

Transborder Licensing: A New Frontier for Job Creation

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Licensing is like a marriage. It can be a beautiful thing, but there has to be total transparency and trust between both parties and if it is not a win-win situation—you're going down a road of ruin.¹

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1. LICENSING EXECUTIVES SOCIETY (U.S. & CAN.), INC., THE BASICS OF LICENSING 1, <http://lesusacanada.org/MainNav/Resources/Publications/licensingbasics.aspx> (last visited Oct. 28, 2010).

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I. INTRODUCTION

Transborder licensing involves the creation and disposition of intellectual property (IP), such as copyright, patent, trademark, or trade secret, across geographical boundaries. Licensing is a contractual agreement in which the owner of IP, called the licensor, agrees to permit or restrict the rights, privileges, or immunity of another, called the licensee, to use informational assets (assets).

Assets can be property, such as music that is licensed for play on the radio or use in a television show, a book that is marketed and distributed for sale by a publisher, or a script that is made into a movie. Assets can also be a design or a process for manufacturing a finished product; or the know-how, formula, research and development, or intellectual capital used to develop or produce something of value, such as software, technology, drugs, or medical devices. Finally, assets can also be a physical component that is used with other assets to produce something of value. Most IP gives the owner a bundle of rights, which may be licensed together or separately. Ideally, licensing technology or intellectual property expands the market for the product or service, creating new jobs to meet the demand, without a huge expenditure of capital. The compensation may be a royalty that is paid as a lump sum or on a recurring basis over the term of the license.

As a field of study, transborder licensing focuses on the legal, regulatory, and business issues governing the export and import of know-how and technology in industries such as telecommunications, computer and information technology, biotech, and clean energy between two or more parties and/or the United States and governments from different countries. Transborder licensing is interdisciplinary, involving legal issues in business, licensing, employment, immigration, and tax.

Transborder licensing is an emerging field of legal practice and business transactions because America's most valuable asset, its intellectual capital, is being underutilized as a vehicle for building wealth. Foreign students flock to the United States for education. The demand for U.S. technology in biotech, bio-fuels, and information technology is unparalleled. Research universities and professional schools own a treasure trove of intellectual property created through collaborations between faculty, governments, and private industry. These collaborations are encouraged and supported by academic and research institutions and

governments around the world. Under laws such as the Bayh-Dole Act, ownership and disposition of IP is created through government-sponsored research grants to small business enterprises, universities, and nonprofit organizations.² As such, technology transfer provides the best and most reliable access to innovation and the promise for job creation.

On March 11, 2010, President Barak Obama issued an Executive Order to launch the National Export Initiative (NEI) to foster job creation for Americans by doubling U.S. exports within the next five years.³ NEI efforts include expanding trade promotion and advocacy for small- and medium-sized enterprises through education outreach, improving access to credit for businesses that want to export, and enforcing trade laws and intellectual property.⁴ In the first quarter of 2010, U.S. exports of goods and services increased by 16.7%, for a total of \$434 billion.⁵ Much of the increase was due to financing available through the Export-Import Bank of the United States.⁶ As a result of lending activities, the increase in exports was estimated to have created 109,000 jobs, up from 61,000 jobs for the same period in 2009.⁷ With firm support from the Obama Administration, the United States may well be on its way to reaching its five-year target of two million additional jobs.⁸

This Article explores why entrepreneurs should consider transborder licensing as a way to increase markets and create jobs. While transborder licensing can involve both goods and services, this Article focuses on exporting nondefense, non-security-related services and intellectual capital, and it explores how the U.S. government can

2. 35 U.S.C. §§ 200-212 (2000). The Bayh-Dole Act created a uniform patent policy among the federal agencies that fund research, which allows universities, small business enterprises, and nonprofits to retain title in materials, products, and inventions created under federal grants.

3. Exec. Order No. 13,534, 75 Fed. Reg. 12,433 (Mar. 11, 2010).

4. Press Release, U.S. Dep't Com., U.S. Commerce Secretary Gary Locke Encourages Export Expansion (May 11, 2010), <http://www.commerce.gov/news/press-releases/2010/05/11/us-commerce-secretary-gary-locke-encourages-export-expansion>.

5. Press Release, Marianna Ohe, Exp.-Imp. Bank U.S., U.S. Exports Rise 16.7 Percent in First Quarter: On Track to Meet President's Goal of Doubling Exports over the Next Five Years (May 18, 2010), http://www.exim.gov/pressrelease_print.cfm/AD452E0C-97D9-503D-97595B2DD89B38DD/. "The largest percentage increases occurred in Taiwan (80%), Korea (66.2%), Malaysia (49.2%), and China (46.6%)." *Id.*

6. *Id.* The Export-Import Bank of the United States is the official export credit agency of the United States. It is an independent, self-sustaining federal government agency, which finances sales of U.S. exports to emerging markets throughout the world, and provides loan guarantees, export credit insurance, and direct loans. *Id.*

7. *Id.*

8. Press Release, U.S. Commerce Secretary Gary Locke Encourages Export Expansion, *supra* note 4.

facilitate the development of an industry of support professionals to help U.S. companies navigate through the regulatory complexities.

Part II of this Article will discuss exports generally and explain the life cycle of a typical patent. Part III will show how current population and foreign business ownership trends necessitate studying how trade is conducted in the United States and abroad, and discuss potential opportunities for U.S. job creation. Part IV will explore the complexity of navigating through the multitude of federal agencies that regulate exports, which often discourage U.S. businesses that want to export their technology but need assurances and advice on how to minimize unforeseen risks. The author next proposes creating a quasi-public “Virtual Protocol” that will allow inventors, authors, and registered and unregistered IP owners to identify prospective partners, track IP licensed abroad, and notify infringers of violations. This Virtual Protocol can be accessible to agencies such as the United States Patent and Trademark Office that grants IP protections; the United States Commerce Department that licenses exports; and the Justice Department and Federal Bureau of Investigation (FBI), which enforce IP protections. This Article concludes that the environment to foster transborder licensing has to be developed with active participation from academic and research institutions along with their students and alumni, and should integrate technology to achieve maximum benefits.

II. OVERVIEW OF TRANSBORDER LICENSING

A. *Exports Generally*

Exports are an integral part of the U.S. economy. In 2009, U.S. exports accounted for 11% of the nation’s gross domestic product and supported nearly ten million American jobs.⁹ For every \$1 billion in exports, 6250 manufacturing jobs were created or supported.¹⁰ Industries such as aviation, machinery, and electronic products now depend on exports for up to half of their sales.¹¹

Historically, U.S. companies have not exported to other countries because the risks were perceived as too high. Companies had to deal with language barriers, different cultures, lack of transparencies in the rules, lack of financing, and the threat of nationalization. In fact,

9. *Id.*

10. *Id.*

11. See Press Release, U.S. Dep’t Commerce, Increased Exports Assists Economic Recovery and Job Creation (Feb. 3, 2010), <http://www.commerce.gov/news/Press-releases/2010/02/03/increased-exports-assists-economic-recovery-and-job-creation>.

according to the Department of Commerce, only 1% of all U.S. companies export their goods and services abroad; and of those, 58% export to only one country.¹² Most of these companies are publicly traded, so few small business enterprises (SBE)¹³ or medium business enterprises (MBE) (collectively referred to as SBEs) export.¹⁴ In the 2009 fiscal year, U.S. firms reported 12,335 export successes that were assisted by the U.S. Department of Commerce's Commercial Service.¹⁵ Only 832 of these successes were from SMEs.¹⁶ This is an area of concern for the government, as most innovation occurs from SMEs.¹⁷ Lack of financing, access to capital, and the complexity of the process have been primary reasons for little export activity among SMEs.

In a typical export scenario, a U.S. company has a product or service that has an established market in the United States and is looking to expand, so it selects a country and must find an agent or distributor who will sell its product or license its technology to one or more companies abroad.¹⁸ In another scenario, an individual or company in another country may import parts, raw materials, or technology into the United States to assemble a finished product that the company is interested in reexporting abroad.¹⁹ Finally, a company may outsource the manufacturing or development of a product abroad, which will be reexported abroad or imported back into the United States for domestic distribution.

