

Economic Analysis of the Proposed CACP Anti-Counterfeiting and Piracy Initiative

Prepared for the
Coalition Against
Counterfeiting and Piracy
(CACP)

Prepared by

LECG

November 2007



Prepared by

Laura Tyson, Ph.D.
Director, LECG, LLC

Tapan Munroe, Ph.D.
Director, LECG, LLC

George Schink, Ph.D.
Director, LECG, LLC

LECG, LLC

2000 Powell Street, Suite 600
Emeryville, CA 94608
Phone: 510.985.6700
Fax: 510.653.9898
www.LECG.com

LECG, LLC, a global expert services firm, one of the few consulting firms listed in NASDAQ, provides independent expert testimony, original authoritative studies, and strategic advisory services to clients including Fortune Global 500 corporations, major law firms, community banks, and local, state, and federal governments and agencies around the world. LECG's highly credentialed experts and professional staff conduct economic and financial analyses to provide objective opinions and advice that help resolve complex disputes and inform legislative, judicial, regulatory, and business decision makers. In addition to its world headquarters in Emeryville, California, the company has offices in San Francisco, Palo Alto, Los Angeles, Atlanta, Chicago, Cambridge (Mass.) Dallas, Evanston, Houston, Nashville, New York, Philadelphia, Salt lake City, Washington D.C., Toronto, Brussels, London, Madrid, Paris, Auckland (NZ), Wellington (NZ), Seoul, Sydney, and Buenos Aires.

Table of Contents

Executive Summary	iii
A. The Need to Increase U.S. Government Anti-Counterfeiting and Anti-Piracy Efforts	iii
B. Summary of Major Findings	iv
C. Conclusions	v
I. Introduction	1
A. Counterfeiting and Piracy Are Major Problems Throughout the World	1
B. The Need to Improve Existing Government Efforts to Combat Counterfeiting and Piracy	1
C. The CACP’s Proposed Initiative to Improve U.S. Efforts to Combat Counterfeiting and Piracy	2
D. Organization of This Study	2
II. Dimensions of the Counterfeiting and Piracy Problem	3
A. Characteristics of Markets Vulnerable to Counterfeiting and Piracy	3
B. The Harm Caused by Counterfeiting and Piracy	4
C. Analysis of U.S. Imports of Counterfeit and Pirated Goods.....	6
D. Analysis of Counterfeit Goods By Product	9
E. Lost U.S. Business Revenues Due to Counterfeiting and Piracy.....	10
1. The Effects of Counterfeiting and Piracy on the Motion Picture Industry.....	10
2. The Effects of Counterfeiting and Piracy on the Sound Recording Industry.....	12
3. The Effects of Counterfeiting and Piracy on the Software Industry.....	13
4. The Effects of Counterfeiting and Piracy on the Auto Parts Industry.....	14
5. The Effects of Counterfeiting and Piracy on the Fashion and Apparel Industry	14
6. The Effects of Counterfeiting and Piracy on Los Angeles.....	15
7. The Contribution of IP-Intensive Industries to U.S. Economic Growth.....	16
III. The Proposed CACP Initiative	17
A. Introduction	17
B. Issues With Current Government Anti-Counterfeiting and Anti-Piracy Efforts	17
C. Description of the CACP Initiative.....	20
1. Objective 1: Improve the coordination of federal government intellectual property enforcement resources.....	21
2. Objective 2: Better protect our borders against counterfeiting and piracy by expanding authorities and improving enforcement practices	21
3. Objective 3: Strengthen criminal enforcement against intellectual property theft by expanding the resources and tools available for law enforcement at the federal, state, and local levels.	22

Table of Contents (Cont.)

4.	Objective 4: Attack counterfeiting and piracy beyond our borders through improved enforcement training and technical assistance programs with foreign governments	22
5.	Objective 5: Strengthen the ability of the rights holders to protect their Intellectual property by civil and judicial reform	22
6.	Objective 6: Decrease demand by educating consumers about the harms of counterfeiting and piracy	22
D.	The Potential Impact of CACP Initiative on the U.S. Counterfeiting and Piracy Rate	23
1.	Bases for Estimating the Potential Effectiveness of the CACP Initiative	23
2.	The NYPD CompStat Process	24
3.	The U.S. DOJ’s Initiatives to Combat Computer and IP Crime.....	26
4.	Estimate of the Effectiveness of the CACP Initiative.....	27
IV.	Cost Estimates for the CACP Initiative	28
V.	Benefits Analysis of the CACP Initiative	29
A.	The Reduction in U.S. Business Revenue Losses due to Counterfeiting and Piracy As A Consequence of Implementing the CACP Initiative	29
B.	The Effects on U.S. Output, Earnings, and Employment As A Consequence of Reducing the U.S. Business Revenue Losses	30
C.	The Effects on U.S. Federal Government Tax Receipts As A Consequence of Reducing the U.S. Business Revenue Losses	32
D.	The Effects on State and Local Government Revenues of Reducing U.S. Business Revenue Losses	34

Appendices

Appendix A
Definitions of Terms

Appendix B
Lost Business Revenues Due to Counterfeiting and Piracy By Country, Region, and Product

Appendix C
CACP Intellectual Property Enforcement Initiative: Summary of Key Elements

Appendix D
Discussion of Cost Assumptions for the CACP Initiative

Appendix E
Calculations to Support Determination of the Benefits From the CACP Initiative

Executive Summary

A. The Need to Increase U.S. Government Anti-Counterfeiting and Anti-Piracy Efforts

The health of the US economy depends on a wide range of industries that rely on intellectual property (IP) to create and produce state-of-the-art products (i.e., IP-intensive industries).¹ Unfortunately, counterfeiting and piracy are robbing these industries of the intellectual property on which their profitability and growth rest and on which the long-run competitiveness of the US economy depends. The industries harmed by counterfeiting and piracy and the industry associations that represent them are devoting substantial amounts of capital and management talent to combat counterfeiting and piracy. But private business efforts to control these problems must be augmented by public efforts by both the U.S. and foreign governments to identify, capture and punish counterfeiters and pirates.

Counterfeiting and piracy are forms of property crimes, and the U.S. government has an important role to play in limiting such crimes on law enforcement grounds alone. Counterfeiting and piracy also both reduce job and income opportunities for Americans and reduce tax revenues at federal, state and local levels by imposing significant losses on the operations of legitimate businesses. Finally, the public interest in controlling counterfeiters and pirates goes beyond considerations of property, jobs, and government revenues to encompass concerns about safety and health. Several recent events have demonstrated that the health and safety of the American public are at risk from inferior, potentially dangerous counterfeit products. And counterfeiting and piracy pose mounting risks to America's national security as organized crime groups and terrorist organizations play growing roles.

The U.S. government already has substantial anti-counterfeiting and anti-piracy efforts in place. However, according to the U.S. Government Accountability Office (GAO), these efforts could be significantly improved primarily through strong permanent leadership to foster better coordination within and among federal government agencies and between them and state, local and foreign government authorities and private industry. Based on an extensive review, the GAO has also concluded that the U.S. government's anti-counterfeiting and anti-piracy effort needs strong permanent leadership, that more dedicated resources are needed to combat counterfeiting and piracy, and that the government agencies need more efficient and effective anti-piracy and counterfeiting operations (i.e., there is a need to "work smarter.") The OECD reached similar

¹ IP-intensive industries are defined in Appendix A. IP-intensive industries are those that create intellectual property and also those that rely on intellectual property to create state-of-the-art products which often have well-identified brand names. IP-intensive industries include motion pictures, sound recordings, software, fashion, pharmaceuticals, consumer electronics including personal computers, electronic components, automotive, aircraft, aerospace, toys, games, publishing, and numerous other industries.

conclusions in its recent review of government efforts to combat counterfeiting and piracy around the world.

The Coalition against Counterfeiting and Piracy (CACP) has recently proposed a broad initiative of actions to be taken by the federal government to enhance its efforts to control piracy and counterfeiting. The measures proposed by the CACP are consistent with the GAO's recommendations. The CACP's call for prompt stronger action by the federal government reflects the fact that the losses to American companies and the dangers to American consumers resulting from piracy and counterfeiting are growing rapidly as technology makes counterfeit products harder to detect and easier and cheaper to produce.

The purpose of this report is to provide an objective evaluation of the CACP initiative by providing estimates of the expected budgetary costs of the actions it proposes and estimates of the expected benefits of these actions. Reflecting limitations on the availability and reliability of underlying data and studies, we present a range of estimates for both the costs and benefits. In both cases, the estimates we present are conservative—we believe that our estimates of costs are on the high side of the likely range and our estimates of benefits are on the low side of the likely range.

B. Summary of Major Findings

Based on our research, we have reached the following conclusions about the costs and benefits of the enactment of the CACP initiative:

1. Measured in present value terms, the CACP initiative would cost between \$0.289 billion and \$0.489 billion during the first three years. We have based our cost estimates on the costs of similar government programs. Most of the costs of the CACP initiative are costs of hiring additional federal government personnel to combat piracy and counterfeiting and training government personnel working in this area. The personnel costs of the CACP proposal include the appointment of a Chief IP Enforcement Officer (CIPEO) in the White House to coordinate the efforts of the federal government and of other U.S. and foreign government agencies responsible for reducing piracy and counterfeiting. Our cost estimates also reflect the provision of resources and legal tools to allow the IPR enforcement agencies to “work smarter.”
2. According to estimates by the FBI and other sources, U.S. companies lose at least \$225 billion each year to piracy and counterfeiting. Measured in present value terms, we estimate that the CACP initiative would reduce these losses by between \$18.4 billion and \$36.8 billion during the first three years. Our estimates assume that enactment of the CACP initiative would reduce these losses by between 5 percent and 10 percent by the

third year. These estimates of success appear conservative and reasonable based on the carefully documented success rate achieved in reducing property theft by the CompStat Program of the New York Police Department, which has many similar features to those of the CACP initiative. This success rate is also consistent with the experience under the U.S. Department of Justice's initiatives to combat computer and intellectual property crime.

3. Even using pessimistic estimates of the reduction in the losses of U.S. business revenues from piracy and counterfeiting, the enactment of the CACP initiative would increase U.S. output by about \$27 billion a year and would increase U.S. employment by about 174,000 a year after three years. Using our optimistic estimates of the reduction in losses from the CACP measures, these figures rise to about \$54 billion in additional U.S. output and about 348,000 in additional employment after three years. These estimates of the overall output and employment benefits to the U.S. economy from enactment of the CACP initiative are based on measures of the direct and indirect effects of piracy and counterfeiting on the U.S. economy from recent studies of the motion picture and recording industries.
4. Measured in present value terms, total federal tax revenues during the first three years of the CACP initiative would increase between \$1.4 billion and \$2.8 billion versus the present value costs over the same period of the CACP initiative of \$0.289 billion to \$0.489 billion. The estimates are based on the additional federal tax revenues that would result from the increases in US output and employment resulting from the enactment of the CACP measures.

C. Conclusions

Overall, our research indicates that the CACP initiative is a sound investment for the federal government. Even under very conservative assumptions, it would produce sizeable reductions in business losses caused by piracy and counterfeiting, it would generate meaningful increases in output and employment levels in the US economy, and it would increase federal government revenues by substantially more than its costs.

For every dollar spent prudently on the CACP initiative, federal tax revenues would increase by at least \$2.9 and by as much as \$9.7 with an intermediate range of \$4.9 to \$5.7.² These federal tax revenue increases are due to the increase in U.S. output and employment that would occur as a result of implementing the CACP initiative. For every dollar spent on the CACP initiative, U.S. output

² All dollar amounts are stated in present value (2007) terms and are average results over three years.

would increase by at least \$38 and would increase by as much as \$127 with an intermediate range of \$64 to \$75.³ The increase in output due to implementing the CACP program will result in the creation of between 174,000 and 348,000 new jobs during the third year. Therefore, the return to the federal government and the economy of investing in the CACP initiative is very high. In addition, state and local governments can expect to receive incremental revenues between \$1.25 billion and \$1.50 billion, in present value terms over three years, if the CACP initiative is implemented.

Over time, by enabling the IP-intensive industries to earn a higher return, the CACP measures would encourage more investment and foster faster U.S. economic growth. In addition to these quantifiable benefits, enactment of the CACP initiative would increase the protection of American consumers against the health and safety risks of counterfeited and pirated goods. Finally, more effective policies to combat piracy and counterfeiting are an important complement to policies to combat organized crime and terrorism and to enhance national security.

³ Id.

I. Introduction

A. Counterfeiting and Piracy Are Major Problems Throughout the World⁴

Counterfeiters and pirates steal about \$225 billion in revenues from U.S. businesses each year. The products produced by IP-intensive industries are particularly vulnerable to counterfeiting and piracy. These IP-intensive industries are a major source of U.S. economic growth and of U.S. export earnings. Therefore, counterfeiting and piracy threaten the health of the U.S. economy. Counterfeiting and piracy also have direct adverse effects on the public and the U.S. government. Counterfeited products are often inferior and can be dangerous, especially counterfeit pharmaceuticals, consumer goods (such as anti-freeze laced counterfeit toothpastes), auto parts, and even airplane parts. Counterfeiting and piracy also take jobs and income away from the public and reduce the tax revenues of federal, state, and local governments.

Counterfeiting and piracy are global problems. Worldwide, counterfeiters and pirates are estimated to steal about \$600 billion in revenues from legitimate businesses. Most of the IP-intensive U.S. businesses sell worldwide, making their products vulnerable to counterfeiters and pirates in every country. In addition, many of the counterfeit products sold in the U.S. are produced overseas. China is the largest exporter of counterfeit and pirated products, and illicit Chinese goods account for about 87 percent of all illicit goods seized by U.S. Customs.

B. The Need to Improve Existing Government Efforts to Combat Counterfeiting and Piracy

As a recent OECD study concluded, effectively combating counterfeiting and piracy requires coordinated, focused, and creative efforts by law enforcement agencies throughout the world. A recent U.S. Government Accountability Office (GAO) study of the counterfeiting and piracy problem reached the same conclusions and called for strong leadership of the U.S. anti-counterfeiting and anti-piracy efforts. The GAO also recognized the need to coordinate the efforts of federal, state, and local law enforcement agencies within the U.S.

⁴ Appendix A presents a definition of terms including definitions of IP rights and the distinctions between counterfeiting and piracy.

C. The CACP's Proposed Initiative to Improve U.S. Efforts to Combat Counterfeiting and Piracy

The Coalition Against Counterfeiting and Piracy ("CACP") has proposed an initiative with six specific objectives designed to enhance and expand the current U.S. government efforts to combat counterfeiting and piracy. The six specific objectives are:

- Improve the coordination of federal government intellectual property enforcement resources.
- Better protect our borders against counterfeiting and piracy by improving enforcement practices.
- Strengthen criminal enforcement against intellectual property theft by expanding the resources and tools available for law enforcement at the federal, state, and local levels.
- Attack counterfeiting and piracy beyond our borders through improved enforcement training and technical assistance programs with foreign governments.
- Strengthen ability of rights holders to protect their intellectual property by civil and judicial reforms.
- Decrease demand for illegal products by educating consumers about the harms of counterfeiting and piracy.

D. Organization of This Study

Section II describes the worldwide dimensions of counterfeiting and piracy. In addition, Section II documents the large worldwide business revenue losses due to counterfeiting and piracy and also estimates the revenue losses of U.S. business. Section III presents evidence that the existing U.S. government anti-counterfeiting and anti-piracy efforts are inadequate (e.g., the GAO and OECD studies). Section III then describes the CACP initiative and how it addresses the inadequacies of the existing U.S. government efforts. On the basis of the similarities between the CACP initiative and other similar highly successful law enforcement initiatives, Section III develops estimates of the potential reductions in the losses of U.S. business revenues to counterfeiters and pirates that would result from the implementation of the CACP initiative. Section IV provides cost estimates for implementing the CACP initiative, and Section V provides estimates of its expected economic benefits including the reductions in U.S. business losses, the increases in U.S. output, earnings and employment, and the increases in the revenues of the federal government.

II. Dimensions of the Counterfeiting and Piracy Problem

A. Characteristics of Markets Vulnerable to Counterfeiting and Piracy

Intellectual property theft through counterfeiting and piracy has increased dramatically throughout the world during the last two decades.⁵ Counterfeiters and pirates focus on products with high unit profitability, which typically are popular brand name products. Counterfeiting and piracy have been relatively low risk, high return criminal activities. As a consequence, the level of activity of counterfeiters and pirates has increased dramatically. The size (scale) of the organizations engaged in counterfeiting and piracy also has increased, and organized crime groups and terrorist groups have been enticed to enter the counterfeiting and piracy arena.⁶

The growth of counterfeiting and piracy has been facilitated by the easy and widespread access to technology advances such as computers, copiers, and scanners, and especially the Internet. These tools have made almost all products, corporations, and consumers vulnerable to the activities of counterfeiting.⁷ These new technologies make it easy to exactly duplicate the labels, packaging, documentation, authentication devices, and symbols/logos of virtually every product.⁸ The Internet provides a means for sellers to link the witting and unwitting buyers of counterfeit goods, through websites, search engines, and auction sites.

The popular image of counterfeiters and pirates is one where street vendors are selling cheap and often defective copies of legitimate goods. The types of goods sold by such street vendors tend to be luxury, apparel, and other relatively high-margin goods (e.g., music CDs, movie DVDs, software, sunglasses, T-shirts, hats, cosmetics, cell phone covers, handbags, and watches, all with well known brand names and logos). The new technologies and entry of new larger groups have expanded the scope of counterfeiting to many additional products including razor blades, shampoos, pharmaceuticals, foods, hand tools, auto parts, airline parts, film, shaving lotions, laundry detergent, band-aids, insecticides, batteries, cigarettes, children's toys, dog food, and practically anything else that has a brand name or logo that consumers recognize. The new technologies and the increasing sophistication of the criminal groups engaged in counterfeiting and piracy have resulted in counterfeited goods that appear to be legitimate that are being fed into the wholesale supply chain of

⁵ International Anticounterfeiting Coalition (IACC) White Paper, "The Negative Consequences of International Intellectual Property Theft: Economic Harm, Threats to the Public Health and Safety, and Links to Organized Crime and Terrorist Organizations", January 2005 (hereinafter "The IACC White Paper") p.2.

⁶ Id.

⁷ Id.

⁸ Id.

legitimate retailers. The retail outlets may be selling counterfeit goods without knowing the goods are counterfeits.

