DEPARTMENT OF JUSTICE

PROMOTING ECONOMIC GROWTH THROUGH COMPETITION AND INNOVATION

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Good morning. It is a pleasure to be here to speak with you about an issue of great importance to both our countries: the relationship between innovation and economic growth. Today I would like to discuss two of the policy tools that the United States uses to promote economic growth through innovation: private intellectual property rights and market-based competition. Promoting innovation is an important societal goal, one that both our countries recognize. Just last month China's Intellectual Property Development Research Center held a symposium that examined how intellectual property rights will stimulate innovation by Chinese enterprise and research bodies. In considering that topic today, I would like to begin by discussing the differences between invention, innovation, and competition, and how these concepts can best be fit together to promote economic growth.

When we talk about innovation and its importance to economic growth, what do we mean? Initially our thoughts turn to the invention or creation of newer, better, and cheaper goods and services. China has a very long history of invention that includes things many of us take for granted in our daily lives, such as decimal mathematics, paper money, gunpowder and rockets, and even the game of chess.[1] Our daily lives are also affected by new technological inventions. We communicate information faster and more reliably thanks to the mobile phone and e-mail, we live longer thanks to advances in pharmaceuticals and medical technology, and we can enjoy music and films in our homes, our cars, or as we walk on the street through CD and DVD technology. All of these products have been drivers of the so-called "new economy."

The invention or creation of something new, however, is just the first part of the innovation process. American economists Dr. Frederick M. Scherer and Dr. David Ross have

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[1] *See* Robert Temple, THE GENIUS OF CHINA: 3,000 YEARS OF SCIENCE, DISCOVERY, AND INVENTION (1986).

identified four other stages of this process called innovation: entrepreneurship, investment, development, and diffusion. Entrepreneurship is the stage in which one decides to commercialize an invention, organizes the process and gets initial financial support. Investment is the stage during which capital funds are risked. Development is the stage in which the invention is perfected for commercial marketing. Finally, diffusion is the stage where other competitors follow the pioneering firm into that commercial market.[2] As we can see, innovation is a complicated and multi-faceted process, so when we use the term innovation it is shorthand for the entire process of taking a new invention or the expression of an idea and bringing it to market.

Although there is certainly more to learn about the innovative process, we do know quite a lot about innovation already. We know that successful innovation can be an uncertain process, with many "failures" before a particular invention results in successful innovation. We know that the later stages of innovation can be expensive and that while much innovation is privately funded, public funding of innovative effort can play an important role in some industries.[3] We know that market leaders tend to focus on incremental innovation while challengers to the market leaders are more likely to move in new directions. And we also know that the welfare of a society is improved when public policy encourages not only the initial spark of creativity, but

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[2] F.M. Scherer & David Ross, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 616-17 (3d ed. 1990).

[3] *See, e.g.,* American Association for the Advancement of Science, Analysis of Research and Development in the FY 2005 Budget (2004), *available at* http://www.aaas.org/spp/rd/prel05p.htm.

also the entire dynamic process of developing improved goods and services or developing more cost-effective methods of producing and delivering these goods and services.[4]

Encouraging Innovation through Intellectual Property Policy

Why do some societies bring more inventions to market? I do not believe that the answer has anything to do with the nature of the population itself. Rather, what distinguishes societies as innovators is likely to be the presence of effective systems to harness the inventive spirit into innovation and economic growth. In the United States, innovation has been a key driver of our economy, and two of the many factors on which we rely to promote that innovation are the creation and enforcement of private intellectual property rights and the nurturing of a competitive open market economy.[5]

Why do we believe that protecting intellectual property rights promotes innovation? I will start by explaining the difficulties that businesses face when intellectual property rights do not exist, then explain how protecting intellectual property rights can solve the problem.

In a market economy, competition pushes firms to be the first to introduce new products at a price and level of quality consumers want. Where there is no intellectual property right or other barrier to making a product, competing firms may quickly drive the price of an existing product down to something close to the cost of production. This can present a problem in industries where the cost of producing a new product is very high, because the inventor firm may

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[4] FEDERAL TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY (2003) ch. 1 at 1, *at* http://www.ftc.gov/os/2003/10/innovationrpt.pdf [hereinafter FTC INNOVATION REPORT].