In each of these situations there are a variety of issues, such as finding a reputable partner, distributor, or agent; minimum local ownership requirements; stringent local labor law; fraud and corruption; obtaining a license; and being aware of applicable tariffs or other trade barriers to ensure that the venture is cost effective and profitable for the U.S. company. One misstep could result in not only loss of money, but nationalization of the business, and ultimately bankruptcy. This is where transborder licensing may provide ways to minimize some of these risks.

12. Press Release, Tim Truman, Int'l Trade Admin., Export Promotion Linked to Job Creation (Dec. 9, 2009), http://www.trade.gov/press/press_releases/2009/exports_120909.

13. See Small Business Size Regulations, 13 C.F.R. § 121 (2010).

14. *Id.*

15. Truman, Press Release, *supra* note 12.

16. *Id.*

17. See ROBERT D. ATKINSON, THE INFO. TECH. & INNOVATION FOUND., CREATING JOBS THROUGH EXPORTS AND INNOVATION: 9 STEPS CONGRESS CAN TAKE TO FOSTER SUSTAINABLE JOB CREATION (2009), available at http://www.itif.org/files/2009_12_02_Job_Creation.pdf; see also Christi Parsons, *Obama Renews Jobs Push*, L.A. TIMES, June 12, 2010, at B1.

18. 15 C.F.R. § 734.2(b) (2010) (defining exports).

19. See *id.* § 734.2(b)(4)-(6) (defining reexports).

B. Life Cycle of Licensing Deal

Transborder licensing involves a process that follows the life cycle of an invention or process, and may result in a patent, copyright, or trademark being filed with the U.S. government and one or more foreign governments.²⁰ Recognition of IP rights usually confers upon the registered owner a bundle of rights, including the right to receive compensation for use by others, and the right to prevent others from using the protected work or invention. The stages of the IP life cycle will vary depending upon the nature and length of the protection sought and the processing time. While an idea may start out with limited value, as it becomes commercialized the value of the IP will likely increase.

Protection of IP can be conferred immediately through copyright once the idea is reduced to a tangible form.²¹ A patent application, on the other hand, can have up to eight stages or steps:

20. In 1993, this author created a software-based prototype for teaching complicated subjects such as math, science, aerodynamics, geography, and social science. The curriculum for the program, called "Aeronauts 2000," was developed under a grant from NASA, and consisted of Web-based lessons and questions and answers for middle and high school students. In 2000, the pedagogy was validated and tested by faculty at the Carnegie Institute at different levels of higher education. In 2003, the commercial product became a Web-based authoring platform called "Cyber Workbooks," which allows faculty to create modules that will identify, track, and measure specific student competencies. After the initial design of the platform, the commercialization stage was delayed for almost one year because the program had too many bugs and errors, such that it was neither user-friendly nor reliable. By chance, this author was introduced to a small Russian Software Application Program (SAP) start-up. The company was housed in a business incubator at the New Jersey Institute of Technology. This author's contact at the company was a Russian marketer living in the United States with a green card. She acted as project manager, and the actual programming work was done in Russia by a team of six programmers and graphic designers in their twenties and thirties. Virtually all of our communication occurred via e-mail. They could read English, but could not speak English, so the Internet was the primary way to overcome language barriers. This was this author's introduction to transborder licensing.

21. An author automatically gets the protections of a copyright when the work is reduced to some tangible expression. Any derivative, modification, or by-product of a copyrighted work is automatically protected and the owner of the original copyright has rights to the derivative work, in the absence of an agreement to the contrary. However, in order to sue in court for copyright infringement against another, the author must register the work with the U.S. Copyright Office in Washington, D.C. Registering a copyright requires filing out the appropriate form based upon the type of work, filing copies of the work with the U.S. Copyright Office, and paying a modest fee. In order to collect statutory damages, the copyright must be registered within ninety days of publication. A registered copyright lasts for the life of the author plus seventy years. Notice of copyright protection, although not required, should state the name of the author, a copyright symbol © or name, and the date, e.g., John Doe © 2002 somewhere prominently on the work.

LIFE CYCLE OF PATENTABLE IDEA	
1) Creating a raw idea→	2) Domestic patent application filed→
3) Product Viability Established→	4) Preliminary Market Analysis→
5) Businesses License the IP→	6) Invention is marketed commercially→
7) Foreign Patent filed→	8) Domestic Patent Granted. ²²

Licensing involves informational assets that may be created, discovered, or evolved over time and which may result in a commercially viable product or service.²³ Sometimes, it may result in a physical product, or it may only be “seen” through a computer or some other device. The cycle begins with a raw idea that is developed into a prototype or process. The idea may result in formulas, drawings, processes, software, literary, or artistic works that may be protected by a copyright, patent, trademark, know-how, or trade secret. Copyrights, trademarks, and patents have different registration requirements, but registering preserves the owner’s priority in time, so that anyone filing a patent or trademark afterwards may be subject to an infringement claim—or simply have their application rejected.²⁴

After the author or inventor applies for a patent or registers a copyright, the next steps focus on determining if the idea or invention is commercially viable and whether there are available markets. Technical support and funding are often required during these stages to develop the idea and will vary widely, from sweat equity to millions of dollars. Financing at these early stages of development tends to be very risky and difficult to find. Programs through the U.S. Department of Commerce, the Small Business Administration, and nonprofit organizations provide assistance through seed capital, “angel investments,” or early stage financing.

Transborder licensing has advantages over a documentary sale of goods that involves bills of lading, shipment, and risk of loss issues involving insurance. IP or capital is generally not subject to typical entry-level requirements of tariffs and quotas, or other nontrade barriers such as minimum ownership requirements.²⁵ In fact, most SME transactions occur with little to no government involvement. If there is

22. LICENSING EXECS. SOC’Y, *supra* note 1, at 2.

23. *Id.*

24. *See* 35 U.S.C. § 271 (2006); 15 U.S.C. §§ 1114, 1125 (2006); 35 U.S.C. §§ 119, 365.

25. *See* SHERRY STEPHENSON ET AL., SERVICES TRADE LIBERALIZATION AND FACILITATION 46 (2002).

nonpayment or a breach, the licensor simply cuts off access to the technology or IP. If parts or components of goods are involved in a transborder licensing agreement, then the goods may be shipped to a free trade zone, where they will be reexported to another country.

By the time the IP has been exported commercially in the U.S. market, the patent will be granted or it may be denied, in which case the denial can be appealed.²⁶ Inventors or their representatives can often meet with the assigned U.S. patent examiner during the process to decide whether to proceed or abandon the application if there is less than a good chance a patent will be granted.²⁷ Even if the patent is abandoned, the inventor may still commercialize it and export it.²⁸

The market for licensed goods can be domestic or international, although experts warn that unless steps are taken to first establish a market for the IP in the United States, it is quite possible that a version of the asset—perhaps counterfeit, pirated, or reverse engineered—could find its way back into the United States within eighteen months, competing against the original asset. For this reason, inventors often file notices of intent to file patent applications in selected foreign markets simultaneously with or right after filing in the United States.²⁹

The Patent Cooperative Treaty (PCT), administered by the World Intellectual Property Organization (WIPO), provides for a common international patent filing.³⁰ The process begins with a single filing and payment of a fee.³¹ An international search, publication, and examination follow to establish the patentability of the invention.³² After this process, the inventor must file an application with the applicable agency in each country where protection is sought.³³ This is considered the national phase. So while there is a single international application, the actual grant of the foreign patent is from the individual governments during the national phase of the process. The process takes from eighteen to thirty

26. 35 U.S.C. § 134.

27. See *Frequently Asked Questions About Patents*, UNITED STATES PATENT & TRADEMARK OFFICE, <http://www.uspto.gov/faq/patents.jsp#a3> (last visited Oct. 28, 2010).

28. See 35 U.S.C. § 154. A patent grants an inventor the right to *exclude* others from making or selling the invention, thus, absent a patent, an inventor can still nonexclusively make or sell its invention.