B. The Harm Caused by Counterfeiting and Piracy

Counterfeiting and piracy impose substantial costs on the directly affected industries, as well as on the business community as a whole, on the public, and on the government. The manufacture, distribution and sale of counterfeit goods robs legitimate business of revenues, slows business innovation and growth, causes the public to lose jobs and income, reduces government tax revenues, requires additional outlays by the government on social programs in response to the job and income losses, and provides an environment where criminal networks can thrive.⁹

The revenue loss to U.S. and foreign businesses due to counterfeiting and piracy is large.¹⁰ U.S. Customs and Border Protection (U.S. CBP) estimated, in 2002, that counterfeiting and piracy caused U.S. “businesses and industries to lose about \$200 billion a year in revenue and 750,000 jobs.”¹¹ Similarly, the U.S. Federal Bureau of Investigation (FBI) estimated, in 2002, that counterfeiting and piracy caused U.S. businesses to lose between \$200 and \$250 billion in revenues each year.¹² Given that counterfeiting and piracy by all reports escalated significantly since 2002, the mid-point of this range (\$225 billion) is a conservative current estimate of lost U.S. business revenues due to counterfeiting and piracy.¹³

Globally, the lost annual business revenues due to counterfeiting and piracy have been estimated to be over \$600 billion.¹⁴ The estimates range upward to \$650 billion.¹⁵ The sum of available individual country estimates of counterfeit and piracy market size produces an estimate of lost global business

⁹ For example, see OECD, *The Economic Impact of Counterfeiting and Piracy*, Part IV, Executive Summary, JT03228347, June 4, 2007, http://www.oecd.org/document/35/0,3343,en_2649_201185_38702947_1_1_1_1,00.html. (hereinafter “OECD 2007 Piracy Report”), pages 2, 4, and 12-18.

¹⁰ The IACC White paper provides a good summary discussion of the economic impacts of counterfeiting and piracy. See pages 3-6.

¹¹ U.S. Customs and Border Protection, (U.S. CBP), Press Release, “U.S. Customs Announces International Counterfeit Case Involving Caterpillar Heavy Equipment,” May 29, 2002, http://www.cbp.gov/xp/cgov/newsroom/news_releases/archives/legacy/2002/52002/05292002.xm

¹² FBI Press Release, July 17, 2002, <http://www.fbi.gov/pressrel/pressrel02/outreach071702.htm>

¹³ The IACC White Paper, pages 2 and 3.

¹⁴ The World Customs Organization (WCO) and Interpol are credited with this estimate. See Coalition for Intellectual Property Rights (CIPR), “First Global Congress on Combating Counterfeiting,” Brussels, Belgium, May 25-26, 2004, http://www.cipr.org/activities/seminars/brussel_250504/index.htm.

¹⁵ International Chamber of Commerce (ICC), “Putin assures ICC that global business concerns will be on G8 agenda,” July 5, 2006, <http://www.iccwbo.org/policy/economic/icciaej/index.html>

revenues due to counterfeiting and piracy of \$522 billion.¹⁶ These results suggest that \$600 billion is a reasonable estimate of the lost global business revenues due to counterfeiting and piracy.

In a recent study the OECD concluded “international trade in counterfeit and pirated products could have been up to USD 200 billion in 2005.”¹⁷ This total excludes domestically produced and consumed counterfeit and pirated products and the pirated digital products being distributed via the Internet.¹⁸ The OECD conjectured that if these items were included that the total global magnitude of counterfeiting and piracy could be several hundred million dollars more.¹⁹ Assuming that total lost global business revenues due to counterfeiting and piracy are \$600 billion, international trade in counterfeited and pirated goods accounts for about 1/3 of the total.

Counterfeiting and piracy also harm the public and the government by substituting inferior and often dangerous counterfeit goods for legitimate high quality goods. If the counterfeit goods are sold through legitimate (or apparently legitimate) retail channels, the public and the government may pay for a high quality legitimate good and receive a low quality and potentially dangerous counterfeit good. Lower priced counterfeit goods purchased from anonymous retailers over the Internet or from obscure remote retailers over the phone, through street vendors, or through transitory physical retail outlets (e.g. the back of a truck) are even more likely to be of inferior quality and potentially dangerous.²⁰

Finally there is also evidence that organized crime groups and terrorist organizations are entering the counterfeiting and piracy arena. The entrance of organized crime will increase the scale of counterfeiting and piracy operations and make these operations more difficult to detect because of the sophistication of the organized crime groups. In addition, terrorist organizations engaging in counterfeiting and piracy will be given a source of funds for their terrorist activities.²¹

¹⁶ Havocscope, <http://www.havocscope.com/>

¹⁷ OECD, *The Economic Impact of Counterfeiting and Piracy, Part IV, Executive Summary*, JT03228347, June 4, 2007, http://www.oecd.org/document/35/0,3343,en_2649_201185_38702947_1_1_1_1,00.html, (hereinafter “OECD 2007 Piracy Report”), p. 2.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ The IACC White paper provides a good overview discussion of the health and safety concerns related to counterfeited goods. See pages 7-14.

²¹ The IACC White Paper provides a good discussion of organized crime syndicates activities related to counterfeiting and piracy. (see pages 14-20) The IACC also addresses the activities of terrorist organizations in the counterfeiting and piracy arena (See pages 20-35).

C. Analysis of U.S. Imports of Counterfeit and Pirated Goods

There is no direct measure of imports of counterfeit and pirated goods into the United States (or to any other country). The objective of the counterfeiters and pirates is to bring their illicit goods into the U.S. (and other countries) without detection. The only measure of the relative magnitude of U.S. imports of counterfeit and pirated products are seizures by U.S. Customs and Border Protection (U.S. CBP). Table II-1 presents total seizures in FY2006 and FY2001 identifying the major countries of origin for these illegal imports. All countries with a share of illegal imports of one percent or more are shown in Table II-1.

Table II – 1

**U.S. Customs and Border Protection Seizures By Country
FY 2006 and FY 2001**

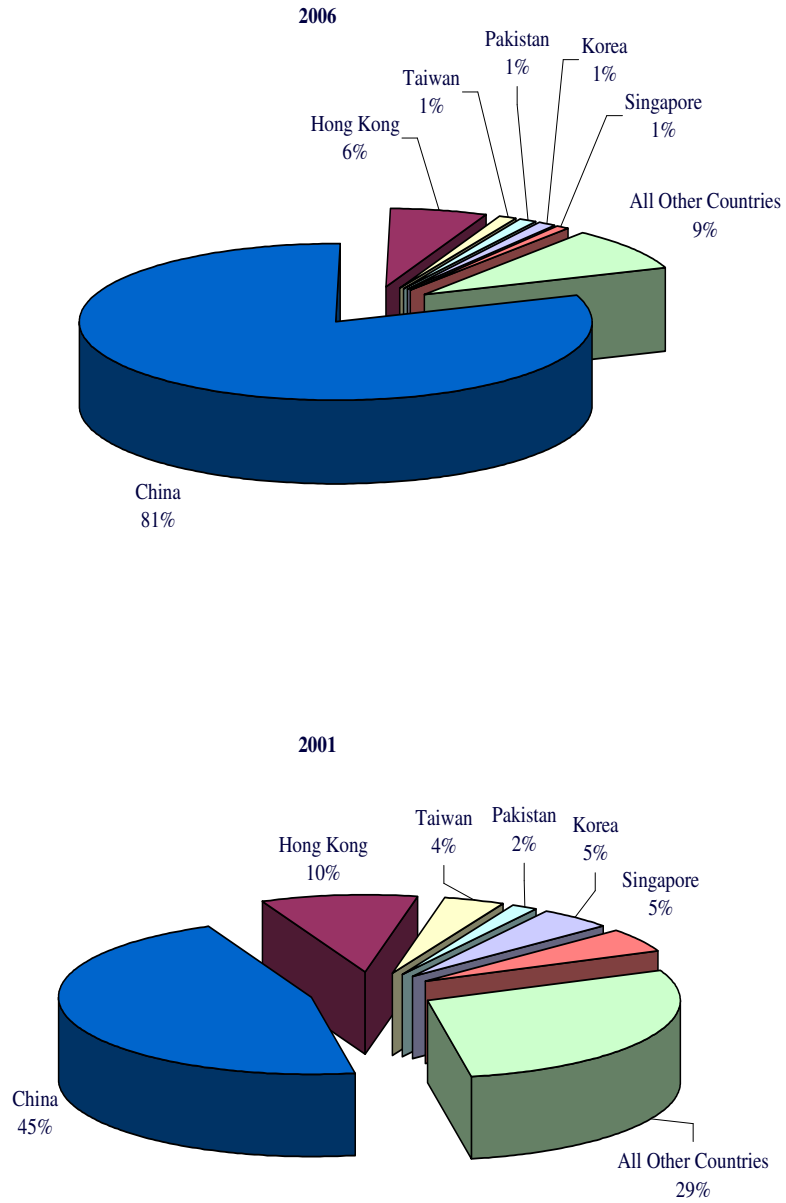
Country	Percent Change: 2001 to 2006 (%)	Fiscal Year 2006		Fiscal Year 2001	
		(Dollars)	(%) Share	(Dollars)	(%) Share
China	374%	\$125,595,844	81%	\$26,471,834	46%
Hong Kong	62%	\$9,389,464	6%	\$5,810,311	10%
Taiwan	-15%	\$1,843,764	1%	\$2,161,387	4%
Pakistan	99%	\$1,838,815	1%	\$922,767	2%
Korea	-36%	\$1,810,140	1%	\$2,845,538	5%
Singapore	-56%	\$1,198,735	1%	\$2,751,582	5%
All Other Countries	-17%	\$13,692,474	9%	\$16,475,261	29%
Total	170%	\$155,369,236	100%	\$57,438,680	100%
Addendum:					
China and Hong Kong	318%	\$134,985,308	87%	\$32,282,145	56%
All Other Countries	-19%	\$20,383,928	13%	\$25,156,535	44%

Source: U.S. Customs and Border Protection, http://www.cbp.gov/xp/cgov/import/commercial_enforcement/ipr/seizure/trading/

The dramatic change in the share of total seizures of illegal goods originating in China between FY2001 and FY2006 is illustrated in Figure II-1.

Figure II-1

**Percentage of U.S. Customs and Border Protection Seizures By Country
FY 2006 and FY 2001**



Source: U.S. Customs and Border Protection, http://www.cbp.gov/xp/cgov/import/commercial_enforcement/ipr/seizure/trading/

The International Anticounterfeiting Coalition (IACC), in a 2007 submission to the United States Trade Representative (USTR), recommended that China be reclassified from a priority watch country to a priority foreign country for monitoring because of serious intellectual property right (IPR) issues.²² The IACC noted that Department of Homeland Security (DHS) statistics on 2006 U.S. Customs seizures showed that 81 percent were from China and that, if seizures from Hong Kong were added (because Hong Kong is normally just a transshipment point for goods from China), then 87 percent of all illegal goods seized would have been from China.²³ (See Table II-3 above.) The counterfeit goods seized from China included electronics, pharmaceuticals, household appliances, computer peripherals, auto parts, lighters, optical media, toys, apparel, footwear, luxury accessories (including handbags, jewelry, watches, and eyewear), and cigarettes.²⁴ Piracy of optical disks (DVDs) and online piracy also are major problems in China.²⁵ Finally, software piracy is an extreme problem in China. The IACC estimates that over 86 percent of the software used in China is pirated.²⁶ The countries on the IACC's proposed priority watch list were Brazil, Canada, Costa Rica, Czech, Republic, Paraguay, Russia and Vietnam.²⁷

The International Intellectual Property Alliance (IIPA) identified China and Russia as key problem countries in its 2007 submission to the USTR.²⁸ The IIPA stated that "China and Russia are again this year the two countries that are of the greatest concern to copyright industries, as they were in 2006. While there have been developments in both these key markets over the year, the bottom line is that piracy levels have not come down at all or only marginally, and some problems have grown worse."²⁹ The IIPA criticized China for being "extremely reluctant to bring criminal cases for copyright piracy."³⁰ The IIPA's concern with Russia was whether Russia was honoring its commitments under the 2006 U.S.-Russia IPR Bilateral Agreement to take action against counterfeiting and piracy.³¹ The

²² The International Anticounterfeiting Coalition (IACC), *Submission of Special 301 Recommendations to the United States Trade Representative*, February 12, 2007 (hereinafter "IACC 2007 Special 301 Recommendations"), p. 4 and pp. 10-34. A priority foreign country would be subject to heightened investigation and possibly immediate sanctions. A priority watch country is the focus of increased bilateral talks to amend that country's laws and practices.

²³ IACC 2007 Special 301 Recommendations, p. 12.

²⁴ IACC 2007 Special 301 Recommendations, p. 15.

²⁵ IACC 2007 Special 301 Recommendations, pp. 30-32.

²⁶ IACC 2007 Special 301 Recommendations, p. 32.

²⁷ IACC 2007 Special 301 Recommendations, p. 4 and pp. 35-70.

²⁸ The IIPA submitted its report to the USTR on February 12, 2007. See <http://www.iipa.com>

²⁹ Comments of IIPA's Eric Smith. *Id.*

³⁰ IIPA Submission on China, *Id.*

³¹ IIPA submission on Russia, *Id.*

IIPA noted that “Russia’s current copyright piracy problem remains one of the worst of any country in the world, resulting in losses of over \$2 billion in 2006.”³²

In its 2007 Special 301 Report, the United States Trade Representative (USTR) did not reclassify China as a priority foreign country as requested by the IACC, but did put China and Russia at the top of its priority watch list as the IIPA had requested.³³ The USTR noted that “[d]espite the anti-piracy campaign in China and an increasing number of IPR cases in Chinese courts, overall piracy and counterfeiting levels in China remained unacceptably high.”³⁴ The USTR stated that U.S. copyright industries had estimated “that 85 percent to 95 percent of all copyrighted material sold in China were pirated, indicating no improvement over 2005.”³⁵ The USTR further stated “Chinese counterfeits include many products, such as pharmaceuticals, electronics, batteries, auto parts, industrial equipment, toys, and many other products that pose a direct threat to the health and safety of consumers in the United States, China, and elsewhere.”³⁶ The USTR listed Russia as the second country on its priority watch list. The USTR noted that “[p]oor enforcement of IPR in Russia is a pervasive problem.”³⁷ The other countries on the USTR’s priority watch list, in the order presented by the USTR, are Argentina, Chile, Egypt, India, Israel, Lebanon, Thailand, Turkey, Ukraine, and Venezuela.³⁸

D. Analysis of Counterfeit Goods By Product

The OECD, in a recent study on piracy, provided an illustrative list of products subject to IP infringement. See Appendix Table B.1. This list is extensive but incomplete. For example, counterfeit aircraft parts are a substantial problem and are not included in the list in Appendix Table B.1.³⁹ Estimates of lost global business revenues due to counterfeiting and piracy have been

³² Id.

³³ Office of the United States Trade Representative (USTR), 2007 Special 301 Report, 2007, http://www.ustr.gov/assets/Document_Library/Reports_Publications/2007/2007_Special_301_Review/asset_upload_file230_11122.pdf, page 18.

³⁴ Id., page 18.

³⁵ Id., page 18.

³⁶ Id., page 18.

³⁷ Id., page 23.

³⁸ Id., page 23-28.

³⁹ FAA estimates indicate that 2 percent of parts installed on aircraft are counterfeit. <http://www.icc-ccs.co.uk/bascap/article.php?articleid=610>

developed by various parties for some of the products identified by the OECD. See Appendix Table B.2.⁴⁰ These individual product estimates developed by others are combined into 9 categories in Appendix Table B.3. These 9 categories are sorted in descending order by lost global business revenues due to counterfeiting and piracy. The categories are taken from the OECD list in Appendix Table B.1. The specific products in each category for which estimates are available in Appendix Table B.2 are listed in the bullet under each category. The total lost global business revenues for all identified products are \$301 billion. There are many products for which no estimates of lost global business revenues are available, which accounts for the difference between the estimate of total lost global business revenues by country (about \$600 billion) and the estimate of total lost global business revenues by product (\$301 billion).

E. Lost U.S. Business Revenues Due to Counterfeiting and Piracy

The total annual lost revenues of all U.S. business due to counterfeiting and piracy is estimated to \$225 billion.⁴¹ Annual U.S. business revenue losses due to counterfeiting and piracy also have been developed for selected industries. These lost U.S. business revenue estimates may occur in the U.S. or internationally, and many of the U.S. IP-related companies are major international players. As a consequence, U.S. firms in the IP-related markets can suffer substantial damage due to counterfeiting and piracy throughout the world.

Below, short discussions of the effects of counterfeiting and piracy on five major IP-based industries are presented: (1) Motion Pictures; (2) Sound Recordings; (3) Software; (4) Auto parts; and (5) Fashion and apparel. In addition, a brief discussion is presented of the estimated impacts of counterfeiting and piracy on Los Angeles.

1. The Effects of Counterfeiting and Piracy on the Motion Picture Industry

In 2007, the Motion Picture Association (MPA) and L.E.K. published a study on the 2005 revenue losses caused by piracy in the movie industry.⁴² As shown in Table II-2, the estimated total global

⁴⁰ We have not attempted to assess the accuracy of the estimates of the global lost business revenues by product presented in Appendix Table B.2. Some of these estimates are based on substantial studies and others are reported in press articles with citations to industry sources. We have checked the sources provided by Havocscope and have found that Havocscope accurately records the reported amounts. The estimates of lost global business revenues by product shown in Appendix Table B.2 are not used in our calculations of the likely effects of the CACP initiative on the U.S. economy that are presented in Section V below.

⁴¹ This is the mid-point of the FBI range estimate of \$200 to \$250 billion. FBI Press Release, July 17, 2002, <http://www.fbi.gov/pressrel/pressrel02/outreach071702.htm>

⁴² MPA and L.E.K., *The Cost of Movie Piracy*, an analysis prepared by L.E.K. for the Motion Picture Association, May 2006, <http://www.mpaa.org/researchStatistics.asp>, (hereinafter "MPA/L.E.K. Piracy Study").

cost of counterfeiting and piracy to the movie industry in 2005 was \$18.2 billion.⁴³ Most of this piracy occurs outside the U.S.; only \$2.7 billion is estimated to occur in the U.S. However, the U.S. motion picture studios are estimated to have lost \$6.1 billion of revenue globally in 2005 due to counterfeiting and piracy. Of these losses, \$3.8 billion were due to counterfeiting of physical devices (e.g., DVDs) and \$2.3 billion were estimated to be due to Internet (digital) theft. Movie piracy rates are highest in China (90% of the market is lost to piracy), Russia (79%), and Thailand (79%).⁴⁴ The piracy rate in the U.S. is 7%.⁴⁵

Table II-2
Cost of Piracy to the Movie Industry in 2005
(Billions of Dollars)

Segment	Global Market	U.S. Market
Motion Picture Industry	\$18.2	\$2.7
Physical	\$11.1	\$1.8
Internet (Digital)	\$ 7.1	\$0.9
	\$ 6.1	\$1.3
U.S. Motion Picture Studios		
Physical	\$ 3.8	\$0.9
Internet (Digital)	\$ 2.3	\$0.4

Source: MPA and L.E.K., *The Cost of Movie Piracy*, An analysis prepared by L.E.K. for the Motion Picture Association, May 2006, <http://www.mpa.org/researchStatistics.asp>.

Note: The motion picture industry includes foreign and domestic producers, distributors, theaters, video stores, and pay-per-view operators.

In a study prepared for the Institute for Policy Innovation (IPI), the economy-wide effects of the estimated \$6.1 billion revenue loss by the U.S. motion picture studios due to counterfeiting and piracy were calculated.⁴⁶ The IPI Study also included the effects of counterfeiting and piracy on the U.S. theatrical exhibit industry and on the U.S. retail trade sector, which increased the total estimated

⁴³ MPA/L.E.K. Piracy Study, p. 4. The movie industry is defined to include foreign and domestic producers, distributors, theaters, video stores, and pay-per-view operators.

