustain Economic Incentive, Technological Innovation, and Capital Flows?* The flyer, handout materials and Précis of this event are accessible online at the ITSSD website at: <http://www.itssd.org/ITSSD%20October%2012,%202010%20WIPO%20SCP%20side-bar%20event%20flyer.pdf>; <http://www.itssd.org/ITSSD%20WIPO%20SCP%20Side-bar%20Geneva%2010-12-10%20-%20Handout%20Materials.pdf>; and <http://www.itssd.org/ITSSD%20WIPO%20SCP%20Side-bar%20Geneva%2010-12-10%20Precis%20Final.pdf>. This article was also informed by the observations and participation of this author in the SCP's plenary sessions during the week of October 11-15, 2010. See *Draft Report prepared by the Secretariat of the Standing Committee on the Law of Patents 15<sup>th</sup> Session*, World Intellectual Property Organization (SCP/15/6/PROV.) (Dec. 4, 2010), at pars. 34, 43, 55-57, 67, 71, 109 and 152, at: [http://www.wipo.int/export/sites/www/scp/en/meetings/session\\_15/pdf/scp\\_15\\_6\\_prov.pdf](http://www.wipo.int/export/sites/www/scp/en/meetings/session_15/pdf/scp_15_6_prov.pdf); *ITSSD 'Geneva Diary' of the Proceedings of the 15th Session of the WIPO Standing Committee on the Law of Patents Reflects Developed Country IP Rights Under Third World Assault*, ITSSD Journal on Intellectual Property Rights (hereinafter referred to as "ITSSD Geneva Diary") (Oct. 26, 2010), at: <http://itssdinternationaliprights.blogspot.com/2010/10/itssd-geneva-diary-of-proceedings-of.html>.

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## **I. INTRODUCTION: HISTORICALLY, CAPITAL-INTENSIVE TECHNOLOGY DEVELOPMENT AND COMMERCIALIZATION HAS INCLUDED SIGNIFICANT ECONOMIC AND LEGAL RISKS AND OTHER UNCERTAINTIES**

The pathways that lead to success for cutting-edge technologies are often fraught with risk, difficulty, and uncertainty, more so under a regime of lengthy time horizons for competent research and development and commercialization which may require regulatory approvals. These challenges are known to be endemic to capital-intensive technology development that requires significant follow-on funding, particularly in highly regulated industries such as life sciences (e.g., pharmaceuticals/biotechnology<sup>1</sup> and electronic medical devices<sup>2</sup>); clean technology

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<sup>1</sup>“By some measures, the average cost of developing a drug has, over the past twenty years, risen at a rate that is 7.4 percent higher than inflation. The same study found that requirements for larger and longer clinical trials were responsible for most of the increase. Another analysis found that total time from synthesis of a new compound to approval averaged 7.9 years in the 1960s, but rose to 12.8 years by the 1990s. Today it is estimated at well over fifteen years. Much of this increased time is spent in the clinical trial phase...These longer development times also mean investments made 10 years ago... are only now showing up in the form of advanced drug candidates and marketed products.” See Scott Gottlieb, *Medical Innovation in Peril*, Chapter in “Reforming America’s Health Care System: The Flawed Vision of ObamaCare” (Scott W. Atlas, M.D., Ed. © 2010 Hoover Institution Press) at 56-57, at: <http://www.aei.org/docLib/Reforming-Americas-Health-Care-System-Gottlieb-101810.pdf> and <http://www.hooverpress.org/productdetails.cfm?PC=1430>, citing C. Johnston, *Annals of Neurology* 62[6] (2007): A6–7 and J. A. DiMasi, R. W. Hansen, and H. G. Grabowski, *The Price of Innovation: New Estimates of Drug Development Costs*, *J. OF HEALTH ECON.* 22 (2003)151–185.

<sup>2</sup>“Venture capital investment plays a significant role in the funding and development of disruptive medical technology innovations. In 2008, the venture capital industry invested \$3.4 billion in the medical technology space which was approximately 12% of overall venture capital investment...*The majority of innovations in the medical technology industry are driven by small businesses and entrepreneurs...hav[ing] fewer than 100 employees...who must assume large amounts of risk as part of their product development process, and many of these companies rely highly on venture capital...In most cases, venture capital is the only source of funding for these companies as the dollars required are too great for angels, friends or family, and the risks are too high for traditional bank financing...[VCs] stay invested in these companies – both financially and through the sweat equity [they] provide – from 7-10 years, often longer and rarely less...*” National Venture Capital

(which may be subdivided into clean or renewable energy generation);<sup>3</sup> and clean or renewable energy efficiency technologies and/or services, the former having more direct exposure to the regulatory environment.<sup>4</sup> And such conditions also pose considerable obstacles to the development and introduction of new paradigm-setting information and communication technologies ('ICTs') categorized by reference to the economic activities generated by their application to and use within *other* industry sectors,<sup>5</sup> including healthcare, energy and the environment, transportation, information and education, emergency and disaster management, and defense/national security.<sup>6</sup> According to one recent study, "...the ICT sector undertakes large investments in R&D and is very innovative. In terms of R&D expenditures, patents, and venture capital investment, it exceeds other industries by a large margin."<sup>7</sup>

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Association, *Impact of the Medical Device Safety Act on Venture Capital Investment in Medical Technology and Innovation*, Statement for the Record, Health Subcommittee of the House Energy and Commerce Committee (May 12, 2009), at 2-3, at: <http://www.NVCA.Statement.to.EC.on.HR.1346-5-09.pdf>

<sup>3</sup>At least one venture capital-focused survey has defined the term 'clean' or 'renewable' energy rather broadly as incorporating a number of sectors and/or activities, including energy generation, energy efficiency, energy storage, waste recycling, emissions reduction, water, cleantech materials, cleantech enabling systems and next generation biofuels. See *Cleantech Investment and Private Equity: An Industry Survey*, a Norton Rose, LLP Survey (July 2010), at 5, at: <http://www.nortonrose.com/knowledge/publications/pdf/file30016.pdf?lang=en-gb>.

<sup>4</sup>According to at least one international law firm, a clear distinction should "be drawn between *clean energy or renewables investments* (e.g. wind or solar farms) and *clean technology or services investments* (technology or services to improve efficiencies or drive clean energy). *Clean energy and renewables investments have more direct exposure to the regulatory environment* (emphasis added). See also *Cleantech and Renewables Update*, SJ Berwin, LLP at 1, (July 14, 2010), at: [http://www.sjberwin.com/Contents/Publications/pdf/210/e421e383\\_70c2\\_4d12\\_8caf\\_b54b582b4fc\\_6.pdf](http://www.sjberwin.com/Contents/Publications/pdf/210/e421e383_70c2_4d12_8caf_b54b582b4fc_6.pdf).

<sup>5</sup>See International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4 (ISIC Rev.4) United Nations Department of Economic and Social Affairs Statistics Division (ST/ESA/STAT/SER.M/4/Rev.4) (Aug. 11, 2008), at 278-78 at pars. 218-220 and Table 4.3, at: <http://unstats.un.org/unsd/cr/registry/isic-4.asp>.

<sup>6</sup>See Graham Vickery and Sacha Wunsch-Vincent, *R&D and Innovation in the ICT Sector: Toward Globalization and Collaboration*, Chapter 1.8 in, "The Global Information Technology Report" 2008-2009 (© 2009 World Economic Forum) at 95-97, at: <http://www.tubisad.org.tr/Tr/Library/Analizler/Toward%20Globalization%20and%20Collaboration.pdf>.

<sup>7</sup>"In 2005, the OECD 21 [country] ICT goods and services sector spent about *two and a half times as much on R&D (US\$130 billion) as the automotive sector and more than triple the pharmaceutical sector*. In 2005, the year of the latest available official data, ICT manufacturing R&D accounted for more than a quarter of total manufacturing business R&D expenditure in most OECD countries" (emphasis added). *Id.* at 97.

The establishment of a technology's economic value is one of the most formidable obstacles faced by inventors and innovators of technologies with long gestation periods (e.g., development, testing and scaling) and sustained high capital flows. Such economic value is determined by management's ability to reduce associated economic and legal uncertainties that otherwise would impede technology development, commercialization, and market entry. And this assessment of value, which is sought increasingly through greater cooperation between financial and corporate investors,<sup>8</sup> is highly contingent on elements of certainty, principally robust enforcement of intellectual property right(s) that ensure market exclusivity.

This is especially the case in the life sciences sector. According to one well-known venture capitalist, the expectation of substantial revenue losses resulting from a large number of drug patents expiring within the next few years and the reality of reduced R&D productivity "is creating an incentive for pharmaceutical companies to pay a lot of money for early-stage program[s]...[and to]...look[] to create partnerships externally to reduce R&D expenditure."<sup>9</sup> Yet, patent protection also has become an important element in the valuation of computer software companies. For example, a recently released patent study reveals that 60% of venture capitalists negotiating with software firms "indicated that patents were an important factor in their investment

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<sup>8</sup>"One of the trends now happening is that corporate investors have stepped in to support the industry with venture funding. You will now see big pharma companies setting up their own venture houses, and taking the sorts of risks that used to be taken by venture capitalists. The relationship between venture and pharmaceutical companies is becoming increasingly close. That's helped to keep the industry going. They bring a different type of knowledge from venture firms and have provided significant amounts of money and expertise. *It has been a big change compared with ten years ago – one that we would not have predicted*" (emphasis added). James Harris, *A design for Life Sciences: Q&A Stephen Bunting*, Real Deals Europe (May 20, 2010), at 24, accessible online at: <http://www.abingworth.com/images/RealDeals2010.pdf>. See also *UPDATE 3-GE, Partners to Invest \$55 Mln in Power-Grid Tech*, Reuters (Nov. 16, 2010), at: <http://finance.yahoo.com/news/UPDATE-3-GE-partners-invest-rc-2858014743.html?x=0&v=4> ("General Electric Co and a group of venture-capital firms said... they would invest \$55 million in a dozen start-up ventures and partnerships working on new power-grid technologies...").

<sup>9</sup>*Id.* at 24-25. See also *Fight or Flight?: Diversification vs. Rx-focus in Big Pharma's Quest for Sustained Growth*, Short Report Version, Roland Berger Strategy Consultants (Oct. 2010), at: [http://www.rolandberger.com/media/pdf/Roland\\_Berger\\_Fight\\_or\\_flight\\_Shortversion\\_20101025.pdf](http://www.rolandberger.com/media/pdf/Roland_Berger_Fight_or_flight_Shortversion_20101025.pdf); Ben Adams, *Two Thirds of Pharma Companies Face 'Strategic Crisis'*, InPharm (Oct. 25, 2010), at: <http://www.inpharm.com/news/101025/two-thirds-pharma-companies-face-strategic-crisis>; Andrew Jack, *Drugs Groups Diversify Away from Patents*, Financial Times (Oct. 21, 2010), at: <http://www.ft.com/cms/s/0/d6fb3f60-dc9d-11df-84f5-00144feabdc0.html>; Kenneth Getz and Rachael Zuckerman, *Anticipating Structural Change in the CRO Market - Sponsor Crises Lead to an Unstable Landscape*, Tufts Center for the Study of Drug Development, ContractPharma (Oct. 2010), at: <http://www.contractpharma.com/articles/2010/10/anticipating-structural-change-in-the-cro-market>.

decision...[compared with]...73% for biotech and 85% for medical devices...[and that]...substantial percentages of other types of investors, such as angels, investment banks, and other companies found patents important to their investment decisions.”<sup>10</sup>

At least one other study suggests that “the economic and strategic value of patents is subject to a very high degree of uncertainty. Patents vary widely in their value, and much of the value associated with intellectual property depends on endogenous outcomes in technology and product markets” (i.e., commercialization efforts).<sup>11</sup> However, this study also shows how certain exogenous (i.e., formal institutional or systemic) factors can be quite determinative of the commercial success of patented technologies. Indeed, there are many economic and legal uncertainties surrounding the patenting of technologies: (1) patent allowance; (2) patent scope; (3) patent grant delay; (4) patent enforceability; and (5) patent value. In particular, the study’s findings show that delays surrounding the issuance of a Notice of Patent Allowance by the US Patent and Trademark Office will effectively delay cooperative commercialization efforts vis-à-vis technology contracting/licensing, especially in the case of technologies requiring long development periods and incurring longer patent allowance lags<sup>12</sup> where alternative forms of intellectual property (‘IP’) protection are not available.<sup>13</sup> In other words, reduced patent allowance uncertainty can result in reduced patent scope uncertainty which, in turn, can significantly increase both the probability and the frequency of securing patent cooperation/licensing agreements within a relatively shorter period of time.<sup>14</sup> These findings have important implications for start-up and repeat innovators many of whom are likely to increase their rate of licensing absent “significant [lingering] uncertainty...[about]...their

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<sup>10</sup>Robert Merges and Pamela Samuelson, *Patenting by Entrepreneurs: The Berkeley Patent Survey (Part III of III)*, PatentlyO Blog (July 21, 2010), at: <http://www.patentlyo.com/patent/2010/07/patenting-by-entrepreneurs-the-berkeley-patent-survey-part-iii-of-iii.html>.

<sup>11</sup>Joshua S. Gans, David H. Hsu and Scott Stern, *The Impact of Uncertain Intellectual Property Rights on the Market for Ideas: Evidence from Patent Grant Delays*, 54 *Management Science* 982-997 (May 2008), Apr. 2007 version at 7, at: <http://works.bepress.com/cgi/viewcontent.cgi?article=1008&context=joshuagans>.

<sup>12</sup>“[A patent allowance lag is] the time between patent application and patent allowance.” *Id.* at 14. “While *electronics* and *scientific instruments* are associated with a relatively short *patent allowance lag* (27 months), average allowance lags are much longer in *biotechnology* (38 months)” (italics in original). *Id.* at 21.

<sup>13</sup>*Id.* at 29.

<sup>14</sup>*Id.* at 2-3, 21, 37 Table 1B.

ability to enforce those claims through the applicable legal system” – i.e., in a court of law.<sup>15</sup>

It is precisely for these reasons that law and policy proposals, enactments, or implementations potentially impacting the strength, scope, and duration of patents can and often do alter the course of investment, innovation, and market presence and increase the economic and legal uncertainties affecting the measurement of value.

## **II. DOMESTIC AND FOREIGN REGULATORY AND POLICY RISKS ASSOCIATED WITH HIGH TECHNOLOGY DEVELOPMENT, COMMERCIALIZATION, AND MARKET BEHAVIOR**

### **A. Domestic Risks**

Technology innovators, financial and corporate investors, and commercialization partners, despite their different return expectations and respective roles in the innovation process, must overcome challenges posed by national- and/or regional-level regulators particularly where greater innovation is perceived as capable of significantly disrupting the marketplace status quo ante and transcending the definitions, rules and principles of extant law. To the extent that overly intrusive or otherwise ill-conceived or inadequate government policy and legal promulgations, including those relating to intellectual property rights for emerging technologies either create, or are themselves a symptom of,<sup>16</sup> legal and economic uncertainties, it may be expected that actual and intended capital availability may be placed at risk and/or withdrawn prematurely as measured by the recipient’s economic model.

Financial and corporate investors understand how U.S. domestic regulatory policy can increase economic and legal risks and impair the success of new pharmaceutical, medical device, and clean technologies. For example, during June

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<sup>15</sup> *Id.* at 6, 29-30.

<sup>16</sup>“To a certain degree...[legal] uncertainty and delay are inevitable byproducts of a rapidly changing environment. The difficulty of anticipating coming and (ever-changing) technological trends complicates efforts to anticipate and quickly adopt copyright rules. Similarly, detailed interpretations of existing rules are complicated by the ever-changing nature of technological applications of copyrighted content. There is a permanent risk that a premature legal intervention will distort innovative activities.” Ben Depoorter, *Technology and Uncertainty: The Shaping Effect on Copyright Law*, 157 U. PA. L. REV. 1831, 1853, 1861-62 (2009).

2009, the National Venture Capital Association and the Medical Device Manufacturers Association together and individually urged Congress to consider the likely adverse economic impacts<sup>17</sup> that the Medical Device Safety Act of 2009<sup>18</sup> would have upon venture capital flows to the medical device sector and its ability to innovate:

[P]olicymakers must evaluate the potential impacts and consequences of new rules and regulations with great care. They must also weigh the benefits of such policies against the possibility of hampering future innovation...Even minute changes in the number or length of required clinical trials or steps for reimbursement approval can significantly alter risk profile and projected cost of a given product.”<sup>19</sup>

Similarly, an analyst at a Washington think-tank expressed deep concerns about how the recently enacted Patient Protection and Affordable Care Act<sup>20</sup> restrictions on drug and medical device insurance expense reimbursement creates legal and economic uncertainties that “will inevitably weigh on entrepreneurship, investment, and innovation...could diminish the capital formation that underpins the riskiest endeavors...[and are] already chasing investment capital into other endeavors that are more lucrative when adjusted for their risk,” with the net result being the shrinkage of “the industry’s total R&D effort.”<sup>21</sup>

It is also widely recognized within the venture capital and academic communities that “any industry that revolves around energy is heavily dependent on public policy at both the federal and the local level, and much more so than the general high-tech sector... [which presents]... a big problem when product

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<sup>17</sup>See National Venture Capital Association, *Impact of the Medical Device Safety Act on Venture Capital Investment in Medical Technology and Innovation*, Statement for the Record, Health Subcommittee of the House Energy and Commerce Committee, *supra* at 2-3.

<sup>18</sup>See H.R. 1346: *Medical Device Safety Act of 2009* (111<sup>th</sup> Cong.), at: [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111\\_cong\\_bills&docid=f:h1346ih.txt.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h1346ih.txt.pdf).

<sup>19</sup>See *Medical Technology and Venture Capital: A Fruitful yet Fragile Ecosystem*, Medical Device Manufacturers Association and National Venture Capital Association (June 2009) at 13, at: <http://www.medicaldevices.org/sites/default/files/MDMA%20NVCA%20Final.June2009.pdf>.

<sup>20</sup>See P.L. 111-148 (Mar. 23, 2010, 111<sup>th</sup> Cong.), otherwise known as “Patient Protection and Affordable Care Act.”

<sup>21</sup>See Scott Gottlieb, *Medical Innovation in Peril*, Chapter in “Reforming America’s Health Care System: The Flawed Vision of ObamaCare” (Scott W. Atlas, M.D., Ed. © 2010 Hoover Institution Press), *supra* at 54, 62, 67-68.

development cycles and election cycles don't mesh.”<sup>22</sup> Nuclear energy technology is especially prone to public perceptions, policy influences, and related regulatory risk.<sup>23</sup> Some believe also that “too many clean tech investments feature significant regulatory risk” because their success is dependent upon whether they are the ultimate recipients of government subsidies or grants.<sup>24</sup> According to one recently released Harvard Business School study, the extent to which a startup company's product (e.g., biofuels) is contingent on whether it is provided a subsidy or credit – and is consequently susceptible to policy changes and uncertainty – are “*major factors hindering the potential investment by private sector players across the clean energy investment landscape...particularly...when the periodicity of the regulatory cycle is smaller than the investment cycle required for demonstrating commercial viability...[N]o one is willing to invest in the first commercial plant if they do not know what the regulatory environment is going to be by the time success has been demonstrated...*”<sup>25</sup> In addition, at least one commentator has opined how the U.S. government's piecemeal rather than comprehensive approach to energy policy has created regulatory risks which have inadvertently triggered a *reduction* in clean tech investment: “It's not just regulation that is important, it's [also the] certainty around regulation – whether it happens or not – that makes the wheels move.”<sup>26</sup>

Information and communication technology investors in the course of undertaking their due diligence similarly consider the level of regulatory risk of potential investment opportunities. For example, they “focus on the independence of the regulator..., the transparency of the regulatory process, the legal processes for

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<sup>22</sup>Carmen Nobel, *Venture Capital's Disconnect With Clean Tech*, Working Knowledge, Harvard Business School, *supra*, paraphrasing Harvard Business School professor Joseph Lassiter.

<sup>23</sup>See Eric Wesoff, *Is There a Role for Venture Capital in Nuclear Power?: A Survey of VC Attitudes Towards Investing in Nuclear Power*, Interviews with Peter Wagner of Accel Partners, Raj Atlaru of Draper Fisher Jurvetson, Ullas Naik of Globespan Capital and Peter Nieh of Lightspeed Venture Partners, Greentech Media (GTM) Research (Dec. 14, 2009), at: <http://www.greentechmedia.com/research-blog/post/is-there-a-role-for-venture-capital-in-nuclear-power/>.

<sup>24</sup>Arleen Jacobius, *High Costs Taking Wind Out of Clean-tech Sails: Too Long a Wait for Too Small a Profit, VC Investors Complain*, Investment News, *supra*.

<sup>25</sup>Shikhar Ghosh and Ramana Nanda, *Venture Capital Investment in the Clean Energy Sector*, Harvard Business School Working Paper 11-020 (Aug. 1, 2010, at 16, at: <http://www.hbs.edu/research/pdf/11-020.pdf> (emphasis added).

<sup>26</sup>Michael Meehan, *Uncertainty in US Energy Policy is Cleantech's Real Challenge*, GreenBeat (Nov. 1, 2010), at: <http://venturebeat.com/2010/11/01/uncertainty-in-us-energy-policy-is-cleantech%E2%80%99s-real-challenge/>.

regulation,” and the overall impact of the proposed regulatory framework on competition and investment.<sup>27</sup> If the perceived regulatory risk is too high and cannot be appropriately mitigated, the greater the likelihood their appetite for investment will be dampened and the financial viability of an ICT investment will be harmed.