29. *Protecting Your Inventions Abroad: Frequently Asked Questions About the Patent Cooperation Treaty*, WORLD INTELLECTUAL PROP. ORG., http://www.wipo.int/export/sites/www/pct/en/basic_facts/faqs_about_the_pct.pdf (last visited June 10, 2010).

30. *Id.*

31. *Id.*

32. *Id.*

33. *Id.*

months and presumptively, an inventor filing an international patent will be deemed to have established a priority of right.³⁴

For licensing that involves copyrighted work, the challenge is the risk of losing control over the technology, or the threat of theft through counterfeits or knock-offs. While licensing tends to be less profitable than exporting goods, it is more attractive to SMEs, who may have limited access to capital.

III. PROTECTING INTELLECTUAL PROPERTY

A. *Patent Protection*

For most entrepreneurs with IP assets, IP protection falls at the top of the list in terms of considerations when exporting abroad. To obtain a patent or register a trademark, the inventor must apply to the United States Patent and Trademark Office (USPTO).³⁵ A patent application must be in writing, which includes a description of the invention and the manner and process for making and using it in full, clear, and concise terms.³⁶ The description must include a claim of what is being patented, along with drawings or a model of the invention.³⁷ Finally, the applicant must swear that he or she is the original and first inventor.³⁸ A prospective applicant may conduct searches of the USPTO database of prior art to see if there are any patents granted for the same or similar inventions. Once a patent is filed in the United States, the inventor must then file patents in every foreign jurisdiction it seeks to extend patent protection.³⁹

To qualify for a U.S. patent, the application must be filed within one year of the first publication of the work or invention, and the applicant must pay a filing fee.⁴⁰ Once the patent is obtained, the holder must pay maintenance fees periodically or the patent will be cancelled.⁴¹ If an inventor publicly uses or sells the invention more than one year after its creation without filing for a patent, the inventor loses the right to a

34. *Id.*; see also *FAQs: Amendments to the PCT Regulations (Apr. 1, 2007)*, WORLD INTELLECTUAL PROP. ORG., http://www.wipo.int/pct/en/faqs/april07_faq.html (last visited June 10, 2010).

35. See U.S. PAT. & TRADEMARK OFF. HOME PAGE, <http://www.uspto.gov/> (last visited June 1, 2010).

36. 35 U.S.C. § 112 (2006).

37. *Id.* § 113.

38. *Id.* § 115.

39. See *Protecting Your Inventions Abroad: Frequently Asked Questions About the Patent Cooperation Treaty*, *supra* note 29.

40. 35 U.S.C. §§ 102, 111.

41. *Id.* § 41.

patent.⁴² Public use of the work can be with or without compensation, but generally excludes experimental use to test or perfect the invention.⁴³ Whoever makes, uses, or offers to sell any patented invention within the United States without authority is deemed to have infringed upon a patent.⁴⁴ There are two types of patent infringements: (1) literal infringement, where the article created is identical to the claims of the patented article, and (2) the doctrine of equivalents, where the infringing article performs substantially the same function in substantially the same manner to obtain the same result.⁴⁵ To determine if the item is equivalent, each element will be examined separately as opposed to as a whole.⁴⁶

A person who infringes may be liable for actively inducing another to infringe, such as one who disseminates unauthorized information about a patent process over the Internet.⁴⁷ A person who infringes can also have contributory liability for selling the components made or adapted especially for use in an infringing patent.⁴⁸ Remedies for patent infringement include injunctive relief to stop someone from using the item, compensatory and treble damages, lost profits if certain findings are shown, and attorney fees and costs to the prevailing party.⁴⁹

B. Disposition of IP

Software patents pose an interesting dilemma for developers in transborder licensing deals because many countries do not recognize business method patents or consider software to be patentable. While patents protect against another duplicating the invention, it does not protect against someone reverse engineering a software program.

42. *Id.* § 102(6).

43. There are several factors to determine if experimental use falls within the exception, including: (1) length of the test period, (2) payment for use of the invention, (3) the existence of nondisclosure or confidentiality agreements, (4) the existence of progress records on the invention, (5) who performed the tests, (6) how many tests were performed, and (7) the relative test period in relation to other similar inventions. *Allen Eng'g Corp. v. Bartell Indus.*, 299 F.3d 1336, 1353 (Fed. Cir. 2002). It is advisable to seek legal counsel from a patent lawyer before filing a patent application.

44. 35 U.S.C. § 271.

45. *See Graver Tank & Mfg. v. Linde Air Prods.*, 339 U.S. 605, 607-08 (1950).

46. *Warner-Jensin Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997).

47. *See* 35 U.S.C. § 271. Defenses to an infringement claim are: (1) the patent was invalid as unpatentable, (2) misrepresentations were made to the USPTO regarding the patent, (3) misuse of the patent, (4) failure to pay the maintenance fees, (5) the invention was abandoned, (6) the person was an innocent infringer where no notice was provided on the item that it had been patented, (7) the patent had expired, (8) the use of the patent was experimental, (9) it was used for noncommercial use, and (10) equitable defenses. *Id.* § 273.

48. *Id.* § 271.

49. *Id.*

Reverse engineering is a process by which the product is analyzed and the steps are retraced to recreate the formula or process. Computer chips are routinely dissected by competitors, stripping them apart and examining them microscopically to learn the design.

The threat of reverse engineering causes some developers to put the code into a secure, physical device for further protection against theft. There are also tamper-resistant packaging methods for digital info, but they are rarely used except for special programs.

Many research institutions that create patentable works have stated policies that specify the respective rights of the employer and employees to inventions made or discovered using the employer's facilities or at the employer's direction. However, having a stated policy regarding ownership does not automatically create an assignment of interests in the absence of some consent by the inventor. Merely inserting an employer's rights to an invention in the employee handbook does not necessarily create a contract.⁵⁰ Employee handbooks are generally construed as only a guide, rather than an enforceable legal document.⁵¹ To be an enforceable agreement, there must also be a specific offer from the employer and acceptance or an acknowledgement by the employee, which, if litigated, will be viewed as a question of fact based upon the circumstances.⁵²

It is important to note that every idea that may be copyrightable or patentable may not be protected. There are several reasons for this. First, the idea may already be preempted by someone else having filed a patent for a similar product, process, or service. This will not preclude the owner from licensing the technology or invention commercially, but will prevent the owner from claiming infringement for statutory damages against entrepreneurs who copy, reverse engineer, or create something equivalent.

Second, an owner may decide not to pursue a patent because the invention or idea has a short shelf life, say three to four years, before upgrades and enhancements are required. In this case, piracy or reverse engineering has little long-term benefit and does not undermine the competitive advantage of the owner.

Third, training on how to use some technologies may be extensive and ongoing, making the presence and contribution of the inventor indispensable. For example, training manuals may be several thousands of pages for some types of engines powered by natural gas instead of

50. Univ. Patents, Inc. v. Kligman, 762 F. Supp. 1212, 1223 (E.D. Pa. 1991).

51. *Id.* at 1224.

52. *Id.* at 1228.

diesel, or engines converted from diesel to natural gas.⁵³ In this case, the inventor is less concerned about long-term infringement, because the complexity and ongoing maintenance of the equipment requires on-site personnel knowledgeable in troubleshooting, and an infringer is not likely to be staffed with such knowledgeable personnel.⁵⁴

Finally, licensing agreements for technology created in the United States but designed for reexportation may have parts or components that are manufactured in different countries, making piracy or reverse engineering virtually impossible.⁵⁵ The manufacturing process may occur in stages in different parts of the world and then brought to the United States for assembly and reexporting abroad. The U.S. company enjoys the protection of U.S. IP laws and can effectively prevent any unauthorized use of the final product.