[5] Alan Greenspan, Intellectual Property Rights, Address Before Stanford Institute of Economic Policy Research Economic Summit (Feb. 27, 2004), *at* http://www.federalreserve.gov/boarddocs/speeches/2004/200402272/default.htm.

never be able to recoup its research and development costs. The result can be lessened incentives for investment, and stifled technological growth. As China becomes a leading player in a number of sectors of the world economy, China has a similar stake in protecting intellectual property rights to that of countries such as the United States that seek to promote technological innovation.

Let me pause here to give an example of this problem. Let us suppose that you wish to design a software program that instantly translates English technical documents into Chinese characters. Assume that you will need to hire twenty computer programmers and two translators for six months of work, and you have to invest, say, one million Yuan. But the day after you begin selling your program for 1000 Yuan per copy, your competitors flood the market with exact copies for only 8 Yuan apiece. Each time you make an improvement, the same unauthorized copying occurs. And even worse, some of these unauthorized copies have defects, but they have your name on them, and customers call to blame you for any problems that occur. How will you ever pay back your million-Yuan investment? Even if you cut your price to 8 Yuan, you will need to sell more than 100,000 copies just to break even.

Clear and enforceable intellectual property rights can be a solution to this problem. If a firm bringing a new product to market can protect its invention via intellectual property rights, it will have the incentive to invest. Does this mean that firms with patents or copyrights will charge excessive fees and destroy their competitors? No. A new invention always competes with all that has gone before. If the firm with the new patent sets its prices too high, consumers will simply buy the old product instead. The competitors also have their own incentives to create new, different and better inventions, either by making improvements or by creating an

entirely new, pioneering product. This process of "inventing around" a patent happens constantly. This system of intellectual property rights creates a beneficial business cycle: with intellectual property protection, firms compete repeatedly to create new and better products, and overall welfare increases over time.

A competitive market also enhances the innovative efforts of our society. By rewarding innovative efforts with the opportunity to increase earnings, competition encourages individuals and firms to capture sales by being the first to market a new better, or cheaper product or service. We rely on our antitrust laws to protect this valuable competition because such protection maintains opportunities for innovation by those competing in the market. But we do not use our antitrust laws to constrain the legitimate use of intellectual property rights. It would make no sense for an intellectual property system to grant property rights in order to promote innovation and then for the antitrust system to take those property rights away. As antitrust enforcers, we only intervene when rights holders attempt to harm competition in ways their rights alone would not permit.[6] I will return to our antitrust law as my last topic today.

US Intellectual Property Rights

I will turn now to the topic of the United States intellectual property law system and how that system acts as an engine of innovation and economic growth. As I mentioned, the American intellectual property system rests on two fundamental foundations: first, protecting and enforcing private intellectual property rights; and second, a trust in markets, which means a belief that private solutions are usually more efficient than government solutions. This does not

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[6] *See* U.S. Dep't of Justice & Federal Trade Comm'n, Antitrust Guidelines for the Licensing of Intellectual Property § 2, 3.1 (Apr. 6, 1995) *at* http://www.usdoj.gov/atr/public/guidelines/ipguide.htm [hereinafter Antitrust-IP Guidelines].

mean exclusive focus on private profit without attention to public benefit. But it does mean faith that individual initiative and the freedom to compete and win are the best avenues to increase public welfare. The American system is not uniquely American, but is really a model based on economics and human nature. If there is one theme I would like you to take away from this discussion, it is that the intellectual property rights I am about to describe are simply a way of using human nature, such as the desire of inventors to seek financial rewards, as an engine for the public good.

Let's begin with the history. I am always a bit embarrassed to mention history before a Chinese audience; after all, China was a great civilization thousands of years before my ancestors even thought about sailing to the New World. But we do have a history, and it is an important one in the area of intellectual property rights.