⁴⁴ MPA/L.E.K. Piracy Study, p. 6.

⁴⁵ *Id.*

⁴⁶ Stephen E. Siwek, *The True Cost of Motion Picture Piracy to the U.S. Economy*, prepared for the Institute for Policy Innovation (IPI), Policy Report 186, September 2006 (hereinafter "IPI Movie Piracy Study").

direct lost business revenues due to counterfeiting and piracy of movies of U.S. firms in 2005 to \$7.3 billion.⁴⁷ The total economy-wide business revenues lost due to these lost motion picture related revenues was calculated to be \$20.5 billion.⁴⁸ The total number of jobs lost in the U.S. economy was estimated to be 141,030 due to counterfeiting and piracy in the movie industry.⁴⁹ Finally, U.S. state, and local governments were estimated to lose at least \$0.8 billion in tax revenues due to counterfeiting and piracy in the movie industry.⁵⁰

2. The Effects of Counterfeiting and Piracy on the Sound Recording Industry

Piracy and counterfeiting are very serious problems for the sound recording industry. The International Federation of the Phonographic Industry (IFPI) estimated that the loss in music industry global revenues in 2005 due to counterfeiting and piracy was \$4.5 billion.⁵¹ The IFPI reported that “37 percent of all CDs purchased [globally] in 2005 were pirate – 1.2 billion pirate CDs in total.”⁵² Further, the IFPI stated that “[p]irate CD sales outnumbered legitimate sales in 2005 in a total of 30 markets.⁵³ Assuming a \$10 wholesale price for a CD, the 1.2 billion pirated CDs, if sold by the recording industry, would have a wholesale value of \$12 billion. At pirate prices, the IFPI estimates that the 1.2 billion CDs sold by pirates had a value of \$4.5 billion.⁵⁴ The IFPI estimated that “national enforcement authorities around the globe seized a record amount of discs in 2005 – some 80 million.”⁵⁵

Internet piracy of music also is a very large problem. The IFPI estimated “that almost 20 billion songs were illegally downloaded in 2005.”⁵⁶ Assuming that a song download has a retail price of \$1, the downloads sold by legitimate vendors would have a market value of \$20 billion. In comparison, “Apple Inc.’s iTunes Music Store, which has more than 70 percent of legal digital music sales in the United States, has sold only a bit more than 2 billion songs since its launch in 2003 [through 2006].”⁵⁷

⁴⁷ IPI Movie Piracy Study, pages 5 and 7.

⁴⁸ IPI Movie Piracy Study, pp. 9-13.

⁴⁹ *Id.*, pp. 9 and 13.

⁵⁰ *Id.*, pp. 11-13

⁵¹ International Federation of the Phonographic Industry (“IFPI”), *The Recording Industry 2006 Piracy Report: Protecting Creativity in Music*, July 2006; (hereinafter “IFPI 2006 Piracy report”), <http://www.ifpi.org/content/library/piracy-report2006.pdf>, page 4.

⁵² *Id.*, page 4.

⁵³ *Id.*, page 4.

⁵⁴ *Id.*, page 4.

⁵⁵ *Id.*, page 4.

⁵⁶ *Id.*, page 4.

⁵⁷ *Id.*, page 4.

In 2006, revenues from legitimate global digital music sales almost doubled from 2005 levels reaching about \$2 billion.⁵⁸ However, the \$2 billion of legitimate downloads in 2005 is only 10% of the illegal \$20 billion illegal downloads.

In a study prepared for the Institute for Policy Innovation (IPI), the total annual global revenue losses of the music recording industry due to counterfeiting and piracy were estimated to be \$5.3 billion.⁵⁹ The IPI study also estimated the related annual business revenue losses in the retail trade sector, which increased the total estimated annual business revenue losses to \$6.4 billion. The IPI study calculated the total economy-wide annual business revenue losses due to recorded music counterfeiting and piracy to be \$12.5 billion.⁶⁰ The total number of jobs lost in the U.S. economy was estimated to be 71,060.⁶¹ Finally, the U.S., state, and local governments were estimated to lose at least \$0.4 billion annually in tax revenues due to counterfeiting and piracy in the recorded music industry.⁶²

3. The Effects of Counterfeiting and Piracy on the Software Industry

The Business Software Alliance (BSA) and IDC performed a study of the impacts of piracy on the IT sector, which includes hardware, software, and IT services.⁶³ The BSA/IDC study concluded that global software piracy in 2006 amounted to \$39.6 billion, which was about 35 percent of the value of total software installed.⁶⁴ The BSA/IDC study estimated that the percentage of total software installed that was pirated ranged across countries from 21 percent to 95 percent.⁶⁵ An earlier BSA/IDC study estimated that reducing the global average software piracy rate from 35 percent to 25 percent, over four years, could add 2.5 million IT jobs, add more than \$400 billion to the global economy, and add \$67 billion to worldwide government tax receipts.⁶⁶ This earlier BSA/IDC study also concluded that

⁵⁸ International Federation of the Phonographic Industry (IFPI), *IFPI: 07 Digital Music Report*, July 2007, http://www.ifpi.org/content/section_resources/digital-music-report.html, page 5.

⁵⁹ Stephen Siwek, *The True Cost of Sound Recording Piracy to the U.S. Economy*, prepared for the Institute for Policy Innovation (IPI), Policy Report 188, August 2007 (hereinafter IPI Music Piracy Study), p. 5.

⁶⁰ *Id.*, pp. 11 and 14.

⁶¹ *Id.*, pp. 11 and 15.

⁶² *Id.*, pp. 14-15.

⁶³ Business Software Alliance (BSA) and IDC, *2006 Piracy Study*, <http://w3.bsa.org/globalstudy/> (hereinafter BSA/IDC 2006 Piracy Study.), p. 12.

⁶⁴ BSA/IDC 2006 Piracy Study, p. 4.

⁶⁵ *Id.*, pp. 10-12.

⁶⁶ Business Software Alliance (BSA) and IDC, *Expanding the Frontiers of our Digital Future: Reducing Software Piracy to Accelerate Global IT Benefits*, December 2005, (hereinafter "BSA/IDC 2005 IT Sector Piracy Study"), p. 6.

the countries with the highest current software piracy rates (e.g., China, Russia, Indonesia, Vietnam, Kazakhstan, and Ukraine) would obtain the greatest benefit from reducing software piracy.⁶⁷

4. The Effects of Counterfeiting and Piracy on the Auto Parts Industry

Counterfeiting in the automobile and auto parts business has become a major problem in recent years, because of widespread access to computers, copiers, and scanners. It has become much easier to re-engineer products and duplicate labels, logos, and warranty claims. Currently the global auto parts industry is estimated to have \$500 billion in annual revenues, with the North American business revenues estimated to be \$191 billion.⁶⁸ According to a 2004 estimate, worldwide counterfeit parts reduce revenues of the automotive industry by \$12 billion.⁶⁹ In the U.S. auto parts industry, counterfeit auto parts drain nearly \$3 billion a year from revenues.⁷⁰ In terms of lost jobs the Department of Commerce estimates that the U.S. auto industry could hire 200,000 additional workers in the absence of counterfeited parts.⁷¹

In addition, counterfeit and gray market auto parts account for 3.2% of the global counterfeit trade, with annual lost revenues amounting to nearly \$16 billion for the auto companies. Estimates by the European Union (EU) suggest that 5-10% of all replacement auto parts are counterfeit. A recent study by the Commercial Times reports that more than 56% of autos in China have counterfeit parts installed.

5. The Effects of Counterfeiting and Piracy on the Fashion and Apparel Industry

The total production of the fashion and apparel industry in 2006 amounted to about \$350 billion. While digital technology has made the fashion industry much more efficient and has facilitated creativity, this same technology also has facilitated counterfeiting and piracy. The lost revenues due to counterfeiting and piracy of the apparel and fashion industry are estimated to be about \$12 billion annually.⁷²

⁶⁷ BSA/IDC 2005 IT Sector Piracy Study, pp. 6-7.

⁶⁸ Jeffrey McCracken, Battered Auto-parts Makers Could Face More Pain, Wall Street Journal, August 13, 2007.

⁶⁹ Tom Nash, Counterfeit Parts: A Poor Fit for Your Shop, Motor Magazine, January 2004.

⁷⁰ Thomas J. Donahue, Counterfeiting and Theft of tangible Intellectual Property: Challenges & Solutions, March 23, 2004.

⁷¹ Tom Nash, Counterfeit Parts: A Poor Fit for Your Shop, Motor Magazine, January 2004.

⁷² Robin Moody, *Logo Cops fight Apparel Knockoffs*, Portland Business Journal, April 9, 2004. http://www.intellectualsecurity.com/2004/04/logo_cops_fight_apparel_knocko.html

The estimated \$12 billion in fashion industry revenue loss, however, may not fully reflect the amount of actual counterfeit goods that hit the market. Numerous law enforcement officials report that labels are often imported separately from garments and bags. As a result, and because the U.S. only outlaws counterfeit goods, not pirated designs, border enforcement and customs officials can neither confiscate the goods that will later be sold as counterfeits, nor arrest those purveying the goods. No goods confiscated means no goods counted. Similarly, since the labels are often kept separately from the bags and garments in U.S. warehouses, and, in fact, are often even affixed after the sale, New York law enforcement officials report⁷³ they are often thwarted from making arrests and seizures on Canal Street and in the garment district, the two largest counterfeit centers in the United States.⁷⁴ Apparel without the label is design piracy which is legal; counterfeiting is not.

The public, unfortunately, has shown little reluctance in buying counterfeit fashions. For example, counterfeit handbags, one of the most widely infringed products, are so easily available that many people perceive them to be legal.⁷⁵ Coach Inc. of New York has seen a 368% increase in the number of fake bags seized in the last two years.⁷⁶ A recent study commissioned by Chemise Lacoste that explored brand devaluation related to counterfeits concluded that 76% of the respondents believed that the growing abundance of forged items and logos made buying the original item far less attractive.⁷⁷

6. The Effects of Counterfeiting and Piracy on Los Angeles

Worldwide piracy hurts Los Angeles County substantially because the region produces most movies and many music recordings. A recent study determined that counterfeiting and piracy caused Los Angeles County firms in 2005 to lose \$5.2 billion in revenue.⁷⁸ The hardest hit firms were in the motion picture industry (\$2.7 billion in lost revenues), sound recording (\$0.851 billion), apparel, accessories, and footwear (\$0.617 billion), and software publishing (\$0.355 billion).⁷⁹ In addition, the study concluded that local retailers lost at least \$2 billion to black market sales of such products.⁸⁰ Job losses in Los Angeles County were estimated to be 706,000 implying a loss in wages of \$5.1

⁷³ Press Office, New York City Comptroller.

⁷⁴ Phillips, Tim. *Knockoff: The Deadly Trade in Counterfeit Goods*, London, PA 2006.

⁷⁵ Tina Cassidy, *Bagging the knockoffs: There is nothing like the real Thing*, Boston Globe, Dec.26, 2002.

⁷⁶ Laura Amendolara, *Knocking Knock-Offs*, *Fordham Intellectual Property Media and Entertainment Law Journal*, Vol. 15:789, 2006.

⁷⁷ Kate Betts, *The Purse Party Blues*, *Time Magazine*, July 29, 2004.

⁷⁸ Gregory Freeman, Nancy D. Sidhu, and Michael Montoya, *A False Bargain: The Los Angeles County Economic Consequences of Counterfeit Products*, Los Angeles County Economic Development Corporation, February 2007 (hereinafter "LA County Study"), page i.

⁷⁹ *Id.*, page i.

⁸⁰ *Id.*, page i.

billion.⁸¹ Finally, the study estimated that state and local governments lost at least \$0.483 billion in tax revenues in 2005 due to the effects of counterfeiting and piracy.⁸²

7. The Contribution of IP-Intensive Industries to U.S. Economic Growth

Counterfeiting and piracy have a large negative impact on the IP-intensive industries such as motion pictures, sound recordings, software, fashion, consumer electronics including personal computers, electronic components, the auto and aircraft industries, and pharmaceuticals. Globally, these product categories account for about 94 percent of the \$301 billion of lost product revenues due to counterfeiting and piracy (see Appendix B, Table B.4) and about 54 percent of the \$522 billion of lost business revenues due to counterfeiting and piracy for all reporting countries (see Appendix B, Table B.1).⁸³

A 2005 study evaluated the contributions of U.S. IP-intensive industries to the overall growth of the U.S. economy.⁸⁴ This study documents that the IP-intensive and related industries accounted for about 33 percent of U.S. economic growth in 2003, while the output of the IP-intensive and related industries only accounted for about 17 percent of total U.S. industry output.⁸⁵ Further, IP-intensive and related industries accounted for 58 percent of the growth in U.S. exportable high-value-added products and services.⁸⁶ Protecting the IP-intensive industries from counterfeiting and piracy could have a big payoff in terms of the U.S. economic growth and the ability of the U.S. to increase its exports and improve its trade balance.

⁸¹ *Id.*, page ii.

⁸² *Id.*, page ii.

⁸³ The lost IP-intensive industry production revenues due to counterfeiting and piracy amount to about \$284 billion. This amount includes the lost business revenues due to counterfeiting and piracy for the following product categories in Table B.3 in Appendix B: (1) Technology Products; (2) Web Videos; (3) Pharmaceutical Drugs; (4) Software; (5) Movies; (6) Auto Parts; (7) Music; (8) Mobile Phone Entertainment; (9) Video Games; (10) Airline Parts; (11) Cable TV; and (12) Books. The sum of global lost business revenues, due to counterfeiting and piracy for these products is \$284.33 billion.

⁸⁴ Stephen E. Siwek, *Engines of Growth: Economic Contributions of the U.S. Intellectual Property Industries*, Prepared for NBC Universal, 2005, http://www.nbcuni.com/About_NBC_Universal/Intellectual_Property/pdf/Engines_of_Growth.pdf, (hereinafter "Engines of Growth Study").

⁸⁵ Engines of Growth Study, page 15.

⁸⁶ Engines of Growth Study, page 18-19.

III. *The Proposed CACP Initiative*

A. Introduction

Counterfeiting and piracy economically harm U.S. businesses. Further, because many of the counterfeit goods are of inferior quality and may be dangerous, the public and the government also suffer. Finally, the lost U.S. business revenues due to counterfeiting and piracy lead to reduced innovation and slower growth, fewer jobs, less income, lower government tax revenues, and higher government outlays, which further impact the public and the government.

There have been studies by the U.S. Government Accountability Office (GAO) and the OECD that have documented the shortcomings in the efforts by the U.S. and all other countries to combat counterfeiting and piracy.⁸⁷ The CACP proposal addresses many of these shortcomings. Key objectives of the CACP initiative include coordinating the efforts of various U.S. and foreign agencies, more effectively using existing resources, and making strategic targeted increases in the levels of effort by selected agencies. This approach is similar to the highly successful CompStat initiative began by the New York Police Department and subsequently adopted by other major city police forces.⁸⁸

B. Issues With Current Government Anti-Counterfeiting and Anti-Piracy Efforts

The GAO has evaluated the performance of U.S. Customs and Border Protection (U.S. CBP) and of the overall U.S. government efforts to combat counterfeiting and piracy. In its 2007 evaluation of the U.S. CBP, the GAO noted that the “CBP lacks an integrated approach across key offices for further improving border enforcement outcomes, causing it to focus on certain efforts that have produced limited results while not taking initiative to understand and address variations among ports’ enforcement outcomes.”⁸⁹ On the basis of its analysis, the GAO concluded that the “CBP’s approach to improving IP enforcement lacks integration and has produced limited results.”⁹⁰ The GAO further

⁸⁷ GAO, Intellectual Property: National Enforcement Strategy Needs Stronger Leadership and More Accountability, Statement of Loren Yager, GAO’s Director of International Affairs and Trade to the Committee on Banking, Housing and Urban Affairs, Subcommittee on Security and International Trade and Finance, United States Senate, GAO-07-710T, April 12, 2007; GAO, Intellectual Property: Strategy Targeting Organized Piracy (STOP) Requires Changes for Longer-term Success, GAO-07-74, July 26, 2006 (hereinafter GAO, Intellectual Property: Better Data Analysis and Integration Could Help U.S. Customs and Border Protection Improve Border Enforcement Efforts, GAO-07-735, April 2007 (hereinafter “GAO 2007 Report on CBP Improvement”); OECD, The Economic Impact of Counterfeiting and Piracy, Part IV, Executive Summary, JT03228347, June 4, 2007.

⁸⁸ See NYPD website, <http://www.nyc.gov/html/nypd/html/chfdept/CompStat.html>; see also LAPD website, http://www.lapdonline.org/inside_the_lapd/content_basic_view/6364, and Philadelphia Police Department website, http://www.ppdonline.org/hq_CompStat.php.

⁸⁹ GAO, Intellectual Property: Better Data Analysis and Integration Could Help U.S. Customs and Border Protection Improve Border Enforcement Efforts, GAO-07-735, April 2007 (hereinafter “GAO 2007 Report on CBP Improvement”), p. 4.

⁹⁰ GAO 2007 Report on CBP Improvement, p. 32.

concluded “CBP’s strategic plan lacks performance measures for IP enforcement.”⁹¹ Finally, the GAO concluded that the “CBP has not analyzed variations in port enforcement outcomes.”⁹² Such analyses, concluded the GAO, could allow the CBP to improve its overall performance.⁹³

The GAO, in 2006, also conducted a broader evaluation of the coordination, organization, and effectiveness of the U.S. government’s overall anti-counterfeiting and anti-piracy efforts.⁹⁴ The GAO, in testimony before congress by Loren Yager, GAO’s Director of International Affairs and Trade, summarized the results of the 2006 study.⁹⁵

Regarding the coordination of the U.S. government’s efforts, the GAO concluded that “[t]he current coordinating structure that has evolved for protecting and enforcing U.S. intellectual property rights lacks leadership and permanence, presenting challenges for effective and viable coordination for the long term.”⁹⁶ The current coordination structure was formed in 1999, when Congress created the interagency National Intellectual Property Rights Law Enforcement Coordination Council (NIPLECC) “to serve as the central coordinating structure for IP enforcement across federal agencies.”⁹⁷ The GAO has concluded “NIPLECC has struggled to define its purpose, retains an image of inactivity within the private sector, and continues to have leadership problems.”⁹⁸

In October 2004, the Bush administration initiated the Strategy Targeting Organized Piracy (STOP), which is led by the National Security Council.⁹⁹ According to the GAO, STOP “has a positive image compared to NIPLECC, but lacks permanence since its authority and influence could disappear after the current [Bush] administration leaves office.”¹⁰⁰ Further, the GAO stated that “STOP is a first step toward an integrated national strategy to protect and enforce U.S. intellectual property rights, and it

⁹¹ GAO 2007 Report on CBP Improvement, p. 33.

⁹² GAO 2007 Report on CBP Improvement, p. 38.

⁹³ GAO 2007 Report on CBP Improvement, p. 38.