IV. THE CASE FOR TRANSBORDER LICENSING

“This country doesn’t value teachers, and that upsets me. . . . Teachers don’t earn much, and [the U.S.A.] worships making money. In China, teachers don’t earn a lot either, but it’s a very honorable career.”⁵⁶

A. *Response to Critics’ Outsourcing Claims*

Critics claim that transborder licensing is just another form of outsourcing that hurts Americans because jobs are created elsewhere.⁵⁷ Between 1970 and 2009, goods-producing jobs in the United States decreased by 54%, from 39% of the private-sector workforce to 17%.⁵⁸ China is credited as having been responsible for a loss of 2.4 million manufacturing jobs from 2000-2010.⁵⁹ Based on this, one could argue that in its simplest form, licensing may involve an element of outsourcing, but as it evolves, it has strong potential to generate new jobs and wealth for all parties.

53. Daria Brovchenko, *Exporting Technologies to Russia* (Mar. 29, 2010) (unpublished comment) (on file with author).

54. *Id.*

55. *Id.*

56. Sam Dillon, *Guest-Teaching Chinese, and Learning America*, N.Y. TIMES, May 10, 2010, at A14 (quoting a Chinese teacher visiting the United States).

57. See Don Lee, *Is a College Degree Still Worth It?*, L.A. TIMES, June 12, 2010, at A1.

58. *Why We Need To Revive American Manufacturing*, INST. FOR AMERICA’S FUTURE, <http://institute.ourfuture.org/fact-sheets-briefs/2010020824/why-we-need-revive-american-manufacturing> (last visited Oct. 14, 2010).

59. Mike Elk, *Chinese Currency Decision Could Be Obama’s Biggest Wall Street Giveaway*, OUR FUTURE BLOG (Apr. 5, 2010, 1:35 PM), <http://www.ourfuture.org/blog-entry/2010041302/biggest-giveaway-wall-street-china-currency>.

Ten years ago, foreign governments expressed concern over the enculturation of their citizens, who came to the United States on foreign exchange programs.⁶⁰ This led to efforts by foreign governments to stop what was called “brain drain.” Brain drain refers to a trend where foreign students come to the United States for education and decide they want to stay here, much to the chagrin of the host governments trying to promote nationalism. While they initially come to the United States to study, work, or for family reasons, many become immigrant entrepreneurs after arriving.⁶¹

The U.S. market is highly sophisticated and is still the preferred market for the manufacturing and development of high-end products and services.⁶² Despite higher costs of labor in the United States, Chinese companies are moving plants to U.S. cities like Spartanburg, South Carolina, because by Chinese standards, it is cheaper to manufacture in the United States.⁶³ One state-of-the-art company that makes cylinders, Yuncheng Gravure Cylinder, moved a plant to South Carolina because the cost of land was one-fourth the price in China.⁶⁴ The cost of electricity was much cheaper as well. Yuncheng pays up to \$.14 per kilowatt-hour in China at peak usage, and just \$.04 in South Carolina, with no brownouts.⁶⁵

Other incentives, such as tax credits and low cost financing by the Beijing government, are attracting Chinese entrepreneurs to the United States. Officially, the Chinese government has approved over 1200 Chinese investments in the United States, but the number is considered low, because it does not include investments through Hong Kong or investments less than \$100 million.⁶⁶ As a result of these and other efforts, Chinese entrepreneurs have invested \$280 million and created 1200 jobs in South Carolina.⁶⁷ Moreover, Chinese investments in the United States almost doubled in 2009, through new commercial development and mergers and acquisitions.⁶⁸ It is, therefore, overly

60. Vivek Wadhwa, *Foreign-Born Entrepreneurs: An Underestimated American Resource*, in KAUFFMAN THOUGHTBOOK 2009 177, at 180 (2008), available at <http://www.kauffman.org/uploadedFiles/WadhwaTBook09.pdf>.

61. *Id.*

62. Sheridan Prasso, *American Made . . . Chinese Owned*, FORTUNE, May 24, 2010, at 84, 92.

63. *Id.* at 86.

64. *Id.*

65. *Id.*

66. *Id.* at 88.

67. *Id.* at 86.

68. *Id.* at 87.

simplistic to criticize exports for job loss, without looking at the associated job creation from immigration to the United States.

One of China's self-made entrepreneurs, Jeff Chee, founder of Top-Eastern, a tool manufacturer based in China with a significant presence in the United States, started the company in 1994 with \$500.⁶⁹ Now, the company has worldwide sales of more than \$120 million, 4000 employees, and factories in Brazil and Germany.⁷⁰ Through several acquisitions, Chee has also been able to rehire laid off U.S. workers.⁷¹ Chinese companies have also acquired failed U.S. companies, such as the foreclosed Los Angeles Marriott Downtown and a shopping center in Milwaukee that intends to bring 200 Chinese retailers.⁷² In addition, foreign companies in the United States have been hiring U.S. metallurgical and mechanical engineers from local universities.⁷³

In each case, foreign investment in the United States has resulted in job creation. For many of these companies, the lure to the United States is clearly for its intellectual capital, since the perception exists that products made in the United States are better.⁷⁴ For many outside of the United States, said some Chinese entrepreneurs, "the problem is customers just accept 'made in U.S.A.' products, so [they] have no choice. Lots of customers here have government contracts that have 'made in the U.S.A.' requirements."⁷⁵

Concerns that foreign ownership of U.S. companies will displace U.S. workers seems misplaced in many cases. The cultural differences make it difficult for foreign-born entrepreneurs to bring in foreign-born managers to oversee U.S. workers. Chinese appliance maker Haier, the first Chinese company to build a plant in the United States, hired Chinese managers to oversee workers in a small Southern town with a population of 6682.⁷⁶ Simply, it did not work. In one instance, a Chinese manager was publicly embarrassing workers for their mistakes, and the level of resentment reached a point where company executives replaced all of the Chinese managers with Americans, realizing the importance of being "good corporate citizens" and the value of having Americans in key managerial positions.⁷⁷

69. *Id.*

70. *Id.*

71. *Id.*

72. *Id.*

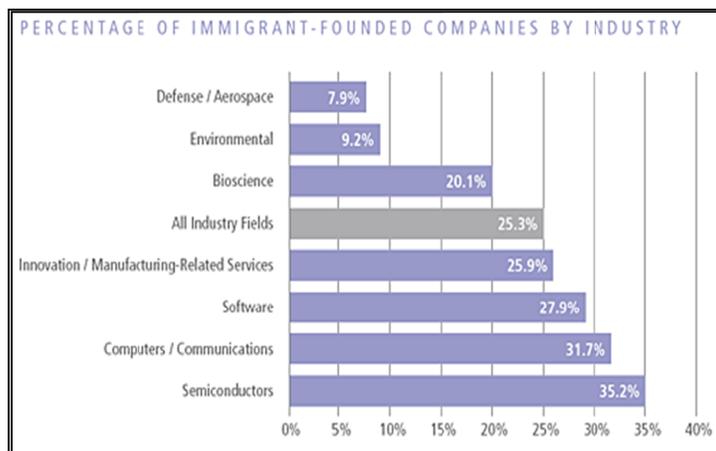
73. *Id.*

74. *Id.* at 90.

75. *Id.*

76. *Id.*

77. *Id.*



According to one survey, from 1995-2005, immigrants founded or led approximately 25% of all newly founded science and technology companies.⁷⁸ In 2005, these companies generated \$52 billion in revenue and employed 450,000.⁷⁹ Moreover, foreign nationals residing in the United States were inventors or co-inventors in 25.6% of patent applications filed in the United States, representing a 337% increase from 7.6% in 1998.⁸⁰ The chart above shows that the largest concentration of foreign-born entrepreneurs worked in IT and biotech.⁸¹

It is also important to note that most immigrant entrepreneurs are highly educated with advanced degrees: 96% hold bachelor's degree; and 74% have postgraduate degrees.⁸² These entrepreneurs tend to hold degrees in science, technology, engineering, and mathematics-related fields.⁸³ These figures parallel those of U.S. citizens who work in these industries. Because these jobs are held by persons who have the highest level of education and are the highest wage earners, it is critical that attention be given to how to preserve and maintain these entrepreneurs and jobs, whatever the nationality of the employer.