In the end, “government can make a significant contribution...through stable, predictable and long-term policy measures...Removing uncertainty around policies reduces policy risk dramatically and makes it easier for the private capital markets to plan their investments accordingly.”<sup>28</sup> Government can also provide a market-friendly environment by selecting the least costly regulatory alternative available to reduce investors’ operational and capital expenditure costs which, in turn, can improve companies’ ability to secure necessary investor funding.<sup>29</sup>

Failing this, institutional and corporate investors in life science, clean energy, and information and communication technologies are likely to endeavor to influence regulatory policy<sup>30</sup> to the extent necessary to mitigate risks that would otherwise prevent them from emerging from the ‘valley of death’<sup>31</sup> and realizing a reasonable economic rate of return or, perhaps, even a return of their original capital.<sup>32</sup> It must

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<sup>27</sup>See Lynne Dorward and Hal Peters, *Impact of Effective Regulation on Investment: an Investor’s Perspective*, GSR Discussion Paper 2009, presented at the 9th Global Symposia for Regulators (GSR), “Hands-on or Hands-off? Stimulating Growth Through Effective ICT Regulation” (Nov. 2009), at 5, 7, at: [http://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR09/doc/GSR09\\_Regulation-Investment\\_Dorward.pdf](http://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR09/doc/GSR09_Regulation-Investment_Dorward.pdf).

<sup>28</sup>Shikhar Ghosh and Ramana Nanda, *Venture Capital Investment in the Clean Energy Sector*, Harvard Business School Working Paper 11-020 (Aug. 1, 2010), *supra* at 18.

<sup>29</sup>See Mandla Msimang, *Effective Regulation: The ‘Stimulus Plan’ for the ICT Sector*, GSR Discussion Paper 2009, presented at the 9th Global Symposia for Regulators (GSR), “Hands-on or Hands-off? Stimulating Growth Through Effective ICT Regulation” (Nov. 2009), at 14-15, at: [http://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR09/doc/GSR09\\_Regulation-Investment\\_Msimang.pdf](http://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR09/doc/GSR09_Regulation-Investment_Msimang.pdf).

<sup>30</sup>See Frédéric Boehm, *Regulatory Capture Revisited – Lessons from Economics of Corruption*, Internet Center for Corruption Research Working Paper (July 2007), at 3-6, at: <http://www.icgg.org/downloads/Boehm%20-%20Regulatory%20Capture%20Revisited.pdf>.

<sup>31</sup>The ‘valley of death’ is “that precarious stage between researching and developing a product and actually going to market with it.” See Stephen Lacey, *Can Cleantech Entrepreneurs Rely on Venture Capital?*, RenewableEnergyWorld.com, *supra*; “The valley of death refers to the difficult period between proof-of-concept for a technology and large-scale deployment.” See Arleen Jacobius, *High Costs Taking Wind Out of Clean-tech Sails: Too Long a Wait for Too Small a Profit, VC Investors Complain*, Investment News, *supra*.

<sup>32</sup>In the case of clean energy and related service technologies, for example, such efforts may include calls for greater governmental intervention in the marketplace via enactment of direct ‘positive’ government subsidies and capital facilitation incentives/mechanisms, including outright or matching research and development and commercialization grants, federal and state loan guarantees, federal

be kept in mind, however, that regulatory and policy risks faced by institutional and corporate investors do not arise in a vacuum. Governments are also susceptible to ‘capture’ by *other than* economic entities. For example, civil society interest groups may seek to embed their own economic, legal, and/or political positions and preferences at the expense of competing interests, including economic interests, through the enactment, repeal, or maintenance of a given regulation – a phenomenon known as ‘interest group regulatory capture.’<sup>33</sup>

## **B. Foreign Risks**

The phenomenon of regulatory and policy risk has also assumed an international dimension in the current era of globalization, especially in the areas of the life science, clean energy, and ICT sectors. Increasingly, foreign governments and international policymakers have deemed these technologies as ‘public goods’ necessary to establishing a 21<sup>st</sup> century domestic knowledge economy capable of competing effectively in the international trading system. At least one study has noted how “[t]he global exposure of [clean energy] markets implies that changes in the regulatory regime in one country can affect the investment landscape across the entire sector.” For example, it found that Spain’s inability to honor its subsidy commitments to the domestic solar sector not only damaged the credibility of the Spanish government, but also created policy uncertainties in other countries i.e., suspicions that other governments would be unable to meet their obligations to that sector, which effectively dampened investor enthusiasm for solar industry portfolios.<sup>34</sup> Another recent study reveals how the French government has finally come to recognize that *anti-science* regulatory policies such as those dependent on a broad and extensive application of the precautionary principle can adversely impact a company’s entrepreneurial, innovative, and investment behavior, ultimately

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tariffs, and various federal, state and local income tax credits and abatements. *See, e.g.,* Shikhar Ghosh and Ramana Nanda, *Venture Capital Investment in the Clean Energy Sector*, Harvard Business School Working Paper 11-020 (Aug. 1, 2010), *supra* at 18-19. They may also, or in the alternate, entail calls for the enactment of indirect ‘negative’ government subsidies that adversely impact competing interests, such as the imposition of public user fees and green/carbon taxes and tariffs, which may sway public opinion against competitive interests.

<sup>33</sup>*See* Frédéric Boehm, *Regulatory Capture Revisited – Lessons from Economics of Corruption*, *supra* at 3-6.

<sup>34</sup>*See* Shikhar Ghosh and Ramana Nanda, *Venture Capital Investment in the Clean Energy Sector*, Harvard Business School Working Paper 11-020, *supra* at 16-17.

contributing to risk aversion and diminished national economic growth and retardation of scientific knowledge.<sup>35</sup>

Developing country governments seeking to establish successful industrial and economic growth policies should therefore avoid the enactment of laws and regulations that place the security of property rights in question such as compulsory licensing which can increase regulatory risks for high technology companies and correspondingly reduce the flow of knowledge-based foreign direct investment (FDI).<sup>36</sup> While government patent policy by itself is an incomplete measurement of a country's market- and investment-friendliness, it is generally agreed that such legal protections reflect a country's interest in fostering business development. Through effective deterrence of imitation, "patents reduce the costs of enforcing contracts and at the same time increase the expected returns on FDI and licensing, which will have a positive effect on technology transfer. *Patent rights encourage technology transfer by providing owners with legal certainty.*"<sup>37</sup> Consequently, the passage of IP laws that do not include a provision for compulsory licensing, for example, may favorably signal to foreign investors that a government is willing to let [them] make strategic business decisions without undue interference and to ensure more transparent and unbiased application of commercial laws with the prospect of reduced government corruption.<sup>38</sup> "There is little doubt that developing countries who issue compulsory licenses also face additional risks in attracting global capital. Particularly, for MDC's [middle developing countries], a compulsory license can trigger the loss of significant FDI."<sup>39</sup>

If patent ownership rights indicate to prospective investors a firm's proper regard for its intellectual property security, then surely a company's willingness to

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<sup>35</sup>See *An Ambition for Ten Years*, Report of the Committee for the Liberation of Growth (Oct. 2010), at 34-35, 149-150, at:

<http://lesrapports.ladocumentationfrancaise.fr/BRP/104000541/0000.pdf>, English translation at: <http://itsdeconomicfreedom.blogspot.com/2010/10/attali-commission-france-must-strictly.html>.

<sup>36</sup>See Robert Bird and Daniel R. Cahoy, *The Impact of Compulsory Licensing on Foreign Direct Investment: A Collective Bargaining Approach*, 45 *American Business Law Journal* 1 (Issue 2 2008) at 1-2, at: [http://www.personal.psu.edu/faculty/d/r/drc13/Index\\_files/CL\\_and\\_FDI.pdf](http://www.personal.psu.edu/faculty/d/r/drc13/Index_files/CL_and_FDI.pdf).

<sup>37</sup>*Report on the International Patent System*, World Intellectual Property Organization (SCP/12/3), at par. 41, pp. 11-12, at: [http://www.wipo.int/edocs/mdocs/scp/en/scp\\_12/scp\\_12\\_3.pdf](http://www.wipo.int/edocs/mdocs/scp/en/scp_12/scp_12_3.pdf).

<sup>38</sup>See Robert Bird and Daniel R. Cahoy, *The Impact of Compulsory Licensing on Foreign Direct Investment: A Collective Bargaining Approach*, *supra*, at 1, 16.

<sup>39</sup>*Id.* at 47.

engage in a foreign market where the government has decided to adopt and/or enforce *anti-patent* measures will convey *negative* signals to the investment community about the company, the quality of its management and the strength and economic value of its patents and associated projected revenue streams:

Just as the sale of a product through a low-status selling channel of a product can signal a diminution in brand status to the consumer, exposure of a patent to an uncertain legal environment can signal that the firm may not consider the patent to be as valuable as others believe. Even the threat of an 'anti-patent' such as a compulsory license can impair firm equity, thereby reducing the attractiveness of a country as an investment partner. Any firm calculating its returns from FDI will have to account for the possibility of these signaling-based losses.<sup>40</sup>

Therefore investors would surely be remiss if they did not carefully scrutinize a company's business plan and financial statements to ascertain management's strategy for, and its actual success or failure in, mitigating foreign regulatory and policy risks to secure a reasonable rate of return on investment (ROI).

### **III. THE WORLD INTELLECTUAL PROPERTY ORGANIZATION AS A PLATFORM FOR WEAKENING PATENT RIGHTS**

The World Intellectual Property Organization (WIPO) is a specialized agency of the United Nations which "administers several treaties aimed at creating a standard global system...[by] tak[ing] patent law in the direction of international harmonization."<sup>41</sup> It is one of only two intergovernmental organizations, the other

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<sup>40</sup>*Id.* at 16-17.

<sup>41</sup>*What is WIPO?, About WIPO*, WIPO website at: [http://www.wipo.int/about-wipo/en/what\\_is\\_wipo.html](http://www.wipo.int/about-wipo/en/what_is_wipo.html). These several treaties include the Patent Cooperation Treaty (PCT), the Patent Law Treaty (PLT) and the Budapest Treaty (BT). See *Patent Cooperation Treaty* of 19 June 1970, last modified 3 October 2001, with the supplementing Regulations under the Patent Cooperation Treaty of 1 January 2004 (142 contracting parties), at <http://www.wipo.int/export/sites/www/treaties/en/documents/pdf/pct.pdf> (accessed Mar. 17, 2010); *Patent Law Treaty*, adopted at Geneva on 1 June 2000 (18 contracting parties), at [http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty\\_id=4](http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=4), (accessed Dec. 18, 2008), with the supplementing Regulations under the Patent Law Treaty, adopted the same date); *Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure*, 28 April 1977, amended 26 September 1980; and the Regulations Under the Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure, adopted 28 April 1977 and amended 20 January 1981 and 1 October 2002 (72 contracting parties), at: <http://www.wipo.int/export/sites/www/treaties/en/documents/pdf/budapest.pdf>, (accessed Mar. 17, 2010)

being the World Trade Organization (WTO)<sup>42</sup> which administers the Trade Related Aspects of Intellectual Property (TRIPS) Agreement,<sup>43</sup> that anchor the current international intellectual property system.

Several WIPO secretariat reports released and discussed during the Thirteenth, Fourteenth, and Fifteenth Session meetings of the Standing Committee<sup>44</sup> on the Law of Patents (SCP) (i.e., during 2008-2010) reflect an emerging global view about patents and related trade secrets that will surely exacerbate legal uncertainties and economic risks associated with high technology innovation and investment. A growing number of WIPO members from emerging markets and developing countries generally believe that patent-based technology markets are inherently flawed, that patent holders are monopolists who exploit the period of temporary exclusivity at the expense of the public interest, and that an irreconcilable conflict exists between the patent and standards systems that undergird technology development and industrial innovation, and are thus inconsistent with the United Nations Millennium Development Goals.<sup>45</sup> The allegations these governments have made are supported by a number of sympathetic academicians and political agenda-based nongovernmental organizations (NGOs) pressure groups, and to a lesser extent, by some in industry.<sup>46</sup>

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<sup>42</sup>“The World Trade Organization (WTO), established on January 1, 1995...functions as the principal international body concerned with multilateral negotiations on the reduction of trade barriers and other measures that distort competition...The basic aim of the WTO is to liberalize world trade and place it on a secure basis, thereby contributing to economic growth and development.” *The World Trade Organization and Agriculture, U.S. Proposal for Global Agricultural Trade Reform*, FASonline (Nov. 2002), at: <http://www.fas.usda.gov/info/factsheets/wto.html>.

<sup>43</sup>See Agreement on Trade-Related Aspects of Intellectual Property Rights, Dec. 15, 1993, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, LEGAL INSTRUMENTS— RESULTS OF THE URUGUAY ROUND vol. 31, 33 I.L.M. 81 (1994) [hereinafter TRIPs].

<sup>44</sup>“Standing Committees...are ad hoc committees of experts...established by a decision of the [WIPO] General Assembly for a given purpose, e.g. to determine the need or otherwise for new treaty provisions...When a Standing Committee determines that sufficient progress has been made in order to move towards treaty adoption, the General Assembly can decide to convene a Diplomatic Conference. This is a high level meeting of Member States, convened purely to finalize negotiations on a new treaty.” *Decision-Making Bodies*, About WIPO, World Intellectual Property Organization website (last viewed on Nov. 22, 2010), at: [http://www.wipo.int/members/en/decision\\_bodies.html](http://www.wipo.int/members/en/decision_bodies.html).

<sup>45</sup>See *United Nations Millennium Declaration*, Resolution adopted by the General Assembly 55<sup>th</sup> Session (A/RES/55/2) (Sept. 18, 2000), at: <http://www.un.org/millennium/declaration/ares552e.pdf>.

<sup>46</sup>Professor Laura DiNardis of the Yale Information Society Project sets forth the following syllogism to support this argument: “[I]ntellectual property rights in standards can be used to inhibit the adoption of international standards and the development of products based on these standards...[and thereby]... serve as non-tariff barriers in global ICT markets...ICT procurement

If successful, this movement will effectively recharacterize for international law purposes most privately conceived, developed, and/or commercialized health, clean energy, and information and communication technologies as ‘public goods’ that may then be appropriated for other than full, complete, and adequate compensation with few substantive or procedural checks and balances by regional and/or national governments for the purpose of serving the public interest, i.e., to facilitate knowledge dissemination, technology and wealth transfer, as well as access to affordable healthcare, clean energy and broadband communications at prices far less than fair market value.

Two governmental regulatory instruments have galvanized debate among government, civil society, and industry stakeholders participating in the WIPO SCP process: broadly defined compulsory licenses for healthcare and clean energy technologies and emerging government procurement rules expressing direct and/or indirect preferences for patent- and/or royalty-free ‘SMART’ technologies embedded in ‘open’ national healthcare, energy, and information and communication technology standards.

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*policies based on open standards are the opposite of proprietary government standards mandates. This later forces citizens to buy a specific vendor's products while product procurement policies based on adherence to open standards inherently attempt to maximize free markets and citizen choice. These procurement policies are also the least interventionist of all the possible roles for governments in standardization because they do not mandate that private industry adopt particular standards and do not intervene directly in the standards-development...Lack of interoperability or problems with standards can create social or economic harm or contribute to a loss of faith in government. The use of proprietary specifications can impede government functions and services or make access to public information dependent upon a single company. These same proprietary specifications can limit the pace of information and communication technology innovation and be used as technical barriers to trade in global technology markets...Governments, as major components of markets and as large ICT customers, can use procurement policies based on principles of openness to promote standards that have favorable public interest and economic effects...The most controversial characteristic of maximum openness in a standard's implementation addresses the issue of intellectual property.[fn] To promote maximum competition, government procurement policies should give preference to standards available to implement in products on a royalty-free basis, if available, or at least to standards made available on a RAND basis...” (emphasis added). Laura DiNardis, *E-Governance Policies for Interoperability and Open Standards*, Yale Information Society Project Working Paper, Social Science Research Network (June 2010, rev. Sept. 2010), at 7, 14, 23-24 and 26, at: <http://ssrn.com/abstract=1629833> ; Laura DiNardis, *E-Governance Policies for Interoperability and Open Standards, Policy & Internet*: Vol. 2: Iss. 3, Article 6, abstract at: <http://www.psocommons.org/policyandinternet/vol2/iss3/art6/>.*

The growing popularity of such measures reveals a deep-seeded, multi-polar, philosophical antipathy toward the institution of exclusive private property rights generally and intellectual property rights specifically, which creates more legal uncertainty and related policy and regulatory risk for patented high technology innovation than has been acknowledged by the investment and corporate communities within OECD member nations. Therefore, unless this emerging world view is peremptorily challenged, such measures are likely to severely jeopardize scientific and technological innovation and investment in these and other promising high technologies conceived and developed within and beyond the United States.

### **A. Government Regulations and Proposals for the Compulsory Licensing of High Technologies**

The Government of Brazil is perhaps the staunchest global advocate of establishing a flexible compulsory licensing mechanism within both international treaty and customary international law that would grant national emerging and developing country governments which are host to many of the world's future growth markets<sup>47</sup> the broad discretion to appropriate and secure third party reverse-engineering of foreign, privately-held, patented medical and ICT technologies whenever a 'public interest' is claimed.<sup>48</sup>

Most troubling, however, is that Brazil's views and efforts in this regard influence a large group of developing countries known generally within the United Nations system as the 'Group of 77,'<sup>49</sup> and they are currently being shepherded through the WIPO SCP via a report entitled, *Exclusions From Patentable Subject*

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<sup>47</sup>See *Top 10 Largest Economies in 2020*, Euromonitor Global Market Research Blog (July 7, 2010), at: <http://blog.euromonitor.com/2010/07/special-report-top-10-largest-economies-in-2020.html>.

<sup>48</sup>See, e.g., Lawrence A. Kogan, *Brazil's IP Opportunism Threatens U.S. Private Property Rights*, *Inter-American Law Review*, 38 (Fall 2006): 1–139, at: [http://www.itssd.org/Publications/IAL105-II\(frompublisher\)\[2\].pdf](http://www.itssd.org/Publications/IAL105-II(frompublisher)[2].pdf)

<sup>49</sup>"The Group of 77 (G-77) was established on 15 June 1964 by seventy-seven developing countries signatories of the "Joint Declaration of the Seventy-Seven Countries" issued at the end of the first session of the United Nations Conference on Trade and Development (UNCTAD) in Geneva... The Group of 77 is the largest intergovernmental organization of developing states in the United Nations, which provides the means for the countries of the South to articulate and promote their collective economic interests and enhance their joint negotiating capacity on all major international economic issues within the United Nations system, and promote South-South cooperation for development." *About the Group of 77*, The Group of 77 at the United Nations website at: <http://www.g77.org/doc/>.

*Matter and Exceptions and Limitations to the Rights*,<sup>50</sup> by a more focused, agenda-based group of developing countries referred to as the WIPO “Development Agenda Group (DAG).”<sup>51</sup> According to the DAG, in order to “preserve[e] national policy space,” WIPO should exploit the implementation of IP “flexibilities, exceptions and limitations as well as other special provisions, options or safeguards...essential to the needs of developing countries” wherever possible to address “developmental and global challenges such as environment, public health, food security, etc.”<sup>52</sup> A compulsory or non-voluntary license

refers to the practice by a government to authorize itself or third parties to use the subject matter of a patent without the authorization of the right holder for reasons of public policy...In [such] cases, the public interest in broader access to an invention is considered more important than the private interest of the right holder to fully exploit his exclusive rights.<sup>53</sup>

As one recent WIPO secretariat report reveals, compulsory licenses were historically issued<sup>54</sup> outside the United States,<sup>55</sup> provided certain statutory conditions were first satisfied, “to prevent the abuses which might result from the exercise of the exclusive rights conferred by [a] patent,” including the “failure to work or [the]

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<sup>50</sup>*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) (hereinafter referred to as “WIPO Report SCP/13/3”), at: [http://www.wipo.int/edocs/mdocs/scp/en/scp\\_13/scp\\_13\\_3.pdf](http://www.wipo.int/edocs/mdocs/scp/en/scp_13/scp_13_3.pdf).

<sup>51</sup>The Development Agenda Group (DAG) consists of WIPO Member States that have accepted this Guiding Principles document in its entirety. *They currently comprise the following countries: Algeria, Brazil, Cuba, Djibouti, Ecuador, Egypt, Guatemala, India, Indonesia, Iran (Islamic Republic of), Malaysia, Pakistan, Philippines, South Africa, Sri Lanka, Sudan, Uruguay and Yemen*” (emphasis added). See *Information on the Development Agenda Group Guiding Principles*, Committee on Development and Intellectual Property (CDIP) Fifth Session, World Intellectual Property Organization CDIP/5/9 Rev., at par. 4 and accompanying footnote 1 (Apr. 2010), at: [http://www.wipo.int/edocs/mdocs/mdocs/en/cdip\\_5/cdip\\_5\\_9\\_rev.pdf](http://www.wipo.int/edocs/mdocs/mdocs/en/cdip_5/cdip_5_9_rev.pdf).

<sup>52</sup>*Id.* at pars. 5, 8.

<sup>53</sup>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*, International Centre for Trade and Sustainable Development (ICTSD) and United Nations Conference on Trade and Development (UNCTAD), Executive Summary at 1 (June 2003) (hereinafter referred to as “Reichman and Hasenzahl”) at: [http://ictsd.org/downloads/2008/06/cs\\_reichman\\_hasenzahl.pdf](http://ictsd.org/downloads/2008/06/cs_reichman_hasenzahl.pdf).