⁹⁴ GAO, Intellectual Property: Strategy Targeting Organized Piracy (STOP) Requires Changes for Longer-term Success, GAO-07-74, July 26, 2006 (hereinafter “GAO 2006 STOP Report”).

⁹⁵ GAO, Intellectual Property: National Enforcement Strategy Needs Stronger Leadership and More Accountability, Statement of Loren Yager, GAO’s Director of International Affairs and Trade to the Committee on Banking, Housing and Urban Affairs, Subcommittee on Security and International Trade and Finance, United States Senate, GAO-07-710T, April 12, 2007 (hereinafter “GAO 2007 Testimony”).

⁹⁶ GAO 2007 Testimony, Executive Summary.

⁹⁷ GAO, 2007 testimony, p. 3.

⁹⁸ GAO 2007 Testimony, p. 3.

⁹⁹ GAO 2007 Testimony, pages 1 and 3.

¹⁰⁰ GAO 2007 Testimony, p. 3.

has energized agency efforts.”¹⁰¹ However, the GAO concludes “that STOP’s potential as a national strategy is limited because it does not fully address important characteristics of a national strategy.”¹⁰²

The GAO emphasized the critical importance of improving the U.S. government’s existing anti-counterfeiting and anti-piracy efforts. The GAO states that “U.S. government efforts to protect and enforce intellectual property rights domestically and overseas are crucial to preventing billions of dollars in losses to U.S. industry and IP rights holders and addressing health and safety risks resulting from the trade in counterfeited and pirated goods.”¹⁰³ The GAO further states that “[i]ntellectual property is an important component of the U.S. economy, and the United States is an acknowledged global leader in its creation.”¹⁰⁴

In terms of the growth of counterfeiting and piracy and its dangers, the GAO stated that “[t]echnology has facilitated the manufacture and distribution of counterfeit and pirated products, resulting in a global illicit market that competes with genuine products and complicates detection and actions against violations.”¹⁰⁵ The GAO further stated that “[h]igh profits and low risk have drawn in organized criminal networks, with possible links to terrorist financing.”¹⁰⁶ Further, the GAO stated that “[c]ounterfeit products raise serious public health and safety concerns, and the annual losses that companies face from IP violations are substantial.”

The GAO emphasized the need for a sustained (permanent) and coordinated effort to combat counterfeiting and piracy. The GAO concluded that “[t]he challenges of IP piracy are enormous and will require the sustained and coordinated efforts of U.S. agencies, their foreign counterparts, and industry representatives to be successful.”¹⁰⁷ The GAO also stated that the coordinated effort would have to be global, because “IP protection and enforcement cut across a wide range of U.S. agencies and functions, as well as those of foreign governments, making coordination among all parties essential.”¹⁰⁸ The GAO also emphasized the need to enlist the cooperation of foreign government agencies and to help the agencies in other countries improve their anti-counterfeiting and anti-piracy

¹⁰¹ GAO 2007 Testimony, pp. 3-4.

¹⁰² GAO 2007 Testimony, p. 4

¹⁰³ GAO 2007, Testimony, p. 1.

¹⁰⁴ GAO 2007 Testimony, p. 5.

¹⁰⁵ GAO 2007 Testimony, p. 5.

¹⁰⁶ GAO 2007 Testimony, p. 3.

¹⁰⁷ GAO 2007, Testimony, p.17.

¹⁰⁸ GAO 2007 Testimony, p. 1.

efforts, because “[t]he legal protection of intellectual property varies greatly around the world, and several countries are havens for the production of counterfeit and pirated goods.”¹⁰⁹

The OECD recently (June 2007) completed a study of global counterfeiting and piracy, and the OECD reached conclusions that were consistent with those of the GAO.¹¹⁰ The OECD emphasized the seriousness of the criminal activities associated with counterfeiting and piracy, which the OECD characterizes as “illicit business in which criminal networks thrive.”¹¹¹ The OECD noted that the counterfeit goods were “often substandard and can even be dangerous, posing health and safety risks that range from mild to life-threatening.”¹¹² The OECD stated that counterfeiting and piracy “undermine innovations, which is the key to economic growth.”¹¹³ The OECD concluded that “[t]he magnitude and effects of counterfeiting and piracy are of such significance that they compel strong and sustained action from governments, business and consumers. More effective enforcement is critical in this regard, as is the need to build public support to combat the counterfeiting and piracy. Increased co-operation between governments, and with industry, would be beneficial, as would better data collection.”¹¹⁴

C. Description of the CACP Initiative

The Coalition Against Counterfeiting and Piracy (CACP) has proposed a broad initiative for combating counterfeiting. There are three primary aspects of the proposed CACP initiative: (1) establish strong and permanent leadership; (2) provide incremental dedicated and focused resources for IPR enforcement; (3) “work smarter” through coordination among the federal agencies plus with state, local, and foreign agencies, training on IPR enforcement, better technological and data analysis support, and changes in the law to facilitate IPR enforcement. The CACP Intellectual Property Enforcement Initiative is composed of the following six specific objectives:

- Improve the coordination of federal government intellectual property enforcement resources
- Better protect our borders against counterfeiting and piracy by expanding authorities and improving enforcement practices
- Strengthen criminal enforcement against intellectual property theft by expanding the resources and tools available for law enforcement at the federal, state, and local levels.

¹⁰⁹ GAO 2007 Testimony, p. 5.

¹¹⁰ OECD, *The Economic Impact of Counterfeiting and Piracy, Part IV, Executive Summary*, JT03228347, June 4, 2007 (hereinafter “OECD 2007 Piracy Report”).

¹¹¹ OECD 2007 Piracy Report, p. 2.

¹¹² OECD 2007 Piracy Report, p. 2.

¹¹³ OECD 2007 Piracy Report, p. 2.

¹¹⁴ OECD Piracy Report, p. 2.

- Attack counterfeiting and piracy beyond our borders through improved enforcement training and technical assistance programs with foreign governments
- Strengthen the ability of the rights holders to protect their intellectual property by civil and judicial reform
- Decrease demand by educating consumers about the harms of counterfeiting and piracy

These objectives are discussed briefly below, and a full description of these objectives is presented in Appendix C.

1. Objective 1: Improve the coordination of federal government intellectual property enforcement resources

This CACP objective is consistent with the GAO's objective of creating strong permanent leadership for the U.S. government's intellectual property rights (IPR) enforcement efforts, with a focus on improving the coordination and effectiveness of the enforcement efforts of a wide range of agencies. To accomplish this objective, the CACP proposes that a presidentially appointed Chief Intellectual Property Enforcement Officer (CIPEO) position should be established in the White House. The CIPEO would be responsible for coordinating IPR enforcement throughout the Federal Government and to oversee development and effectiveness of implementation of a joint strategic plan by the individual enforcement agencies. The CIPEO would interact with the two lead federal government enforcement agencies – The Department of Justice (DOJ) and the Department of Homeland Security (DHS). The DOJ and DHS should designate senior officials as Directors of IPR Enforcement at each agency. The two main bureaus at DHS that would be involved are Customs and Border Protection (CBP) and Immigration Customs Enforcement (ICE).

2. Objective 2: Better protect our borders against counterfeiting and piracy by expanding authorities and improving enforcement practices

Border security is the responsibility of the two bureaus at DHS: CBP and ICE. The CACP objective calls for incremental dedicated resources at the CBP and ICE whose sole focus would be IPR enforcement. Also, this initiative calls for having senior CBP and ICE officials being tasked with overseeing IPR efforts at these bureaus, developing new efficient strategies being provided with more legal tools, and providing increased IPR enforcement training. This objective also calls for implementing enhanced technology and undertaking efforts to make CBP and ICE operate more efficiently.

3. Objective 3: Strengthen criminal enforcement against intellectual property theft by expanding the resources and tools available for law enforcement at the federal, state, and local levels.

This objective focuses on improving the efficiency and effectiveness of domestic IPR enforcement efforts by the DOJ as well as by state and local law enforcement agencies. This CACP objective calls for new resources at the DOJ for the attorneys and the FBI agents that are assigned full time to IPR enforcement matters. Specifically, this objective calls for more Computer Hacking and Intellectual Property (CHIP) units in the U.S. Attorneys' offices, with dedicated FBI agents and prosecutors in each unit. Further, this effort involves implementing new technologies and more IPR enforcement specific training. This objective also involves IPR enforcement training of state and local police, coordination of federal, state, and local enforcement efforts, and other enhancements. Finally, this objective calls for strengthening the federal anti-counterfeiting and anti-piracy laws.

4. Objective 4: Attack counterfeiting and piracy beyond our borders through improved enforcement training and technical assistance programs with foreign governments

This objective involves working with enforcement agencies in foreign countries to improve foreign IPR enforcement. The effort includes training of staff of U.S. embassies, increased funding of IPR enforcement and technical assistance at the U.S. State Department, direct training of foreign enforcement agents, and increased coordination with foreign IPR enforcement efforts. In addition, this objective calls for additional intellectual property attaches at U.S. embassies and increased funding for Intellectual Property Law Enforcement Coordinators (IPLECs) internationally.

5. Objective 5: Strengthen the ability of the rights holders to protect their intellectual property by civil and judicial reform

This CACP objective is intended to increase the civil remedies available to protect IPR holders, to authorize federal civil enforcement against pirates and counterfeiters, and to improve the judicial systems' knowledge of IPR enforcement issues.

6. Objective 6: Decrease demand by educating consumers about the harms of counterfeiting and piracy

This CACP objective involves increasing public awareness of the costs and dangers of counterfeiting and piracy through advertising. This objective also calls for working with universities to better secure campus networks against transmission of pirated materials and to fund research on how to implement such secure networks.

D. The Potential Impact of CACP Initiative on the U.S. Counterfeiting and Piracy Rate

1. Bases for Estimating the Potential Effectiveness of the CACP Initiative

The overall objective of the CACP initiative is to improve the effectiveness of the U.S. efforts to combat counterfeiting and piracy. To estimate what effects the CACP initiative might have in improving the effectiveness of the U.S. efforts, LECG investigated whether there had been generally similar efforts to improve the effectiveness of law enforcement against property crimes in other areas.

We do not believe that these other efforts need to be limited to efforts to combat counterfeiting and piracy because the CACP approach is hardly unique to addressing a large problem in either government or business. The CACP approach calls for high-level leadership to raise the priority of the issue within the organization. It would add dedicated resources – boots on the ground – that would focus exclusively on this issue at the key agencies. And it would provide legal and technological tools to allow those investigating IP offenses and protecting our borders to work smarter and more effectively to accomplish their objectives.

Whenever business or other organizations identify an important objective – whether it is developing a new product or entering a new market – they engage in these same, common-sense approaches: adding leadership, resources and tools to attain their objective. Of course, these are no guarantees of success. The fact that these elements are part of every successful organization's approach to addressing a problem or opportunity, however, suggests that the CACP's approach is reasonable. Moreover, the fact that the GAO recommended precisely this type of approach for dealing with this issue suggests that the CACP proposals would have an impact on the rates of counterfeiting and piracy.

There are clear precedents that show that such an approach works. In New York City (NYC), for example, the NYPD CompStat process contains many of these same elements to address what seemed to many to be the entirely intractable problem of property crime in NYC. Another precedent is the U.S. Department of Justice's (U.S. DOJ's) response to the growth of computer and intellectual property crime over the last decade. The NYPD CompStat and U.S. DOJ's efforts are discussed below.

2. The NYPD CompStat Process

According to a recent paper, the CompStat process adopted by the New York Police Department (NYPD) dramatically increased the efficiency and success of the NYPD in controlling crime.¹¹⁵ CompStat “is a management process through which the NYPD identifies problems and measures the results of its problem-solving activities.”¹¹⁶ The CompStat process has “six core elements – a clear mission, internal accountability, geographical organization of operational command, organizational flexibility, and a reliance on data and innovative problem-solving tactics.”¹¹⁷ The specific strategies and tactics adopted by the NYPD during the period when CompStat was in place include: (1) hiring more officers; (2) re-directing police patrols to combat public disorder; (3) developing closer relationships with the community; (4) strictly enforcing gun laws to reduce firearm crimes; (5) vigorously enforcing drug laws; (6) practicing strict law enforcement generally (“a zero tolerance policy”); and (7) concentrating police resources on problem places and persons.¹¹⁸ CompStat’s effectiveness within the NYPD has been enhanced by strong political support from and coordination with other Criminal Justice agencies in New York City and also strong political support from New York’s mayor.¹¹⁹ Under the CompStat process, the property crime rate in New York City was reduced dramatically as shown in Table III-1.¹²⁰

¹¹⁵ Dr. Vincent E. Henry, “*CompStat Management in the NYPD: Reducing Crime and Improving Quality of Life in New York City*,” Presented at 129th International Senior Seminar, Resource Material Series No. 68, 2005 (hereinafter “NYPD CompStat Process”), pages 100-104. See also Patrick A. Langan, Ph.D, Matthew R. Durose, Statisticians, “The Remarkable Drop in Crime in New York City,” Bureau of Justice Statistics, U.S. Department of Justice, October 21, 2004, (hereinafter “Bureau of Justice Paper”).

¹¹⁶ *Id.*, page 103.

¹¹⁷ Sewell Chan, “Why Did Crime Fall in New York City?,” *The New York Times*, August 13, 2007.

¹¹⁸ Bureau of Justice Paper, page 7.

¹¹⁹ NYPD CompStat Process, page 103 and 104.

¹²⁰ *Id.*, page 114.

Table III-1

**Percentage Change in the Property Crime Rate
Since 1993: New York City Versus United States**

Year	Year After 1993	New York City (%)	United States (%)	Difference: The “CompStat Effect” (%)
1994	1	-11.8%	-1.7%	-10.1%
1995	2	-26.0%	-3.2%	-22.8%
1996	3	-36.4%	-6.1%	-30.3%
1997	4	-40.9%	-8.9%	-32.0%
⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮
2001	8	-59.9%	-22.8%	-37.1%
⋮	⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮	⋮
2005	12	-67.1%	-27.6%	-39.4%

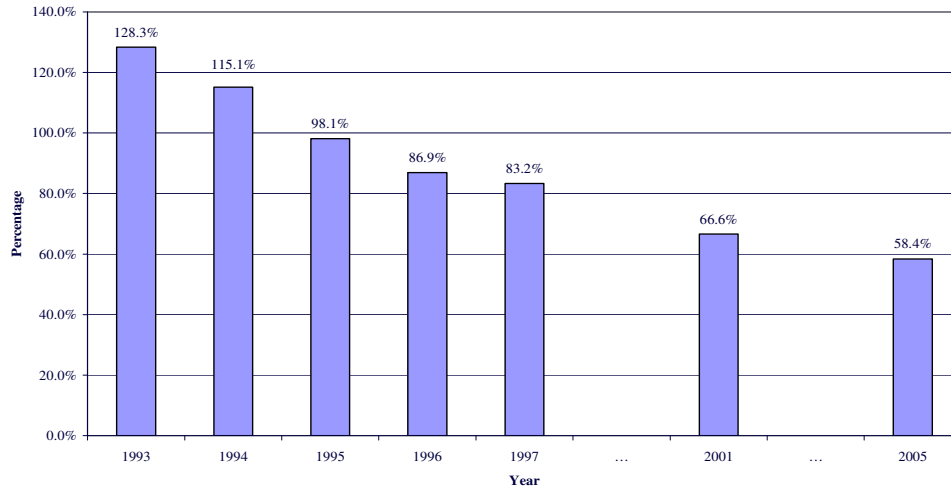
Source: *FBI, Crime in the United States.*

Table III-1 shows the percentage change in the New York City (NYC) property crime rate in the years following 1993 because CompStat was introduced in 1994. Table III-1 also shows the percentage change in the U.S. property crime rate in the years following 1993 to identify any changes in the crime rate statistics due to U.S.-wide changes in police procedures or other U.S.-wide factors. The U.S. property crime rate also declines after 1993 suggesting that some of the NYC property crime rate decline may be due to factors other than the introduction of CompStat and the specific related changes in police strategy and tactics. Table III-1 calculates the difference between the percentage change since 1993 in the NYC and U.S. property crime rates. This difference is labeled the “CompStat Effect” and reflects NYC-specific changes in police procedures (i.e., it adjusts the percentage reduction in the NYC property crime rate to remove U.S.-wide effects). Even after this adjustment, the incremental reduction in the NYC property reduction rate, relative to its 1993 level, is about 10% in the first, second, and third years of CompStat’s existence. In addition, the NYC property crime rate continues to improve relative to the U.S. property crime rate through 2005.

As shown in Figure III-1, the property crime rate in New York City was 128.3 percent of the U.S. rate in 1993. By 1995, the second year of the CompStat program, the New York City property crime rate

had fallen to 98 percent of the U.S. rate. In 2005, the New York City property crime rate had fallen to 58.4 percent of the U.S. rate. In addition, New York City’s felony crime rate was the lowest among the largest ten cities in the U.S.¹²¹

Figure III-1
New York City Property Crime Rate As
A Percentage Of U.S. Property Crime Rate



Source: FBI, *Crime in the United States*.

The CompStat process can provide guidance for improving the effectiveness of U.S. efforts to combat counterfeiting and piracy. Counterfeiting and piracy are property crimes, and, like the property crime rate in New York City in 1993, the U.S. counterfeiting and piracy crime rate is too high today. The CACP initiative has many elements that are similar to those in CompStat, and the success of CompStat is encouraging for the CACP initiative.

3. The U.S. DOJ’s Initiatives to Combat Computer and IP Crime

In 1996, the U.S. DOJ set up experts to provide leadership in combating computer and IP crime through the formation of the Computer Crime and Intellectual Property Section in the Criminal Division. The leadership of this effort was augmented by the Intellectual Property Task Force run out of the Office of the Deputy Attorney General in 2004, bringing together all parts of DOJ that have a role in protecting IP. Also, Computer Hacking and Intellectual Property (CHIPs) units were created by the U.S. DOJ in key U.S. Attorney’s offices around the country. There currently are about 25 CHIP units. These units are dedicated to prosecuting computer and IP-related crimes. As a result, IP prosecutions have steadily increased. Indeed, between 2004 and 2005 (the first year after the U.S.

¹²¹ *Id.*, pages 100-101.

DOJ integrated all its computer and IP crime fights efforts) the number of defendants charged increased by 98 percent.¹²²

4. Estimate of the Effectiveness of the CACP Initiative

The precedents discussed above suggest that it would be unrealistic to assume that taking the bold steps suggested by the CACP proposals would have no impact on the piracy and counterfeiting problem. Indeed, given the notable success of the NYPD CompStat process and the strong positive results of the U.S. Department of Justice's efforts, one could project that adopting the CACP proposals could result in a dramatic reduction in piracy and counterfeiting over time.

We have chosen to make much more modest assumptions. In our view, it would be somewhat optimistic to project a 10 percent reduction over three years (2 percent the first year and an additional 4 percent in the second and third years). It would be somewhat pessimistic to project a 5 percent reduction over three years (1 percent the first year and 2 percent the second and third years). Even the optimistic formulation implies that the CACP proposals would only be one-third as effective in reducing IP crime as was the NYPD's CompStat process in reducing property crime in New York City. Consequently, our assumptions certainly seem reasonable and indeed conservative.