Additionally, studies show that immigrants to the United States settle in diverse regions of the country, so the wealth creation has been spread across the country, rather than being concentrated in immigrant

78. Wadhwa, *supra* note 60, at 178. In Silicon Valley, immigrant-founded start-ups were at 52%. Immigrants from India founded 26% of these. *Id.* at 179.

79. *Id.* at 178.

80. *Id.* at 180.

81. *Id.* at 178.

82. *Id.* at 179.

83. *Id.*

gateways, such as Los Angeles and New York.⁸⁴ This suggests that foreign national entrepreneurs favorably impact the U.S. economy.

B. Visas

The United States has created several classifications for scholars, researchers, and students to obtain visas to study and conduct research.⁸⁵ Even with these programs, some believe a reverse trend is occurring, leading to a “reverse brain drain.”⁸⁶ One survey revealed that of foreign students studying in the United States who expressed interest in starting a business, over half of all Chinese and Indian students were more inclined to do so in their home countries than in the United States.⁸⁷ Many believe that the reverse brain drain trend is attributable, in part, to delays in the visa process.⁸⁸

As of September 30, 2006, 1,181,505 foreign nationals were waiting for visas to work in the United States: 500,040 foreign nationals had applied for permanent status under employment-based visas, an additional 555,044 family members had applied for permanent-resident status, and another 126,421 foreign nationals who had job offers were waiting in their home countries for clearance to immigrate to the United States.⁸⁹ With only about 120,000 U.S. visas that can be issued for skilled immigrants in key employment industries, and no more than 7% of these visas can be allocated from any one country, it is likely that many may get tired and choose not to come.⁹⁰ It is clear that Americans have some choices: permit more skilled immigrants to come to the United States

84. *Id.* (noting that 52% of immigrants came to study, 40% came to work, and 5.5% came for family reasons).

85. *Green Card Through a Job*, U.S. CITIZENSHIP & IMMIGR. SERVS. (Dec. 10, 2009), <http://www.USCIS.gov> (follow “Green Card Through a Job” hyperlink). The Department of Labor permits foreign workers to work in the United States, by issuing Green Cards through one of four classifications: (1) based upon an offer of permanent employment in the United States; (2) through investment as an investor/entrepreneur who invests \$1,000,000 or more (or \$500,000 in a high unemployment or rural area) in an enterprise that creates new U.S. jobs; (3) through self-petition where the foreign national has “extraordinary ability” in the arts, education, business, or athletics; or is granted a National Interest Waiver; and (4) through a special job category. *Id.*; see also Immigration and Nationality Act, 8 U.S.C. §§ 1101-1778 (2006).

86. Wadhwa, *supra* note 60, at 180-81.

87. See VIVEK WADHWA ET AL., LOSING THE WORLD’S BEST AND BRIGHTEST: AMERICA’S NEW IMMIGRANT ENTREPRENEURS, PART V, at 14 (2009), available at http://www.kauffman.org/uploadedFiles/ResearchAndPolicy/Losing_the_World%27s_Best_and_Brightest.pdf.

88. Wadhwa, *supra* note 60, at 179-80.

89. *Id.*

90. *Id.* at 180-81; see also ANNALEE SAXENIAN, THE NEW ARGONAUTS: REGIONAL ADVANTAGE IN A GLOBAL ECONOMY 232 (2006).

under an expedited process, prepare the nation's young people to compete, or some combination of the two.⁹¹

C. *Potential for Future Job Growth*

From March to June of 2009, the only industry where there was no gross job loss was in health services and education.⁹² These industries had gross job gains of 60,000.⁹³ These industries are also the only industries that have consistently posted positive net gains every quarter since 1992.⁹⁴ Projections are that employment in public and private educational services will grow by 12%, or 1.7 million new jobs through 2018.⁹⁵ Health services will also see major growth. Currently, roughly 26% of all new jobs created in the U.S. economy will be in healthcare and social assistance.⁹⁶ Education, training and library occupations are expected to add 1.3 million new jobs, representing a growth rate of 13%.⁹⁷ Computer and mathematical science occupations are projected to add 785,700 new jobs by 2018.⁹⁸ However, the legal occupation will add the fewest new jobs among all professionals, increasing only 188,400.⁹⁹ This means that law school graduates will have to be more creative in reinventing themselves or pursue nontraditional jobs.

The U.S. Bureau of Labor Statistics reports that job growth areas for the legal profession are in healthcare, intellectual property, corporate and securities litigation, antitrust law, and environmental law.¹⁰⁰ Self-employed lawyers, who comprise 26% of all lawyers, are expected to grow slowly, under stiff competition from larger, established law firms.¹⁰¹ There is also a growing trend toward specialization. Employers are

91. In 2009, Congressman Jared Polis (D-CO) introduced The Employment Benefit Act of 2009 to update the U.S. EB-5 visa system and facilitate foreign entrepreneurs' ability to invest in the United States and create jobs. H.R. 4259, 111th Cong. (2009). Under this legislation, the immigration process would be streamlined and expedited, the Regional Center Program would be reauthorized permanently, and a "Start-up Visa" would be created for entrepreneurs who demonstrate interest from venture capitalists. *Id.*

92. Press Release, U.S. Bureau Lab. Stat., Business Employment Dynamics—Second Quarter 2009 (Feb. 23, 2010), http://www.bls.gov/news.release/archives/cewbd_02232010.pdf.

93. *Id.* Gross job gains were 770,000 in the second quarter, while gross job losses decreased to 710,000. *Id.*

94. *Id.*

95. *Occupational Outlook Handbook, 2010-11 Ed.: Overview of the 2008-18 Projections*, U.S. BUREAU LAB. STAT. (Dec. 17, 2009), <http://www.bls.gov/oco/oco2003.htm>.

96. *Id.*

97. *Id.*

98. *Id.*

99. *Id.*

100. *Occupational Outlook Handbook, 2010-11 Ed.: Lawyers*, U.S. BUREAU LAB. STAT. (Dec. 17, 2009), <http://www.bls.gov/oco/ocos053.htm>.

101. *Id.*

looking for persons who have advanced degrees in specialty areas such as tax and patent law.¹⁰² To the extent that the fees charged by established firms are often too high for the average SMEs, young lawyers who develop an expertise in transborder licensing have the opportunity to fill a niche that could be very lucrative.

Redefining the role of academic institutions will be indispensable to this process. That is why this author and others retool courses in Business and International Business Transactions to include a practicum component on transborder licensing.¹⁰³ It is what some refer to as a “paradigm shift” to focus on teaching students interdisciplinary studies to solve international business problems and address the needs of businesses going forward.¹⁰⁴

Some non-U.S. business schools partner their students with a U.S. business school to expand their skill sets to be more competitive. A group of twelve business schools in Latin America work with Tulane University’s Freeman School of Business to allow MBAs to research, write, and publish investment reports on small- and medium-sized businesses.¹⁰⁵ Founded in 2003, the program that improves Latin American access to capital markets and gives Latin American MBAs an edge in the job market by giving them marketable skills.¹⁰⁶

A similar approach can apply to law schools. Law schools need to rethink the training of its students in International Business Transactions (IBT), and focus more deliberately on creating job opportunities through closer alliances with alumni, particularly those M.C.L. and LL.M. students who can provide links to new markets around the world, and provide internship programs for students. In order for U.S. students to be competitive, they will need problem-solving skills and practical exposure in transborder licensing issues.

Also encouraging the development of transborder licensing as a potential new revenue source and stimulus for job creation is the fact that today’s young people do not define themselves, as this author’s generation did, by geographical boundaries. They travel abroad earlier and are bi- or trilingual and multicultural, having been exposed to classmates from all over the world. The Millennial Generation is also much more comfortable with technology, text communication, and non-

102. *Id.*

103. Pat Broderick, *For Law Students, a New, Special Focus: Program at San Diego’s California Western Pushes Cross Border Collaboration*, L.A. DAILY J., Apr. 21, 2010, at A4.