<sup>54</sup>See *WIPO Report SCP/13/3*, supra at pars. 138-184, pp. 36-44.

<sup>55</sup>*Id.*, Executive Summary, at 4-5. (The author discusses how “the US never adopted a general statute to regulate non-voluntary licensing of patented inventions either on grounds of misuse or on public interest grounds”, while the federal courts and the Federal Trade Commission from time to time issued non-voluntary licenses to regulate misuses of patent rights and antitrust violations and/or within consent decrees bearing on corporate mergers and acquisition).

insufficient working” of a patent.<sup>56</sup> Governments eventually broadened the definition of ‘patent abuses,’ and hence, the grounds for issuance of compulsory licenses, to encompass also “the refusal [to] grant[] a license on reasonable terms and conditions;” 2) “the failure to supply the national market with sufficient quantities of the patent product;” 3) “demanding excessive prices for such product;” and 4) “anti-competitive behavior.”<sup>57</sup> Gradually, by the early 1990’s, approximately one hundred national governments other than the United States had opportunistically expanded their use of compulsory licensing to cover *non*-abuse situations “which can be grouped together under the general heading of compulsory licenses *in the public interest*,” which include compulsory licenses: 1) “in the fields of military security[;] or [2]...public health[;]...[and 3] to protect the public interest in unhampered technological progress ...[as in the case of]... so-called *dependent patents*.”<sup>58</sup> According to at least one international IP law expert, 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,”<sup>59</sup> 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 [...]”<sup>60</sup>

What emerging and developing country governments have failed to acknowledge, however, is that TRIPS Article 31 circumscribes such practices with a robust statutory framework that “imposes strict conditions and procedural requirements for such issuance,”<sup>61</sup> consistent with “one of the two primary objectives of the treaty – *the recognition that intellectual property rights are private rights*”

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<sup>56</sup>See Article 5A(2) and 5A(4), Paris Convention for the Protection of Industrial Property of Mar. 20 1883, as amended, at:

[http://www.wipo.int/treaties/en/ip/paris/trtdocs\\_wo020.html#P123\\_15283](http://www.wipo.int/treaties/en/ip/paris/trtdocs_wo020.html#P123_15283).

<sup>57</sup>SCP/13/3, *supra* at par. 78.

<sup>58</sup>WIPO *Intellectual Property Handbook: Policy, Law and Use*, WIPO Publication No.489E, Chap. 5, at par. 5.51-5.53, pp. 247-248 (©WIPO 2004, Second Edition), at:

<http://www.wipo.int/export/sites/www/about-ip/en/iprm/pdf/ch5.pdf>.

<sup>59</sup>Reichman and Hasenzahl, *supra*, Executive Summary, at 1.

<sup>60</sup>*Id.* at 2.

<sup>61</sup>ITSSD *Comments Concerning Document (SCP/13/3) Patent Exclusions, Exceptions & Limitations*, ITSSD, at 5-6 and accompanying footnotes, (Feb. 2009) (hereinafter referred to as “ITSSD Comments Concerning Document SCP/13/3”), at:

[http://www.wipo.int/export/sites/www/scp/en/meetings/session\\_14/studies/itssd\\_2.pdf](http://www.wipo.int/export/sites/www/scp/en/meetings/session_14/studies/itssd_2.pdf).

entitled to affirmative due process protections.<sup>62</sup> International IP law commentators have argued that such recognition is enshrined within various provisions of the TRIPS Agreement. These provisions include TRIPS Preamble Paragraph 4 and TRIPS Articles 31(h) and 44.2 (ensuring payment of adequate, just, and complete remuneration upon issuance of a compulsory license); TRIPS Articles 31(k) and 62.4 (ensuring against the diminution of patent owner rights which would otherwise follow from the imposition of remedies/sanctions, including compulsory licenses, for judicially or administratively determined anti-competition violations); and proposed new TRIPS Article 31.2*bis* contained within the pending Annex to the Protocol Amending the TRIPS Agreement intended to codify Paragraph 3 of the Decision of the General Council of August 30, 2003, on the Implementation of paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health. 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,"<sup>63</sup> 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] 28 U.S.C. § 1498..."<sup>64</sup>

Nevertheless, the BRIC nations ('BRIC' stands for 'Brazil, Russia, India, and China)' continue in their efforts to promote debate on the issue of compulsory licensing in domestic as well as international fora such as the WIPO. During the SCP's Fourteenth Session in March 2009, for example, SCP members "commission[ed an] external experts...study on exclusions, exceptions and limitations focused on, but not

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<sup>62</sup>*Id.* at 6, citing Nuno Pires de Carvalho, *The TRIPS Regime of Trademarks and Designs* (Kluwer Law International © 2006) at 43, at: [http://books.google.com/books?id=WyNen7A0WUkC&pg=PA46&lpg=PA46&dq=TRIPS+Article+31+%2B+eminent+domain&source=bl&ots=dCuc7H-uk8&sig=F2WielJDHjx8tNCoK0rFnPnLC2M&hl=en&ei=kLPKSa-JIsyrtgeaqfjuCQ&sa=X&oi=book\\_result&resnum=2&ct=result#v=onepage&q=TRIPS%20Article%2031%20%2B%20eminent%20domain&f=false](http://books.google.com/books?id=WyNen7A0WUkC&pg=PA46&lpg=PA46&dq=TRIPS+Article+31+%2B+eminent+domain&source=bl&ots=dCuc7H-uk8&sig=F2WielJDHjx8tNCoK0rFnPnLC2M&hl=en&ei=kLPKSa-JIsyrtgeaqfjuCQ&sa=X&oi=book_result&resnum=2&ct=result#v=onepage&q=TRIPS%20Article%2031%20%2B%20eminent%20domain&f=false).

<sup>63</sup>Antony Taubman, *Rethinking Trips: 'Adequate Remuneration' for Non-Voluntary Patent Licensing*, Journal of International Economic Law (Dec. 2008) at 3, 20, discussed in *ITSSD Comments Concerning Document (SCP/13/3) Patent Exclusions, Exceptions & Limitations*, Institute for Trade, Standards and Sustainable Development, *supra* at 20.

<sup>64</sup>Daniel R. Cahoy, *Confronting Myths and Myopia on the Road from Doha*, 42 GEORGIA L.REV. 1, 156 (2007), at: [http://www.personal.psu.edu/faculty/d/r/drc13/Index\\_files/Myths\\_and\\_Myopia.pdf](http://www.personal.psu.edu/faculty/d/r/drc13/Index_files/Myths_and_Myopia.pdf).

limited to, issues suggested by members, such as public health, education, research and experimentation and patentability of life forms, including from a public policy, socio-economic development perspective, bearing in mind the level of economic development.”<sup>65</sup> The completed study, which was released during September 2010 in advance of the SCP’s Fifteenth Session, discusses the use of compulsory licenses in two of its six chapters. One chapter relates to life forms and identifies the various provisions of the EU directive on biotechnological inventions that establish a compulsory licensing scheme “to deal with the overlap between patent and plant variety protection”<sup>66</sup> and the analogues of several EU Member States,<sup>67</sup> as well as the compulsory licensing statutes of IP stalwarts such as Brazil<sup>68</sup> and the Russian Federation.<sup>69</sup> A second chapter details the use of compulsory licensing with respect to pharmaceuticals, focuses on countries other than the United States that have issued compulsory licenses on various grounds including public interest, anti-competition, national security emergencies, health emergencies, failure to work, government non-commercial use, or one of several other deemed ‘abuses’ of patent rights.<sup>70</sup>

During the SCP’s Fifteenth Session, which took place in Brazil in October 2010, speaking on behalf of the DAG, publicly expressed its agreement with the experts’ articulation of a utilitarian *rather than* a private property rights basis for patents. In particular, the Brazilian delegate interpreted the experts’ study as recommending that governments grant technology patents only to the extent necessary to rectify the failure of the market to foster innovation.<sup>71</sup> The Free Software Foundation Europe

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<sup>65</sup>*External Experts’ Study Regarding Exclusions, Exceptions and Limitations for the Standing Committee on the Law of Patents (SCP)*, Standing Committee on the Law of Patents Fourteenth Session (SCP/14/INF/2) at par. 1 and 4 (Jan. 26, 2010), at [http://www.wipo.int/edocs/mdocs/scp/en/scp\\_14/scp\\_14\\_inf\\_2.pdf](http://www.wipo.int/edocs/mdocs/scp/en/scp_14/scp_14_inf_2.pdf).

<sup>66</sup>Denis Borges Barbosa and Karin Grau-Kuntz, *Exclusions from Patentable Subject Matter and Exceptions and Limitations to the Rights – Biotechnology*, Chap. 3 (SCP/15/3 ANNEX III), World Intellectual Property Organization, at 34-35, 56 (Jan. 1, 2010), at: [http://www.wipo.int/edocs/mdocs/scp/en/scp\\_15/scp\\_15\\_3-annex3.pdf](http://www.wipo.int/edocs/mdocs/scp/en/scp_15/scp_15_3-annex3.pdf).

<sup>67</sup>*Id.* at 65-68, concerning the laws of Belgium, Bulgaria, Latvia, Lithuania, Malta, Romania, Slovakia, Sweden and the United Kingdom.

<sup>68</sup>*Id.* at 45-46.

<sup>69</sup>*Id.* at 67.

<sup>70</sup>See Coenraad Visser, *Patent Exceptions and Limitations in the Health Context*, Chap. 5 (SCP/15/3 - ANNEX V), at 3-24 (Jan. 2010), at: [http://www.wipo.int/edocs/mdocs/scp/en/scp\\_15/scp\\_15\\_3-annex5.pdf](http://www.wipo.int/edocs/mdocs/scp/en/scp_15/scp_15_3-annex5.pdf).

<sup>71</sup>“Observing that the experts’ study recognized the cost-benefit analysis underpinning the system, and that *patents should be granted only to the extent necessary to rectify market failure*, the

(FSFE), an outspoken NGO observer and staunch advocate of royalty-free and/or nonproprietary open source software-based ICT standards, agreed with this Brazilian/DAG interpretation and proposed its own three-part test for adjudging the necessity of a patent grant. According to the FSFE, a patent should be granted only where there is: 1) “a demonstrated market failure to provide innovation; 2) a demonstrated positive disclosure of the invention for patenting and 3) a demonstrated effectiveness of the patent system in the area to disseminate knowledge.”<sup>72</sup>

The view that technology and knowledge are ‘public goods’ and that patents are merely temporary incentives provided by governments to correct ‘market failures’ is based on the economic rationale for technology patents articulated within the WIPO SCP’s initial *Report on the International Patent System*.<sup>73</sup> According to the report, since technology and knowledge are ‘non-excludable’ in the sense that they can be used simultaneously by many people and owned exclusively by none in competitive markets, if left to their own devices, people would not invest in them. Consequently, governments have intervened by developing patent systems to incentivize markets to undertake the costly and risky investments necessary to generate the production of

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Delegation referred to what the chief economist of WIPO had said, that *in most cases, markets would not foster innovation on their own, and that in those cases, patents should be granted*. Therefore, the DAG believed that the experts’ study brought elements for a discussion which accepted the complexity of the subject, avoiding simplistic assumptions which ignored the systemic implications and the diversities of concrete realities. The Delegation agreed with Professor Bently who had stated that the TRIPS Agreement had extensively reduced the flexibilities available for countries in general. Therefore, a full understanding of the exclusions and limitations available was vital for a calibration of the national systems, considering the particularities of the countries and their socio-economical environments” (emphasis added). *The Delegation of Brazil, Speaking on Behalf of the DAG*, in “Draft Report prepared by the Secretariat of the Standing Committee on the Law of Patents 15<sup>th</sup> Session, World Intellectual Property Organization (SCP/15/6/PROV.), supra at par. 76, p.32. See also *DAG-Statement on the Expert’s Study on Exclusion and Exceptions/Limitations* (SCP/15/3), at: <http://www.ip-watch.org/weblog/wp-content/uploads/2010/10/DAG-Statement-On-Exemptions-Limitations.doc>.

<sup>72</sup>FSFE Submission to European Patent Office (Apr. 2009), Free Software Foundation Europe website, at: <http://www.fsf.org/projects/swpat/epo-response-042009.en.html>; See also *Statement of the Representative of FSFE*, in “Draft Report prepared by the Secretariat of the Standing Committee on the Law of Patents 15<sup>th</sup> Session,” World Intellectual Property Organization (SCP/15/6/PROV.) supra, at par. 103, p. 43.

<sup>73</sup>See *Report on the International Patent System*, Standing Committee on the Law of Patents, World Intellectual Property Organization (SCP/12/3/Rev.2) (Feb. 3, 2009), at: [http://www.wipo.int/edocs/mdocs/scp/en/scp\\_12/scp\\_12\\_3\\_rev\\_2.pdf](http://www.wipo.int/edocs/mdocs/scp/en/scp_12/scp_12_3_rev_2.pdf).

knowledge.<sup>74</sup>

Professor Lionel Bentley, the designated coordinator of the experts' study,<sup>75</sup> in responding to a comment made by this author during the SCP's October 11, 2010 plenary session, added one other dimension to this theory of market failure. He emphasized that a "neoliberal economics" property rights basis for technology patents is not possible in developing countries given the added market failure of asymmetry of information caused by the lack of any willing buyers and sellers to create a market for knowledge goods in such countries.<sup>76</sup> This utilitarian patent 'public interest' point of view is also reflected in a related WIPO SCP study on 'technology transfer,' which extols compulsory licenses as "tools to ensure that the patent system contributes to the promotion of innovation...and to the dissemination and transfer of technology...[thereby] responding to the public interest at large."<sup>77</sup>

Given the European Union's relatively weaker private property laws vis-à-vis the United States<sup>78</sup> and its continued inability to enact a regional patent law, it is understandable why the Belgian WIPO delegate representing the EU-27, for largely political reasons, agreed with the experts' study assessment. According to the EU, the relative asymmetry of information between patent holders and prospective licensees within developing countries and the relatively different capacities within developing countries to receive technology transfer have resulted in a definition of property rights that is unclear and which justifies the enactment of national legislation that is most

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<sup>74</sup>*Id.* at par. 28-29.

<sup>75</sup>See, e.g., *Summary by the Chair*, Standing Committee on the Law of Patents, World Intellectual Property Organization, Fifteenth Session (SCP/15/5) (Oct. 15, 2010), at par. 6, at: [http://www.wipo.int/edocs/mdocs/scp/en/scp\\_15/scp\\_15\\_5.pdf](http://www.wipo.int/edocs/mdocs/scp/en/scp_15/scp_15_5.pdf).

<sup>76</sup>During the Q&A portion of Professor Bentley's presentation this author made the following comment: "your study seems to begin with the flawed premise of market failure such that exclusive private property rights are deemed an impediment to the public interest." See *Statement of Professor Bentley*, in "Draft Report prepared by the Secretariat of the Standing Committee on the Law of Patents 15<sup>th</sup> Session", World Intellectual Property Organization (SCP/15/6/PROV.) supra, at par. 56, pp. 25-26.

<sup>77</sup>*Transfer of Technology*, Standing Committee on the Law of Patents, World Intellectual Property Organization (SCP/14/4) (Dec. 11, 2009), at par. 122, at: [http://www.wipo.int/edocs/mdocs/scp/en/scp\\_14/scp\\_14\\_4.pdf](http://www.wipo.int/edocs/mdocs/scp/en/scp_14/scp_14_4.pdf).

<sup>78</sup>*Comments on the Report on the International Patent System Received from Members and Observers of the SCP*, The World Intellectual Property Organization (SCP/12/3 Rev.2 Annex III) at 18-26, at: [http://www.wipo.int/edocs/mdocs/scp/en/scp\\_12/scp\\_12\\_3\\_rev\\_2-annex3.pdf](http://www.wipo.int/edocs/mdocs/scp/en/scp_12/scp_12_3_rev_2-annex3.pdf).

suitable to each country's needs.<sup>79</sup> This statement apparently emboldened the Brazilian delegate to propose that a government intervention mechanism be established that would match prospective patent licensors with prospective licensees to correct the perceived market failure deemed to impede technology transfer.<sup>80</sup>

It is quite clear that these views resonate with those of BRIC and developing nations seeking an expanded global application of compulsory licensing on public interest grounds to include technologies other than medicines – i.e., clean energy technologies. And, it should be regarded as troubling that this position derives 'soft' law support from the "UNEP [United Nations Environment Program] Agenda 21 proposal [on sustainable development] that created the UNFCCC at the 1992 Rio Convention."<sup>81</sup>

During the December 2007 United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP), the now-former Brazilian Foreign Minister "proposed that a statement similar to the Doha Declaration on the TRIPS Agreement and Public Health should be considered in the climate change context."<sup>82</sup> This proposal was taken seriously enough to attract the attention and analysis of University of Florida law professor Frederick Abbott who was one of the drafters of the Doha Declaration on Public Health.<sup>83</sup> During the November 2008 Beijing International Conference on carbon abatement technology transfers, "China and India proposed that the TRIPS flexibility for medicines (i.e. compulsory licensing)

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<sup>79</sup>See *Statement of the Delegate from Belgium on Behalf of the EU*, in "Draft Report prepared by the Secretariat of the Standing Committee on the Law of Patents 15<sup>th</sup> Session," World Intellectual Property Organization (SCP/15/6/PROV.), *supra* at par. 143, p55.

<sup>80</sup>See *Statement of the Delegate from Brazil*, in "Draft Report prepared by the Secretariat of the Standing Committee on the Law of Patents 15<sup>th</sup> Session," World Intellectual Property Organization (SCP/15/6/PROV.), *supra* at par. 144, p. 56.

<sup>81</sup>Charles Ebinger and Govinda Avasarala, *Transferring Environmentally Sound Technologies in an Intellectual Property-Friendly Framework*, Brookings Policy Brief 09-07, at 23-24, The Brookings Institution (Nov. 2009), at: [http://www.brookings.edu/~media/Files/rc/papers/2009/11\\_environmental\\_technology\\_ebinger/1\\_environmental\\_technology\\_ebinger.pdf](http://www.brookings.edu/~media/Files/rc/papers/2009/11_environmental_technology_ebinger/1_environmental_technology_ebinger.pdf), referencing Agenda 21, Section 4, Chapter 34.10, 34.18, UNCED (Rio de Janeiro, Brazil, June 3-14, 1992). (©United Nations, New York).

<sup>82</sup>*Climate Change, Technology Transfer and Intellectual Property Rights*, International Centre for Trade and Sustainable Development (ICTSD) Background Paper (Aug. 2008), at 7 at: <http://www.um.dk/NR/rdonlyres/F4D753A6-7015-4064-8BC6-FD4FEF1913F9/0/GMFIPRqx.pdf>.

<sup>83</sup>See, e.g., Frederick M. Abbott, *Innovation and Technology Transfer to Address Climate Change: Lessons from the Global Debate on Intellectual Property and Public Health*, ICTSD Global Platform on Climate Change, Trade Policies and Sustainable Energy, Issue Paper No. 24 (June 2009), Abstract at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1433579](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1433579).

should be extended to cover carbon abatement technology. The argument was that climate is a public good, just like health, and that hence the international community should follow the principle of ‘guidance by government – participation by enterprises.’”<sup>84</sup> Thereafter, during February 2009, the Chinese government proposed in comments submitted to the UNFCCC concerning the implementation of the Bali Action Plan that, “Compulsory licensing related patented ESTs [environmentally sound technologies] and specific legal and regulatory arrangement to curb negative effects of monopoly powers shall be put in place as part of the efforts to implement the UNFCCC.”<sup>85</sup> And, in November 2009, European and American media reported how China and India had intended to condition any agreement reached at the December 2009 Copenhagen Climate Change Conference on developed countries’ acceptance of a broad compulsory licensing-based technology transfer regime relating to clean energy/carbon mitigation/new green technologies.<sup>86</sup> The U.S. and EU eventually rejected such proposal out of deep concern that it would stifle investment, research and development, technological innovation, and ‘green’ jobs creation within their economic regions.

Yet, Draft decision -/CP.15 - Enhanced action on technology development and transfer, contained within the February 2010 Report of the “Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA) under the Convention” continues to provide UNFCCC Parties with the option of interpreting and/or implementing any international agreement on intellectual property “in a manner that [does not] limit[] or prevent[] any Party from taking any measures to address...transfer of, and access to, environmentally sound technologies and know-how.”<sup>87</sup> The draft decision

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<sup>84</sup>Copenhagen Economics and the IPR Company, *Are IPRs A Barrier To The Transfer Of Climate Change Technology?* (Jan. 2009), at 7, a “report... commissioned by the European Commission (DG Trade),” at:

[http://trade.ec.europa.eu/doclib/docs/2009/february/tradoc\\_142371.pdf](http://trade.ec.europa.eu/doclib/docs/2009/february/tradoc_142371.pdf).

<sup>85</sup>*China’s Views on the Fulfillment of the Bali Action Plan and the Components of the Agreed Outcome to be Adopted by the Conference of the Parties at its 15<sup>th</sup> Session* (Feb. 6, 2009), at 7, at: [http://unfccc.int/files/kyoto\\_protocol/application/pdf/china060209.pdf](http://unfccc.int/files/kyoto_protocol/application/pdf/china060209.pdf).

<sup>86</sup>*China, India Push for ‘Patent Free’ Green Tech*, EurActiv.com (Nov. 23, 2009), at: <http://www.euractiv.com/en/innovation/china-india-push-patent-free-green-tech/article-187567>; Jim Efstathiou Jr., *Clean-Energy Cause Shouldn’t Void Patents, Senators Tell Obama*, Bloomberg News (Nov. 4, 2009), at: <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aug9aycq0lJw>.