¹²² U.S. Department of Justice, See Progress Report of the Department of Justice's Task Force on Intellectual Property, pages 18-25, [http://www.cybercrime.gov/2006IPTFPProgressReport\(6-19-06\).pdf](http://www.cybercrime.gov/2006IPTFPProgressReport(6-19-06).pdf)

IV. Cost Estimates for the CACP Initiative

Table IV-1 below presents our estimates of the costs for the six CACP objectives. For each objective, a low and high cost estimate is provided. These low and high estimates reflect both differences in the estimated cost of given activities and different levels of activities. In many cases, the CACP initiative called for increasing staffing at relevant agencies by at least a given amount. Typically, this minimum estimate corresponds to the low estimate. The high estimate involves twice the minimum number of new hires. In some cases, the CACP initiative is not specific in terms of the level of effort required for a task under an objective. In such cases, we investigated other similar efforts and used our judgment to produce reasonable estimates. The details of cost estimates for all six objectives of the CACP initiative are provided in Appendix D. As shown in Table IV-1, the total estimated cost for all objectives for the low case is \$103 million and for the high case is \$174 million.

**Table IV-1
Summary of Low and High Cost Estimates
For Each of the Six CACP Objectives**

Objective	Low Estimate	High Estimate
1. Improve Coordination of Government IP Enforcement Resources by Establishing a CIPEO within the White House	\$ 6,144,208	\$ 8,065,820
2. Expand Authorities and Improve Enforcement Practices	\$ 58,477,860	\$ 105,139,040
3. Strengthen Criminal Enforcement	\$ 18,885,625	\$ 25,988,497
4. Attack Counterfeiting and Piracy Beyond U.S. Borders	\$ 10,800,000	\$ 21,600,000
5. Institute Civil and Judicial Reforms to Protect IP Holders	\$ 1,477,000	\$ 2,954,000
6. Coordinate and Conduct Public Education Campaigns	\$ 7,500,000	\$ 10,750,000
Totals	\$ 103,284,693	\$ 174,497,357

Sources: Appendix Tables D.1 - D.6.

V. **Benefits Analysis of the CACP Initiative**

A. **The Reduction in U.S. Business Revenue Losses due to Counterfeiting and Piracy As A Consequence of Implementing the CACP Initiative**

Total annual lost U.S. business revenues due to counterfeiting and piracy are estimated to be \$225 million.¹²³ As discussed in Section III.E above, assuming that the CACP initiative is implemented essentially as proposed, it would be reasonable to assume that annual U.S. business losses due to counterfeiting and piracy could be reduced by between 5 percent and 10 percent during the first three years the CACP initiative was implemented. The pessimistic case assumes incremental reductions of 1 percent, 2 percent, and 2 percent during the first three years, and the optimistic case assumes incremental reductions of 2 percent, 4 percent, and 4 percent during the first three years. Table V-1 shows the reduction in the annual amount of U.S. business revenue losses due to counterfeiting and piracy during the first three years that the CACP initiative is implemented.

Table V-1
Alternative Reductions in U.S. Business Revenue
Losses Due to Counterfeiting and Piracy
As A Consequence of Implementing the CACP Initiative
(Billions of Dollars)

<u>Years Implemented</u>	<u>Reduction in U.S. Business Revenue Losses</u>	
	<u>Pessimistic Case</u>	<u>Optimistic Case</u>
1	\$ 2.25	\$ 4.50
2	\$ 6.75	\$13.50
3	\$11.25	\$22.50

Source: LECG Calculation.

¹²³ This is the mid-point of the FBI range estimate of \$200 to \$250 billion. FBI Press Release, July 17, 2002, <http://www.fbi.gov/pressrel/pressrel02/outreach071702.htm>

B. The Effects on U.S. Output, Earnings, and Employment As A Consequence of Reducing the U.S. Business Revenue Losses

The impacts of piracy in the motion picture and sound recording industries on U.S. output, earnings, and employment were estimated in recent studies published by IPI.¹²⁴ We have calculated the relationship between the combined business revenue losses for these two industries due to piracy and the combined resulting effects of this piracy on U.S. output, earnings (income), and employment (jobs).¹²⁵ See Appendix E, Table E.1. We have used this “average” relationship for the motion picture and sound recording industries to calculate the effects on U.S. output, earnings, and employment (jobs) of the reduction in U.S. business revenue losses due to implementing the CACP initiative as shown in Table V-1 above.¹²⁶ See Appendix E, Tables E.2 and E.4. These calculations are conceptually identical to those performed in the IPI studies for the motion picture and sound recording industries.¹²⁷

The results of these calculations are summarized in Table V-2 below. The increases in output, earnings, and employment shown in Table V-2 that are expected as a consequence of implementing the CACP initiative are substantial even in the pessimistic case. After three years under the pessimistic case, annual U.S. output is increased by \$27.09 billion, annual U.S. earnings (income) are increased by \$6.76 billion, and U.S. employment is increased by 174,149.

¹²⁴ Stephen E. Siwek, *The True Cost of Motion Picture Piracy to the U.S. Economy*, prepared for the Institute for Policy Innovation (IPI), Policy Report 186, September 2006 (hereinafter “IPI Movie Piracy Study”); *The True Cost of Sound Recording Piracy to the U.S. Economy*, prepared for the Institute for Policy Innovation (IPI), Policy Report 188, August 2007 (hereinafter IPI Music Piracy Study), p. 5.

¹²⁵ The term “jobs” should be interpreted as being the same as full-time equivalent employees.

¹²⁶ This calculation implicitly assumes that the movie and sound recording industries are “representative” of a “typical” IP-intensive industry. Further, research could produce a direct estimate of the relationships for a “typical” IP-intensive industry (i.e., for the IP-intensive industries as a group).

¹²⁷ Stephen E. Siwek, *The True Cost of Motion Picture Piracy to the U.S. Economy*, prepared for the Institute for Policy Innovation (IPI), Policy Report 186, September 2006 (hereinafter “IPI Movie Piracy Study”); *The True Cost of Sound Recording Piracy to the U.S. Economy*, prepared for the Institute for Policy Innovation (IPI), Policy Report 188, August 2007 (hereinafter IPI Music Piracy Study), p. 5. We have reviewed a draft version of an upcoming study by Mr. Siwek that examines the combined effects of piracy in motion pictures, sound recordings, business software, and entertainment software on the U.S. economy. The multipliers used in Mr. Siwek’s upcoming study are similar to the ones used in this study.

Table V-2

**Increases in U.S. Output, Earnings, and Employment
As A Consequence of Implementing the CACP Initiative**

I. Increases in U.S. Output (Billions of Dollars)

<u>Years Implemented</u>	<u>Pessimistic Case</u>	<u>Optimistic Case</u>
1	\$ 5.42	\$10.83
2	\$16.25	\$32.50
3	\$27.09	\$54.17

II. Increases in U.S. Earnings (Billions of Dollars)

<u>Years Implemented</u>	<u>Pessimistic Case</u>	<u>Optimistic Case</u>
1	\$1.35	\$ 2.71
2	\$4.06	\$ 8.12
3	\$6.76	\$13.53

III. Increases in U.S. Employment (Number)

<u>Years Implemented</u>	<u>Pessimistic Case</u>	<u>Optimistic Case</u>
1	34,830	69,660
2	104,489	208,979
3	174,149	348,298

Source: Appendix E, Table E.4

C. The Effects on U.S. Federal Government Tax Receipts As A Consequence of Reducing the U.S. Business Revenue Losses

We have calculated the expected increases in federal tax revenues that would result from the output, earnings, and employment increases shown in Table V-2. In doing these calculations, we used a procedure similar to that used in the IPI studies of the impacts of piracy on the motion picture and sound recording industry.¹²⁸ The methodology used to calculate federal tax revenues is described in Appendix E, Table E.3. The results of these calculations are presented in Appendix E, Table E.4 and are summarized in Table V-3 below.¹²⁹

Table V-3

The Increases in Federal Tax Revenues Due to the Reductions in Business Revenue Losses Resulting From the Implementation of the CACP Initiative (Billions of Dollars)

Years Implemented	Pessimistic Case	Optimistic Case
1	\$0.172	\$0.344
2	\$0.516	\$1.031
3	\$0.859	\$1.719
Discounted Present Value (7% Discount Rate)	\$1.404	\$2.809

Addendum:

Cost estimates to implementing the CACP initiative (Billions of Dollars)

	Annual Value	Discounted Present Value Over Three Years
Low Estimate 1:	\$0.103	\$0.289
High Estimate 2:	\$0.174	\$0.489

Sources: (1) Appendix E, Table E.4; and (2) Table IV-1 above.

The increases in federal tax revenues shown in Table V-3 that are expected as a consequence of implementing the CACP initiative are substantial even in the pessimistic case. After three years

¹²⁸ Stephen E. Siwek, *The True Cost of Motion Picture Piracy to the U.S. Economy*, prepared for the Institute for Policy Innovation (IPI), Policy Report 186, September 2006 (hereinafter "IPI Movie Piracy Study"); *The True Cost of Sound Recording Piracy to the U.S. Economy*, prepared for the Institute for Policy Innovation (IPI), Policy Report 188, August 2007 (hereinafter "IPI Music Piracy Study"), p. 5.

¹²⁹ In Appendix D, Table D.4, separate calculations are presented for federal personal income taxes, federal corporate income taxes, and federal protection and import subsidies. Only the total of these tax revenues is presented in Table V-3.

under the pessimistic case, annual federal tax revenues are increased by \$0.859 billion. Table V-3 also presents the discounted present value of the increase in total federal tax revenues over the three-year period for the three cases.¹³⁰ In the pessimistic case, the discounted present value of the increase in total federal tax revenues over the three-year period following implementation of the CACP initiatives is \$1.404 billion. In the optimistic case the discounted present values of the increased federal tax revenues over the three-year period is \$2.809 billion. Even for the pessimistic case the discounted present value of the increased federal tax revenues over the three years following the implementation of the CACP initiative (\$1.404 billion) substantially exceeds the discounted present value over the three-year period of even the high estimate for the cost of the CACP initiative (\$0.489 billion). The discounted present value of the benefits to the federal government due to implementing the CACP initiative exceeds the discounted present value of its costs.

For every dollar spent prudently on the CACP initiative, federal tax revenues would increase by at least \$2.9 and by as much as \$9.7 with an intermediate range of \$4.9 to \$5.7.¹³¹ These federal tax revenue increases are due to the increase in U.S. output and employment that would occur as a result of implementing the CACP initiative. For every dollar spent on the CACP initiative, U.S. output would increase by at least \$38 and would increase by as much as \$127 with an intermediate range of \$64 to \$75.¹³² The increase in output due to implementing the CACP program will result in the creation of between 174,000 and 348,000 new jobs during the third year. Therefore, the return to the federal government and the economy of investing in the CACP initiative is very high.

¹³⁰ The amounts in years 2 and 3 and discounted back to year 1 using a 7.0 percent discount rate. See Appendix E, Table E.4.

¹³¹ All dollar amounts are stated in present value (2007) terms and are average results over three years.

¹³² Id.

D. The Effects on State and Local Government Revenues of Reducing U.S. Business Revenue Losses

As shown in Table V-4 below, state and local government revenues also would increase significantly as a result of reducing the losses of U.S. business revenues to counterfeiting and piracy.

Table V-4

**The Increases in State and Local Tax Revenues
Due to the Reduction in Business Revenue Losses
Resulting From the Implementation of the CACP Initiative
(Billions of Dollars)**

Years Implemented	Pessimistic Case	Optimistic Case
1	\$0.153	\$0.306
2	\$0.459	\$0.917
3	\$0.764	\$1.529
Discounted Present Value (7% Discount Rate)	\$1.249	\$2.498

State and local governments can expect to receive incremental revenues of between \$1.25 billion and \$2.50 billion, in present value terms over three years, if the CACP initiative is implemented.

Appendix A

Definition of Terms

Definition of Counterfeiting and Piracy

Counterfeiting and piracy are terms used to describe a range of illicit activities that are related to intellectual property (IP) rights violation. They describe a whole array of activities that include infringement of copyrights, patents, trademarks and designer rights.

Difference between Piracy and Counterfeiting

Counterfeiting describes the process of intentionally making, selling and/or distributing unauthorized copies of IP-protected products (i.e. fake goods).

Piracy describes the act of reproducing or distributing, without authorization, movies, music, books or other copyrighted works.

Definition of IP Rights

Here are brief definitions of each of the IP rights:

- Copyrights: Authors of creative works such as music, movies, software and written work are given ownership of rights to these creations via a *copyright*.
- Patents: A *patent* is a legal instrument that makes it possible for the holder to exclude unauthorized parties from making, using, selling, or importing a protected product.
- Trademarks: Companies use *trademarks* to differentiate their products from those produced by competing businesses. Consumers use trademarks to evaluate different products. Illicit use of a trademark destroys or undermines the value of the product to consumers as well as producers.
- Design Rights: *Design rights* refer to the aesthetic and ornamental aspects of an article.

Infringement of IP rights undermines the holder's ability to recover their investments as well as reap the benefits of their innovative and creative work.

Definition of IP-intensive industries

IP-intensive industries include those that create intellectual property and those whose operations are dependent on copyrights, patents, trademarks, and design rights for their operation. IP-intensive industries also include those that are knowledge- or technology-based where the knowledge and technology may or may not be subject to copyright, patent, or design right protection. Examples of IP-intensive industries include motion pictures, sound recordings, software, fashion, pharmaceuticals, consumer electronics including personal computers, electronic components, automotive, aircraft, aerospace, toys, games, publishing, and numerous other industries.

APPENDIX B**Lost Business Revenues Due to Counterfeiting and Piracy By Country, Region, and Product**

Appendix Table	Table Description
B.1	An Illustrative List of Products Subject to IP Infringement
B.2	Estimated Global Lost Business Revenues Due to Counterfeiting and Piracy By Type of Product
B.3	Estimated Global Lost Business Revenues Due to Counterfeiting and Piracy By Product Group (Billions of Dollars)

Note: It is difficult to develop estimates of lost business revenues due to counterfeiting and piracy because of the clandestine nature of these illegal activities. As a consequence, while the estimates provided in this appendix are the best available information, the reader should view these estimates as indicative of the size of lost business revenues due to counterfeiting and piracy by country and by product.

Appendix Table B.1

An illustrative list of products subject to IP infringement

Industry sector	Examples of products subject to IP infringement
Apparel, footwear and designer clothing	T-shirts, hats, jerseys, trousers, footwear, caps, socks
Audio-visual, literary and related copyrighted work	Music, motion pictures, TV programmes, (CDs DVDs), software, books, computer/video games
Automotive	Scooters, engines, engine parts, body panels, air bags, windcreens, tires, bearings, shock absorbers, suspension and steering components, automatic belt tensioners, spark plugs, disc brake pads, clutch plates, oil, filters, oil pumps, water pumps, chassis parts, engine components, lighting products, belts, hoses, wiper blades, grilles, gasket materials, rings, interior trim, brake fluid, sealing products, wheels, hubs, anti-freeze, windshield wiper fluid
Chemicals/pesticides	Insecticides, herbicides, fungicides, non-stick coatings
Consumer electronics	Computer components (monitors, casing, hard drives), computer equipment, webcams, remote control devices, mobile phones, TVs, CD and DVD players, loudspeakers, cameras, headsets, USB adaptors, shavers, hair dryers, irons, mixers, blenders, pressure cookers, kettles, deep fryers, lighting appliances, smoke detectors, clocks
Electrical components	Components used in power distribution and transformers, switchgears, motors and generators, gas, and hydraulic turbines and turbine generator sets, relays, contacts, timers, circuit breakers, fuses, switchgears, distribution boards and wiring accessories, batteries
Food, drink and agricultural products	Fruit (kiwis), conserved vegetables, milk powder, butter, ghee, baby food, instant coffee, alcohol, drinks, candy/sweets, hi-breed corn seeds
Personal accessories	Watches, jewellery, glasses, luggage, handbags, leather articles
Pharmaceuticals	Medicines used for treating cancer, HIV, malaria, osteoporosis, diabetes, hypertension, cholesterol, cardiovascular disease, obesity, infectious diseases, Alzheimer's disease, prostate disease, erectile dysfunction, asthma and fungal infections; antibiotics, anti-psychotic products, steroids, anti-inflammatory tablets, pain killers, cough medicines, hormones, and vitamins; treatments for hair and weight loss.
Tobacco	Cigarettes, cigars, and snuff
Toiletry and other household products	Home and personal care products, including shampoos, detergents, fine fragrances, perfumes, feminine protection products, skin care products, deodorants, toothpaste, dental care products, shaving systems, razor blades; shoe polish; non-prescription medicine
Other	Toys, games, furniture, sporting goods (such as basket balls and golf clubs), stickers, dyed and printed exotic fabrics, belt buckles, decals, flags, lighters, tabletops, flowers, plant cuttings, qualification certificates, abrasive tools, sanitary products (bath tubs, wash basins, toilets), tableware (plates, bowls, cups)

Source: OECD, http://www.oecd.org/document/35/0,3343,en_2649_201185_38702947_1_1_1_1,00.html

Appendix Table B.2

Estimated Global Lost Business Revenues Due to Counterfeiting and Piracy By Type of Product

Ranking	Counterfeit and Pirated Product	Market Value (Dollars)
1	Technology Products	\$100 Billion
2	Web Videos	\$60 Billion
3	Pharmaceutical Drugs	\$40 Billion
4	Software	\$39.5 Billion
5	Movies	\$18.2 Billion
6	Auto Parts	\$12 Billion
7	Clothing	\$5.04 Billion
8	Music	\$4.5 Billion
9	Mobile Phone Entertainment	\$3.4 Billion
10	Cosmetics	\$3.0 Billion
10	Video Games	\$3.0 Billion
12	Cigarettes	\$2.95 Billion

Appendix Table B.2 (Cont.)

Estimated Global Lost Business Revenues Due to
Counterfeiting and Piracy By Type of Product

Ranking	Counterfeit and Pirated Product	Market Value (Dollars)
13	Airline Parts	\$2 Billion
14	Small Arms	\$1.8 Billion
15	Cable	\$1.13 Billion
16	Shoes	\$920 Million
17	Watches	\$655 Million
18	Pesticides	\$650 Million
19	Books	\$600 Million
20	Sports Memorabilia	\$500 Million
21	Alcohol	\$300 Million
22	Toys	\$131 Million
23	Cuban Cigars	\$100 Million
24	Purses	\$70 Million

Appendix Table B.2 (Cont.)