The United States arrived at the beginnings of its intellectual property system through the experiences of Great Britain. In Britain, patents and copyrights dated back hundreds of years. Their purpose was to trade some type of state-enforced monopoly for a benefit to the sovereign. In the case of patents, this benefit might be a political favor, a large payment, or the development of a weapon of war for the King.[7] In the case of copyrights, the benefit was that each of the King's libraries received one copy of any copyrighted book, which is how the great University libraries of Britain began.[8]

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[7] *See* UK Patent Office, Origins [of Patents], *available at* http://www.patent.gov.uk/patent/history/fivehundred/origins.htm.

[8] UK Patent Office, Origins [of Copyrights], *available at* http://www.patent.gov.uk/copy/history/index.htm. This system continues today: in the United States, an author seeking to enforce a copyright must submit copies of his work to the Copyright Office of the Library of Congress. 17 U.S.C. § 408(b) (2000).

The primary goal of these monopolies was to benefit the monarchy, not the public at large. By the time the United States Constitution was drafted in 1787, American leaders had observed the abuses of the British patent and copyright system and were skeptical of placing unlimited rights in the hands of private inventors and the government.[9] For that reason, our Founders mentioned intellectual property in the very first Article of our Constitution, and they did so in a way that is still meaningful, two centuries later.

The first Article of the United States Constitution states that one of the primary functions of America's government is, and I quote:

> To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." U.S. Const. art. I, § 8.

To understand how remarkable this sentence is, you need to understand what was meant by the word "Progress" in 1789. This was the "Age of the Enlightenment," a time when political philosophers believed that reason and science could transform whole societies for the better. "Progress" was a term of art that meant not only an advancement of science, but also a triumph of the general good. So when the Founders established the goal of these rights as "Progress of Science and the useful Arts," they were focused not on a private benefit to individual inventors and authors, but on the benefits to society as a whole.

The United States recognizes four primary forms of IP rights. What you will notice about each right is that it is a powerful private right, but at the same time it preserves rights for

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[9] *See generally Eldred v. Ashcroft*, 537 U.S. 186, 201-04 (2003) (discussing Eighteenth Century British and American concerns over excessive granting of copyright monopolies).

the public good. Each of these rights permits the owner to prohibit others from using or making copies of the thing governed by the right. The first right is patent, which applies to new and useful processes, machines, and other items of invention. Patents are created by the Patent Act,[10] a federal government law, and they last for 20 years. The second right is copyright, created by the federal Copyright Act,[11] which covers "works of authorship" such as books, music, and some aspects of computer software. Copyrights can last for a very long time; for example, the author's lifetime plus 70 years, if the author is an individual. The third right is trademark, also governed in part by federal law,[12] which applies to words or logos – we call them "brands" or "marks" – that identify the source or quality of a product or service. A trademark does not have a specific term or expiration date but it lasts only as long as its owner maintains the quality or source-identifying nature of the mark. And finally, trade secret applies to any business information that derives value from being secret. Trade secret is largely a matter of state law, not federal, and is very similar to the state laws against theft – stealing a trade secret is against the law. Each of these rights creates a property interest, and each right can be sold or licensed, in whole or in part, in almost any way that maximizes the owner's return on his investment.

Each right also is subject to important limitations that protect the public's interest. For example, patents are extremely powerful rights, but they become completely public at the end of their 20-year term. Even during the term, the public gets to learn about the invention – since the patent itself is made public – and the public has a limited right to use the patent for pure

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[10] Patent Act, 35 U.S.C. §§ 1-373 (2000).

[11] Copyright Act of 1976, 17 U.S.C. §§ 101-1332 (2000).

[12] *See generally* Lanham Trademark Act, 15 U.S.C. §§ 1051-1141(n) (2000).

research. With copyrights, an owner can only prevent actual copying of the expressive elements of a work, so that the public remains free to copy facts or to independently create anything so long as no copying occurs. In addition, a copyright owner cannot prevent "fair use," which is a term of art meaning copying performed as part of some minimal, usually non-commercial use such as teaching and scholarship.[13] A trade secret does not prevent anyone else from discovering the same secret, so long as the discovery did not occur, essentially, via theft. And trademark rights will be lost if the mark ceases to indicate a particular source of a product.