<sup>87</sup>D. Draft decision -/CP.15 - Enhanced Action on Technology Development and Transfer, in “Report of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention on its

indicates that one way to achieve this objective is to ensure that “publicly funded technologies and related know-how is placed into the public domain, shared and made universally accessible “in a manner that promotes transfer of and/or access to environmentally sound technology and know-how to developing countries on royalty-free terms.”<sup>88</sup> Another way is to oblige Parties to “take all necessary steps in all relevant forums to exclude from Intellectual Property Rights protection, and revoke any such existing intellectual property right protection in developing countries and least developed countries on environmentally sound technologies to adapt to and mitigate climate change...”(emphasis added).<sup>89</sup> Alternatively, Parties can recognize “the right [of]...developing countries...to make use of the full flexibilities contained in the Trade Related Aspects of Intellectual Property Rights agreement, including compulsory licensing.”<sup>90</sup>

Apparently, by June 2010, these draft decision options had been subsequently incorporated within Chapter III - Enhanced Action on Technology Development and Transfer of a text prepared by the Chair of the UNFCCC Secretariat under a mandate “to facilitate negotiations among Parties, drawing on the report of the AWG-LCA presented to the Conference of the Parties (COP) at its fifteenth session”<sup>91</sup> and had triggered objections from the Government of Japan.<sup>92</sup> Furthermore, it is likely that such decision text was referenced by the Expert Group on Technology Transfer of the

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eighth session, held in Copenhagen from 7 to 15 December 2009”, Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention, United Nations Framework Convention on Climate Change (FCCC/AWGLCA/2009/17) (Feb. 5, 2010), at: <http://unfccc.int/resource/docs/2009/awglca8/eng/17.pdf>.

<sup>88</sup>Intellectual Property Rights – Option 2, *Id.*, at par. 17bis (b) (emphasis added).

<sup>89</sup>Emphasis added. This would include environmentally sensitive technologies “developed through funding by governments or international agencies and those involving use of genetic resources that are used for adaptation and mitigation of climate change.” *Id.* at par. 17ter.

<sup>90</sup>*Id.* at par. 17quater (Emphasis added).

<sup>91</sup>Chapter III - Enhanced Action on Technology Development and Transfer, Text to Facilitate Negotiations Among Parties - Note by the Chair, presented at Ad Hoc Working Group on Long-term Cooperative Action under the Convention Tenth session Bonn 1–11, June 2010 (FCCC/AWGLCA/2010/6) (May 17, 2010) at par. 11, Option 2, at 25-26, at: <http://unfccc.int/resource/docs/2010/awglca10/eng/06.pdf>.

<sup>92</sup>Japan advocated for strict protection of IPRs and called for Option 2 of Paragraph 11 in Chapter III of the Chair’s text to be eliminated. (Option 2 relates to measures to address IPRS).” Divergent Views on Bodies of the UNFCCC Technology Mechanism, TWN Bonn Update No. 16 (June 8, 2010), at 3, at: [http://www.twinside.org.sg/title2/climate/news/Bonn06/TWN\\_bonn6.up16.pdf](http://www.twinside.org.sg/title2/climate/news/Bonn06/TWN_bonn6.up16.pdf). See also Report of the Ad Hoc Working Group on Long-term Cooperative Action Under the Convention on its tenth session, held in Bonn from 1 to 11 June 2010 (FCCC/AWGLCA/2010/7) (June 28, 2010), at par. 17, p.4, at: <http://unfccc.int/resource/docs/2010/awglca10/eng/07.pdf>.

Subsidiary Body for Scientific and Technological Advice<sup>93</sup> in a stocktaking paper it was charged with preparing “on the role of IPRs in technology transfer”<sup>94</sup> that has yet to be publicly released.<sup>95</sup> Whether this report and its contents will ever be released and subject to public scrutiny is uncertain, though the issue of how best to facilitate and implement clean technology transfers via IPR law and policy changes was certainly discussed in less direct terms and extensively referenced within a draft COP decision thereafter issued following the recently convened December 2010 UNFCCC Cancun, Mexico climate change conference,<sup>96</sup> despite some media reports that the issue of intellectual property rights has been dropped altogether, for now, from the discussion.<sup>97</sup>

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<sup>93</sup>This body “counsels the Conference of the [UNFCCC] Parties on matters of climate, the environment, technology and method.” Bodies of the Framework Convention, Actors in the Negotiation Process, and the UNFCCC secretariat, United Nations Framework Convention on Climate Change website at: [http://unfccc.int/essential\\_background/feeling\\_the\\_heat/2915](http://unfccc.int/essential_background/feeling_the_heat/2915).

<sup>94</sup>Report of the Expert Group on Technology Transfer - Note by the Chair of the Expert Group on Technology Transfer, Subsidiary Body for Scientific and Technological Advice and Subsidiary Body for Implementation, United Nations Framework Convention on Climate Change (FCCC/SB/2010/INF.4) (Nov. 24, 2010) at I.B and III.A.2, at: <http://unfccc.int/resource/docs/2010/sb/eng/inf04.pdf>; Annex I, The Updated Rolling Programme of Work of the Expert Group on Technology Transfer for 2010-2011, Report of the Expert Group on Technology Transfer - Note by the Chair of the Expert Group on Technology Transfer, Subsidiary Body for Scientific and Technological Advice and Subsidiary Body for Implementation, United Nations Framework Convention on Climate Change (FCCC/SB/2010/INF.1) (May 30, 2010), at Activity 4.5, 11, at: <http://unfccc.int/resource/docs/2010/sb/eng/inf01.pdf>.

<sup>95</sup>FCCC/SB/2010/INF.4 (Nov. 24, 2010), *supra*, at I.B and III.A.2, par.12.

<sup>96</sup>Draft decision [-/CP.16] - Outcome of the Work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, Advance unedited version, United Nations Climate Change Conference Cancun - COP 16/CMP 6, at Preamble Section I pars.(a)1 and (2)(a)and(c); Section II pars. 14(a), 18 and 20(d); Section IIIA pars. 40(a)and(c) and 42(b); Section IIIB pars. 48 and 53; Section IIIC pars. 73 and 76; Section IIID par. 89; Section IVB pars. 113-116, at: [http://unfccc.int/files/meetings/cop\\_16/application/pdf/cop16\\_lca.pdf](http://unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf).

<sup>97</sup>*See, e.g.*, Urmi A. Goswami, Experts raise questions over future of Kyoto Protocol, THE ECONOMIC TIMES INDIA (Dec. 13, 2010), at: <http://economictimes.indiatimes.com/news/politics/nation/Experts-raise-questions-over-future-of-Kyoto-Protocol/articleshow/7090659.cms> (“Another important US demand that intellectual property rights be kept off the discussion on technology has been dropped.”); Catherine Saez, *IP Issues In Shadows At Climate Change Conference*, Intellectual Property Watch (Dec. 10, 2010), at: <http://www.ip-watch.org/weblog/2010/12/10/ip-issues-in-shadows-at-climate-change-conference/>; Martin Khor, *Strange Outcome of Cancun Conference*, THE STAR ONLINE (Dec. 13, 2010) at: <http://thestar.com.my/columnists/story.asp?col=globaltrends&file=/2010/12/13/columnists/globaltrends/7611715&sec=Global%20Trends> (“[T]he Cancun text avoided any mention of intellectual property rights, which have an influence over developing countries’ access to and cost of technology. The United States insisted that there be no mention whatsoever of the IPR issue, and it got its way in Cancun.”); *Final Accord Reached at Cancun Despite Bolivia’s Objection*, Xinhuanet.com at: [http://news.xinhuanet.com/english2010/world/2010-12/12/c\\_13645374.htm](http://news.xinhuanet.com/english2010/world/2010-12/12/c_13645374.htm) (“Another Bolivian official also complained that his nation had been denied basic rights by the conference. ‘We had asked for a workshop to consider the topic of intellectual property in 2011,’ the official said, ‘Bolivia has been

Despite failing to adopt such a compulsory licensing regime at Copenhagen, the members of the DAG have continued to debate compulsory licensing at the WIPO SCP. For example, in January 2010 during the WIPO SCP's Fourteenth Session meetings, the Government of Brazil proposed a new tool for implementing the WIPO Development Agenda – the establishment of an SCP working group to “carry out a wide and sustained...three phase...debate” on the issue of “limitations and exceptions to patent rights,” including compulsory licensing. According to the Brazilian proposal, the working group would: 1) exchange and compile information detailing all national or regional legislation on limitations and exceptions and the reasons for and methods of their use; 2) investigate all effective legislation on limitations and exceptions and the conditions for their implementation; and 3) develop “an exceptions and limitations manual” for WIPO Member reference.<sup>98</sup> However, it remains to be determined whether such a working group will be capable of bringing any further enlightenment to such a highly complex, fact-specific subject matter.

Arguably, it was the ongoing legal uncertainty surrounding compulsory licensing that prompted the Indian government, during August 2010, to release a draft discussion paper on that subject, the stated purpose of which was to “develop a predictable environment for use of such measures.”<sup>99</sup> One of the questions raised by the Indian government concerned the wisdom of limiting a government’s discretion to issue compulsory licenses, and whether alternative grounds beyond ‘national emergency,’ ‘extreme urgency,’ and ‘public non-commercial use’ as set forth in Article 31 of the TRIPS Agreement are and should be available to justify the issuance of compulsory licenses.<sup>100</sup> A second question concerned the suitability of compulsory licenses to resolve anti-competition abuses.<sup>101</sup> These two questions sidestepped the issue of employing compulsory licenses on broader public interest grounds beyond ‘failure to work’ abuses, and also left unresolved the types of technologies beyond

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not even given the most basic opportunity.”).

<sup>98</sup>See *Proposal from Brazil and Accompanying Annex 3*, Standing Committee on the Law of Patents, 14<sup>th</sup> Session (SCP/14/7) (Jan. 20, 2010), at par. 24-28, at: [http://www.wipo.int/edocs/mdocs/patent\\_policy/en/scp\\_14/scp\\_14\\_7.pdf](http://www.wipo.int/edocs/mdocs/patent_policy/en/scp_14/scp_14_7.pdf).

<sup>99</sup>*Discussion Paper on Compulsory Licenses*, India Department of Industrial Policy and Promotion’s (DIPP) (Aug. 24, 2010), at: <http://dipp.nic.in/>.

<sup>100</sup>*Id.* at par. 1 and 2, Section XVII - Issues for Resolution, at 22.

<sup>101</sup>*Id.* at par. 5, p. 22.

medicines needed to treat front line diseases such as HIV/AIDs, Hepatitis C, cancer and diabetes<sup>102</sup> for which compulsory licenses could theoretically be issued, which arguably would include climate change/carbon mitigation technologies. A third question concerned the impact of compulsory licenses on technological growth in emerging and developing economies – i.e., the market failure theory. With respect to this latter issue the discussion drafted cited a 2009 report which found that “compulsory licensing has a strong and persistent positive effect on domestic invention,” and then concluded, without any further analysis, that “Even without any effects on innovation, compulsory licensing may create significant positive welfare effects on consumers in developing countries as a mechanism to maintain product variety.”<sup>103</sup> It remains uncertain whether India will seriously consider responses received from foreign and domestic industry stakeholders emphasizing how the discussion paper conveys the impression that patent rights susceptible to broad compulsory licensing in India will be weakened along with the incentive to innovate without resolving India’s healthcare problems.<sup>104</sup>

The Indian government would be wise to consider, however, that compulsory licensing is not the silver bullet that the Brazilian government and the DAG believe it to be. First, “compulsory licensing does not [generally] oblige the patent holder to transfer [as yet undisclosed associated trade secret] know-how (nor does patent law in general).”<sup>105</sup> The triggering of such an obligation will often depend on whether a

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<sup>102</sup>*Id.* at par. 30, pp. 9-10; par. 15-7, pp. 4-5; par. 44, p.15.

<sup>103</sup>*Id.* at par. 70, p. 21, citing Petra Moser and Alessandra Voena, *Compulsory licensing-Evidence from The Trading With The Enemy Act*, NBER Working Paper (15598) (Dec. 2009), at n. 35, p. 21, at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1313867](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1313867).

<sup>104</sup>CropLife International’s Comments on the Discussion Paper on Compulsory Licenses Published by the Department of Industrial Policy and Promotion within India’s Ministry of Commerce and Industry (Sept. 29, 2010) at 2, at: [http://www.dipp.nic.in/ipr-feedback/Feedback\\_CropLifeInternational30September2010.pdf](http://www.dipp.nic.in/ipr-feedback/Feedback_CropLifeInternational30September2010.pdf); Pfizer’s Response to DIPP Discussion Paper on Compulsory Licensing (Sept. 27, 2010), at 2 and 3, at: [http://www.dipp.nic.in/ipr-feedback/FeedBack\\_Pfizer\\_27September2010.pdf](http://www.dipp.nic.in/ipr-feedback/FeedBack_Pfizer_27September2010.pdf); The Comments of the Biotechnology Industry Organization on the Discussion Paper on Compulsory Licenses Published by the Department of Industrial Policy and Promotion within India’s Ministry of Commerce and Industry (Sept. 29, 2010), at 3, at: <http://www.bio.org/ip/international/20100929.pdf>; OPPI Views and Suggestions on the DIPP ‘Discussion Paper’ on Compulsory Licensing, Organization of Pharmaceutical Producers of India (Sept. 30, 2010), at 2, at: [http://www.dipp.nic.in/ipr-feedback/Feedback\\_OPPI\\_30September2010.pdf](http://www.dipp.nic.in/ipr-feedback/Feedback_OPPI_30September2010.pdf).

<sup>105</sup>See Daniel K.N. Johnson and Kristina M. Lybecker, *Challenges to Technology Transfer: A Literature Review of the Constraints on Environmental Technology Dissemination*, Colorado College Working Paper 2009-07 (July 2009), at 12, abstract accessible online at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1456098](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1456098), citing Cameron Hutchison, *Does*

simple refusal to license is involved rather than anti-competitive behavior or some other *abuse* of the patent right. Second, even where compulsory licensing is called for with respect to a given technology, it may prove ineffective in practice if the prospective developing country government or firm licensee “lacks the expertise to develop the technology without more than just the [patent] blueprint,”<sup>106</sup> i.e., where such party is unable to “make the technology workable” in the absence of additional “significant tacit [as yet undisclosed trade secret] knowledge.”<sup>107</sup> In addition, the Indian government must not fail to recognize that, although there is a current lack of clear international legal standards for determining the appropriate level of market-based compensation due private patent holders whose technologies fall subject to government compulsory licensing, it and other governments are being closely watched. According to one legal expert, the lack of such standards “can make patent property rights less predictable, encourage[s] gamesmanship by developing or developed countries wishing to cut expenditures and, most perversely, even stifle access.”<sup>108</sup>

While the Government of India may recognize that the analysis it must undertake to determine an ‘abuse’ of the patent right justifying the issuance of a compulsory license is a facts- and circumstances-specific exercise not readily reducible to a fixed formula, it must understand that it cannot base any such determination exclusively on subjective criteria defined by simple reference to culturally motivated policy preferences or on questionable interpretations of human rights law to the exclusion of WTO law. Arguably, the European Court of First Instance did not adhere to this standard when it affirmed in September 2007 the European Commission’s 2004 *de facto* compulsory licensing decision against

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*TRIPS Facilitate or Impede Climate Change Technology Transfer into Developing Countries?*, 3 U. OF OTTAWA LAW AND TECH. J. 517, 533 (2006), at: <http://www.uoltj.ca/articles/vol3.2/2006.3.2.uoltj.Hutchison.517-537.pdf>.

<sup>106</sup>*Id.*

<sup>107</sup>*Id.*

<sup>108</sup>Daniel R. Cahoy, *Confronting Myths and Myopia on the Road from Doha*, 42 GEORGIA L. REV., abstract *supra*.

Microsoft.<sup>109</sup>

In upholding the Commission's determination in the *Microsoft vs. European Communities* case, the Court found that the failure of an already market-dominant Microsoft to license its Windows and Media Player software separately (i.e., its refusal to deal' on patent and trade secret protection grounds), and its failure to render such software *interoperable* i.e., "to authorize the use of interoperability information,"<sup>110</sup> for the public benefit of both Microsoft competitors and consumers<sup>111</sup> constituted an impermissible *abuse* of its intellectual property rights that was per se inconsistent with and in violation of European regional competition<sup>112</sup> statutory and case law<sup>113</sup> and innovation policy.<sup>114</sup>

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<sup>109</sup>See *Microsoft Corp. vs. Commission of the European Communities*, JUDGMENT OF THE COURT OF FIRST INSTANCE (Grand Chamber) Case T-201/04 (Sept. 17, 2007), at: <http://curia.europa.eu/jurisp/cgi-bin/form.pl?lang=EN&Submit=rechercher&numaff=T-201/04>.

<sup>110</sup>Microsoft alleged that "the refusal to supply the information was objectively justified by the intellectual property rights which it holds over the 'technology' concerned. It has made significant investment in designing its communication protocols and the commercial success which its products have achieved represents the just reward. It is generally accepted, moreover, that an undertaking's refusal to communicate a specific technology to its competitors may be justified by the fact that it does not wish them to use that technology to compete with it...Microsoft relies on the fact that the technology which it is required to disclose to its competitors is secret, that it is of great value for licensees and that it contains significant innovation." *Id.* at par. 666-667.

<sup>111</sup>*Id.* at par. 816-1167.

<sup>112</sup>Article 82 EC deals with the conduct of one or more economic operators involving the abuse of a position of economic strength which enables the operator concerned to hinder the maintenance of effective competition on the relevant market by allowing it to behave to an appreciable extent independently of its competitors, its customers and, ultimately, consumers." *Id.* at par. 229. "The Court observes...the objective of the [European Commission] decision is to 'ensure that Microsoft's competitors can develop products that interoperate with the Windows domain architecture natively supported in the dominant Windows client PC operating system and hence viably compete with Microsoft's work group server operating system'...the aim pursued by the Commission is to remove the obstacle for Microsoft's competitors represented by the insufficient degree of interoperability with the Windows domain architecture..." *Id.* at par. 236, 240.

<sup>113</sup>"...[T]he refusal by an undertaking holding a dominant position to license a third party to use a product covered by an intellectual property right cannot in itself constitute an abuse of a dominant position within the meaning of Article 82 EC. *It is only in exceptional circumstances that the exercise of the exclusive right by the owner of the intellectual property right may give rise to such an abuse.* It also follows from that case-law that the following circumstances, in particular, must be considered to be exceptional: in the first place, the refusal relates to a product or service indispensable to the exercise of a particular activity on a neighbouring market; in the second place, the refusal is of such a kind as to exclude any effective competition on that neighbouring market; in the third place, the refusal prevents the appearance of a new product for which there is potential consumer demand. *Once it is established that such circumstances are present, the refusal by the holder of a dominant position to grant a license may infringe Article 82 EC unless the refusal is objectively justified*" (emphasis added). *Id.* at par. 331-333.

<sup>114</sup>"The CFI confirmed that refusal to allow interoperability and bundling reduce competition in the relevant markets, thereby preventing innovation and choice to the substantial detriment of

The ruling of the Court of First Instance referring to interoperability as a ‘public interest’ ancillary to maintaining effective competition in the marketplace<sup>115</sup> (i.e., “that in exceptional circumstances a refusal to license intellectual property rights could be an abuse of a dominant position” and that “the withholding [of intellectual property protected] interoperability information may constitute an abuse of a dominant position”<sup>116</sup>), without regard to any other alleged form of market abuse, was apparently based on the following four premises: 1) companies holding an acknowledged market-dominant position have “a special responsibility irrespective of the causes of that position, not to allow its conduct to impair *genuine undistorted competition* on the common market” (emphasis added);<sup>117</sup> 2) “interoperability implies a ‘two-way’ relationship [wherein] the ‘function of a computer program is to communicate and work together with other components of a computer system’...[and is defined]...as the ‘ability to exchange information and mutually to use the information which has been exchanged,’”<sup>118</sup> thereby enabling competing software systems to interoperate with the domain architecture of the dominant software “on an equal footing with” the dominant software, i.e., “*client/server interoperability and server/server interoperability*” (emphasis added);<sup>119</sup> 3) market dominant companies that provide less than the degree of interoperability deemed necessary to enable developers of competing software systems “to remain viably on the market for those operating systems...retain a competitive advantage in terms of interoperability that hinder[s]...the maintenance of effective competition on that market...[by] *discourag[ing]...competitors from developing and marketing...systems with*

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consumers. In this respect, legal tests applied by the Commission were upheld by the CFI. *The decision concerning interoperability focused on the promotion of interoperability, which contributes to innovation and competition in the software industry whilst also fully recognizing the importance of intellectual property rights as incentives for innovation.*” See Alla Pozdnakova, *Court of First Instance Issues a Judgment in Microsoft Case*, International Law Observer (Sept. 28, 2007), at: <http://internationallawobserver.eu/2007/09/28/court-of-first-instance-issues-a-judgement-in-microsoft-case/>.

<sup>115</sup> See *Microsoft Corp. vs. Commission of the European Communities*, JUDGMENT OF THE COURT OF FIRST INSTANCE, *supra* at par. 691.

<sup>116</sup> *Id.* at par. 1313.

<sup>117</sup> *Id.* at par. 229.

<sup>118</sup> *Id.* at par. 226, citing EC Directive 92/150. See also Council Directive 91/250/EEC of 14 May 1991 on the Legal Protection of Computer Programs, at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31991L0250:EN:HTML>.