Estimated Global Lost Business Revenues Due to
Counterfeiting and Piracy By Type of Product

Ranking	Counterfeit and Pirated Product	Market Value (Dollars)
25	Dollars	\$61 Million
26	Lighters	\$42 Million
27	Batteries	\$23 Million
28	Money Orders	\$3.7 Million
Total		\$301 Billion

Source: Havocscope, <http://www.havocscope.com/Counterfeit/cgproductrank.htm>

Appendix Table B.3

Estimated Global Lost Business Revenues Due to Counterfeiting and Piracy By Product Group (Billions of Dollars)

Product Groups	Lost Global Business Revenues (Billions \$)
1. Audio visual, literary, and related copyrighted work <ul style="list-style-type: none"> • Music, movies, web videos, mobile phone, entertainment, video games, cable TV, books, and software 	\$130.33
2. Consumer electronics and electrical components <ul style="list-style-type: none"> • Technology products: Computers, consumer audio and video equipment, computer components, etc. 	\$ 100.0
3. Pharmaceuticals	\$ 40.0
4. Automotive and aircraft <ul style="list-style-type: none"> • Automobile and aircraft parts 	\$ 14.0
5. Apparel, footwear, designer clothing, and personal accessories <ul style="list-style-type: none"> • Clothing, shoes, watches, purses, and lighters 	\$ 6.73
6. Food, drink, agricultural products, and tobacco <ul style="list-style-type: none"> • Cigarettes, alcohol, cigars 	\$ 3.32
7. Toiletries and other household products <ul style="list-style-type: none"> • Cosmetics 	\$ 3.0
8. Chemicals/pesticides <ul style="list-style-type: none"> • Pesticides 	\$ 0.65
9. Other items <ul style="list-style-type: none"> • Small arms, sports memorabilia, toys, batteries, currency, and money orders 	\$ 2.52
Total	\$ 301

Sources: (1) Havocscope, <http://www.havocscope.com/Counterfeit/cgproductrank.htm>
 (2) Appendix Table B.2.

Appendix C

**CACP Intellectual Property Enforcement
Initiative: Summary of Key Elements**

Appendix C
Table of Contents

- I. Objective I: Improve the Coordination of Federal Government Intellectual Property Enforcement Resources 1

- II. Objective II: Better Protect Our Borders Against Counterfeiting and Piracy By Expanding Authorities and Improving Enforcement Practices..... 1
 - A. Enhancing Our IPR Enforcement Efforts At Our Boards 1
 - B. “Working Smarter” at Ports of Entry 2
 - C. Legal Tools for Border Enforcement..... 3

- III. Objective III: Strengthen Criminal Enforcement Against Intellectual Property Theft By Expanding the resources and Tools Available For Law Enforcement at the Federal, State, and Local Levels 4
 - A. Federal Law Enforcement 4
 - B. State and Local Initiatives..... 4
 - C. Updating Federal Criminal Laws 5

- IV. Objective IV: Attack Counterfeiting and Piracy Beyond Our Borders through Improved Enforcement Training and Technical Assistance Programs With Foreign Governments 5

- V. Objective V: Strengthen Ability of Rights Holders to Protect Their Intellectual Property By Civil and Judicial Reform..... 6
 - A. Upgrade Civil Remedies..... 6
 - B. Authorize Federal Civil Enforcement Against Pirates and Counterfeiters..... 7
 - C. Building Judicial Expertise..... 7

- VI. Objective VI: Decrease Demand By Educating consumers About the Harms of Counterfeiting and Piracy 8

Appendix C

CACP Intellectual Property Enforcement Initiative: Summary of Key Elements

I. Objective 1: Improve the coordination of federal government intellectual property enforcement resources

While the Federal Government has increased resources to enforce its copyright and trademark laws, these resources have not always been expended effectively and efficiently, and the issue has not been a top priority. The current administration's STOP! Program is a good first step, but much more must be done to elevate the profile of IPR (intellectual property rights) enforcement across the federal government, with a focus on improving the coordination and execution of the enforcement efforts of a wide range of agencies.

To accomplish this, a presidentially appointed Chief Intellectual Property Enforcement Officer (CIPEO) position should be established within the White House. The CIPEO would be responsible to coordinate IPR enforcement efforts throughout the Federal Government, and to oversee the development and effective implementation of a joint strategic plan and priorities for enforcement activities (without, however, intruding upon investigative or prosecutorial powers traditionally reserved to the Department of Justice), The CIPEO should report directly to Congress on the implementation of these plans and priorities. The Office should serve as a government-wide advocate for moving IPR enforcement higher on the agenda of all relevant agencies.

The IPR enforcement portfolio must also be appropriately elevated in all relevant federal departments, in particular the two lead enforcement agencies - the Department of Justice and the Department Homeland Security. The Attorney General and the Secretary of Homeland Security should designate senior officials, reporting directly to the Deputy Attorney General and to the Deputy Secretary respectively, to lead the efforts of each department in combating counterfeiting and piracy. The new Director of IPR Enforcement at DHS should coordinate the intellectual property enforcement activities of the two major DHS bureaus - Customs and Border Protection (CBP) and Immigration and Customs Enforcement (ICE) - and implement a department-wide strategic plan that includes specific performance measures of progress. The corresponding position at Justice would institutionalize leadership of the DOJ Intellectual Property Task Force, first created in 2004.

II. Objective II: Better protect our borders against counterfeiting and piracy by expanding authorities and improving enforcement practices

A. Enhancing Our IPR Enforcement Efforts At Our Borders

The majority of pirate and counterfeit products enter our marketplace from abroad. The Department of Homeland Security mans our first line of defense against these fakes. DHS needs an improved strategy, new legal tools, and more resources in order to respond effectively to this challenge.

Both CBP and ICE have key responsibilities in combating international trade in counterfeit and pirated products. Both bureaus are under-resourced. They require targeted resource enhancements and expanded legal authority if they are to step up their efforts.

An effective IPR enforcement strategy at our borders must include:

- A DHS-wide IPR enforcement plan that specifically measures the effectiveness of all current enforcement tools - targeting, examination, seizures, post-entry audits, penalty actions - and that prioritizes the most effective tools throughout the agency. As recent GAO reports demonstrate, the track records of different ports vary widely; the plan must identify best practices and move toward implementing them department-wide.
- Designating a senior official within both CBP and ICE, reporting directly to the head of the respective bureau, tasked to implement the DHS enforcement plan, coordinate the intellectual property enforcement efforts within each bureau, and help direct the activities of the agents dedicated to anti-counterfeiting and piracy.
- Training and deploying a new cadre of CBP enforcement agents whose primary responsibility is to protect against illegal importation and smuggling of counterfeit and pirate goods. At least five such agents would be deployed at each of the most significant ports of entry in the United States including at US Postal Service facilities and those operated by major international courier services. DHS should evaluate whether the Strategic Trade Center approach, where enforcement agents monitor specific targets for IPR violations and coordinate reporting and training efforts, is effective, and if so should establish IPR-focused centers at the top five ports.
- Training and deploying (at headquarters and in the field) at least 25 ICE agents dedicated to IPR enforcement, and improving the effectiveness of the National Intellectual Property Rights Coordination Center.
- Increasing funding for CBP's Fines, Penalties and Forfeitures office (FPF), as well as making the needed regulatory and statutory reforms described below, with the goal of significantly improving CBP's track record in collecting civil fines it imposes on the importers of shipments of intercepted counterfeit product.
- Funding IPR enforcement training at all 52 ICE attaché offices around the world.

The DHS strategy must build capacity to deal with the increasing volume of pirate and counterfeit goods entering the U.S. through postal and courier services. It must also address goods in transit through U.S. ports, and counterfeit or pirate goods in the export channel. If we are to persuade our trading partners to adopt best practices to stop the export of illicit product to market, we must show that we are implementing these practices ourselves.

B. "Working Smarter" at Ports of Entry

Outdated enforcement practices at our nation's ports of entries impede the development of effective public-private cooperation to stop the import of illicit products. CBP must make the needed regulatory and policy changes to lower these barriers and improve the effectiveness of border controls to keep pace with evolving methods for importing and exporting counterfeit and pirate goods. These changes include:

- Disclosing to copyright and trademark owners more information about detained shipments of suspected pirate or counterfeit product, including identities of importers, exporters, declarants and other parties; shipping documentation; and countries of origin and destination, as well as facilitating obtaining samples of detained products for analysis;
- Working with the private sector so that CBP agents are effectively trained in the use of cost-effective new technological means for the identification of pirate or counterfeit product (e.g., authentication technologies). CBP should be authorized to accept donations of hardware or software and similar equipment or technologies, and related support services, for screening imports using these new technological means;

- Accelerating efforts to apply risk assessment modeling techniques to border enforcement against counterfeiting and piracy. CBP should report on its pilot project in this area, which should be expanded to include Automated Targeting System data. The goal is to develop, test, evaluate and continuously improve these techniques, and to deploy them at key points of entry as soon as possible;
- Improving the efficiency of CBP's recordation process for trademarks and copyrights, including by giving registrants the option of simultaneously recording with CBP at the time their marks or works are first registered with the Patent and Trademark Office or the Copyright Office, and ensuring that CBP's reliance on the recordation process is not impeding the rapid seizure of clearly infringing goods;
- Identifying low-risk shippers that have taken specific measures to strengthen and protect their supply chains to prevent the infiltration of counterfeits.

CBP should also work with industry representatives to develop criteria for implementing a "Special Scrutiny" database of importers, exporters, shippers, freight forwarders and other participants in the import/export and transit process that have been previously identified as participating in the trade in pirate or counterfeit products. (The Law Enforcement Retail Partnership Network recently announced by FBI provides a model.) The database would be developed using both CBP and legitimate private sector information sources, and would be available, in real time and for intelligence purposes, only to qualified CBP agents, enabling them to readily flag and divert for enhanced scrutiny shipments associated with entities listed in the database. Imports from overseas "free ports" and free trade zones that have been the source of piratical or counterfeit imports should also be targeted for special scrutiny.

C. Legal Tools for Border Enforcement

Besides the more effective enforcement of current laws, DHS needs new legal tools to fight back against counterfeit and pirate imports. These include:

- Prohibiting the importation of any quantity of counterfeit products, and repealing provisions of current laws and regulations that permit importation of limited quantities of counterfeit product for personal use. The prohibition should be backed by appropriate sanctions (including civil penalties);
- Requiring the declaration of all counterfeit or pirated goods in the possession or luggage of any person entering the United States, or entering the U.S. via postal or courier services, and punishing a false declaration in this regard in the same manner as other false declarations made upon entry of a person's goods or luggage into the United States. The introduction of these new legal tools would be coordinated with the public education campaign at entry and departure points, as discussed under Objective VI;
- Providing new legal tools for the imposition and collection of fines for imports of counterfeit or pirate product, both to enhance the credibility of the agency's enforcement efforts, as well as to offset some of the costs of enforcement enhancements. CBP should be directed to revise its guidelines to reduce the scope of fine mitigation or outright dismissal, and to move more aggressively to extract fines from violators, including through mandatory impoundment of property acquired with the ill-gotten gains of violations; imposition of liens on personal real estate of violators; use of bonds to secure full payment of fines; and clearer authority to "pierce the veil" of shell corporations created primarily for trafficking in infringing goods. Consideration should also be given to empowering trademark owners to pursue and collect fines imposed for importation of counterfeits of their products, retaining part of the proceeds, and even to turning the collection process over to the private sector;

- Giving CBP enhanced legal authority to assess fines, under appropriate circumstances, on importers, exporters, or other parties who provide services that materially facilitate the unlawful entry of counterfeit or pirate goods into the U.S. market, without prejudice to other means of enforcement.

III. Objective III: Strengthen criminal enforcement against intellectual property theft by expanding the resources and tools available for law enforcement at the federal, state, and local levels

The recommended strategy is to make carefully targeted increases in criminal enforcement activities - at the global, federal, and state/local levels. If done strategically, relatively modest expansions of effort can have big payoffs.

A. Federal Law Enforcement

While the Department of Justice has taken significant steps to improve its anti-counterfeiting and anti-piracy efforts, more resources are needed, better cooperation with the private sector should be encouraged, and adequate prosecutorial and investigative personnel should be assigned exclusively to this critical fight. Goals include:

- Increasing the number of CHIP (computer hacking/intellectual property) units within US Attorneys' offices, and ensuring that all CHIP units are fully staffed, with at least one federal prosecutor within each unit dedicated to intellectual property enforcement cases;
- Assigning full time to each CHIP unit at least two FBI agents, who are dedicated exclusively to intellectual property enforcement cases;
- Directing each CHIP unit to coordinate its activities with IP enforcement resources of state or local jurisdictions within the federal judicial district in question, including operational
- coordination and intelligence sharing as appropriate;
- Allocating additional funding to computer forensic support needed to efficiently prosecute piracy and counterfeiting cases;
- Increasing transparency of federal prosecutorial decisions on which cases of IPR violations are actionable, and adopting more flexible threshold standards that will encourage the prosecution of more IPR theft cases; and
- Funding semi-annual training conferences for federal prosecutors and law enforcement agents, participated in by trademark and copyright industry enforcement experts

B. State and Local Initiatives

State and local law enforcement agencies, and state courts, play a critical role in the fight against counterfeiting and piracy. These activities violate not only federal law, but numerous state laws as well and the majority of investigations and prosecutions take place in the state law enforcement and judicial systems. State governments also have a strong interest in combating counterfeiting and piracy because they adversely affect a variety of important state interests -reducing state tax revenues, undermining efforts to protect consumers, and supporting organized crime and others involved in illegal activities. Thus, any comprehensive effort to improve the effectiveness of our national IPR enforcement system must devote significant resources to improving the training, expertise, and efficiency of state law enforcement and judicial personnel to establish and evaluate pilot projects in five states, localities or metropolitan areas, under which specialized intellectual property enforcement units would be established, trained, and resourced, These units would be dedicated to, and would target, manufacturing and distribution of counterfeit and pirated goods. Dedicated prosecutors would also be assigned to these units, and designated judges of the courts in which the resulting prosecutions would be brought would receive specialized training in intellectual

property enforcement cases. The specialized enforcement units would coordinate their activities with the CHIP units in the corresponding federal judicial districts.

C. Updating Federal Criminal Laws

Federal criminal liability under current law extends only to "trafficking" in counterfeit goods. The production, possession or importation of counterfeit products is a crime only if it can be proven that these activities are carried out with the intent to transport, transfer, or otherwise dispose of them to another, for purposes of commercial advantage or private financial gain. To more comprehensively discourage and punish participation in the entire distribution chain of counterfeit goods, knowingly making or manufacturing counterfeit products should be outlawed in all circumstances. The harm inflicted may not be purely economic, but also physical — in some cases, literally a matter of life or death. Today, criminal penalties for trademark counterfeiting do not reflect this harsh reality. To provide punishment commensurate with the crime, and to increase deterrence, the maximum penalty for criminal counterfeiting violations that result in serious bodily injury should be doubled to 20 years, and a life sentence should be authorized for intentional or reckless counterfeiting conduct that results in death.

The civil and criminal forfeiture provisions of current intellectual property offenses lack uniformity both as to substance and process. Harmonizing these statutes would provide law enforcement and victims of intellectual property crimes with a uniform set of standards applicable to the seizure and forfeiture of the tools and proceeds of trade in counterfeit and pirate goods, as well as confiscation of the contraband goods themselves.

IV. Objective IV: Attack counterfeiting and piracy beyond our borders through improved enforcement training and technical assistance programs with foreign governments

Enforcement against intellectual property crimes will not effectively protect our markets unless there is a corresponding effort overseas. It is critical that we extend our enforcement efforts beyond our borders, by ramping up our work with our trading partners to train and provide technical assistance to law enforcement agencies, prosecutors, and courts in the key source countries. By improving enforcement capabilities in these countries, they can more effectively protect American intellectual property in their own markets, and prevent counterfeit or pirate products from reaching our borders. We must also bring greater cohesion to international enforcement efforts across the Federal Government, and strengthen and make better use of trade tools that encourage stronger IPR enforcement by our trading partners. As in other areas, we need to do more, but we also need to minimize overlap, duplication, and the sending of inconsistent messages to other governments.

The CIPEO should be tasked with coordinating the relevant agencies - including the Departments of State, Commerce, Justice and Homeland Security, and the Office of the U.S. Trade Representative - in developing and implementing an annual strategic plan. The goal: to ensure that federal training and technical assistance resources are spent efficiently, with greater consistency and cohesion, and in a way that is most effective in enhancing the ability of our trading partners to improve and enforce their laws against piracy and counterfeiting. The plan should set priorities for these activities, and, guided by the Special 301 report issued by the Office of the U.S. Trade Representative, identify those countries where these programs can be carried out most effectively, and will have the greatest impact on the U.S. market and American right holders. This plan should also reflect input from enforcement experts in the private sector, and should include metrics by which to evaluate the effectiveness of our international efforts to improve enforcement against IPR crimes. The CIPEO should report to Congress annually on development and implementation of the strategic plan.

Acting on the basis of this unified strategic plan, additional resources need to be targeted to international outreach and technical assistance that will strengthen the capabilities of foreign

governments to crack down on trade in counterfeit and pirated products. Funding enhancements are needed for:

- Designation, training and assignment of 10 additional Commerce Department IP attaches at key U.S. embassies and other diplomatic missions. The goal is to promote enforcement cooperation with foreign governments; to provide a valuable resource to U.S. companies faced with counterfeiting and piracy problems in the host country market; and generally to elevate the profile of IPR enforcement in bilateral and multilateral fora. At each mission where they serve, these attaches should chair an IP protection task force comprised of all relevant sections of the mission, and should build working coalitions with their counterparts at other embassies to share information, deliver joint messages to the host country government and otherwise cooperate to improve IP enforcement in that market.
- Increased funding for IPR enforcement training and technical assistance carried out by the State Department and elsewhere in the U.S. government, with safeguards against the duplicative or inconsistent efforts that have too often plagued these programs in the past, and with an emphasis on public-private training partnerships that draw on the enforcement expertise of U.S. businesses;
- Additional direct funding for attorneys in the Justice Department's Computer Crime and Intellectual Property Section (CCIPS) to train law enforcement counterparts overseas in prosecuting IPR cases;
- Establishing DOJ Intellectual Property Law Enforcement Coordinators (IPLEC) positions in additional regions of the world, and reporting on activities and progress of currently placed IPLECs.

Preferential trade programs such as the Generalized System of Preferences (GSP) and regional preference programs allow certain products from specified less developed countries to enter the U.S. duty-free. These programs, which are also important for many U.S. industries, already condition benefits of duty-free entry on compliance with IPR enforcement benchmarks. But these conditions are vaguely phrased and are often given short shrift in decisions on program eligibility. As a result, an effective tool for encouraging trading partners to upgrade their IPR enforcement efforts is not realizing its full potential. GSP and the other programs should be re-authorized for adequate periods, and their IPR-related criteria should be made more specific and given greater attention.

V. Objective V: Strengthen ability of rights holders to protect their intellectual property by civil and judicial reform

An effective strategy against counterfeiting and piracy requires that we strengthen the ability of right holders to protect their intellectual property and obtain strong remedies for infringement. To do this, we must amend existing laws to close loopholes, toughen penalties, and upgrade the capacity of the federal government to bring, and of federal courts to decide, civil IPR enforcement cases.