The United States believes, and we believe our economic success has proved, that creating a strong private market is the most efficient way to drive economic growth. Private and individual decisions simply tend to be quicker, more varied, and more directly responsive to consumer demands than are government decisions. In addition, government decisions are expensive – they may require bureaucratic consensus and expert studies, which cost time and money – whereas private decision making is often less costly to society as a whole. The potential cost savings to the government and society, if more decisions can be left to individuals in the marketplace, is huge.

While the US generally trusts markets, we admit that sometimes markets fail. This is to be expected, since no system is perfect. The solution is not to abandon the incentive system; instead, we simply address specific failures. We have found, for example, that occasionally the potential rewards for very high-risk research – for example, some types of medical research concerning very rare diseases – are so low that no one will perform the research under our incentive system. We have responded with a *command*: government agencies perform some of

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[13] 17 U.S.C. § 107.

this research themselves. Another complement to the market is the use of a *reward*, in which the government pays private individuals to create useful inventions, and then permits the public to use the inventions for free. We use such rewards occasionally in the form of government grants, again usually in high-risk areas such as medical research. Finally there is the option of *coercion*, in which the government uses penalties to deter undesirable outcomes. We use this approach to some degree as part of our antitrust laws, which I will discuss next.

The Role of Competition in Promoting Innovation

As antitrust enforcers, we do not object if a firm comes to dominate a market purely by competition, including successful innovation. "The successful competitor, having been urged to compete, must not be turned upon when he wins."[14] But our system is not perfect, and the potential exists that intellectual property rights — like any type of advantage in the market — could make a few firms so powerful that they could conspire to fix prices, limit output, or set up anticompetitive barriers to prevent new innovation. Therefore, strong laws to protect competition are a necessary complement to vigorous enforcement of intellectual property rights. But antitrust law and intellectual property are not opponents, but instead serve the same goals. Both seek to promote innovation and competition — intellectual property law by promoting them affirmatively, antitrust law by prohibiting anticompetitive acts. An equally important point is that because United States antitrust laws are concerned with consumer welfare, our antitrust laws protect competition, not competitors.

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[14] *United States v. Aluminum Co. of America*, 148 F.2d 416, 430 (2d Cir. 1945) (L. Hand, J.).

The Justice Department does not use our antitrust laws as a method to determine the proper scope or duration of intellectual property rights or to mend any existing imperfections in intellectual property laws. Rather, such responsibilities fall to those in charge of administering or creating and amending our intellectual property laws, primarily our Patent and Trademark Office, our Copyright Office, and our elected officials sitting in the House of Representatives and the Senate. Our sister agency, the FTC, has recently issued a report discussing ways in which the system might be improved.[15]

We do sometimes use our antitrust laws to prevent the inappropriate use of intellectual property rights in the creation, dissemination and marketing of a product or service.[16] The possession of an IP right does not bring with it *carte blanche* to act anticompetitively in any activity that might involve the IP right.[17] On the other hand, IP rights do not necessarily confer market power or monopoly power in the antitrust sense.[18]

When applying our antitrust analysis to transactions or agreements involving intellectual property, we take into account the special characteristics of intellectual property, such as the ease

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[15] FTC INNOVATION REPORT, *supra* note 4.

[16] *See* Business and Industry Advisory Committee to the OECD*, Creativity, Innovation and Economic Growth in the 21st Century: An Affirmative Case of Intellectual Property Rights* 11 (Jan. 2004), *at* http://www.oecd.org/dataoecd/52/45/23375023.pdf.

[17] *United States v. Microsoft Corp.*, 253 F.3d 34, 63 (D.C. Cir. 2001) ("The company claims an absolute and unfettered right to use its intellectual property as it wishes: That is no more correct than the proposition that use of one's personal property, such as a baseball bat, cannot give rise to tort liability .... Intellectual property rights do not confer a privilege to violate the antitrust laws.") (citations and quotations omitted).

[18] Antitrust-IP Guidelines at § 2.2.

with which others can misappropriate it.[19] Our analysis takes into account the fact that intellectual property may also require different forms of protection than other tangible types of property, particularly when the fixed costs of developing it, such as filming a movie, are very high and the marginal costs of copying that film to VHS tapes or DVDs are low. In addition, problems of marking the exact boundaries of intellectual property may create analytical difficulties for antitrust enforcers. I may know exactly where the walls of my factory begin and end, but may be less sure about the precise limits the intellectual property protection accorded the technology that I use in my factory. Such ambiguity sometimes makes it difficult to discern whether a competitor is legitimately competing with a protected intellectual property right or is an illegitimate competitor whose removal from the market is entirely appropriate.