<sup>119</sup> *Id.* at par. 230, 231.

*innovative features*” (emphasis added);<sup>120</sup> and 4) the failure of market dominant companies to provide the degree of interoperability deemed necessary to enable developers of competing software systems “to remain viably on the market” for those operating systems “*prejudices consumers*” and creates a situation wherein “an increasing number of consumers are locked into the dominant company’s solution,” thereby placing “a *limitation...on consumer choice*” (emphasis added).<sup>121</sup>

The views and motivations of both the Court and the Commission were likely shaped by promoters of the FOSS-driven<sup>122</sup> ‘software-as-a-service’ (‘SaaS’) business model<sup>123</sup> long favored by Microsoft competitors and civil society groups which had intervened in the case to support the European Commission.<sup>124</sup> With the evolution of FOSS-based ‘cloud computing’ service offerings that have since generated the interest of cost-conscious governments,<sup>125</sup> it can be credibly argued in hindsight that the Court’s ruling reflected a successful lobbying effort to ‘capture’ European governmental institutions for the ultimate purpose of laying the policy and legal groundwork for new regional and national Internet markets favoring a royalty-

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<sup>120</sup>*Id.* at par. 653-654.

<sup>121</sup>*Id.* at par. 650-653.

<sup>122</sup>See Jim Whitehurst, *The Open Source Opportunity*, Keynote Presentation at the Software Summit and Codie Awards, Software & Information Industry Association (May 2009), at: [http://www.siiia.net/softsummit/2009/slides/SIIA\\_Jim%20Whitehurst%20Keynote.pdf](http://www.siiia.net/softsummit/2009/slides/SIIA_Jim%20Whitehurst%20Keynote.pdf).

<sup>123</sup>“In the software as a service model, the application, or service, is deployed from a centralized data center across a network – Internet, Intranet, LAN, or VPN – providing access and use on a recurring fee basis. Users ‘rent,’ ‘subscribe to,’ ‘are assigned,’ or ‘are granted access to’ the applications from a central provider. Business models vary according to the level to which the software is streamlined, to lower price and increase efficiency, or value-added through customization to further improve digitized business processes. The core value of software as a service is providing access to, and management of, a commercially available application. The potential benefits of the model are significant for both the vendor and the customer. This service is different from business process outsourcing (BPO), for instance, where the outsourcing contract encompasses management of entire business processes such as HR or finance. It is also different from hosting services, where the focus of the service is management of the network and servers, but virtually no applications management...While pure play ASPs were the first to offer software as a service, the bigger industry trend is for all elements of the software chain – plus the network providers who are new additions to the delivery chain – to begin offering software as a service.” *Software as a Service: Strategic Backgrounder*, Software & Information Industry Association (Feb. 2001), at 4, 6, at: <http://www.siiia.net/estore/ssb-01.pdf>.

<sup>124</sup>These intervenors included Washington DC-based Software & Information Industry Association (SSIA), Hamburg, Germany-based Free Software Foundation Europe (FSFE), Brussels, Belgium-based European Committee for Interoperable Systems (ECIS) and Los Angeles, California-based Audiobanner.com, trading as VideoBanner.

<sup>125</sup>See, e.g., Matthew Goodrick, *GSA Presentation on Federal Cloud Computing Initiative*, Software & Information Association Conference (June 17, 2010), at: <http://www.siiia.net/cloudgov/>.

free/proprietary-free non-licensing-based business model.<sup>126</sup> However, if the recommendations contained within a recently released European Commission Expert Study on public cloud computing<sup>127</sup> are any indication, it more than appears that these interest groups continue to be quite persuasive<sup>128</sup> even though there are evident limitations to establishing a proprietary-free ‘open’ cloud forum based on interoperability framework standards.<sup>129</sup>

Therefore, the Indian government must seriously consider whether the Court of First Instance’s ruling could have been reached without resorting to the very broadly conceived and newly advanced concept of ICT ‘interoperability’ promoted by certain members of industry and civil society. The notion of interoperability articulated by the Court and championed by certain industry and civil society

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<sup>126</sup>See *Software as a Service: Strategic Backgrounder*, Software & Information Industry Association, *supra*.

<sup>127</sup>Lutz Schubert, Keith Jeffery and Burkhard Neidecker-Lutz, *The Future of Cloud Computing Opportunities for European Cloud Competing Beyond 2010*, Expert Group Report, Commission of the European Communities, Information Society & Media Directorate-General, Software & Service Architectures, Infrastructures and Engineering Unit (2010), at 6, at: <http://cordis.europa.eu/fp7/ict/ssai/docs/cloud-report-final.pdf>.

<sup>128</sup>“Due to the strong commercial nature of cloud systems, both technological and non-technological aspects are involved in cloud provisioning. Since both areas still have major gaps, the recommendations are not restricted to purely technological issues, but also cover non-technological aspects related in particular to the economical and legalistic side of cloud systems... The recommendations towards research and development communities and bodies as expressed in this report hence do address a wide scope of outstanding issues, ranging from specific research and development topics over general policies to legalistic aspects which currently pose a major obstacle towards wide uptake of cloud infrastructures... *Recommendation 2: The EC together with Member States should set up the right regulatory framework to facilitate the uptake of Cloud computing... Additional Recommendation 3: The EC should encourage the development and production of (a) CLOUD interoperation standards (b) an open source reference implementation... Additional Recommendation 4: The EC should promote the European leadership position in software through commercially relevant open source approaches... The European open source movement should thereby work strongly together with industry to support commercial cloud based service provisioning*” (emphasis added). *Id.* at Executive Summary, at 3-4.

<sup>129</sup>“A currently recurring issue in the context of commercial cloud provisioning consists in ‘vendor lock-in’: As most commercial tools were developed independently from one another with a particular focus on solving the respective company’s customers’ problems first, there is little (technical) convergence between the available products. This is also due to *the typical development cycle of clouds which typically start as in-house, internal solutions (private clouds) which are then extended to provide (a subset of) capabilities to potential customers (public clouds)*. Issues related to Federation & Interoperability are hence a specific issue for commercial cloud systems... *An attempt to set up an open cloud forum to counteract the effect of lock-ins basically failed when in particular larger vendors’ strongly expressed their desire to perpetuate the lock-in for competition reasons*, even though multiple companies still signed the Open Cloud Manifesto [fn]. *Given the scope of cloud types... interoperability is however not an issue[] easily solved by agreeing on common interfaces, as it impacts on different technologies (such as interfaces for SaaS, APIs for PaaS and images for IaaS) – hence it remains dubious whether approaches such as standardization or the Open Cloud Manifesto can actually solve the problem of vendor lock-in [fn]*” (emphasis added). *Id.* at 23.

members was seemingly derived from and consistent with the questionably broad interpretation of the same overstretched socio-economic human rights theory discussed in the WIPO experts' study on compulsory licensing and human health,<sup>130</sup> despite the efforts of legal commentators to characterize the ruling as having been premised on an 'objective' finding of 'exceptional circumstances' consistent with prior European statutory and case law.<sup>131</sup>

## **B. Proposed Government Procurement Interoperability Regulations Expressing Preferences for Patent-Free and/or Royalty-Free 'Open' Standards Applicable to High Technologies**

According to the WIPO Secretariat's *Report on the International Patent System*<sup>132</sup> and its *Report on Patents and Standards*,<sup>133</sup> new government mechanisms are urgently needed to ease the "inherent tensions [that] exist between patents and standards [in the telecommunications, electronic communications, and software sectors] which become apparent when the implementation of a standard calls for the use of technology covered by one or more patents."<sup>134</sup> Although at least one prominent European standards development organization (SDO)<sup>135</sup> and some within the European Commission have tacitly acknowledged this cleverly cast disease and diagnosis, they do not share the fundamental principles underlying it. Rather,

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<sup>130</sup>See Coenraad Visser, *Patent Exceptions and Limitations in the Health Context*, Chap. 5 (SCP/15/3 - ANNEX V), *supra*, at 1-3.

<sup>131</sup>See, e.g., Pierre-André Dubois and Shannon Yavorsky, *Cross-border: Europe The Microsoft Decision: The Evolution of Compulsory Licensing in the European Union*, Kirkland and Ellis Building and Enforcing Intellectual Property Value Newsletter (2008), at: [http://www.buildingipvalue.com/08\\_EMEA/119-122Kirkland.pdf](http://www.buildingipvalue.com/08_EMEA/119-122Kirkland.pdf).

<sup>132</sup>Standing Committee on the Law of Patents, World Intellectual Property Organization (SCP/12/3/Rev.2) (Feb. 3, 2009), *supra*.

<sup>133</sup>Standing Committee on the Law of Patents, World Intellectual Property Organization (SCP/13/2) (hereinafter referred to as "WIPO Report on Patents and Standards (SCP/13/2)") (Feb. 18, 2009), at: [http://www.wipo.int/edocs/mdocs/scp/en/scp\\_13/scp\\_13\\_2.pdf](http://www.wipo.int/edocs/mdocs/scp/en/scp_13/scp_13_2.pdf).

<sup>134</sup>*Report on the International Patent System*, Standing Committee on the Law of Patents, World Intellectual Property Organization (SCP/12/3/Rev.2) (Feb. 3, 2009), *supra*, at par. 116; *WIPO Report on Patents and Standards (SCP/13/2)*, Standing Committee on the Law of Patents, World Intellectual Property Organization (SCP/13/2) (Feb. 18, 2009), *supra*, at par. 28, and 54-64, 66, 117.

<sup>135</sup>According to "Mr Karsten Meinhold, chairman of the ETSI IPR Special Committee, "IPRs and Standards serve different purposes: 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." Karsten Meinhold, *The ETSI IPR Policy: A Key Element for the Success of ETSI's Globally Applicable Standards*, Presented at EC Workshop on "Intellectual Property Rights in ICT Standardisation" (Nov. 19, 2008), at 1-2, at: [http://ec.europa.eu/enterprise/newsroom/cf/getdocument.cfm?doc\\_id=3635](http://ec.europa.eu/enterprise/newsroom/cf/getdocument.cfm?doc_id=3635).

consistent with market-based principles reflected in UK law which recognizes patents and patent applications as a form of personal property,<sup>136</sup> they have generally argued that technological innovation and technology transfer is possible, but only if stronger legal recognition and protection of exclusive private contractual and intellectual property rights is guaranteed at the domestic and international levels.

As the expanding WIPO SCP agenda has made abundantly clear, this allegedly simplistic, positive prognosis differs markedly from the more widely held assessment of technology-aspiring developing country governments and United Nations officials<sup>137</sup> that the exercise of such private rights can and often does impede the critical public role of technical standardization in promoting ICT system *interoperability*, innovation, jobs creation and investment, and therefore, should be

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<sup>136</sup>“Any patent or application for a patent is personal property (without being a thing in action), and any patent or any such application and rights in or under it may be transferred, created or granted...” See Section 30(1) “*Property in Patents and Applications, and Registration.*” “Any patent or application for a patent, and any right in or under any patent or any such application, is incorporeal moveable property...” Section 31(2) “Nature of, and Transactions in, Patents and Applications for Patents in Scotland”, The Patents Act 1977 (as amended), An unofficial consolidation produced by Patents Legal Section (Jan. 1, 2010), at: <http://www.ipo.gov.uk/patentsact1977.pdf>.

<sup>137</sup> According to officials within the United Nations Conference on Trade and Development (UNCTAD) “An important effect on innovation, manufacture and subsequent trade is that standardization processes may be influenced or ‘captured’ by industries that enjoy a leading position in the market (being the first to design and market a particular product) and possess strong IP portfolios in the sector in question. In many cases, access to technologies is a ‘must’ to comply with the agreed standards. When those standards are overly influenced or even captured, it becomes almost impossible for new entrants to participate in the market. This could defeat the purpose of promoting innovation, competition and the use and potential benefits of technical standards.” *Addressing the Interface between Patents and Technical Standards in International Trade Discussions*, UNCTAD - ICTSD Project on IPRs and Sustainable Development, Policy Brief No. 3 (Feb. 2009) at 3-4, at: [http://www.unctad.org/en/docs/iprs\\_pb20093\\_en.pdf](http://www.unctad.org/en/docs/iprs_pb20093_en.pdf) (emphasis added). And, according to officials within the United Nations Development Program (UNDP), “*Open standards are usually contrasted with proprietary standards – specifications that are owned and controlled by an individual or a corporation. Bruce Perens, who argues for a comprehensive but restrictive view, suggests the following main characteristics of open standards... No royalty – free for all to implement, with no royalty or fee. Certification of compliance by the standards organization may involve a fee...Not everyone agrees with Perens. Among the most contentious issue in defining open standards is the royalty-free implementation of standards...For the proponents of the royalty-free implementation, the issue is the added burden that consumers – or, in the case of e-government implementation, citizens – may have to bear if open standards are not implemented royalty-free...The minimum criteria that have emerged for a standard to be considered open are: Easy accessibility for all to read and use; Developed by a process that is open and relatively easy for anyone to participate in; and No control or tie-in by any specific group or vendor...Many of the GIFs [Government Interoperability Frameworks] recognized seven similar key principles...Openness – focusing on open standards; that is, all standards and guidelines must conform with open standards principles. Wherever possible, open standards will be adopted while establishing technical specifications Standards that are vendor- and product-neutral should be considered in favour of their proprietary alternatives” (emphasis added). *e-Government Interoperability: Guide*, United Nations Development Program (2007), at 4 and 6, at: <http://www.apdip.net/projects/gif/GIF-Guide.pdf>.*

legislatively and/or administratively curtailed. Apparently, a growing number of European Commissioners and EU Member State government officials also share this negative outlook, especially concerning software. It is arguable, for example, that the EU Commission's prior recommendation to EU Member States "to keep administrative systems independent of proprietary technology" when "implementing a national interoperability framework" modeled after the initial version of the European Interoperability Framework (EIFv.1.0) (2004)<sup>138</sup> was no less an indictment of exclusive private contractual and patent rights.

European civil society pressure groups have also promoted the notion that patents impede software interoperability and should be severely restricted by governments. For example, the German-based Free Software Foundation Europe (FSFE)<sup>139</sup> an outspoken NGO endeavoring to influence regional and international ICT policy within both the EU and the WIPO, has insisted that since "both patents and standards derive their justification from the public benefit" and "the upholding of one deprives the function of the other,"<sup>140</sup> "patents which limit or prevent *interoperability* should be [rendered legally] *unenforceable*."<sup>141</sup>

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<sup>138</sup>"When implementing a national interoperability framework the emphasis is obviously on 'interoperability'. Standardisation in technology and harmonisation in legislation are just two ways to achieve this. Other recommendations are...*Keep administrative systems independent of proprietary technology*" (emphasis added). "European Interoperability Framework for Pan-European eGovernment Services Version 1.0", European Communities Brochure (hereinafter referred to as "EIFv.1.0 Brochure") (2004) at 26, 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) (hereinafter referred to as "EIFv.1.0"), at 26, at: <http://xml.coverpages.org/IDA-EIF-Final10.pdf>.

<sup>139</sup>"Free Software Foundation Europe (FSFE) is a non-profit and in some countries charitable organisation dedicated to [Free Software](http://www.fsf.org/)." See Free Software Federation Europe website at: <http://www.fsf.org/>.

<sup>140</sup>According to FSFE President George Greve, "Allowing patents on standards consequently is an intentional act to grant monopolies on standards to certain parties that includes the right to block implementation by other parties." George Greve, *Innovation Policy: The Balance Between Standards and Patent Regulation*, Intellectual Property Watch Inside Views (Feb. 26, 2009), at: <http://www.ip-watch.org/weblog/2009/02/26/inside-views-innovation-policy-the-balance-between-standards-and-patent-regulation/> (emphasis added).

<sup>141</sup>"During the software patent debate in the European Union *there was consensus among SME, Free Software and big businesses representatives from companies such as IBM or Sun Microsystems that patents which limit or prevent interoperability should be unenforceable*. In the European Union, this could be introduced into the ongoing Community Patent debate. On a global level, WIPO should consider this as part of its ongoing Development Agenda discussions" (emphasis added). *Analysis on Balance: Standardisation and Patents*, The Free Software Foundation Europe (Dec. 2, 2008) at: <http://www.fsf.org/projects/os/ps.en.pdf>.

A similar but more nuanced position has been advanced by the European Committee for Interoperable Systems (ECIS),<sup>142</sup> an influential Brussels-based NGO. ECIS represents ICT companies seeking to secure legislation at the EU and international levels that promotes their new services-rather-than-goods business model as the cure for the ‘growing impediments’ to software interoperability and innovation. As can be gleaned from the comments it contributed during a July 2006 hearing on the desirability of establishing a European Community patent, the ECIS has decidedly embraced a utilitarian view of patents. In other words, the ECIS advocates in favor of a patent system that: 1) “ultimately exists to benefit society as a whole and not merely to service individual interests;” 2) “promote[s] innovation in the public interest;” 3) “take[s] into account the importance of interoperability of information and communications technology;” and 4) ensures against “overbroad patent protection that frustrates interoperability in the ICT sector” – i.e., it “ensures that patents cannot be used as a means to confining users to a particular technology by closing off full interoperability...”<sup>143</sup>

Indeed, the ECIS plainly stated in more detailed comments submitted as part of a prior April 2006 response to a European Commission community patent questionnaire, that if a European Community Patent law were enacted it should be circumscribed by a provision that treats *any* interference with ICT interoperability resulting from the exercise of a patent right as an *abuse* of that right.<sup>144</sup> The implications of what the ECIS left unstated, however, are quite obvious: such a legal

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<sup>142</sup>ECIS “endeavours to promote a favourable environment for interoperable ICT solutions. It has actively represented its members regarding issues related to interoperability and competition before European, international and national fora, including the EU institutions and WIPO.” *About ECIS*, European Committee for Interoperable Systems website at: <http://www.ecis.eu/about/index.html>.

<sup>143</sup>ECIS *Patent Consultation Contribution* (July 2006), at: [http://ec.europa.eu/internal\\_market/indprop/docs/patent/hearing/vinje\\_ecis\\_en.pdf](http://ec.europa.eu/internal_market/indprop/docs/patent/hearing/vinje_ecis_en.pdf).

<sup>144</sup>*Where access to the patented technology is indispensable to achieve the limited purpose of interoperability, the application of patent rights by a firm that controls a standard may be abusive... regardless of whether the standard is a legal technology standard, a technology standardised in a standard-setting organisation, or a technology accepted as standard in the industry... Given the public interest in and importance of interoperability as recognised by the Community, and evidenced by its legislative intent underlying the 1991 Software Directive of fostering interoperability and the disclosure of software interfaces, ECIS believes that a carefully tailored legislative provision should be implemented that fosters interoperability while recognizing the value of patents and the rights of the patent holder.” See *ECIS Reply to the EC Patent Consultation* (Apr. 2006), at 3, at: [http://circa.europa.eu/Public/irc/markt/markt\\_consultations/library?l=/industrial\\_property/patents/consultation\\_future/e\\_contributions/ecispdf/EN\\_1.0\\_&a=d](http://circa.europa.eu/Public/irc/markt/markt_consultations/library?l=/industrial_property/patents/consultation_future/e_contributions/ecispdf/EN_1.0_&a=d) (emphasis added).*

characterization would logically entail the imposition of some type of statutory or judicial restriction on the exercise of such rights, including the sacrifice or limitation of patent royalties.

Interestingly, the ECIS' position is strikingly similar in principle to the legislative proposal set forth within the Japanese Ministry of Economy, Trade and Industry's ('METI') 2005 Interim Report on the legal protection of software,<sup>145</sup> though the connection between them may never be known. In addition to treating the mere interference with software interoperability as an *abuse* of the patent right equivalent in magnitude to an anti-competitive practice, the METI study proposal also recommended broad compulsory licensing or a general restriction on or exception to the exercise of patent rights as a possible legislative remedy.<sup>146</sup> Fortunately, these interim recommendations were never incorporated within the final proposed (non-binding) "General Rules on Software-related Intellectual Property" ("General Rule") legislation METI subsequently released during 2007<sup>147</sup> which boasted other deficiencies. If implemented, for example, the "proposed rule changes, [which were] intended to 'clarify the scope of abuse of rights applicable where exercising software patent rights hinders promotion of software innovation, *such as ensuring software interoperability*'...[would have]...allow[ed] for infringing uses without a license agreement...[and]...provide[d]...a complete release of

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<sup>145</sup>See "METI Commerce and Information Policy Bureau, Interim Report of 'Study Group on the Legal Protection of Software and Promotion of Innovation'" (Oct. 11, 2005), at: <http://www.meti.go.jp/english/information/downloadfiles/051017LegalProtectionSoftware.pdf>.

<sup>146</sup>*Id.* at 3-4; see also Michael Chapin, *Sharing the Interoperability Ball on the Software Patent Playground*, 14 B.U. J. SCI. & TECH L. 220, 237 (2008), at: <http://www.bu.edu/law/central/jd/organizations/journals/scitech/documents/Chapin.pdf> ("METI lists several conditions that would constitute patent abuse under its first proposal – tying practices by requiring a license for another patent, mandating that related patents acquired after licensing to be assigned over, and *merely acting to impede interoperability*" (emphasis added)).