104. Arnoud De Meyer, *Schools Must Learn To Tear Down Their Walls*, FIN. TIMES, May 24, 2010, at 15.

105. Rebecca Knight, *Programme with a ‘Buy’ Rating*, FIN. TIMES, May 24, 2010, at 15.

106. *Id.*

face-to-face interaction. Ease with technology creates new opportunities for virtual communities, e-commerce, and technology-transfer innovations.

V. GOVERNMENT'S ROLE IN FACILITATING EXPORTS IN THE EXISTING REGULATORY REGIME

Federal agencies that regulate exports generally, and transborder licensing specifically, can be divided into three groups. There is a group of federal agencies and departments that determine whether and how products, technology, and IP can be exported; another group of agencies that is primarily responsible for protecting and enforcing intellectual property rights; and finally, a group of agencies and departments that work in concert with the second group to focus on investigation and enforcement of intellectual property rights.

A. *Navigating the Regulatory Quagmire*

The first group of federal agencies and offices have jurisdiction over different aspects of exports and oversee the import and export of technology. General export controls are administered by the Department of Commerce, while other federal agencies may impose controls on specialized goods or items.¹⁰⁷

The U.S. Bureau of Industry and Security (BIS) within the Department of Commerce has jurisdiction over export controls through a licensing system under the Export Administration Regulations (EAR).¹⁰⁸ The EAR covers a broad range of exports and reexports, including "items" such as commodities, software, technology, and certain commodities produced outside of the U.S. that are direct products of U.S.-based technology or software.¹⁰⁹ While the statute is broad in scope, there are several exceptions that significantly reduce the percentage of U.S. industrial exports subject to BIS registration or licensing requirements.¹¹⁰ As such, only a small percentage of exports are required to be registered. These exceptions include items that are exclusively controlled by specific

107. Cecil Hunt, *Overview of U.S. Export Controls, in* COPING WITH U.S. EXPORT CONTROLS 2004 17, at 2-4 (Practising L. Inst. 2004). Exports of defense articles and services are controlled by the Department of State, and the Treasury Department controls exports to countries that are subject to U.S. trade embargoes and economic sanctions. *Id.* at 2-3.

108. 15 C.F.R. § 734 (2010).

109. *Id.* § 734.3(a)(3)-(5). "Export" includes "[a]ny release of technology or software subject to the EAR in a foreign country." "Release" of technology or software includes through visual inspection, oral exchanges, or "application to situations abroad of personal knowledge or technical experience acquired in the United States." *Id.* § 734.2(b)(1)-(3).

110. Hunt, *supra* note 107, at 4.

federal agencies,¹¹¹ publications and information related to publicly available technology and software, and goods made abroad that include a *de minimis* level of domestic content (under 10% or 25% of the good's value).¹¹²

The Department of Commerce maintains a Commerce Control List (CCL), which is a chart with ten categories and numerous subgroups with identifying numbers for classification purposes. This list is used to determine when a license is required. There are three basic exceptions that will generally exclude most technology and information technology: (1) items covered by the EAR, but not on the CCL; (2) items covered by the CCL, but the country chart specifies that no license is required; and (3) items subject to other license exceptions.¹¹³ The last group of items may include exports of a low value, those which are going to the U.S. government and or those being temporarily exported.¹¹⁴

The second group of federal agencies regulates the rights and entitlements of owners to protect their intellectual property. These agencies may either be domestic or international organizations established by treaties in which the United States is a signatory. They have responsibility over registration of technology and software and include the U.S. Copyright Office,¹¹⁵ the Patent Trademark Office,¹¹⁶ and the World Intellectual Property Organization (WIPO).¹¹⁷ The entrepreneur will likely encounter these agencies first in the life cycle. However, they will not control whether the item can be exported, just its level of protection.

International protection of copyrighted works is subject to international treaties, such as the Berne Convention¹¹⁸ or Trade-Related

111. See 15 C.F.R. § 734.3(b) (referencing items under the control of other agencies and, therefore, not subject to the EAR jurisdiction).

112. Hunt, *supra* note 107, at 4; see also 15 C.F.R. § 734.4 (c)-(d) (outlining *de minimis* U.S. content).

113. Hunt, *supra* note 107, at 5-6.

114. *Id.* at 6.

115. The U.S. Copyright Office is responsible for registering copyright claims. A copyright grants to the author six specific rights: (1) to reproduce work; (2) to prepare derivatives of it; (3) to distribute copies for sale, gift, rental, lease, or lending; (4) to perform publicly; (5) to display publicly; and (6) to transmit sound recordings digitally. 17 U.S.C. § 106 (2006).

116. The USPTO is responsible for granting and administering U.S. patents and trademarks.

117. WIPO currently administers twenty-three treaties and agreements related to IP. See WORLD INTELLECTUAL PROP. ORG., WIPO INTELLECTUAL PROPERTY HANDBOOK: POLICY, LAW AND USE § 1.15, at 5 (2d ed. 2004), available at <http://www.wipo.int/export/sites/www/about-ip/en/iprm/pdf/ch1.pdf>.

118. *Id.* § 5.165-.206, at 262-68, available at <http://www.wipo.int/export/sites/www/about-ip/en/iprm/pdf/ch5.pdf>.

Aspects of Intellectual Property Rights (TRIPS),¹¹⁹ administered by WIPO and the World Trade Organization (WTO), respectively. U.S. companies and entrepreneurs who have registered their copyright with the U.S. Copyright Office can expand their protection to member nations by registering the copyright with WIPO. This is not the case with patents, which permit a single international application under the Patent Cooperation Treaty, but also require filing in every jurisdiction where protection is sought.¹²⁰

The third group of federal agencies has primary responsibility over enforcement of intellectual property that may be associated with physical or tangible goods, such as CDs, DVDs, games, and the like. These agencies include: the Federal Bureau of Investigation (FBI), the U.S. Customs and Border Protection (CBP), and the Department of Justice. The FBI investigates criminal counterfeiting, piracy, and other federal crimes.¹²¹ The CBP keeps foreign pirated and counterfeit goods from being imported into the United States, but generally does not handle enforcement of intangibles, such as electronic or Web-based information and services.¹²² The Department of Justice prosecutes intellectual property rights crimes on behalf of the United States.¹²³

119. TRIPS is an international agreement that took effect on January 1, 1995, and covers all areas of IP. It includes standards of protection among member states, enforcement of IP rights, and dispute resolution. *Overview: The TRIPS Agreement*, WORLD TRADE ORG., http://www.wto.org/english/tratop_e/trips_e/intel2_e.htm (last visited June 10, 2010).

120. *Protecting Your Inventions Abroad: Frequently Asked Questions About the Patent Cooperation Treaty*, *supra* note 29, at 3.

121. *Investigative Programs: Cyber Investigations*, FED. BUREAU INVESTIGATION, <http://fbi.gov/about-us/investigate/cyber/ipr> (last visited Oct. 28, 2010).

122. *Overview of IPR Enforcement: A Priority Trade Issue*, U.S. CUSTOMS & BORDER PROT., http://www.cbp.gov/xp/cgov/trade/priority_trade/ipr/overview_ipr.xml (last visited Oct. 28, 2010).

123. Press Release, U.S. Dep't Justice, Justice Department Announces New Intellectual Property Task Force as Part of Broad IP Enforcement Initiative (Feb. 12, 2010), *available at* <http://www.justice.gov/opa/pr/2010/February/10-ag-137.html>. In February 2010, the Justice Department committed to increasing enforcement of IP by expanding resources in investigations and prosecutions of IP-related crimes. *Id.* This was the latest step by the Obama Administration to make IP protection a priority. In 2009, President Obama appointed an Intellectual Property Enforcement Coordinator to serve in the White House and to work closely with an advisory committee composed of high-level officials from all federal agencies across the United States. Eric Holder, U.S. Att'y Gen., *Attorney General Eric Holder Speaks at the Rio de Janeiro Prosecutor General's Office* (Feb. 24, 2010), *available at* <http://www.justice.gov/ag/speeches/2010/ag-speech-100224.html>. In February 2010, a Department of Justice Task Force on Intellectual Property was established to help develop and implement a multifaceted criminal enforcement strategy with federal, state, and international partners to combat IP crime effectively. *Id.* The Department of Justice has also created the Computer Crime and Intellectual Property Section within the Department's Criminal Division, with forty prosecutors and four Cybercrime Lab specialists who focus exclusively on computer and intellectual property crime. *Id.* These

Given the multitude of agencies that control some aspect of transborder licensing, there is a need to distribute a great deal of information to different agencies at different periods in the IP life cycle. Much attention and criticism has been focused on ways to address redundancies, delays in processing, and ineffective administration of the licensing and enforcement systems.¹²⁴ Even when IP does not involve defense or security-related technology, there are still a number of agencies that entrepreneurs have to deal with to obtain approvals, permits, or licenses. This is where professionals trained in these complexities can provide a meaningful service.