Licensing and Contractual Restrictions on the Use of Intellectual Property

Typically, a license imposes some restrictions on the use of intellectual property, which under one manner of thinking could be seen as a restriction on competition. But, generally speaking, we at the Department have found that the exploitation of intellectual property through licensing is both efficient and procompetitive because it fosters the efficient commercialization of new products, and increases incentives to engage in research and development. Except in certain extreme cases, such as naked price-fixing, bid-rigging or market allocation, we will oppose a particular use of intellectual property rights only in those cases where the anticompetitive effects of the parties actions outweigh the competitive benefits.[20] We call this balancing analysis "the rule of reason."

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[19] Antitrust-IP Guidelines at § 2.1.

[20] Antitrust-IP Guidelines at § 3.4.

Let's take patent pools as an example. In a patent pool, multiple firms jointly license their patents to each other and third-party licensees, often in industries where numerous patents are necessary to make a certain product or comply with an industry standard. On the one hand, a patent pool can be procompetitive in a number of ways. It may allow licensees to have access to complementary technologies. It may reduce the costs of licensing patents from multiple licensors. It may help licensees avoid infringement litigation, or, where inventions are closely related, stop patentees from blocking each other from using their own technology. Having identified benefits such as these, we would weigh them against any evidence of harm from the pool we might discover. For example, the pool might harm competition if it enabled members to set prices, or to agree to limit production. In some cases, the pool's licensing restrictions might cause the members of the pool or their licensees to stop trying to invent new technologies, thus retarding innovation. What conclusion one reaches after weighing the pros and cons of a patent pool will depend, of course, on the facts of each case.

The Department of Justice also provides "safe harbors" to firms when there is no fear that behavior will harm competition. "Safe-harbors" allow cooperation among competitors where it is necessary to promote innovation and provide some certainty to the private parties that are not subject to antitrust enforcement.[21]

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[21] Antitrust-IP Guidelines at § 4.3 (with some exceptions, antitrust "safety zone" available to private parties entering into a licensing agreement if licensor and licensees together account for no more than 20 percent of each relevant market significantly affected by the licensing restraint); National Cooperative Research and Production Act, 15 U.S.C. §§ 4301-06 (2000) (potential antitrust liability reduced for qualifying research and development joint ventures created by private parties).

We have learned that flexible antitrust rules that weigh efficiencies against any anticompetitive effects of a specific business practice, combined with safe harbors, can both protect competition in dynamic markets and provide rewards to private firms that innovate in a competitive environment.

Conclusion

How might this description of the American intellectual property rights and competition systems be useful to China? Certainly I do not presume to claim that ours is a one-size-fits-all system, or that it is perfectly tailored to China. I am conscious of the fact that China and the US have very different histories and traditions. But I do not think that these differences change the potential value of strong intellectual property rights, markets, and competition as a formula for economic progress. This type of system is based on the fundamental human nature of pursuing incentives, and it can be carefully designed to balance private gains with benefits to society as a whole. Our system is not perfect, and we are constantly discussing changes to keep abreast of shifts in the global economy. But empirical evidence suggests that strengthening intellectual property rights leads to sustainable economic growth, and that certainly has been the United States' experience.

China's decision to became a signatory to the TRIPS agreement demonstrates that China recognizes the value of a strong intellectual property regime for its economic development. It may be that growth in higher technology segments of the Chinese economy can be enhanced by promoting innovation through the continued development of a strongly-enforced intellectual property regime, a marketplace that encourages innovation, and the protection of competition by appropriately rigorous antitrust enforcement. So as you adapt China's system to meet your

incredible growth over the coming years, I would urge you to emphasize the incentives-based aspects of your system. History suggests that an incentives-based system can efficiently turn invention into innovation. I wish you great success as you go about harnessing China's great creative energy.