<sup>147</sup>For an English translation and summary of the proposed rule, See Kenji Shimada, Yi-Hsuan Chen, Chi-Yuan Kuo, Alfredo DeLaRosa, and Jeremiah Miller, *Patents as Property: International Injunctive Relief*, CASRIP Online Newsletter, Vol. 14, Issue 3, University of Washington School of Law (Summer 2007), at:

<http://www.law.washington.edu/Casrip/Newsletter/default.aspx?year=2007&article=newsv14i3Shimada>. See also, *Comments on the Draft of Rule Concerning Software Related Intellectual Property*, Business Software Alliance Asia (July 12, 2006) at 2, at: [http://www.bsa.or.jp/file/BSA\\_Comments\\_English\\_060712.pdf](http://www.bsa.or.jp/file/BSA_Comments_English_060712.pdf).

liability...[upon a showing that]... such use is needed to achieve interoperability,”<sup>148</sup> presumably based on ‘public interest’ grounds.<sup>149</sup>

One governmental mechanism to address potential patent abuses that was discussed within the WIPO *Report on Patents and Standards* and which has also been supported by the ECIS<sup>150</sup> and portrayed by it as being similar to private FRAND contractual undertakings despite the lack of an injunction relief entitlement,<sup>151</sup> is the ‘license of right’<sup>152</sup> provided under the British<sup>153</sup> and German<sup>154</sup> patent laws. A license of right is described as an ostensibly *voluntary* decision on the part of the patent

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<sup>148</sup>Michael Chapin, *Sharing the Interoperability Ball on the Software Patent Playground*, *supra* at 237 (emphasis added).

<sup>149</sup>See, e.g., Kazuaki Okimoto, *Compulsory License on Patented Drug for H1N1 Influenza Virus*, Presented at Emerging Intellectual Property Rights Committee Meeting of the APAA56th Council (Nov. 10, 2009), at:

[http://www.apaaonline.org/pdf/APAA\\_56th\\_&\\_57th\\_council\\_meeting/emergingIP/2-Japan%20Emerging%20IP%20Rights%20Ctee%20Country%20Report%202009.pdf](http://www.apaaonline.org/pdf/APAA_56th_&_57th_council_meeting/emergingIP/2-Japan%20Emerging%20IP%20Rights%20Ctee%20Country%20Report%202009.pdf) (“We have no system for granting a compulsory license against a patent. [However,] we have a system for granting a non-exclusive license by arbitration made by the Commissioner of the Japanese Patent Office in the case of non-working...when...[it is] in the public interest...(Section 93)...”).

<sup>150</sup>“In the high tech area, we need to be sure the patent system is used actually to foster innovation instead of being abused to prevent interoperability between systems, chill innovation or discourage new market entrants. For example, *one way to help promote an open society and interoperability is a voluntary ‘license of right,’* in which inventors would see the patent fees they pay to patent offices diminish in return for agreeing to license their inventions.” *Open Letter to the European Commission*, European Committee for Interoperable Systems (Mar. 2010), at: <http://www.ecis.eu/documents/OpenLettertotheEuropeanCommissionMarch2010.pdf> (emphasis added).

<sup>151</sup>ECIS Legal Counsel Thomas Vinje recently moderated a panel entitled “Certainty of Availability and Continuity of Essential IP Rights for Licensing” at a Brussels conference convened recently by the EU Commission and the European Patent Office, wherein he was quoted as proposing the license of right mechanism as a ‘complement to the FRAND regime’ and the inclusion of such mechanism ‘or something similar to it’ within the EU patent regulation (e.g., so that the owner of an EU patent may choose to make a FRAND statement to the EPO). *Tensions Between Intellectual Property Rights and Standardisation: Reasons and Remedies*, Agenda of Information and Communication Technologies Conference, organized by The European Commission and The European Patent Office (EPO) (Nov. 22, 2010), at: [http://ec.europa.eu/enterprise/sectors/ict/files/ict-policies/agenda\\_ict\\_workshop\\_new\\_en.pdf](http://ec.europa.eu/enterprise/sectors/ict/files/ict-policies/agenda_ict_workshop_new_en.pdf). See also Press Release at: [http://ec.europa.eu/enterprise/sectors/ict/files/10-08-24\\_announcement\\_of\\_the\\_event.pdf](http://ec.europa.eu/enterprise/sectors/ict/files/10-08-24_announcement_of_the_event.pdf).

<sup>152</sup>See *Report on Patents and Standards*, Standing Committee on the Law of Patents, World Intellectual Property Organization (SCP/13/2) (Feb. 18, 2009) *supra*, at par. 143.

<sup>153</sup>See UK Section 46, “Patentee’s Application for Entry in Register that Licences are Available as of Right”, The Patents Act 1977 (as amended), an unofficial consolidation produced by Patents Legal Section (Jan. 1, 2010), at: <http://www.ipo.gov.uk/patentsact1977.pdf>.

<sup>154</sup>See German Patent Law, Section 23. “Licenses of right...provided for under the German patent laws...[are] called Lizenzbereitschaft[s]...The provisions and incentives for applying for a Lizenzbereitschaft are very similar to those provided for under the UK law.” See Tanuja V. Garde, *Supporting Innovation in Targeted Treatments: Licenses of Right to NIH-Funded Research Tools*, 11 Michigan Telecommunications and Technology Law Review 249, 280 (2005), at: <http://www.mttlr.org/voleven/garde.pdf>.

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.<sup>155</sup> Once a patent has been so registered 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. In cases where the patent owner and licensee cannot agree on reasonable terms, UK and German law provide that a designated national patent office official will make such determination.<sup>156</sup> 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.<sup>157</sup> Also, if during the course of an infringement action an EU 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 and the amount (if any) recoverable against him by way of damages 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."<sup>158</sup>

While a historical review of UK patent law (the UK Patents and Designs Act of 1919) reveals that it once functioned as a compulsory licensing statute, the fact that "UK courts [continue today to] look to [UK] case law deciding issues arising under the compulsory licensing provisions as persuasive for cases decided under...licenses of right" strongly suggests that licenses of right remain closely related to and essentially nothing more than *de facto* compulsory licenses in disguise.<sup>159</sup>

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<sup>155</sup> See Tanuja V. Garde, *Supporting Innovation in Targeted Treatments: Licenses of Right to NIH-Funded Research Tools*, *supra*, at 279; German Patent Law, Section 23(1).

<sup>156</sup> *Id.*, citing UK Patents Act 1977 Sections 46(3)(a) and 3(b); German Patent Act Sections 23(3) and (4).

<sup>157</sup> *ITSSD Comments Concerning SCP/13/2*, at 39, *citing* UK Patents Act 1977 Sections 46(2) and (4).

<sup>158</sup> *Id.*, citing UK Patents Act 1977 Section 46(3)(c).

<sup>159</sup> See Tanuja V. Garde, *Supporting Innovation in Targeted Treatments: Licenses of Right to NIH-Funded Research Tools*, *supra*, at 279-281.

The attractiveness of compulsory licenses to remedy patent abuses and/or anti-competitive behaviors notwithstanding, the free and open source software (FOSS) movement (represented by the Boston, Massachusetts-based Free Software Foundation,<sup>160</sup> its European sister organization FSFE, and the Brussels-based OpenForum Europe (OFE)<sup>161</sup>) have considered the compulsory licensing remedy by itself insufficient to eliminate the perceived impediments to ‘full interoperability’ between and among the different patented ICT technologies often embedded within a single standard, whatever the term ‘full interoperability’ means. In acknowledgement of the numerous legal and political conditions the WTO TRIPs Agreement places on member government compulsory license usage, the FOSS movement has promoted a different approach that tries to impose general public interest restrictions *a priori* on the exercise of patent rights and to minimize the economic basis underlying a patent grant. Arguably, their favored approach was systematically incorporated into the European Union’s initial interoperability framework for eGovernment services released during 2004, whose principles were likely relied upon by the European Commission and the European Court of First Instance thereafter in the *Microsoft* case previously discussed.

The WIPO *Report on Patents and Standards* reveals somewhat the role of the FOSS movement in defining systems interoperability as a ‘public interest’ that should benefit commercial technology users as well as consumers, the protection of which necessitates the least costly and most universally accessible ‘open standards,’ incorporating only those ICT technologies (whether patented or not) deemed ‘essential’ to the functioning of the standard. The report also suggests how the FOSS movement was also influential in redefining in the first EU EIF version the term ‘open standard’ – from one focused primarily on the ‘openness’ and inclusiveness of the standard development process *and* on the prevailing FRAND/RAND (‘fair, reasonable and non-discriminatory’) private contract-based pricing model<sup>162</sup> – to one now

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<sup>160</sup> *What We Do*, Free Software Federation website, at: <http://www.fsf.org>.

<sup>161</sup> See *Who We Are and What We Do*, OpenForum Europe website at: <http://www.openforumeurope.org/about/who-we-are-and-what-we-do>.

<sup>162</sup> For a discussion of the definition traditionally adopted by recognized national and international standards organizations such as ANSI and the ITU, see *WIPO Report on Patents and Standards (SCP/13/2)* at par. 41-42 and accompanying footnotes.

focused on the FOSS contractual and pricing model that calls for patent-free or *unlimited royalty-free* patented technology usage as practiced by Internet standards-setting consortia such as W3C.<sup>163</sup>

Implicit in the ‘public good’ of open standards-based interoperability is the assumption that predefined and ex ante disclosed royalty-free and unlimited use patent licensing terms employed by such consortia are more compatible with FLOSS (‘free, liberal open source software’) licenses and less conflict-ridden<sup>164</sup> and legally risky,<sup>165</sup> and hence, more economically efficient than non-binding, flexible, unfixed patent royalty pricing terms that traditional SDOs remain incapable of enforcing against member or nonmember technology patent owners.<sup>166</sup> Also implicit within this concept of the public good is the assumption that the allegedly less precise and economically inefficient FRAND/RAND pricing terms adopted by traditional SDOs violate the public trust<sup>167</sup> and rarely result in the least costly alternative for society due to ‘royalty stacking’ and anti-competitive contractual ‘tie-ins,’ especially in the case of procurement contracts where it was found that several EU Member State governments had fallen victim to ‘vendor lock-in’ at taxpayer expense.<sup>168</sup> However, this last point begs the proverbial question, ‘which came first, the chicken or the egg’?, considering that the national and/or provincial governments of several EU Member

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<sup>163</sup>*Id.* at par. 43, 111-116 and accompanying footnotes; *See also generally* Lawrence A. Kogan, *How SMART are Standards that Sacrifice Intellectual Property Rights?*, Presented at American National Standards Institute (ANSI) Intellectual Property Rights Policy Committee (IPRPC) Meeting (Apr. 15, 2010), at: <http://itsstd.org/How%20SMART%20are%20Standards%20that%20Sacrifice%20Intellectual%20Property%20Rights%20-%20Full%20Outline.doc>.

<sup>164</sup>*See WIPO Report on Patents and Standards (SCP/13/2)* at par. 111 and 128.

<sup>165</sup>*See* Rishab Ghosh, Reinier Bakels and Patrice-Emmanuel Schmitz, *Patents and Open Source Software: What Public Authorities Need to Know*, EU IDABC Open Source Observatory (Apr. 5, 2005), Executive Summary at 2-3, at: <http://www.osor.eu/idabc-studies/expert-docs/patents-and-open-source-software>; <http://ec.europa.eu/idabc/servlets/Doce6a8.pdf?id=28129>.

<sup>166</sup>*See WIPO Report on Patents and Standards (SCP/13/2), supra* at pars. 117-124, 126-127.

<sup>167</sup>“Public sector consumers, however, have in many situations an obligation to support (and certainly not to harm) competition through their procurement practices... they are obliged to save costs – taxpayer money – over the very long term. This is equivalent to an obligation to further net welfare, which is harmed by rent-seeking behaviour and weakened competition.” Rishab A. Ghosh, *Free/Libre/Open Source Software: An Economic Basis for Open Standards*, MERIT University of Maastricht (Dec. 2005) at 13, at: <http://www.flosspols.org/deliverables/FLOSSPOLSD04-openstandards-v6.pdf>.

<sup>168</sup>*See* Rishab Aiyer Ghosh, Ruediger Glott, Patrice-Emmanuel Schmitz and Abdelkrim Boujraf, *OSOR Guidelines: Public Procurement and Open Source Software* public draft version 1.0: 10 (Oct. 2008) at 48-51 and 104-110, at: <http://www.osor.eu/idabc-studies/OSS-procurement-guideline-public-draft-v1%201.pdf>.

States had already been promoting and/or expressing preferences for open source software in government procurement bids<sup>169</sup> by the time these debates had unfolded (Germany (2001), Spain (2002), France (2004) and the United Kingdom (2004), with the Netherlands (2005), Denmark (2006), Belgium (2009) and Hungary (2009) to follow thereafter).<sup>170</sup>

Arguably, the EU Commission was *driven* to establish a FLOSS-centric ICT interoperability framework at the EU regional level for the following reasons. First, such a framework would serve to reconcile and harmonize the differing national government open source software procurement practices consistent with the EU regional public interest – i.e., to “ensure public policy objectives and societal needs are respected.”<sup>171</sup> Second, such a framework would facilitate the exercise of the EU Commission’s public procurement function, which as of 2007-2008 had already exceeded 16.3% of EU Community GDP<sup>172</sup> and which is predicted to reach 19% of EU Community GDP by end of 2010<sup>173</sup>, thereby helping it to shape and sustain the growth of private open source technology markets throughout the EU region.<sup>174</sup> Third, such a

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<sup>169</sup>See *Supplement to ITSSD Comments Concerning the WIPO Report on Standards and Patents (SCP/13/2) Paragraph 44* (Jan. 2010), at 4-7 and accompanying endnotes, at: [http://www.wipo.int/scp/en/meetings/session\\_14/studies/itssd\\_supplement.pdf](http://www.wipo.int/scp/en/meetings/session_14/studies/itssd_supplement.pdf).

<sup>170</sup>*Id.* at 7-10.

<sup>171</sup>“...[I]t was decided to present a White Paper to ascertain the degree of consensus on the possible proposals for policy choices and specific measures that would help the European ICT standardisation policy *to better respond to industry and societal needs*...In order to facilitate the use of the best available standards in support of European legislation and policies it is necessary to lay down requirements, in the form of a list of attributes, for such standards and their associated standardisation processes. These attributes *ensure that public policy objectives and societal needs are respected*.” *EU White Paper: Modernising ICT Standardisation in the EU - The Way Forward* (July 3, 2009 at 3 and 4, at: <http://ec.europa.eu/enterprise/ict/policy/standards/whitepaper.pdf> (emphasis added).

<sup>172</sup>See Patrick Van Eecke, Paulo Pinto Fonseca and Tineke Egyedi, *EU Study on the Specific Policy Needs for ICT Standardization*, Prepared for the European Commission (July 2007) (hereinafter referred to as the “DLA Piper Study”), at 107, at: [http://ec.europa.eu/enterprise/ict/policy/standards/piper/full\\_report.pdf](http://ec.europa.eu/enterprise/ict/policy/standards/piper/full_report.pdf).

<sup>173</sup>“European governments will spend \$15.7 billion on software this year, 19 percent of all software that is purchased on the Continent, according to International Data Corp.” See Kevin J. O’Brien, *Technology Rivals Lobby to Break Microsoft’s Hold*, N.Y. TIMES (July 18, 2010), at: [http://www.nytimes.com/2010/07/19/technology/19iht-eusoftwar19.html?\\_r=1](http://www.nytimes.com/2010/07/19/technology/19iht-eusoftwar19.html?_r=1).

<sup>174</sup>“Information and Communication Technology (ICT) is a major driver of competitiveness and represents one of the key industrial sectors of the 21st century. In 2007 the European ICT industry had a turnover of € 670 bn and accounted for over 5% of total employment in the EU. European ICT needs sound framework conditions to fully contribute to the growth and jobs agenda and in this context standardisation plays an important role. Moreover, as ICT tools are used in all economic sectors, an effective EU ICT standardisation policy can encourage the faster uptake of new technologies and applications thereby contributing to the competitiveness of the European economy as a whole.” See *EU White Paper: Modernising ICT Standardisation in the EU - The Way Forward*, *supra* at 2.

framework would fall within the clear parallels drawn by the FOSS movement between their preferred approach concerning ICT patents and standardization and that adopted in the EU Software Copyright Directive.<sup>175</sup>

Indeed, at least one EU Commission-sponsored report specifically recommended that

open standards for software markets should be defined in order to be compatible with FLOSS licenses... [that]...compatibility with proprietary technologies should be explicitly excluded from public procurement criteria...[and that]...open standards should be mandatory for eGovernment services and preferred for *all other* public procurement of software and software services.<sup>176</sup>

It would appear in hindsight that the initial version of the European Interoperability Framework (EIF v1.0) contained many of these underlying assumptions and recommendations.<sup>177</sup>

The open source community, nevertheless, remains dissatisfied with the evolving process of ICT stakeholder engagement since none of the subsequent versions of the draft EIFv2.0 ((EIF v2.0‘A’ (2008)),<sup>178</sup> (EIFv2.0‘B’ (2009)),<sup>179</sup> or (EIFv2.0‘C’ (2010))<sup>180</sup>) have reflected all of these features. According to the FSFE, with each successive version of the draft EIFv2.0, the original concepts of interoperability and open standards originally championed by the FOSS movement

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<sup>175</sup>“Exceptions to the unlimited right of creators to determine the way in which their deliverables can be used, as well as to take the moral and material benefit from their commercial exploitation, are inserted in the law itself. Such a well-defined case is determined, for example, in Directive 91/250/EEC (the Software Copyright Directive) *whereby exceptions to the exclusive right of copyright holders are justified for interoperability reasons*” (emphasis added). Patrick Van Eecke, Paulo Pinto Fonseca and Tineke Egyedi, *EU Study on the Specific Policy Needs for ICT Standardization*, *supra* at 109.

<sup>176</sup>Rishab A. Ghosh, *Free/Libre/Open Source Software: An Economic Basis for Open Standards*, *supra*, at Executive Summary, 3, 21 (emphasis added).

<sup>177</sup>For example, EIFv1.0 defined the term ‘open standard’ as one where: i) “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;” ii) “the patents possibly present [in the standard or part of it are] made irrevocably available on a royalty free basis;” and iii) the standard may be reused without any constraints.” See EIFv1.0 Brochure, *supra* at 9; EIFv1.0, *supra* at 8.

<sup>178</sup>European Interoperability Framework for Pan-European eGovernment Services, Draft for Public Comments – As Basis for EIF 2.0, European Communities (© 7/15/08).

<sup>179</sup>*European Interoperability Framework for European Public Services (EIF) Version 2.0*, European Commission Unofficial Leaked Draft (Nov. 2009), at: <http://blog.webwereld.nl/wp-content/uploads/2009/11/European-Interoperability-Framework-for-European-Public-Services-draft.pdf>.

<sup>180</sup>This version of draft EIFv2.0 is unpublished at the current time.

have been steadily pared back by industry<sup>181</sup> so that it would be possible for EU regional and Member State government officials to continue selecting proprietary ICT standards alongside open source ICT standards in satisfying their procurement needs, a result which the FOSS movement finds completely unacceptable.<sup>182</sup> For example, after comparing the changes contained within each of the versions of the draft EIFv2.0, the OFE accused the EU Commission of having been unduly influenced by industry “outside of the democratic and transparent processes that bind the European institutions...to maintain past practice,” and insisted that the EU Commission reinstate the first draft of EIFv2.0.<sup>183</sup>

Irrespective of whether these allegations are true, it may be recalled that EIFv1.0 included an EU Commission recommendation to EU Member States “*to keep administrative systems independent of proprietary technology*” when “implementing a national interoperability framework.”<sup>184</sup> This would explain why these stakeholders would continue in their efforts to influence the European Commission<sup>185</sup> and to oppose the draft EIF v2.0 so long as it would enable a government procurement contract to conceivably allow for the implementation of a technical specification in *proprietary* software, even where such specification is also compatible with open source software and FLOSS licensing terms and otherwise fulfills functional interoperability needs.

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<sup>181</sup>“Looking back to the consultation draft, it is obvious that during the development of EIFv2, the European Commission has abandoned the concept of Open Standards as a key enabler for interoperability. This is a central reason why the current draft would see the European Interoperability Framework become a shadow of its former self.” *Open Standards - EIFv2: Tracking the Loss of Interoperability*, Free Software Foundation Europe website at: <http://fsfe.org/projects/os/eifv2.en.html#>.

<sup>182</sup>“In an open letter...to the EU Member States...Free Software Foundation Europe (FSFE) president Karsten Gerloff...[argues that], ‘In its current form, the text is a threat to the interoperability of European eGovernment services, and a recipe to maintain and even increase vendor lock-in’. He continues by stating that the ‘clear definition’ of open standards from the first version of the EIF has been abandoned and that the term openness is being twisted to include ‘proprietary positions.’” *Protests Against Proposed Redefinition of Open Standards Within the EU*, The Open H Blog (Nov. 10, 2009) at: <http://www.h-online.com/open/news/item/Protests-against-proposed-redefinition-of-open-standards-within-the-EU-854651.html>, citing *FSFE’s letter to EU Member States*, Karsten on Free Software blog (Nov. 6, 2009), at: <http://blogs.fsfe.org/gerloff/?p=285>.

<sup>183</sup>*OFE Letter of complaint re EIF v2.0* 2009-02-22 (Mar. 22, 2010), OFE Press Releases, OFE website, at: <http://www.openforumeurope.org/press-room/press-releases>.

<sup>184</sup>See EIFv.1.0 Brochure, *supra* at 26.

<sup>185</sup>See *EU to Push Patent-Free eGovernment*, EurActiv.com (Oct. 11, 2010), at: <http://www.euractiv.com/en/infosociety/eu-push-patent-free-egovernment-news-498694>.