B. Case Study: Academic Research, Presentations, and Publications

To demonstrate the complexities of deciphering the regulatory requirements, consider a professor who has created something novel with the help of students—some of whom may be foreign students—and who wants to discuss the research with foreign nationals at other institutions, while being under contract to a private corporation. There are some broad exceptions from the EAR licensing for educational materials¹²⁵ and published information and software, which would include patented technology¹²⁶ and software,¹²⁷ works available in the library and at “open” conferences,¹²⁸ or those which are the subject of “fundamental research” conducted by an academic institution or corporation.¹²⁹ The EAR will also not apply to government-funded research that does not implicate national security and thus does not have specific national security controls.¹³⁰

One could conclude that the professor’s teaching and consulting services in the above hypothetical, whether performed in or outside of the United States, would probably not be subject to any licensing

attorneys prosecute major criminal IP cases that have international sources or that require multidistrict coordination. *Id.*

124. See INT’L LAW ASS’N (AM. BRANCH) INT’L IP COMM., WHITE PAPER ON MAJOR INTERNATIONAL INTELLECTUAL PROPERTY DEVELOPMENTS (2010).

125. 15 C.F.R. § 734.9 (2010) (defining educational information as that which is released in catalog courses or associated with teaching laboratories or academic institutions). The only exception here where the EAR may apply is where it involves encryption. *Id.*

126. *Id.* § 734.10(a)(3).

127. *Id.* § 734.7(b).

128. *Id.* § 734.7(a)(4). An “open” conference includes invitation-only conferences, so long as the participants can take notes or make a record of the proceedings and presentations. *Id.* § 734.7(a)(4)(i).

129. *Id.* § 734.8. “Fundamental research” includes basic and applied research in science and engineering, where the resulting information may be published and shared broadly with the scientific community. *Id.* § 734.8(a).

130. See *id.* § 734.11.

requirements, so long as the information related to such research or services becomes publicly available or published. This analysis becomes trickier when the person is compensated for work that will be proprietary to the licensor or licensee. Restrictions on publication rights will subject the research to the EAR licensing requirements for as long as the restrictions are imposed, but will not extend to prepublication review requirements imposed solely to ensure no compromise of IP rights, and do not preclude any publication of the results.¹³¹

Other considerations of the EAR licensing requirement in the above scenario would be the cost of selling the information. Generally, the EAR will not apply if the information is made available free to the public, or at a cost that does not exceed the reasonable costs of reproduction and distribution.¹³² Moreover, the EAR will not apply to cooperative research arrangements with a research group at a university under specific conditions, provided again that the results may be published.¹³³ This would apply to faculty who do work for or provide their expertise to foreign nationals or nations.

As a result, in the above hypothetical, the three critical issues in determining if the EAR requires a license, would be (1) who is providing the information, not the site or location; (2) the ability to disseminate information publicly or commercially; and (3) whether the research is considered “fundamental research” conducted by a qualifying institution or corporation, and in which information related to it may be published or made available to the public. On its Web site explaining these regulations, BIS acknowledges the complexities of these decisions and encourages entrepreneurs to attend training seminars or contact the BIS for advisory opinions on whether a license is required.¹³⁴

It is important to note that the EAR is simply a licensing regime; it does not enforce national security controls or intellectual property protections. To this extent, the EAR is limited in scope, and entrepreneurs must seek protection from other agencies to protect their rights. The onus is on the entrepreneur to know what rules apply. Otherwise, they may find themselves subject to liability for noncompliance of other agency requirements. In addition, if a particular transaction is not subject to the EAR licensing requirements under U.S. law, the entrepreneur may still be liable for compliance with the laws and any licensing require-

131. *Id.* § 734.8(a)-(d).

132. *See id.* pt. 734, supp. 1, questions (A)(1)-(A)(6).

133. *Id.* pt. 734, supp. 1, questions (D)(1)-(D)(5).

134. *Introduction to Commerce Department Export Controls*, BUREAU INDUS. & SEC., <http://www.bis.doc.gov/licensing/exportingbasics.htm> (last updated May 8, 2003).

ments imposed by the foreign country receiving the import.¹³⁵ This is because the application abroad of personal knowledge or technical experience acquired in the United States constitutes an export of that knowledge and experience, and may be subject to the EAR.¹³⁶ For example, if the U.S. professor in our hypothetical becomes a consultant in the design and creation of technology that would be subject to the EAR, then the consultant to a foreign national would likely have to get a license to train foreign nationals on the manufacture of such devices.

VI. RECOMMENDATIONS

Several commentators have recommended methods to facilitate exports. The recommendations include reallocating government resources (for instance, increasing funding for research and development and granting tax credits to SMEs)¹³⁷ and consolidating authority in a single agency or streamlining the licensing process.¹³⁸ In April 2010 the Obama Administration unveiled a proposal to restructure the export control system to streamline and centralize the licensing process for exports with dual military and commercial use, which will tighten restrictions on some exports, and loosen exports on others.¹³⁹ The plan, if implemented, proposes to be a “major boost” for manufacturers, defense contractors, and technology companies by imposing fewer regulations, which would spur export of goods to foreign buyers.¹⁴⁰ The plan would close the gaps in the current system that allows exporters to forum shop for the agency that will approve the license with the least controls.¹⁴¹ While the proposal focuses on those exports that tend to be more heavily regulated because they implicate national security, the need to address redundancies, overlap, and inconsistencies in interpreting regulations would also apply to commercial exports. A major stumbling block will be antitrade sentiment in Congress and turf wars, which could derail any true reform.¹⁴² For this reason, more creative ways are necessary to enhance enforcement of intellectual property, while preserving existing jurisdictional boundaries, and facilitating more effective coordination and dissemination of information.

135. 15 C.F.R. § 734.12 (regarding compliance with foreign laws).

136. *Id.* pt. 734, supp. 1, question (D)(5).

137. Parsons, *supra* note 17.

138. ATKINSON, *supra* note 17.

139. Yochi J. Dreazen & Andy Pasztor, *Plan Would Revamp Export Controls*, WALL ST. J., Apr. 21, 2010, at A6.

140. *Id.*

141. *Id.*

142. *Id.*

The International Law Association (American Branch) published a White Paper on May 4, 2010, which recommended reform of the Patent Cooperation Treaty to address problems of backlog, needless duplication of patent searches, inadequate searches at the national level, and prohibitive costs for SMEs of obtaining multinational patent protections.¹⁴³ WIPO recommended creating a new treaty that would establish an International Searching Authority that would integrate the international search with national searches, so that only one search was necessary.¹⁴⁴ This would avoid the need to conduct parallel national and international review of patent applications. Enhancing the quality of the search reports would lend credibility to the process that would enable national authorities to rely upon the reports. The enhancement may also address criticism that too many invalid patents are issued because the examination process is inadequate without an efficient mechanism for invalidating patents.¹⁴⁵

Using technology to enhance the quality of information available allows the stakeholders to address the redundancy problems without forcing any party to abdicate their authority or jurisdiction, a possibility that has brought extreme opposition from developing countries that are principal patent holders.¹⁴⁶ While any serious reform seems unlikely because of the extreme level of distrust among nations of WIPO efforts, it would be possible to create a central repository of information to facilitate better coordination and more reliable access and reporting.