A. Upgrade Civil Remedies

Current law provides enhanced remedies against those civilly liable for counterfeiting activities, including treble damages and court-awarded attorney's fees in most such cases. However, these enhanced remedies are available only against parties who are found to have acted intentionally and with knowledge that the items in question were counterfeit. To provide adequate incentives for responsible behavior, it is necessary to expand the class of defendants who are routinely exposed to these remedies, to include those who are liable for intentionally assisting infringement in situations involving counterfeit goods. The trademark law should be amended to make clear that treble damages and attorney's fees would be assessed, as a matter of course, against parties who intentionally induce another to engage in an act that violates the anti-counterfeiting prohibitions of the

Lanham Act, or who continue to supply goods or services to a party that they know or have reason to know is engaging in counterfeiting.

As an alternative civil remedy for counterfeiting, a trademark owner can choose an award of statutory damages set by the court. Under current law, such awards can range up to \$100,000 per mark infringed, or up to \$1 million per mark infringed in the case of a willful violation. Awards as low as \$500 per mark are also authorized. These amounts have remained unchanged since enactment of the statutory damages remedy in 1996. In order to maintain their deterrent effect in an environment in which the value of commercially successful trademarks has skyrocketed, with a concomitant increase in the incentive to counterfeit them, these statutory damage levels should be at least doubled.

B. Authorize Federal Civil Enforcement Against Pirates and Counterfeiters

Even after federal investigators have amassed strong evidence of counterfeiting or piracy activities that violates the federal criminal laws, a federal criminal prosecution may not be brought because of the need to prove guilt beyond a reasonable doubt and other demands on prosecutorial resources. Enabling the federal government to bring a civil lawsuit in these circumstances would enhance the efficiency of the enforcement effort, ensure that counterfeiters and pirates are exposed to the risk of substantial financial penalties, and bring to bear the moral weight of the United States government in the civil enforcement arena. Building on the PIRATE Act, which the Senate passed in the 108th Congress, Congress should authorize the Justice Department to bring civil actions against those whose counterfeiting or piracy conduct constitutes a criminal offense under current law, and should fund training of federal lawyers handle these cases. Once liability is established in these cases by a preponderance of the evidence, the defendant could be ordered both to pay restitution to the injured right holder, and to pay a significant civil penalty to the government.

C. Building Judicial Expertise

Intellectual property enforcement efforts will be significantly aided by upgrading the expertise of the federal judiciary in the specialized legal and technical issues these cases present. Since the U.S. routinely recommends such specialization to foreign governments; we should not be afraid to experiment with it here.

Building on H.R. 34, passed by the House earlier this year, pilot programs should be established in five United States District Courts under which counterfeiting or piracy cases could be assigned or reassigned to judges volunteering for them and who receive special training in such cases. In those courts participating in the pilot program, cases randomly assigned to non-participating judges could, at the assigned judge's option, be reassigned to those judges participating in the pilot.

The Administrative Office of the U.S. Courts should be directed to sponsor annual training sessions on handling counterfeiting and piracy cases, and to make this training available to selected state judges as well as those on the federal bench.

VI. Objective VI: Decrease demand by educating consumers about the harms of counterfeiting and piracy

Ultimately, the business of counterfeiting and piracy depends for its success upon an uninformed and indifferent public. While increased and more visible enforcement is an important component of public education, the Federal Government can also provide a "bully pulpit" from which a clear message can be disseminated to the public: that counterfeiting costs American jobs, undermines American competitiveness in global markets, and threatens public health and safety.

The CIPEO should coordinate public education efforts to disseminate this message nationwide through appropriate channels, including television, radio, print, and the Internet. (One model for the campaign envisioned here is the national youth anti-drug media campaign carried out by the Office of National Drug Control Policy in collaboration with the Partnership for a Drug-Free America.) In

carrying out this campaign, the CIPEO should leverage limited federal funding by utilizing, to the greatest extent possible, corporate sponsorships and donations from the private sector for expenditures such as the purchase of media time and space, advertising production costs, and creative and talent costs. Partnerships with professional, civic and business groups, community-based and consumer organizations, and state, local and tribal governments, are also encouraged as primary channels for dissemination of the educational message while minimizing costs to the federal government. An industry-led commission should be convened to advise on the campaign. The educational campaign should also be independently evaluated for its effectiveness in increasing awareness about the threats posed by counterfeiting and piracy, and annual reports should be provided to Congress.

Educational initiatives directed to more targeted audiences are also essential. For example, there is disturbing but incontrovertible evidence that much of the US market for counterfeit and pirate products is to be found on college campuses, especially with regard to pirate entertainment products delivered online. While some universities, in cooperation with copyright owners, have taken steps to prevent their computer and networking resources from being abused for piracy, and have worked to educate their students on this issue, much more needs to be done. The CIPEO should work with the major federal agencies that support higher education (including the National Science Foundation and NIST as well as Education) to initiate a process for developing, approving and publishing voluntary best practices for prevention of intellectual property infringements in higher education, without imposing specific technological mandates. The implementation of these best practices, once promulgated, should be used as a factor in grant decisions under the various federal higher education funding programs these agencies operate. Finally, the Department of Education should require each applicant for a federally supported student loan to acknowledge the need to refrain from using the computing, networking or information resources of institutions of higher education for infringing activities.

Border crossings by U.S.-based travelers should also be seized upon as "teachable moments" in the campaign against counterfeiting and piracy. Funding should be provided to DHS for a marketing campaign at all Customs departure and entry points, informing travelers about the impact of counterfeiting and piracy on the economy and on consumer health and safety, and warning them against acquiring counterfeit or pirate products abroad, or importing them into the United States in violation of the law.

Appendix D

Discussion of Cost Assumptions for the CACP Initiative

I. Summary of Cost Assumptions

In this appendix, we present the details underlying the low and high cost estimates for the six objectives contained in the CACP initiative. This appendix explains and documents the assumptions that went into each cost estimate for each sub-objective or task. In order to make specific cost estimates, we used comparisons to similar programs, initiatives and personnel costs whenever comparable data was available. In some cases we assumed details of an objective's implementation in terms of the number of personnel hired, number of locations for a campaign, etc. These are noted – changes in these assumptions will affect the overall budget for the CACP initiative.

There are numerous references in these objectives to hiring new personnel or reallocating existing personnel. The salaries for new hires are based on the federal salary schedule as of January 1, 2007. The cost estimates for new hires include a benefits burden rate (40%) on direct salaries and an estimate of the other costs associated with new hires (e.g., office space, computers, furniture, special equipment, computers, supplies, travel, etc.). These other costs are estimated to be 70 percent of personnel costs (direct salaries plus benefits) for non-law enforcement new hires and 85 percent of personnel costs for law enforcement new hires.¹³³ There are also numerous references to training programs. We have noted the basis for our estimated costs where appropriate. Ancillary costs for the use of specialized training facilities, special equipment, etc., are not included in these estimates.

II. Assumptions and Calculations By Objective

A. Objective 1: Improve Coordination of Government IP Enforcement Resources

The costs associated with this objective are related to creating and staffing the Office of the Chief IP Enforcement Office (CIPEO) within the White House. The low and high estimated costs for this effort are shown in Appendix Table D.1.

¹³³ The 70 percent rate is based on the relationship between total personnel costs and total costs for the judicial and legislative branches of the federal government. See, Office of Management and Budget (OMB), Budget of the United States Government Fiscal Year 2008, Federal Employment and Compensation By Agency, Table 24.1 Full Time Equivalent Employment By Agency, Table 24.2 Total Federal Employment, and Table 24.4 Employee Compensation by Agency (<http://www.whitehouse.gov/omb/budget/fy2008/empl.html>); OMB, Historical Tables: Budget of the United States Government, Fiscal Year 2008, Table 4.1, p.78 and Table 17.3, p.327 (<http://www.whitehouse.gov/omb/budget/fy2008/>). The 85 percent rate is based on the relationship between total personnel costs and total costs for the FBI. See, Office of Management and Budget (OMB), Budget of the United States Government Fiscal Year 2008, Federal Employment and Compensation By Agency, Table 24.1 Full Time Equivalent Employment By Agency, Table 24.2 Total Federal Employment, and Table 24.4 Employee Compensation by Agency (<http://www.whitehouse.gov/omb/budget/fy2008/empl.html>); OMB, Department of Justice (<http://www.whitehouse.gov/omb/budget/fy2007/justice.html>); Statement of Robert S. Mueller, III, Director, Federal Bureau of Investigation, before the U.S. House of Representatives Committee on Appropriations, Subcommittee on Science, State, Justice, Commerce, and Related Agencies, March 28, 2006 (<http://www.fbi.gov/congress/congress06/mueller032806.htm>).

**Appendix Table D.1
Low and High Cost Estimates for Objective #1:
The Office of the Chief Enforcement Officer Within the White House**

Description of Cost Item	Salary	Low Estimate		High Estimate	
		Number of Employees	Amount (\$)	Number of Employees	Amount (\$)
Personnel Costs					
Direct Salaries					
Chief IP Enforcement Officer	---	1	\$ 154,600	1	\$ 168,000
Senior Staff (GS-15, Step 9 to 10)	\$ 118,000	6	\$ 708,000	8	\$ 944,000
Support Staff (GS-12 to 14, Step 6)	\$ 78,000	12	\$ 936,000	16	\$ 1,248,000
Executive Assistants (GS-9, Step 6) (2 for CIPEC and rest shared)	\$ 45,000	7	\$ 315,000	9	\$ 405,000
Other Support Staff or IT, Legal, Contracts, Budgets, Etc. (GS-13, Step 6)	\$ 78,000	6	\$ 468,000	8	\$ 624,000
Total Direct Salaries		32	\$ 2,581,600	42	\$ 3,389,000
Benefits (40% of Total Direct Salaries)			\$ 1,032,640		\$ 1,355,600
Total Personnel Costs			\$ 3,614,240		\$ 4,744,600
Other Costs (Includes Office Space, Furniture, Computers, Supplies, Travel, Etc.) (70% of Total Personnel Costs)			\$ 2,529,968		\$ 3,321,220
Total Costs			\$ 6,144,208		\$ 8,065,820

Sources:

- (1) U.S. Office of Personnel Management, <http://www.opm.gov/oca/07tables/>
- (2) U.S. Office of Management and Budget, <http://www.whitehouse.gov/omb/budget/fy2008/spreadsheets.html>
- (3) Other costs are set at 70% of total personnel costs based on the relationship between total personnel costs and total costs for the judicial and legislative branches of the federal government (Office of Management and Budget (OMB), Budget of the United States Government Fiscal Year 2008, Federal Employment and Compensation By Agency, Table 24.1 Full Time Equivalent Employment By Agency, Table 24.2 Total Federal Employment, and Table 24.4 Employee Compensation by Agency (<http://www.whitehouse.gov/omb/budget/fy2008/empl.html>); OMB, Historical Tables: Budget of the United States Government, Fiscal Year 2008, Table 4.1, p.78 and Table 17.3, p.327 (<http://www.whitehouse.gov/omb/budget/fy2008/>)).

The Office of the CIPEO would be charged with a wide range of tasks described throughout the CACP Initiative. These tasks are summarized below by objective:

Objective 1:

- “Coordinating IPR enforcement activities throughout the government”
- “Overseeing the development and effective implementation of a joint strategic plan and priorities for enforcement activities”
- “Elevating the IPR enforcement portfolio” in “all relevant federal departments, in particular the two lead enforcement agencies - the Department of Justice and the Department Homeland Security.”
- Working with “designated senior officials” at DOJ and DHS to develop and “implement department-wide strategic plans that includes specific performance measures of progress.”

Objective 2:

- Working with the DHS to draft “a DHS-wide IPR enforcement plan that specifically measures the effectiveness of all current enforcement tools - targeting, examination, seizures, post-

entry audits, penalty actions - and that prioritizes the most effective tools throughout the agency.”

Objective 4:

- “Coordinating the relevant agencies - including the Departments of State, Commerce, Justice and Homeland Security, and the Office of the U.S. Trade Representative - in developing and implementing an annual strategic plan” for attacking counterfeiting and piracy beyond U.S. borders.

Objective 6:

- “Coordinating public education efforts to disseminate [the anti-counterfeiting and piracy] message nationwide through appropriate channels, including television, radio, print, and the Internet.”
- Convening an industry-led commission to guide the development and implementation of the public education campaign and to secure “sponsorships and donations from the private sector” for the campaign.
- “Evaluating the effectiveness of the public education campaign “in increasing awareness about the threats posed by counterfeiting and piracy, and annual reports should be provided to Congress.”

B. Objective 2: Expand Authorities and Improve Enforcement Practices

Objective 2 calls for adding additional personnel to expand and improve our country’s ability to enforce IPR laws. In addition to increasing the number of agents and officers in the field, this objective also calls for additional IP-related training programs and new tools for IPR enforcement.

**Appendix Table D.2 - Page 1 of 3
Low and High Cost Estimates for Objective #2:
Expand Authorities and Improve Enforcement Practices**

<u>Description of Cost Item</u>	<u>Salary</u>	<u>Low Estimate</u>		<u>High Estimate</u>	
		<u>Number of Employees/ Trainees/ Sessions</u>	<u>Amount (\$)</u>	<u>Number of Employees/ Trainees/ Sessions</u>	<u>Amount (\$)</u>
Task 2.1: New IPR Officials within CBP and ICE					
Personnel Costs					
Direct Salaries					
Senior Staff (GS-15, Step 9 to 10)	\$ 118,000	2	\$ 236,000	2	\$ 236,000
Support Staff (GS-13, Step 6)	\$ 78,000	1	\$ 78,000	2	\$ 156,000
Executive Assistants (GS-9, Step 6)	\$ 45,000	2	\$ 90,000	4	\$ 180,000
Total Direct Salaries		5	\$ 404,000	8	\$ 572,000
Benefits (40% of Total Direct Salaries)			\$ 161,600		\$ 228,800
Total Personnel Costs			\$ 565,600		\$ 800,800
Other Costs (Includes Office Space, Furniture, Computers, Supplies, Travel, Etc.) (70% of Total Personnel Costs)			\$ 395,920		\$ 560,560
Task 2.1 Total Costs			\$961,520		\$1,361,360
Task 2.2: New CBP Agents at Ports of Entry (Low Estimate Based on Increased Staffing at 34 Ports and Higher Estimate Based on Increased Support at 68 Ports)					
Personnel Costs					
Direct Salaries					
Agents (GS-10, Step 6)	\$ 50,000	170	\$ 8,500,000	340	\$ 17,000,000
Supervisors (GS-13, Step 6)	\$ 78,000	17	\$ 1,326,000	34	\$ 2,652,000
Total Direct Salaries		187	\$ 9,826,000	374	\$ 19,652,000
Benefits (40% of Total Direct Salaries)			\$ 3,930,400		\$ 7,860,800
Total Personnel Costs			\$ 13,756,400		\$ 27,512,800
Training Costs (\$14,700 per Agent)		170	\$ 2,499,000	340	\$ 4,998,000
Other Costs (Includes Office Space, Furniture, Computers, Supplies, Travel, Etc.) (85% of Total Personnel Costs)			\$ 11,692,940		\$ 23,385,880
Task 2.2 Total Costs			\$ 27,948,340		\$ 55,896,680
Task 2.3: Training ICE Agents					
Training Costs (\$5,000 per Agent)		26	\$ 130,000	51	\$ 255,000
Task 2.3 Total Costs			\$ 130,000		\$ 255,000
Task 2.4: Improving the Effectiveness of the NIPRCC Total Costs (Cost is Covered Under Objective 1)			---		---

**Appendix Table D.2 - Page 2 of 3
Low and High Cost Estimates for Objective #2:
Expand Authorities and Improve Enforcement Practices**

<u>Description of Cost Item</u>	<u>Salary</u>	<u>Low Estimate</u>		<u>High Estimate</u>	
		<u>Number of Employees/ Trainees/ Sessions</u>	<u>Amount (\$)</u>	<u>Number of Employees/ Trainees/ Sessions</u>	<u>Amount (\$)</u>
Task 2.5: Increasing Funding for the CBP Fines, Penalties and Forfeitures Office					
Personnel Costs					
Direct Salaries					
Agents (GS-10, Step 6)	\$50,000	10	\$ 500,000	20	\$ 1,000,000
Executive Assistants (GS-9, Step 6)	\$45,000	20	\$ 900,000	40	\$ 1,800,000
<u>Total Direct Salaries</u>		30	\$ 1,400,000	60	\$ 2,800,000
<u>Benefits (40% of Total Direct Salaries)</u>			\$ 560,000		\$ 1,120,000
Total Personnel Costs			\$ 1,960,000		\$ 3,920,000
Other Costs (Includes Office Space, Furniture, Computers, Supplies, Travel, Etc.) (85% of Total Personnel Costs)			\$ 1,666,000		\$ 3,332,000
<u>Training Costs (\$14,700 per Agent)</u>		10	\$ 147,000	20	\$ 294,000
Task 2.5 Total Costs			\$ 3,773,000		\$ 7,546,000
Task 2.6: Providing IP Enforcement Training at ICE Offices Worldwide					
<u>Training Costs (\$18,000 per Session)</u>		5	\$ 90,000	10	\$ 180,000
<u>Travel Costs (\$15,000 per Session: Ten Trips at \$1,500 Each)</u>		5	\$ 75,000	10	\$ 150,000
Task 2.6 Total Costs			\$ 165,000		\$ 330,000
Task 2.7: Training CBP Agents in the Use of New Technologies (10% of Agents Trained in Low Case and 20% in High Case)					
<u>Training Costs (\$5,000 per Agent)</u>		1,900	\$ 9,500,000	3,800	\$ 19,000,000
Task 2.7 Total Costs			\$ 9,500,000		\$ 19,000,000
Task 2.8: Develop and Implement a "Special Scrutiny" Database Total Costs			\$ 15,000,000		\$ 18,750,000
Task 2.9: Create New Legal Tools for Border Enforcement Total Costs			\$ 1,000,000		\$ 2,000,000
Task 2: Total Costs			\$ 58,477,860		\$ 105,139,040

Appendix Table D.2 - Page 3 of 3
Low and High Cost Estimates for Objective #2:
Expand Authorities and Improve Enforcement Practices

Sources:

- (1) U.S. Office of Personnel Management, <http://www.opm.gov/oca/07tables/>
- (2) Tasks 2.2 and 2.5 Training Cost of \$14,700: Government Accountability Office, "Border Patrol, Costs and Challenges Related to Training New Agents," GAO-07-997T (<http://www.gao.gov/new.items/d07997t.pdf>).
- (3) Tasks 2.3 and 2.7 Training Cost of \$5,000: Approximately one third of \$14,700 training cost.
- (4) Task 2.6 Training Cost per Session: Estimate is six times attorney/judge training.
- (5) Task 2.6 Travel Cost per Session: The \$1,500 per trip estimated is based on flight costs for a trip about two-thirds the distance cross country (San Francisco to Pittsburgh) plus per diem for two days.
- (6) Task 2.8 Database Cost: Estimate based on the cost of a comparable system (the FDA's FACTS system) intended to "coordinate risk management efforts within USDA and between federal, state, and local food safety authorities" by providing "timely, up-to-the-minute data on in-plant inspection and performance" with respect to food processing inspections throughout the country. The FSIS Automated Corporate Technology Suite (FACTS) was budgeted at \$14.5 million in 2003 (http://www.fsis.usda.gov/oa/congress/2002/test_murano031402.htm).
- (7) Other costs are set at 70% of total personnel costs in Task 2.1 based on the relationship between total personnel costs and total costs for the judicial and legislative branches of the federal government (Office of Management and Budget (OMB), Budget of the United States Government Fiscal Year 2008, Federal Employment and Compensation By Agency, Table 24.1 Full Time Equivalent Employment By Agency, Table 24.2 Total Federal Employment, and Table 24.4 Employee Compensation by Agency (<http://www.whitehouse.gov/omb/budget/fy2008/empl.html>); OMB, Historical Tables: Budget of the United States Government, Fiscal Year 2008, Table 4.1, p.78 and Table 17.3, p.327 (<http://www.whitehouse.gov/omb/budget/fy2008/>)). Other costs are set at 85% of total personnel costs in Tasks 2.2 and 2.5 based on the relationship between total personnel costs and total costs for the FBI (Office of Management and Budget (OMB), Budget of the United States Government Fiscal Year 2008, Federal Employment and Compensation By Agency, Table 24.1 Full Time Equivalent Employment By Agency, Table 24.2 Total Federal Employment, and Table 24.4 Employee Compensation by Agency (<http://www.whitehouse.gov/omb/budget/fy2008/empl.html>); OMB, Department of Justice (<http://www.whitehouse.gov/omb/budget/fy2007/justice.html>); Statement of Robert S. Mueller, III, Director, Federal Bureau of Investigation, before the U.S. House of Representatives Committee on Appropriations, Subcommittee on Science, State, Justice, Commerce, and Related Agencies, March 28, 2006 (<http://www.fbi.gov/congress/congress06/mueller032806.htm>)).