Nevertheless, logic and the public interest should dictate a more equitable, measured and economically reasonable approach to interoperability that considers technical standard specifications as falling along a continuum of ‘openness’. ‘Full openness’, where available, would require public administrations to grant *all* stakeholders *the same possibility* of contributing to the development of a standard specification relating to a software component(s) and to ensure 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. And, where ‘fully open’ specifications are either unavailable (because they are not yet mature or are unsupported by the market) or are incapable of satisfying functional interoperability needs, government agencies could seek less open specifications. Were such an approach adopted it would be more acceptable for government agencies to express a preference for ‘open’ specifications.

In any event, the need to undertake ongoing revisions to draft EIFv2.0 clearly reflects the economic and legal significance of the lobbying battle in which these competing domestic and international industry and civil society interest groups have long been engaged. To this end, it must be remembered that the results of these stakeholders’ efforts to shape future European ICT interoperability standards will likely transcend the Internet to include also broadband,<sup>186</sup> health,<sup>187</sup> energy,<sup>188</sup> and

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<sup>186</sup>See “A Digital Agenda for Europe”, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions COM(2010) 245 final/2 (8/26/10), at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0245:FIN:EN:PDF>.

<sup>187</sup>See Flora Giorgio-Gerlach, *European Commission Strategy for European eHealth Interoperability*, DG Information Society and Media, ICT for Health, European Commission (Oct. 2008), at: [http://www.calliope-network.eu/Portals/11/assets/documents/Crete\\_Presentations/CAL%202008-10-09%20s11%20Giorgio%20%20EC%20Strategy%20Interoperability.pdf](http://www.calliope-network.eu/Portals/11/assets/documents/Crete_Presentations/CAL%202008-10-09%20s11%20Giorgio%20%20EC%20Strategy%20Interoperability.pdf); *e-Health-Making Healthcare Better for European Citizens: An Action Plan for a European e-Health Area*, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, COM(2004) 356 final (4/30/04), at 16-17, at: <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2004:0356:FIN:EN:PDF>.

<sup>188</sup>See *ICT for a Low Carbon Economy. Smart Electricity Distribution Networks*, European Communities (July 2009), at: [http://ec.europa.eu/information\\_society/activities/sustainable\\_growth/docs/sb\\_publications/pub\\_smart\\_edn\\_web.pdf](http://ec.europa.eu/information_society/activities/sustainable_growth/docs/sb_publications/pub_smart_edn_web.pdf) (summarizing “the role of the ICT sector in smart grids”); *ICT and e-Business Impact in the Energy Supply Industry, A Sectoral e-Business Watch Study* (Report No. 03/2009), IDC EMEA on behalf of the European Commission (Dec. 2009), at: <http://www.ebusiness->

transport.<sup>189</sup> Consequently, the EU Commission's continued inability to reconcile these various EIF drafts to the satisfaction of all concerned parties substantially increases the regulatory risks that proprietary technology industry stakeholders and their investors must bear and the legal and economic uncertainties those risks engender.

What appears to have been ignored or forgotten in the heat of this debate, however, is the likely required interface of software with technologies developed by and used within other industry sectors, and the probability that any ICT government procurement preference for universally accessible and disclosed nonproprietary and/or royalty-free ICT technologies *will* implicate related trade secret protected knowledge and information as well.<sup>190</sup> Trade secret-protected information and know-how needed to implement patented inventions often accompany patents and are chosen by entrepreneurs as an alternate form of economic assurance despite the inherent inconsistencies between patents and trade secrets.<sup>191</sup>

The EU Commission cannot simply ignore that legal practitioners frequently advise their clients to seek patent protection for an invention and trade secret protection for related information.<sup>192</sup> Given the increasing "difficult[y]" for e-commerce companies to come up with inventions that are truly novel and non-

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[watch.org/studies/sectors/energy\\_supply/documents/FR03-2009\\_Energy-supply.pdf](http://watch.org/studies/sectors/energy_supply/documents/FR03-2009_Energy-supply.pdf).

<sup>189</sup>See *Standardisation Mandate Addressed to CEN, CENELEC and ETSI in the Field of Information and Communication Technologies to Support the Interoperability of Cooperative Systems for Intelligent Transport in the European Community*, European Commission Enterprise and Industry Directorate-General, M/453EN (Oct. 6, 2009), at: [http://www.etsi.org/WebSite/document/aboutETSI/EC\\_Mandates/m453%20EN.pdf](http://www.etsi.org/WebSite/document/aboutETSI/EC_Mandates/m453%20EN.pdf).

<sup>190</sup>See *Can Government Intervention Sustain Economic Incentive, Technological Innovation, and Capital Flows?*, Précis Of ITSSD WIPO Side-Bar Event, Institute for Trade, Standards and Sustainable Development (Oct. 12, 2010), Moderator's Comments at 12, at: <http://www.itssd.org/ITSSD%20WIPO%20SCP%20Side-bar%20Geneva%2010-12-10%20Precis%20Final.pdf>.

<sup>191</sup>"[S]ince patent protection depends on publishing the invention to the world and trade secret protection depends on keeping the matter secret, consideration should be given to protecting the same invention by both methods." See Peter J. Toren, *Protecting Inventions as Trade Secrets: A Better Way When Patents Are Inappropriate*, *Unavailable*, Sidley Austin, LLP (May 2000 at: <http://library.findlaw.com/2000/May/1/130451.html>). See also Karl F. Jorda, *Patent and Trade Secret Complementariness: An Unsuspected Synergy*, 48 WASHBURN LAW J. 1 (2008), at: <http://www.washburnlaw.edu/wlj/48-1/articles/jorda-karl.pdf> ("What I have practiced in my career, and what I endorse as the best policy and practice, is to obtain patents as the centerpiece in an intellectual property portfolio and maintain trade secrets as underpinnings for patents to protect unpatentable collateral know-how and show-how.").

<sup>192</sup>*Id.*

obvious as required by the Patent Act,” such scrupulously undisclosed “information and know-how may be a company’s most valuable asset...[and]...for many Internet companies it may be their *only* asset” (emphasis added).<sup>193</sup> Indeed, as the vaunted Berkeley Patent Study which focuses heavily on software firms<sup>194</sup> reveals, two of the key reasons why startup firms often decide against patent protection, aside from the “high costs associated with prosecuting and enforcing [a] patent,” are a “fear of disclosure” i.e., startups do not want “to disclose information” in a patent capable of being reverse engineered and the “belie[f] that trade secret was adequate protection.”<sup>195</sup> The study, in fact, shows that “the reluctance to disclose information appears to be more of a deterrent for large firms than for...early-stage” firms.<sup>196</sup>

And, the EU Commission also cannot simply ignore that public “Corporations, through their boards and management, are duty bound to take informed action to protect the company’s assets...[and that]...individual directors and officers can also be liable [to shareholders] for failing to monitor the companies activities to ensure compliance with the [corporate governance aspects of common and statutory] law. Where trade secrets are concerned...management [has a duty]...to conserve the corporation’s property from loss through theft or dissipation [through]...control of information leaving the organization...This involves...keeping close track of the company’s secrets.”<sup>197</sup>

Thus, if the FOSS movement and industry proponents of the new services-rather-than-goods business model are successful in reinstating their criteria for and definition of ‘open standards’ established by EIFv1.0 which express a preference for *nonproprietary and/or royalty-free* ICT technologies, the trade secret option for

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<sup>193</sup>*Id.*

<sup>194</sup>See Stuart J.H. Graham, Robert P. Merges, Pam Samuelson and Ted Sichelman, *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey*, 24 BERKELEY TECHNOLOGY LAW J. 1255, 1312 (2010), at: [http://www.btlj.org/data/articles/24\\_feature.pdf](http://www.btlj.org/data/articles/24_feature.pdf).

<sup>195</sup>*Id.* at 1309-1310.

<sup>196</sup>*Id.* at 1312.

<sup>197</sup>See James Pooley and Katherine Nolan-Stevaux, *Trade Secrets and Corporate Governance: Best Practices*, Intellectual Property Owners Association (IPO) Articles & Reps., Trade Secrets Sec., No. 5 (2005) at 1-2, at:

<http://www.ipso.org/AM/Template.cfm?Section=Home&Template=/CM/ContentDisplay.cfm&ContentID=22924>;

[http://www.ipso.org/AM/Template.cfm?Section=Trade\\_Secrets&Template=/CM/ContentDisplay.cfm&ContentID=1572](http://www.ipso.org/AM/Template.cfm?Section=Trade_Secrets&Template=/CM/ContentDisplay.cfm&ContentID=1572).

many startup and large software firms will be eliminated and/or valuable trade secret assets lost, thereby contributing to an even greater economic and legal risk scenario.

Furthermore, the European Commission has seemingly ignored the potential impact that any decision to adopt EIFv1.0's preference for *nonproprietary and/or royalty-free* ICT technologies would have on third-country government law and policy formulation, considering that it has already managed to encourage similar adventurism within the U.S. government to reshape the American healthcare and energy sectors. For example, at the insistence of the same or similar interest groups and industry stakeholders,<sup>198</sup> the Obama administration, like the EU Commission: 1) has enacted legislative and administrative royalty and license-free government procurement open standards criteria to ensure software interoperability of electronic health records<sup>199</sup> ("the standard to govern the transmission and interoperability of medical data between healthcare facilities and insurers, doctors, pharmacies and the wider healthcare establishment")<sup>200</sup> and proposed similar new administrative rules implementing recently enacted law to ensure interoperability of electronic medical records<sup>201</sup> ("the data standard for formatting cradle-to-grave patient medical history information"<sup>202</sup>); 2) is in the process of developing royalty and/or proprietary-free government procurement open standards criteria to ensure software interoperability of evolving smart energy grid technologies and avoid vendor lock-in which, in each case, as in Europe, favors the user and consumer rather than the innovator and investor viewpoint;<sup>203</sup> and 3) has misguidedly ignored industry stakeholder claims that the adoption of such policies will negatively influence standards development

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<sup>198</sup> See *Supplement to ITSSD Comments Concerning the WIPO Report on Standards and Patents (SCP/13/2) Paragraph 44*, at 20-26 and accompanying endnotes; Lawrence A. Kogan, *How SMART are Standards that Sacrifice Intellectual Property Rights?*, *supra*.

<sup>199</sup> *Id.*

<sup>200</sup> Ken Zita, *China Healthcare ICT: Reinventing China's National Healthcare System Through Electronic Medical Records, Telecom Networks and Advanced IT Services*, *Journal of Emerging Knowledge on Emerging Markets*, Vol. 1, Issue 1 (Nov. 2009), at 52, at: [http://www.icainstitute.org/ojs/index.php/working\\_papers/article/viewFile/13/8](http://www.icainstitute.org/ojs/index.php/working_papers/article/viewFile/13/8).

<sup>201</sup> *Proposed Rule for Medicaid; Federal Funding for Medicaid Eligibility Determination and Enrollment Activities*, 75 FR 68583, 42 CFR 433 (Nov. 8, 2010) at: <http://www.gpo.gov/fdsys/pkg/FR-2010-11-08/pdf/2010-27971.pdf>.

<sup>202</sup> Ken Zita, *China Healthcare ICT: Reinventing China's National Healthcare System Through Electronic Medical Records, Telecom Networks and Advanced IT Services*, *supra*.

<sup>203</sup> See *Supplement to ITSSD Comments Concerning the WIPO Report on Standards and Patents (SCP/13/2) Paragraph 44*, at 20-26 and accompanying endnotes; Lawrence A. Kogan, *How SMART are Standards that Sacrifice Intellectual Property Rights?*, *supra*.

and law and policy formulation in China.<sup>204</sup> Indeed, the EU ICT interoperability debate has also influenced patent and technology law and standardization efforts<sup>205</sup> within several BRIC nations – Brazil, China, and India – and not for the better.

### **1. Brazil**

Since 2005, the Government of Brazil has published an evolving set of interoperability standards for electronic government known as the e-PING program, which “address technical, semantic, and organizational issues, as well promote open standards and public or free software.”<sup>206</sup> It covers federal government-to-government, federal government-to-state government, federal government-to-citizen, federal government-to-business, and federal government-to-foreign government information exchanges. The most recent version of e-Ping was released during December 2009 (‘Version 2010’).<sup>207</sup>

E-ping standards and policies are mandatory for all federal government agencies<sup>208</sup> and apply to all new and legacy systems.<sup>209</sup> As a matter of general policy, government agencies are to prioritize the adoption of ‘open standards’ meeting technical specifications wherever possible. In the absence of open standards, *proprietary standards will be accepted, but only on a temporary interim basis* until an open standard replacement can be secured.<sup>210</sup> In addition, consistent with the

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<sup>204</sup>See Karsten Gerloff, Carlo Piana, and Sam Tuke, *Defending Open Standards: FSFE Refutes BSA’s False Claims to European Commission*, Free Software Foundation Europe (10-15-2010), at: <http://www.fsf.org/projects/os/bsa-letter-analysis.en.html>.

<sup>205</sup>As early as 2005, China proposed to the WTO Technical Barriers to Trade (TBT) Committee that it further study with respect to IPR-based technologies how standardization interoperability needs at the societal level may be appropriately balanced with IPR protection needs at the innovator level, in order for standards to facilitate and eliminate barriers to international trade, especially in the case of WTO Developing Country Members which typically require technical assistance and capacity building. See *Intellectual Property Right (IPR) Issues in Standardization*, Background paper for Chinese Submission to WTO on Intellectual Property Right Issues in Standardization, Communication from the People’s Republic of China Addendum (G/TBT/W/251) (Nov. 9, 2006), at: <http://chinawto.mofcom.gov.cn/accessory/200702/1171346578955.doc>.

<sup>206</sup>*Report on the Global Meeting on Government Interoperability Frameworks 2010* (May 4-6, 2010), at 3 and 8, at: <http://www.gif4dev.net/wp-content/uploads/2010/05/Report-on-the-Global-Meeting-on-Government-Interoperability-Frameworks-2010-PDF.pdf>.

<sup>207</sup>See *e-PING Electronic Government Interoperability Standards, Reference Document Version 2010*, Brazilian Government Executive Committee of the Electronic Government (Dec. 11, 2009), at 7, at: <http://www.governoeletronico.gov.br/anexos/e-ping-versao-2010>.

<sup>208</sup>*Id.*

<sup>209</sup>*Id.* at 8.

<sup>210</sup>*Id.* at Section 3.1.

general policy, *government agencies must prioritize the use of public software and/or free software* in the implementation of interoperability standards.<sup>211</sup> For purposes of implementing such policy ‘free software’ has been defined as source code available for anyone to use, copy, and distribute in its original or modified form either free or at cost, and “is necessarily non-proprietary.”<sup>212</sup> And an ‘open standard’ is one that: 1) “enables the interoperability between several applications and platforms, internal and external;” 2) “enables application *without any restriction or fee payment*,” and 3) is capable of being “fully and independently implemented by multiple suppliers of computer programs, in multiple platforms, with *no charge relating to intellectual property* for the necessary technology” (emphasis added).<sup>213</sup> Accordingly at least one Brazilian commentator has opined that the e-Ping definition of ‘open standard’ is that contained within EIFv1.0.<sup>214</sup>

## 2. China

On November 2, 2009, the Standardization Administration of the People’s Republic of China (SAC) released proposed standardization interoperability rules<sup>215</sup> (interim draft regulations) governing the disposition of patents involved in the development or revision of both compulsory<sup>216</sup> and voluntary<sup>217</sup> national standards.<sup>218</sup> If adopted, these rules would have treated patented technologies even more harshly than would EIFv1.0.

Pursuant to the proposed rules, only patented technology that is ‘essential’ to

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<sup>211</sup>*Id.* at Section 3.2.

<sup>212</sup>*Id.* at Glossary of Acronyms and Technical Terms, at 51.

<sup>213</sup>*Id.* at 50.

<sup>214</sup>See Jomar Silva, *Standards and the Control of Communication*, in, “Citizenship and Digital Networks,” Brazilian Internet Steering Committee CGI.br (Ed. Sergio Amadeu da Silveira ©2010) at 238 and n. 4, at: [http://www.cidadaniaeredesdigitais.com.br/files/011jomar\\_ing.pdf](http://www.cidadaniaeredesdigitais.com.br/files/011jomar_ing.pdf).

<sup>215</sup>*Regulations for the Administration of the Formulation and Revision of Patent-Involving National Standards (Interim) (Exposure Draft)*, Standardization Administration of China (Nov. 2, 2009) (“hereinafter (SAC Interim Draft”), at: [http://www.iprospective.com/wp-content/uploads/2009/11/091118chinastandard\\_e1.pdf](http://www.iprospective.com/wp-content/uploads/2009/11/091118chinastandard_e1.pdf) and <http://www.giprs.org/node/575>.

<sup>216</sup>“National standards...for safeguarding human health[] and ensuring the safety of the person and of property and those for compulsory execution as prescribed by the laws and administrative rules and regulations *shall be compulsory standards*, the others shall be voluntary standards” (emphasis added). See Article 7, *Standardization Law of the People’s Republic of China*, Apr. 1, 1989, at: <http://www.sac.gov.cn/templet/english/ShowArticle.jsp?id=2325>.

<sup>217</sup>*Id.*

<sup>218</sup>See Article 2, SAC Interim Draft.

the implementation of a voluntary national standard may be incorporated into its development.<sup>219</sup> Once deemed ‘essential,’ a patented technology may be included in a voluntary national standard only if the patentee chooses to “license on a *free-of-charge*, reasonable and nondiscriminatory basis” or “on a reasonable and nondiscriminatory basis...at a price significantly lower than the normal royalties.”<sup>220</sup> A patentee’s refusal to enter into a license at all will deny the patent inclusion within such a standard.<sup>221</sup> In addition, the failure by any patentee or affiliate involved in the drafting of a voluntary national standard to ‘promptly’ disclose the existence of a technology patent during the formulation or revisions phases<sup>222</sup> will result in the deemed (implied) free licensure of the patented technology, and will trigger legal liability in the event “such disclosure failure is [subsequently] found to be a ‘purposeful concealment’<sup>223</sup> (i.e., an act of concealment that “bring[s] losses to the setting and implementation of national standards.”)<sup>224</sup>

In general, a ‘compulsory national standard,’ compliance with which is mandatory,<sup>225</sup> shall not involve any patents.<sup>226</sup> However, where “a compulsory national standard needs to involve a patent the patentee shall grant a license free of charge [i.e., royalty-free]” or shall enter into licensing negotiations with the appropriate administrative authorities.<sup>227</sup> If the patentee and the authorities fail to enter into a mutually agreeable licensing arrangement, the compulsory national standard’s release will be temporarily withheld or the patent will fall subject to a compulsory license by force of law.<sup>228</sup>

The recently released results of the U.S. International Trade Commission investigation of China’s intellectual property laws, policies, and practices clearly reflects USTR’s view that the practices called for by the SAC Interim Draft discussed

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<sup>219</sup>See Article 3, SAC Interim Draft.

<sup>220</sup>See Article 9(1)-(2), SAC Interim Draft.

<sup>221</sup>See Article 9(3), SAC Interim Draft.

<sup>222</sup> See Article 5, SAC Interim Draft.

<sup>223</sup>See Article 8, SAC Interim Draft.

<sup>224</sup>See Zhong Yi, Ni Jia and Liu Jiayin, *The Comparison and Commentaries on Version 2009 and 2004 of Regulations on National Standard Involving Patent (Interim)*, Global IPRs Research Center (Nov. 21, 2009), at: <http://www.giprs.org/node/577>.

<sup>225</sup>See Article 14, *Standardization Law of the People’s Republic of China*, *supra*.

<sup>226</sup>See Article 12, SAC Interim Draft.

<sup>227</sup> See Article 13, SAC Interim Draft.

<sup>228</sup>*Id.*

above are “in conflict with those followed by standards developing organizations in other countries, where reasonable and nondiscriminatory (RAND) licensing policies are incorporated into the standards.”<sup>229</sup> When combined with China’s national ‘indigenous innovation’ policy, the purpose of which is to promote “the development of technological innovation in domestic firms, eventually leading to the ownership of their own core IP rights,”<sup>230</sup> it is clear that the proposed Chinese standardization interoperability rules (interim draft regulations) if adopted would have had a severe impact on developed country renewable/alternative energy companies, especially considering that most manufacturing of solar panels windmills, hybrid auto batteries, and compact fluorescent light bulbs occurs in China.<sup>231</sup>

Pursuant to and in implementation of Article 17 of the SAC Interim Draft, the General Administration of Quality Supervision, Inspection and Quarantine, and the Standardization Administration of the People’s Republic of China jointly issued during January 2010 draft *Disposal Rules for the Inclusion of Patents in National Standards*.<sup>232</sup> Although these rules apply directly to the formulation/revision of public national standards, they may be referred to within and thereby apply indirectly to private industry standards and local standards under formulation/revision.<sup>233</sup> Unlike the SAC Interim Draft, the Disposal Rules require disclosure of not only

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<sup>229</sup>*China: Intellectual Property Infringement, Indigenous Innovation Policies, and Frameworks for Measuring the Effects on the U.S. Economy*, United States International Trade Commission Investigation No. 332-514 USITC Publ. 4199, (Nov. 2010), at 5-19, at: <http://www.usitc.gov/publications/332/pub4199.pdf>.

<sup>230</sup>See Peng Heyue, *China’s Indigenous Innovation Policy and its Effect on Foreign Intellectual Property Rights Holders*, China Law Insight, King (Sept. 9, 2010), at: <http://www.chinalawinsight.com/2010/09/articles/intellectual-property/chinas-indigenous-innovation-policy-and-its-effect-on-foreign-intellectual-property-rights-holders/>.