The most promising solution can be found in what the Obama Administration emphasizes as a “new era of diplomacy,” where the focus is on building strong alliances.¹⁴⁷ This new international order, based upon diplomacy and engagement, creates some incentive for U.S. universities across the country to reach out to their alumni to forge a foundation of new strategic partners across the borders.¹⁴⁸ This author would like to propose three guiding principles that need to be followed in building these alliances: (1) Market Access, (2) Mutual Cooperation, and (3) Mediated Compromise.

143. INT’L LAW ASS’N (AM. BRANCH) INT’L IP COMM., *supra* note 124, at 2.

144. *Id.* at 3.

145. *Id.*

146. *Id.* The countries include the members of the European Union, Australia, Canada, Japan, New Zealand, Norway, Switzerland, and the United States. *Id.* at 3 n.3.

147. Michael D. Shear, *Envisioning a New Era of Diplomacy*, WASH. POST, May 23, 2010, at A3.

148. *Id.*

A. *Market Access*

The first principle is Market Access. Entrepreneurs who own IP should be paired with those who need or can benefit from it. The Internet makes many things possible, and the government makes volumes of information available on exports, but it may be overwhelming to the average entrepreneur not well-versed in search functions. This is where a central portal (Virtual Protocol) could be used to partner U.S. companies with interested parties in a controlled environment. The most important consideration at the beginning of the export process is evaluating the suitability of engaging in transborder licensing in a given country. Criteria would be based upon predetermined variables requested in an online profile form. The profiler could match criteria to develop potential countries, partners, distributors, etc. Evaluation factors could include measurements related to transparency of rules, IP enforcement, ownership and registration requirements, constraints, and political stability. Moreover, such a system could be designed as an online resource that includes both training modules and online surveys with a series of branching queries that could provide useful information on selected markets.

The front end of the portal could be open source, accessible to participating institutions. It could include a variety of functionality, including allowing inventors and authors to register IP electronically and upload information to the various government resources and services available. The administrative back end could be secure and would include an IP data management platform that would be a central repository for IP owners to register and track their IP using watermarks. It could then set up an automatic notification system when suspected violations have occurred. Entrepreneurs could be incentivized to use the system by receiving reduced fees or expedited review.

The Directorate General of Foreign Trade (DGFT) of India has followed this approach with some success.¹⁴⁹ In 2003, India introduced a program under which import and export licenses applied for online would be granted automatically within twenty-four hours.¹⁵⁰ In addition, the application fee was reduced to 50% percent of the fees typically charged.¹⁵¹ The effect of India's efforts toward a paperless process has

149. *DGFT Launches Online Import and Export Licensing System*, FIN. EXPRESS (Sept. 23, 2003), <http://www.financialexpress.com/printer/news/dgft-launches-online-import-and-export-licensing-system/91729>.

150. *Id.*

151. *Id.*

proven successful, with over 70% of applications being filed online.¹⁵² There are thirty-two DGFT offices equipped with grievance procedures to address problems with policy and procedures.¹⁵³ In addition, the DGFT has focused on special economic zones for industries such as software and electronic hardware technology parts and provides 100% export-oriented units with minimal government interface.¹⁵⁴

B. Mutual Cooperation

The second principle is Mutual Cooperation. The future of transborder licensing is dependent upon parties being able to develop relationships that provide a level of transparency, trust, and mutuality—the breeding grounds for innovations. For this reason, whatever solutions the Virtual Protocol stakeholders devise should be based upon the principle that all will win or receive the expected benefit, be it monetary, attribution, or substantive. A Virtual Protocol could also assist in investigations and IP infringement prosecutions.

C. Mediation and Alternative Dispute Resolution

The last principle is encouraging Mediated Compromise. Disputes are inevitable in any business relationship. However, having an effective mechanism to work through differences can reduce costs, avoid the delay and uncertainties of litigation, and produce a resolution that will not terminate the relationship. This is another area where technology may play a role.

Technology Mediated Dispute Resolution (TMDR) is a new area that fosters Online Dispute Resolution (ODR).¹⁵⁵ In effect, using technology to mediate disputes allows parties to add a new host of technology tools that can neutralize the language barrier and allow parties to mediate simple disputes through a variety of queries and artificial intelligence.¹⁵⁶

The basic principles in using technology-based dispute resolution are that the parties must be willing to think creatively about technologies

152. *Id.*

153. *Id.*

154. *Id.*

155. See David Larson, *Technology Mediated Dispute Resolution (TMDR): A New Paradigm for ADR*, 21 OHIO ST. J. ON DISP. RESOL. 629 (2006); David Larson, *Technology Mediated Dispute Resolution (TMDR): Opportunities and Dangers*, 38 U. TOL. L. REV. 213 (2006).

156. Technology tools would include cellular telephones, satellite communications, tele-immersion, video conferencing, avatars, and virtual personalities.

such as cell phones, Web conferencing, and podcasts to integrate into dispute resolution processes. Technology can assist in orienting the parties to the issues, information gathering, and generating options. Technology can, in essence, be a fourth party at the table. Examples of technology-based solutions include Cybersettle¹⁵⁷ and Smartsettle.¹⁵⁸

Technology has become a useful tool in mediating disputes, and may be an attractive component to the Virtual Protocol proposed to complement the IP data management system. Designing a process by which interested parties already engaged in transborder licensing may be able to resolve simple payment or performance disputes would be truly innovative. There are existing software applications that could be used or customized specifically for licensing.

VII. CONCLUSION

Transborder licensing has become more prominent in recent years due to the increase in volume of deals involving U.S. intellectual property. Moreover, foreign exchange programs to the United States over the last ten years have produced a more sophisticated entrepreneur, changing the complexity of licensing deals with foreign nationals and countries as they build their infrastructure and try to sustain new industries and encourage foreign investment.¹⁵⁹ These trends have helped maintain U.S. prominence in such areas as biotech, IT, and education, but have also left the United States vulnerable that our most valuable asset may not be producing sustained opportunities for new job areas in the United States, which could ultimately hurt the United States.

Recent trends clearly show that the best and brightest still flock to the United States to study.¹⁶⁰ Collaborations that produce some of the most significant innovations in the world almost always include U.S. researchers, scientists, lawyers, business professionals, and America's most prestigious academic and research institutions. These will also be the highest paid positions, the research from which will likely create the new industries of tomorrow.

157. CYBERSETTLE, <http://www.cybersettle.com/pub/> (last visited Nov. 3, 2010). Cybersettle has over 150,000 attorneys registered in its system and approximately 30,000 have used the service to facilitate settlements. CYBERSETTLE, <http://www.cybersettle.com/pub/home/about.aspx> (last visited Nov. 7, 2010).

158. SMARTSETTLE ONLINE NAVIGATION SYSTEM, <http://www.smartsettle.com> (last visited Nov. 3, 2010).

159. Broderick, *supra* note 103.

160. See Karin Fischer, *Number of Foreign Students in U.S. Hit a New High Last Year*, CHRON. OF HIGHER EDUC. (Nov. 16, 2009), <http://chronicle.com/article/Number-of-Foreign-Students-in/49142>.

For this reason, there is a need for a new breed of lawyer and financial professionals who are knowledgeable about intellectual property, immigration and employment law, the mechanics of an international business transaction, and the tax implications of earning revenue from offshore activities. Business schools and law schools must begin to provide practicum courses in international trade. These schools need to include in their curriculum how to conduct international trade negotiations.

The potential for job creation is enormous. “Modernizing U.S. export controls would produce higher export growth in the future” that will spur job creation.¹⁶¹

The Web-based IP management and tracking system could link all of the stakeholders—including the associated agencies with authority over exports—and be accessible by trade associations and academic stakeholders who could upload information to a central platform. The system could serve as a model of how the government could link the various government functions and requirements electronically, so that it would be transparent to the end user and facilitate a “one-stop shop” approach. This could be a first step to provide better coordination. It seems preferable to pursue a phased approach in consolidating functions as innovations and experience reveal the best options.

161. Dreazen & Pasztor, *supra* note 139.