

PERSPECTIVE

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Protecting Patent Holders of Clean Technology

Almost two decades ago, 154 nations agreed to reduce atmospheric concentrations of greenhouse gases to prevent dangerous anthropogenic interference with the climate system. Since the Earth Summit and the inception of the United Nations Framework Convention on Climate Change, the world has seen a great deal of investment in research and development by government and private sectors in the area of clean technology. These efforts led to inventions and their concomitant intellectual property rights, as exemplified by the steady increase in patents over the last decade.

When ministers and officials from 192 countries took part in the 15th Conference of the Parties at Copenhagen in December 2009, some suggested how best to diffuse environmentally sound technologies to counter global warming. Options proposed included revoking patent rights, compulsory licensing, royalty-free patent pooling, and exempting from patentability relevant subject matter. None of these options is included in the Copenhagen Accord. Future climate talks may lead to a different result. Moreover, member countries of the World Trade Organization already have certain flexibilities based on the Trade Related Aspects of Intellectual Property agreement that may come into play should global warming so necessitate. These flexibilities include compulsory licensing, as well as exemption from patentability. The United States also has compulsory licensing laws that apply in rather limited circumstances, including march-in rights for those who have received federal funding. What remains a common theme in these laws and applicable treaties is whether the patent holder is working the invention or otherwise licensing it on reasonable terms to those who ask. To this end, there are a number of proactive courses of action that intellectual property rights holders may consider in an effort to control their own destiny for their own benefit as well as society as a whole.

The proactive intellectual property rights holder can choose from a number of different technology sharing mechanisms. In addition to patent pools, another mechanism includes a patent commons, which is somewhat of a variation on a patent pool. Usually, patent holders pledge

their patents to the commons subject to some conditions. The pledge is generally for widespread use without royalty payments, which makes it different from a patent pool.

The Eco-Patent Commons was launched in January 2008 by IBM, Nokia, Pitney Bowes, and Sony in partnership with the World Business Council for Sustainable Development. Over 100 eco-friendly patents have been pledged by eleven companies who covenant not to assert their rights against those using technologies in the Commons for environmental benefit. The Creative Commons is also planning to launch a green commons called the Green Xchange in early 2010.

Other technology sharing mechanisms include a license of right, which is offered in some countries such as the United Kingdom. When a patent applicant agrees to allow a license of their technology to anyone requesting it, the applicant will receive a reduction in patent fees. The license terms are negotiated or decided by the country offering the license of right. Another sharing mechanism includes a non-assertion pledge or covenant that legally binds a patent holder not to assert their patent against anyone using the technology. This kind of covenant can be issued on conditions, such as only for environmentally friendly uses. Humanitarian or preferential licensing can also be used to provide licenses to certain beneficiaries on highly favorable or free terms. Open innovation, commons-based peer production, and distributed innovation are also sharing mechanisms, each based on collaborative technological platforms for innovation.

Direct foreign investment is when an entity from one country builds a factory in another country, acquires a lasting interest in a company in a foreign country, establishes a joint venture with a company in another country, or the like. Direct foreign investment is one way for rights holders to transfer technology and further their own interests simultaneously.

One example of successful direct foreign investment involves the General Electric Co. and Shenhua Group, China's biggest coal producer, partnering to build integrated gasification combined cycle (IGCC) facilities across China. IGCC is considered the "clean coal" alternative to conventional plants because it is more efficient and improves air quality. General Electric is one of several United States energy companies to sign a deal like this recently.

Applied Materials, Inc., the world's biggest supplier of solar-manu-

facturing equipment, recently completed the largest research and development facility in China. Applied Materials has gone from \$0 to \$1 billion in solar revenue over the past two years, and its Chief Technology Officer, who is relocating to China, stated that China "will be the biggest solar market in the world."

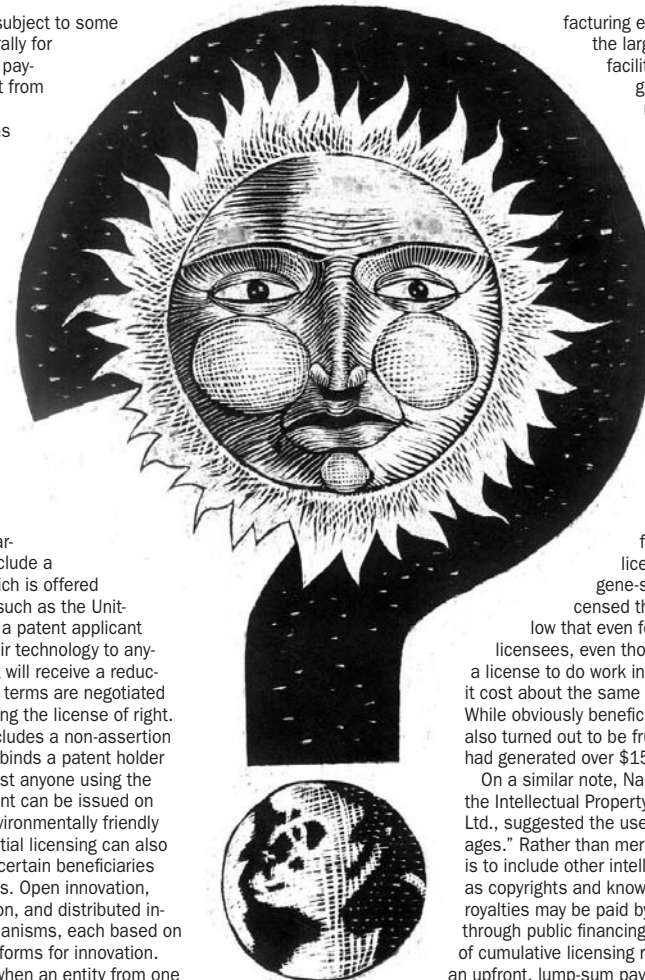
Another private sector approach is licensing to scale. The concept is akin to volume selling. Basically, charge a lower price, sell more, and everybody wins. Where a clean technology is amenable to licensing to scale, this measure will permit rapid diffusion of clean technology for the benefit of all.

Stanford University and the University of California successfully utilized this kind of mass licensing with their Cohen-Boyer gene-splicing patents. The universities licensed these patents at a rate "so pitifully low that even foreign companies signed on as licensees, even though they would never need to take a license to do work in their home countries," because it cost about the same as a non-infringement opinion. While obviously beneficial to the public, this approach also turned out to be fruitful for the universities as they had generated over \$155 million as of 1996.

On a similar note, Naoto Kuji, the General Manager of the Intellectual Property Division of Honda Motor Co., Ltd., suggested the use of "green technology packages." Rather than merely license a patent, the thought is to include other intellectual property rights, such as copyrights and know-how, as a package. Ongoing royalties may be paid by a developing country licensee through public financing. The licensor gains the prospect of cumulative licensing royalties that may be greater than an upfront, lump-sum payment, while the licensee obtains a bundle of rights for efficient technology diffusion.

While most agree that global warming is real and clean technologies are needed to counter global warming, not everyone agrees how clean technologies should be diffused. To counter those that have proposed and will undoubtedly continue to propose weakening or eliminating intellectual property rights, clean technology innovators should not be passive and wait for forced technology diffusion measures to be implemented. Patent holders that take assertive, proactive steps now will have a much better chance of protecting their intellectual property rights in the long run.

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