<sup>231</sup>“Only one of the top ten solar photovoltaic (PV) producers in the world is American; only one of the top ten wind turbine producers is American; and only two of the top ten advanced battery producers are from the U.S. China and Japan host seven of the ten leading producers of photovoltaics. India’s Suzlon Corporation is a leading producer of wind turbines, another renewable energy category dominated by Chinese firms.” Charles Ebinger and Govinda Avasarala, *Transferring Environmentally Sound Technologies in an Intellectual Property-Friendly Framework*, Brookings Policy Brief 09-07, *supra* at 30.

<sup>232</sup>See *Disposal Rules for the Inclusion of Patents in National Standards*, General Administration of Quality Supervision, Inspection and Quarantine, and the Standardization Administration of the People’s Republic of China, Draft for Comments (1/21/10) (English version) (hereinafter referred to as the “Disposal Rules”) referenced in *CNIS is Soliciting the Public Comments about the Draft Disposal Rules for the Inclusion*, Quality Brands Protection Committee, China Association of Enterprises With Foreign Investment website (Feb. 2010) at: [http://www.qbpc.org.cn/Activities/Upcoming Events/2010-02/24\\_968.html](http://www.qbpc.org.cn/Activities/Upcoming%20Events/2010-02/24_968.html).

<sup>233</sup>See Article 1, Disposal Rules.

published and issued patents, but also of published patents awaiting examination and non-published patents (patents pending) during the national standard formulation and revision phases.<sup>234</sup> The sample disclosure form accompanying the Disposal Rules requires at least a summary description of the technology relating to the known or pending patent(s) and a description of those features within the specific technical standard in question that relate to such patent(s).<sup>235</sup> According to at least one legal commentator the interests of holders of pending patents will be placed at risk since the rules fail to provide any assurance of confidentiality prior to patent publication.<sup>236</sup>

As concerns the licensing of essential patents,<sup>237</sup> the Disposal Rules provide patent holders with the same three options as does the SAC Interim Draft, namely: 1) a royalty-free license on reasonable and nondiscriminatory terms (RF-RAND); 2) a royalty fee-based license on reasonable and nondiscriminatory terms (RAND); or no license at all.<sup>238</sup> However, a royalty-based license issued under option 2 of the Disposal Rules need not be “at a price significantly lower than the normal royalties” as required by the SAC Interim Draft. In addition, where a patent holder refuses to license a patented technology both regimes require its exclusion from the national standard.<sup>239</sup> However, unlike the SAC Interim Draft, the Disposal Rules do not impose a penalty on a patentee for nondisclosure of an essential patent or for failing to negotiate a mutually agreeable licensing arrangement with the authorities, which may be attributable to their process/procedural rather than substantive nature.<sup>240</sup>

At least one legal commentator has emphasized that the ministerial nature of the SAC Interim Draft and the Disposal Rules precludes the imposition against private entities or individuals of obligations and/or penalties not otherwise prescribed by law – i.e., enacted by the legislature – the People’s Congress or its standing committee – or by a State administrative regulation. Consequently, in the absence of a

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<sup>234</sup>See Article 4.1.1 and 4.1.2, Disposal Rules.

<sup>235</sup>See Article 4.1.2, Disposal Rules and Form A.1 Patent Information Disclosure Form, Appendix A, accompanying Disposal Rules.

<sup>236</sup>See Freshfields Bruckhaus Deringer LLP, *Patents and Standard-Setting in China*, (Mar. 2010), at 2, at: <http://www.freshfields.com/publications/pdfs/2010/Mar10/27730.pdf>.

<sup>237</sup>See Article 3.1, Disposal Rules.

<sup>238</sup>See Articles 4.3.2(a)-(c), 3.2-3.3, Disposal Rules and Form A.3 Patent License Statement Form, Appendix A accompanying Disposal Rules.

<sup>239</sup>See Article 5.3.5, Disposal Rules.

<sup>240</sup>See *Patents and Standard-Setting in China*, *supra* at 2.

compulsory licensing law or administrative regulation, the implied compulsory license imposed by the SAC Interim Draft would not be binding upon private entities or individuals.<sup>241</sup> Nevertheless this would not preclude the State Intellectual Property Office (SIPO) from “us[ing] the Interim Regulations Draft as a reference point in deciding whether to issue a compulsory license, because it is authorized to issue compulsory licenses *in the public interest*.”<sup>242</sup>

### 3. *India*

On November 12, 2010, the Indian government finalized its national policy on open standards for e-governance 2010,<sup>243</sup> ending approximately three years of debate<sup>244</sup> and amid concern that “Europe’s equivalent European Interoperability Framework has been hijacked by rights holders.”<sup>245</sup> The policy’s purpose is to “provide a set of guidelines for identifying...Open Standards for the consistent, standardized and reliable implementation of e-Governance solutions...[in order] to facilitate interoperability between systems developed by multiple agencies...promote[] technology choice, and avoid[] vendor lock-in.”<sup>246</sup> The policy applies “at [the] interface and data archival level[s] of all systems used for e-Governance...[and]...is applicable to all prospective eGovernance systems including businesses (G2G [government-to-government], G2B[government-to-business], G2E[government-to-employee] and G2C)[government-to-citizen]...”<sup>247</sup> And, owners of ‘legacy systems’ will be responsible for ensuring that the interfaces between legacy and existing systems

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<sup>241</sup>*Id.* at 1.

<sup>242</sup>*Id.* (emphasis added). See also *Amendment Provides New Road Map for Compulsory Licenses*, State Intellectual Property Office of the P.R.C., (Nov. 30, 2009), at: [http://www.sipo.gov.cn/sipo\\_English/news/iprspecial/200911/t20091130\\_482836.html](http://www.sipo.gov.cn/sipo_English/news/iprspecial/200911/t20091130_482836.html) (discussing how, “The amendment makes it more feasible and likely for compulsory licenses to be granted in the area of pharmaceuticals under a new Article 50 and semiconductor technology under a new Article 52.”).

<sup>243</sup>See *Policy on Open Standards for e-Governance*, Government of India Ministry of Communications & Information Technology Department of Information Technology (Nov. 12, 2010), at: <http://egovstandards.gov.in/>.

<sup>244</sup>See Michael Tiemann, *Indian Open Standards Policy for e-Governance Finalized*, Open Source Initiative blog (Nov. 12, 2010), at: <http://www.opensource.org/node/551>.

<sup>245</sup>Mark Ballard, *India Mandates Open IT Standards as Fears Grow Over EU Policy*, ComputerWeekly.com (Nov. 19, 2010), at: <http://www.computerweekly.com/Articles/2010/11/19/244014/India-mandates-open-IT-standards-as-fears-grow-over-EU.htm>.

<sup>246</sup>*Policy on Open Standards for e-Governance*, *supra* at Preamble 2<sup>nd</sup> paragraph and Section 1.

<sup>247</sup>*Id.* at Sections 3.1-3.2.

and between new versions of legacy and existing systems adhere to the mandatory characteristics of open standards,<sup>248</sup> i.e., that they are interoperable.<sup>249</sup>

In fulfillment of these policy objectives, the Indian government will adopt a single *royalty-free* ‘open standard’ for each specific purpose within a given domain which meets six mandatory characteristics.<sup>250</sup> Two of these characteristics incorporate the key goals of the FOSS movement whose efforts were assisted by the media, the academic community, civil society pressure groups and a number of government agencies:<sup>251</sup> 1) “The Patent claims necessary to implement the Identified Standard shall be made available on a Royalty-Free basis for the life time of the Standard;”<sup>252</sup> and 2) “[The] Identified Standard shall be recursively open<sup>253</sup> as far as possible.”<sup>254</sup> However, contrary to the FOSS movement’s desire to exclude proprietary technologies from the definition of an ‘open standard,’ the Indian government policy provides that a “standard with patents can be considered as [an] Open standard if [it] adheres to [the] mandatory characteristics of the Policy.”<sup>255</sup> In the event an open standard fails to meet all of the mandatory characteristics, the policy allows for the temporary adoption of an interim standard that progressively relaxes the mandatory characteristics in a prescribed order “until the standard becomes eligible”.<sup>256</sup> For example, the life-time, royalty-free characteristic is the first that must be relaxed to allow for the consideration of standards with FRAND and RAND terms bearing noroyalty payment.<sup>257</sup> If royalty-free FRAND or RAND standards are unavailable,

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<sup>248</sup>*Id.* at Section 3.3.

<sup>249</sup>“The owner of the application will have to ensure that bridges are built, that is the existing applications are interoperable with newer ones. The onus will be on the vendor to ensure that all future versions of the same process comply with specified open standards. This will also protect government data by unlocking it from the influence or control of any particular vendor.” See Deep Kurup, *A Radical Shift in e-Governance*, THE HINDU, (Nov. 24, 2010), at: <http://www.thehindu.com/todays-paper/tp-features/tp-opportunities/article908199.ece>.

<sup>250</sup>*Id.* at Section 4.

<sup>251</sup>See Venkatesh Hariharan, *Open Standards Policy in India: A Long, But Successful Journey*, OpenSource.com (Nov. 19, 2010), at: <http://opensource.com/government/10/11/open-standards-policy-india-long-successful-journey>.

<sup>252</sup>*Id.* at Section 4.1.2.

<sup>253</sup>“The mandatory characteristics are applicable recursively to the normative references of the Identified Standard i.e. standards which are essential for the implementation of the Standard of a particular version of the Standard.” *Id.* at A-II-9, Annexure –II Frequently asked Questions (FAQs).

<sup>254</sup>*Policy on Open Standards for e-Governance, supra* at Section. 4.1.4.

<sup>255</sup>*Id.* at A-II-3, Annexure –II Frequently asked Questions (FAQs).

<sup>256</sup>*Id.* at Section 4.3.

<sup>257</sup>*Id.* at Section 4.3(a).

then a royalty-based FRAND or RAND standard may be considered.<sup>258</sup> In setting forth a definition of a royalty-free standard, the policy document brings these distinctions in terms to light by emphasizing the non-monetary consideration aspects of the underlying license.<sup>259</sup> With the adoption of this policy, India has joined Brazil in becoming the second country in the developing world to mandate ‘open’ royalty-free, and effectively, proprietary-free standards in e-governance.<sup>260</sup>

#### 4. *South Africa*

While not among the BRIC nations, South Africa “is [t]he leader of information and communication technology (ICT) development in Africa...[and]...has become “the 20<sup>th</sup> largest consumer of IT products and services in the world...[T]he country’s ICT and electronics sector [is recognized] as an increasingly important contributor to South Africa’s gross domestic product (GDP).”<sup>261</sup> “The South African Ministry of Trade and Industry (DTi) has identified ICT and electronics among 11 priority sectors that have the highest growth and investment potential in South Africa.”<sup>262</sup>

It is therefore not surprising that the South African government, a leading member of the WIPO DAG, released its own national eGovernment ICT interoperability framework during 2007. Like the interoperability frameworks previously discussed in this working paper, the South African framework broadly defines ‘open standards’ as standards containing specifications that are “documented, *freely implementable* and available to the public at large.”<sup>263</sup> The MIOS *is* applicable to all existing as well as legacy government systems used by South African national, provincial and local government departments and agencies, and covers all intra-government agency, government-to-citizen, government-to-employee and

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<sup>258</sup>*Id.* at Section 4.3(c).

<sup>259</sup>*Id.* at Annexure – I, “Royalty-Free (RF).”

<sup>260</sup>See Deep Kurup, *A Radical Shift in e-Governance*, THE HINDU (Nov. 24, 2010), *supra*.

<sup>261</sup>*ICT and Electronics in South Africa*, Key Sectors, South Africa.info (Oct. 2008) at: <http://www.southafrica.info/business/economy/sectors/ict-overview.htm>.

<sup>262</sup>*Emerging ICT Market Strategy: South Africa*, Department of Innovation, Industry & Regional Development, State of Victoria (Multimedia Victoria ©2007) at 6, at: <http://www.mmv.vic.gov.au/Assets/606/1/MMVSthAfricaStrategyNov2007.pdf>.

<sup>263</sup>*Minimum Interoperability Standards (MIOS) for Information Systems in Government* (Version 4.1) (2007) (emphasis added), at 9-10, at: [http://www.i-gov.org/images/articles/4760/MIOS\\_V4.1\\_final.pdf](http://www.i-gov.org/images/articles/4760/MIOS_V4.1_final.pdf); [http://www.dpsa.gov.za/documents/egov/MIOSVer4\\_1\\_2007.pdf](http://www.dpsa.gov.za/documents/egov/MIOSVer4_1_2007.pdf).

government-to-third party interactions consisting of the exchange of data and information access.<sup>264</sup> The South African government also recommends that MIOS be implemented “in all public sector procurements and major upgrades to...departmental legacy systems..., [even for] systems that fall outside the scope and mandate” of MIOS.<sup>265</sup>

And, as in the case of some other of national governments’ frameworks, South Africa has drawn a strong correlation between ICT interoperability and ‘open standards’ largely for economic/competitiveness and ostensibly ‘public interest’ reasons. While acknowledging the different “definitions of open standards which emphasize different aspects of openness, including of the resulting specification, the openness of the drafting process, and the ownership of rights in the standard”, the framework nevertheless sets forth a list of criteria the complete satisfaction of which is mandatory in order for a standard to be considered ‘open’. Among other things, for example, “the intellectual property rights required to implement the standard (e.g., essential patent claims) [must be] irrevocably available without any royalties attached” and there must be “no reservations regarding reuse of the standard.”<sup>266</sup> Perhaps corporate innovators and investors may derive some comfort from the South African government’s willingness, for reasons of pragmatism, to adopt other than fully ‘open’ standards as so defined – i.e., to “take into account...the degree of openness...when selecting an appropriate standard [that does] not necessarily conform to being open in all respects”,<sup>267</sup> as in the case where a fully open royalty-free standard is unavailable or is unsupported by the market and an otherwise compatible FRAND, royalty-based specification is.

#### **IV. CONCLUSION**

Multinational businesses should be concerned with the developments described in this WORKING PAPER. National and regional governments in both developing and developed countries are pursuing regulatory agendas that purportedly

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<sup>264</sup>Sections 1.2.1, 1.2.2, and 1.2.3. *Id.*

<sup>265</sup>Section 1.2.4. *Id.*

<sup>266</sup>Section 2.3.1. *Id.*

<sup>267</sup>*Id.*

advance the ‘public interest’ which are undermining economically valuable patents and trade secrets. In the process, these governments have intentionally or unwittingly increased the already high level of legal and economic uncertainty currently borne by high technology companies operating in the pharmaceutical and biotech, medical devices, clean and renewable energy technologies, clean technology services, and ICT sectors, as well as their investors. As a result, these investors may ultimately decide to modify their investment strategies such that capital funds previously committed and/or new capital funds necessary to enable small and medium-sized entrepreneurs (SMEs) and multinational innovators to conduct basic R&D and undertake technology-critical commercialization efforts will be diminished or prematurely withdrawn and diverted to less risky and innovative ventures.

The international trade agreements that fall under the auspices of the World Trade Organization (WTO) acknowledge that proposed or enacted regulatory changes in one country can and often do affect the investment, trade, and regulatory landscapes in another, and aim to prevent one member country’s laws and regulations from creating *non-tariff*-related trade and investment barriers that impede the flow of goods and/or services offered for sale and/or sold by the citizens of another. Implicit in this recognition is an unspoken appreciation for the economic and legal uncertainties and the associated market risks such measures may engender. Consequently, consistent with the mutual concessions made by each WTO member State at the Uruguay Round of trade negotiations, WTO member state governments are obliged as a matter of due process and transparency to consider other WTO members’ economic interests and to notify them promptly *before enactment* of proposed legislative and/or regulatory measures that could potentially affect the property and due process rights of citizens engaged in the international trade of goods and services.<sup>268</sup> This obligation applies as well to WTO Member State laws and regulations that may possibly impair the exploitation by WTO member citizens of

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<sup>268</sup>See Article 12.4 (relating to *Administration*) of the Sanitary and Phytosanitary (SPS) Agreement and accompanying Annex B (relating to *Transparency Of Sanitary And Phytosanitary Regulations*; Articles 2.9 (relating to *Preparation, Adoption and Application of Technical Regulations by Central Government Bodies*), 3.2 (relating to *Preparation, Adoption and Application of Technical Regulations by Local Government Bodies and Non-Governmental Bodies*), and 10 (*Information About Technical Regulations, Standards and Conformity Assessment Procedures*) of the Technical Barriers to Trade (TBT) Agreement.

validly held intellectual property (patent and trade secret) rights and trade in high technology goods in which such IP rights are embedded,<sup>269</sup> in addition to WTO Member State laws and regulations that may “condition[] the approval of [IP-related] foreign investments on compliance with laws, policies or administrative regulations that favor domestic [technology-based] products” for the direct or indirect purpose of achieving industrial and economic development policy goals.<sup>270</sup> Furthermore, the obligations to ensure ‘national treatment’ and transparency and to prevent ‘like’ product discrimination or the creation of disguised restrictions on international trade also extend to the regulatory promulgations of a number of central and sub-central government entities seeking to procure high technology products and related services beyond certain thresholds.<sup>271</sup>

Arguably, the inquiry and analysis that national and/or regional governments and policymakers should undertake in each market (within developed *and* developing countries) to ascertain the presence and degree of regulatory and policy risk and its impact on foreign as well as domestic high technology innovation and investment should be the same, entailing a broad examination of the domestic *purposes and* the domestic and cross-border *effects* of the particular measure(s) in question. The following inquiries should be made:

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<sup>269</sup>Article 63.2 of the WTO Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement (relating to *Transparency*) “requires Members to notify the laws and regulations made effective pertaining to the subject-matter of the Agreement (the availability, scope, acquisition, enforcement and prevention of the abuse of intellectual property rights),” which the WTO Secretariat, pursuant to TRIPS Article 2.4, then “transmits to the International Bureau of WIPO [World Intellectual Property Organization]...” *Notifications Under the TRIPS Agreement*, World Trade Organization website at: [http://www.wto.org/english/tratop\\_e/trips\\_e/intel7\\_e.htm](http://www.wto.org/english/tratop_e/trips_e/intel7_e.htm).

<sup>270</sup>See Article 6 (relating to *Transparency*) of the Trade Related Investment Measures (TRIMs) Agreement. See also WTO Trade Related Investment Measures (TRIMs) Agreement, Trade Policy Directorate, (Aug. 2001), at: <http://webarchive.nationalarchives.gov.uk/tna/+http://www.berr.gov.uk/files/file22992.pdf>. The function of the Trade Policy Directorate appears to have been incorporated into the Department for Business, Innovation and Skills (BIS). See *About the Department for Business, Innovation and Skills*, Civil Service website at: <http://www.civilservice.gov.uk/my-civil-service/networks/professional/ges/what/about-bis.aspx>.

<sup>271</sup>See Articles III.1(a) and (b), XIX and XXIII.2 of the 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](http://www.wto.org/english/docs_e/legal_e/gpr-94_e.pdf); see also Uruguay Round Trade Agreements, Texts of Agreements, Implementing Bill, Statement of Administrative Action and Required Supporting Statements, H.R. Doc. 103-116, 103d Cong. 2d Sess. (1994).

- Did economic or civil society interests derive a direct or indirect benefit from the enactment, repeal, or maintenance of a given regulation(s) (e.g., compulsory licensing) or the adoption of ostensibly private standards?
- Did this occur as the result of particular constituencies' 'home court' advantage?
- Did this occur at the expense of competing foreign interests?
- Did such measure(s) qualify as permissible trade-related political safeguard measure(s)?
- Were less intrusive and trade restrictive alternatives available other than those selected?

The answers to these questions may ultimately help determine whether WTO rules have been violated in the process.

It must be emphasized that the use of an expressed preference (as opposed to a direct mandate) is a nuanced way for governments to say that if you seek a government contract you must satisfy our demands, which can amount to a de facto mandatory imposition. It is possible, therefore, that such a preference can also rise to the level of a potential trade barrier if, contrary to WTO rules, its adoption, implementation, or enforcement by governments: 1) deny 'national treatment' to foreign high technology imports; 2) directly or indirectly 'discriminates' against 'like' competing foreign and domestic high technology products; or 3) effectively creates an unnecessary (e.g., overly costly and burdensome) obstacle to international trade that could have otherwise been avoided through the selection of alternative mechanisms – i.e., it is not the least trade-restrictive alternative available – to satisfy a legitimate national policy objective.<sup>272</sup>

Indeed, GATT/WTO case law reveals that government preferences or recommendations can potentially rise to the level of indirect governmental mandates even if the government itself does not directly impose the mandate, but rather, private standards bodies or consortia do. In cases where governments indirectly facilitate development, promotion, enactment, adoption, implementation and/or enforcement of government policy preferences and/or prescriptions by private standards bodies or

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<sup>272</sup>See *Can Government Intervention Sustain Economic Incentive, Technological Innovation, and Capital Flows?*, Précis of ITSSD WIPO Side-Bar Event, *supra* at 13.

consortia, GATT/WTO case law holds that there may exist enough of an imprimatur of government involvement in a given case to hold the government culpable under WTO law. Thus, the relevant inquiry in each case should be whether foreign high technology competitors employing a product-based business model dependent on patent protection have been directly or indirectly disadvantaged economically as the result of a preference for a business model based on royalty-free and/or proprietary-free services.<sup>273</sup>

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<sup>273</sup>See 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](http://www.itssd.org/GTCJ_03-offprints%20KOGAN%20-%20Discerning%20the%20Forest%20from%20the%20Trees.pdf).