References:

- (1) Department of Energy, FY 2006 (<http://www.orau.gov/tdd/2006ATR/Section%202%20Major%20Accomplishments.pdf>).
- (2) Government Accountability Office, *Costs and Challenges Related to Training New Agents*, Highlights of GAO-07-997T, June 19, 2007.
- (3) U.S. Department of Agriculture, Food Safety and Inspection Service (http://www.fsis.usda.gov/oa/congress/2002/test_murano031402.htm).
- (4) White House, Office of the Press Secretary, Dec. 28, 1999 (<http://www.fda.gov/oc/buyonline/onlinesalespr.html>).

C. Objective 3: Strengthening Criminal Enforcement

Objective 3 calls for strengthening federal C&P law enforcement via three primary strategies: 1) increasing federal C&P law enforcement, 2) supporting state and local initiatives, and 3) updating federal criminal law.

**Appendix Table D.3 - Page 1 of 3
Low and High Cost Estimates for Objective #3:
Strengthen Criminal Enforcement**

<u>Description of Cost Item</u>	<u>Salary</u>	<u>Low Estimate</u>		<u>High Estimate</u>	
		<u>Number of Employees / Trainees / Sessions</u>	<u>Amount (\$)</u>	<u>Number of Employees / Trainees / Sessions</u>	<u>Amount (\$)</u>
Task 3.1: Establishing Five New CHIP Units					
Personnel Costs					
Direct Salaries - Average (2001 Value Times 1.16755 Which is 2007, GS-9, Step 6 Divided by 2001, GS-9, Step 6)	\$ 55,429	30	\$ 1,662,870	50	\$ 2,771,450
<u>Benefits (40% of Total Direct Salaries)</u>			<u>\$ 665,148</u>		<u>\$ 1,108,580</u>
Total Personnel Costs			\$ 2,328,018		\$ 3,880,030
Other Costs (Includes Office Space, Furniture, Computers, Supplies, Travel, Etc.) (85% of Total Personnel Costs)			\$ 1,978,815		\$ 3,298,026
Task 3.1 Total Costs			\$ 4,306,833		\$ 7,178,056
Task 3.2: Assigning New FBI Agents to CHIP Units					
Personnel Costs					
Direct Salaries Total Direct Salaries of Agents (GS-10, Step 6)	\$ 63,804	60	\$ 3,828,240	60	\$ 3,828,240
<u>Benefits (40% of Total Direct Salaries)</u>			<u>\$ 1,531,296</u>		<u>\$ 1,531,296</u>
Total Personnel Costs			\$ 5,359,536		\$ 5,359,536
Other Costs (Includes Office Space, Furniture, Computers, Supplies, Travel, Etc.) (85% of Total Personnel Costs)			\$ 4,555,606		\$ 4,555,606
Task 3.2 Total Costs			\$ 9,915,142		\$ 9,915,142
Task 3.3: Additional Funding for Computer Forensics Total Costs			\$ 750,000		\$ 1,500,000
Task 3.4: Semi-Annual Trainings for Federal Prosecutors					
Training Costs (\$3,000 per Trainee per Session)		96	\$ 288,000	96	\$ 288,000
Travel Costs (\$1,500 per Trainee per Session)		96	\$ 144,000	96	\$ 144,000
Task 3.4 Total Costs			\$ 432,000		\$ 432,000

**Appendix Table D.3 - Page 2 of 3
Low and High Cost Estimates for Objective #3:
To Strengthen Criminal Enforcement**

<u>Description of Cost Item</u>	<u>Salary</u>	<u>Low Estimate</u>		<u>High Estimate</u>	
		<u>Number of Employees / Trainees / Sessions</u>	<u>Amount (\$)</u>	<u>Number of Employees / Trainees / Sessions</u>	<u>Amount (\$)</u>
Task 3.5: - Establish and Operate New “Specialized IP Enforcement” Units					
Personnel Costs					
Direct Salaries					
SIPE Attorneys (Equivalent to GS-13, Step 6)	\$ 78,000	5	\$ 390,000	10	\$ 780,000
Prosecutors (Equivalent to GS-14, Step 6)	\$ 92,000	5	\$ 460,000	10	\$ 920,000
<u>Total Direct Salaries</u>		10	\$ 850,000	20	\$ 1,700,000
<u>Benefits (40% of Total Direct Salaries)</u>			\$ 340,000		\$ 680,000
Total Personnel Costs			\$ 1,190,000		\$ 2,380,000
Other Costs (Includes Office Space, Furniture, Computers, Supplies, Travel, Etc.) (85% of Total Personnel Costs)			\$ 1,011,500		\$ 2,023,000
Grant Administrative Costs (10% of Above Costs)			\$ 220,150		\$ 440,300
Task 3.5 Total Costs			\$ 2,421,650		\$ 4,843,300
Task 3.6: Training Designating Judges					
Training Costs (\$6,000 per Trainee per Session)		10	\$60,000	20	\$120,000
Task 3.7: Updating Federal Criminal Laws Total Costs					
			\$1,000,000		\$2,000,000
Task 3: Total Costs			\$18,885,625		\$25,988,497

Appendix Table D.3 - Page 3 of 3
Low and High Cost Estimates for Objective #3:
To Strengthen Criminal Enforcement

Sources:

- (1) U.S. Office of Personnel Management, <http://www.opm.gov/oca/07tables/>
- (2) Task 3.4 Training Cost per Trainee per Session: The \$3,000 per person per seminar cost is based on the cost of a Patent and Trademark Office seminar assuming 15 participants per session.
- (3) Task 3.4 Travel Cost per Trainee per Session: The \$1,500 per trip estimated is based on flight costs for a trip about two-thirds the distance cross country (San Francisco to Pittsburgh) plus per diem for two days.
- (4) Task 3.6 Training Cost per Trainee per Session: The \$6,000 per person per seminar cost is based on the cost of a Patent and Trademark Office seminar assuming about eight participants per session.
- (6) Other costs are set at 85% of total personnel costs based on the relationship between total personnel costs and total costs for the FBI (Office of Management and Budget (OMB), Budget of the United States Government Fiscal Year 2008, Federal Employment and Compensation By Agency, Table 24.1 Full Time Equivalent Employment By Agency, Table 24.2 Total Federal Employment, and Table 24.4 Employee Compensation by Agency (<http://www.whitehouse.gov/omb/budget/fy2008/empl.html>); OMB, Department of Justice (<http://www.whitehouse.gov/omb/budget/fy2007/justice.html>); Statement of Robert S. Mueller, III, Director, Federal Bureau of Investigation, before the U.S. House of Representatives Committee on Appropriations, Subcommittee on Science, State, Justice, Commerce, and Related Agencies, March 28, 2006 (<http://www.fbi.gov/congress/congress06/mueller032806.htm>)).

Reference: Computer Hacking and Intellectual Property (CHIP) Fact Sheet, Dec. 2002 (<http://www.usdoj.gov/criminal/cybercrime/chipfact.htm>).

D. Objective 4: Attack Counterfeiting and Piracy Beyond U.S. Borders

Objective 4 addresses the critical issue of attacking C&P activities overseas. Part of this effort involves coordinating existing agencies and resources to more effectively address the problem while also recognizing that diplomatic efforts with our trade partners are also called for.

**Appendix Table D.4
Low and High Cost Estimates for Objective #4:
Attack Counterfeiting and Piracy Beyond U.S. Borders**

<u>Description of Cost Item</u>	<u>Low Estimate</u>		<u>High Estimate</u>	
	<u>Number of Positions/ Sessions</u>	<u>Amount (\$)</u>	<u>Number of Positions/ Sessions</u>	<u>Amount (\$)</u>
Task 4.1: Strategic Planning Total Costs (Cost is Covered Under Objective 1)		---		---
Task 4.2: Strengthening the Capabilities of Foreign Governments				
Total Costs (\$430,000 per Position)	10	\$4,300,000	20	\$8,600,000
Task 4.3: Increased Funding for IPR Enforcement Training and Enforcement		\$1,750,000		\$3,500,000
Task 4.4: Additional Funding for Training and Technical Assistance to Foreign Counterparts				
Total Costs (\$45,000 per Session)	10	\$ 450,000	20	\$ 900,000
Task 4.5: Establish New IP Law Enforcement Coordinators in Additional Regions				
Total Costs (\$430,000 per Position)	10	<u>\$4,300,000</u>	20	<u>\$8,600,000</u>
Task 4: Total Costs		\$10,800,000		\$21,600,000

Source:

(1) Tasks 4.2 and 4.5 Travel Cost of \$430,000 per Position: Office of Management and Budget, "Department Of State and International Assistance Programs," 2006 (<http://www.whitehouse.gov/omb/budget/fy2006/state.html>).

(2) Task 4.4 Cost of 45,000 per Session: The \$45,000 seminar cost is based on the cost of a Patent and Trademark Office seminar..

Reference: Office of Management and Budget, "Department Of State and International Assistance Programs," 2006 (<http://www.whitehouse.gov/omb/budget/fy2006/state.html>).

E. Objective 5: Civil and Judicial Reforms to Protect IP Holders

Objective 5 calls for more aggressive action to protect the interests of IP holders by increasing civil penalties for violators, by training federal attorneys to more effectively prosecute C&P cases and by building judicial expertise in civil IP enforcement.

**Appendix Table D.5
Low and High Cost Estimates for Objective #5:
Institute Civil and Judicial Reforms to Protect IP Holders**

<u>Description of Cost Item</u>	<u>Low Estimate</u>		<u>High Estimate</u>	
	<u>Number of Trainees</u>	<u>Amount (\$)</u>	<u>Number of Trainees</u>	<u>Amount (\$)</u>
Task 5.1: Additional Support for Funding		\$ 1,000,000		\$ 2,000,000
Task 5.2: Training Federal Attorneys in Civil IP Enforcement				
Training Costs (\$3,000 per Trainee per Session)	96	\$ 288,000	192	\$ 576,000
Travel Costs (\$1,500 per Trainee per Session)	96	\$ 144,000	192	\$ 288,000
Task 5.2 Total Costs		\$ 432,000		\$ 864,000
Task 5.3: Training Judges in Civil IP Enforcement				
Training Costs (\$3,000 per Trainee per Session)	10	\$ 30,000	20	\$ 60,000
Travel Costs (\$1,500 per Trainee per Session)	10	\$ 15,000	20	\$ 30,000
Task 5.3 Total Costs		\$ 45,000		\$ 90,000
Task 5: Total Costs		\$1,477,000		\$2,954,000

Sources:

- (1) Tasks 5.2 and 5.3 Training Cost per Trainee per Session: The \$3,000 per person per seminar cost is based on the cost of a Patent and Trademark Office seminar assuming 15 participants per session.
- (2) Tasks 5.2 and 5.3 Travel Cost per Trainee per Session: The \$1,500 per trip estimated is based on flight costs for a trip about two-thirds the distance cross country (San Francisco to Pittsburgh) plus per diem for two days.

F. Objective 6: Coordinate and Conduct Public Education Campaigns

To be truly effective, efforts must be made to address the demand side of the C&P problem. Therefore, Objective 6 of the CACP Initiative calls for a comprehensive public education campaign plus targeted prevention campaigns at selected ports of entry.

**Appendix Table D.6
Low and High Cost Estimates for Objective #6:
Coordinate and Conduct Public Education Campaigns**

<u>Description of Cost Item</u>	<u>Low Estimate</u>	<u>High Estimate</u>
Task 6.1: Coordinate a Public Education Campaign (Cost is Covered Under Objective 1)	---	---
Task 6.2: Funding for a Public Education Campaign, Task 6.3: Convening an Industry-Led Commission, and Task 6.4: Evaluating Effectiveness	\$ 7,000,000	\$ 10,000,000
Task 6.5: Counterfeiting and Piracy Prevention Marketing Campaigns at Customs Entry Points	\$ 500,000	\$ 750,000
Task 6: Total Costs	\$ 7,500,000	\$ 10,750,000

Source: French Embassy, Brune Meseuich-Jacquemin. France spent 5 million euros which is approximately 7 million U.S. dollars on an anticounterfeiting campaign. This effort included a multi-media campaign of 15-second television ads, radio ads, print ads, and posters, a website, a national call center, and a traveling exhibition. The affected French industries contributed to the creation of the television and radio advertising. The expectation is that the affected U.S. companies would do the same thing and sponsor some of the television and radio ads.

Appendix E

Calculations to Support Determination of the Benefits From the CACP Initiative

Appendix Table	Table Description
E.1	Calculation of the Implied Final Demand Multipliers and the Direct Effect Multipliers for the Combined Movie and Recorded Music Industries
E.2	Calculation of the Effects on Output, Earnings, and Employment As A Consequence of the Reduction in U.S. Business Revenue Lost Due to Implementing the CACP Initiative
E.3	Tax Rates to Apply to Calculate the Tax Revenue Effects (Based on 2004 Data)
E.4	U.S. Output, Earnings, Employment, and Tax Revenue Increase Due to Implementing the CACP Initiative (Billions of Dollars Unless Otherwise Noted)

Appendix Table E.1

Calculation of the Implied Final Demand Multipliers and the Direct Effect Multipliers for the Combined Movie and Recorded Music Industries

IP-Intensive Industry	Revenue Lost Due to Counterfeiting and Piracy (Millions \$)	Impact on All Industries			Impact on IP-Intensive Industry		
		Lost Output (Millions \$)	Lost Earnings (Millions \$)	Lost Jobs (Number)	Lost Output (Millions\$)	Lost Earnings (Millions \$)	Lost Jobs (Number)
Movies	\$ 7,327	\$20,484	\$5,542	141,030	\$ 7,327	\$1,903	46,597
Recorded Music	\$ 6,374	\$12,502	\$2,697	71,060	\$ 6,374	\$1,056	26,860
Combined Movie and Recorded Music Industries	\$13,701	\$32,986	\$8,239	212,090	\$13,701	\$2,959	73,457
<i>Addendum:</i>							
Implied Final Demand Multipliers	-----	2.4076	0.6013	15.4799	-----	-----	-----
Implied Direct Effect Multipliers	-----	-----	-----	-----	-----	2.7844	2.8873

- Sources: (1) Stephen E. Siwek, *The True Cost of Motion Picture Piracy to the U.S. Economy*, prepared for the Institute for Policy Innovation (IPI), Policy Report 186, September 2006, Table 3, page 9 and Table 4, page 10.
 (2) Stephen Siwek, *The True Cost of Sound Recording Piracy to the U.S. Economy*, prepared for the Institute for Policy Innovation (IPI), Policy Report 188, August 2007, Table 6, page 11 and Table 7, page 12.
 (3) LECG calculations. See notes.

- Notes: (1) The implied final demand multipliers equal the impacts on all industries for the combined movie and recorded music industries divided by combined revenue losses due to counterfeiting and piracy.
 (2) The implied direct effect multipliers equal the combined impacts on all industries divided by the combined impacts on the IP-intensive industry.
 (3) The term "jobs" should be interpreted as the number of full-time equivalent employees.

Appendix Table E.2**Calculation of the Effects on Output, Earnings, and Employment
As A Consequence of the Reduction in U.S. Business
Revenue Lost Due to Implementing the CACP Initiative**

- I. Changes in Output, Earnings, and Jobs for All Industries
 - A. Output change equals business revenue change times 2.4076
 - B. Earnings change equals business revenue change times 0.6013
 - C. Employment (jobs) change equals business revenue change times 1,000 times 15.4799

- II. Changes in Output, Earnings, and Employment (Jobs) for the Directly Affected Industry
 - A. Output change equals business revenue change.
 - B. Earnings change equals earnings change for all industries divided by 2.7844.
 - C. Employment (jobs) change equals employment (jobs) change for all industries divided by 2.8873.

Sources: (1) Appendix D, Table D.1.
(2) Stephen Siwek, *The True Cost of Sound Recording Piracy to the U.S. Economy*, prepared for the Institute for Policy Innovation (IPI), Policy Report 188, August 2007, pp. 8-13, Table 4 at p. 9, Table 5 at p. 10, Table 6 at p. 11, and Table 7 at p. 12.

Appendix Table E.3**Tax Rates to Apply to Calculate Tax Revenue Effects
(Based on 2004 Data)**

I. Federal Tax Revenues

A. Federal Personal Income Tax Rate

1. 8.21% which equals federal personal income tax collections (\$797.4 billion) divided by U.S. personal income (\$9,713.3 billion)
2. Estimated federal personal income tax receipts equal “earnings” times 0.0821.
3. The term “earnings” equals the change in earnings for all industries resulting from the reduction in U.S. business revenue losses due to the CACP initiative being implemented.

B. Federal Corporate Income Tax Rate

1. 13.73% which equals federal corporate income tax collections (\$250.3 billion) divided by U.S. Other Gross Operating Surplus (\$1,822.9 billion).
2. The U.S. Other Gross Operating Surplus is assumed to equal “earnings” times 0.2726 which equals U.S. Other Gross Operating Surplus in 2004 (\$1,022.9 billion) divided by U.S. compensation of employees in 2004 (\$6,687.6 billion).
3. Estimated federal corporate income tax receipts equal “earnings” times 0.2726 times 0.1373.
4. The term “earnings” equals the change in earnings for all industries resulting from the reduction in U.S. business revenue losses due to the CACP initiative being implemented.

C. Federal Taxes on Production and Imports Less Subsidies Rate

1. 0.75% which equals federal taxes on production and imports less subsidies in 2004 (\$50.4 billion) divided by U.S. employee compensation (\$6,687.6 billion).
2. Estimated federal tax on production and imports less subsidies receipts equal “earnings” times 0.0075.
3. The term “earnings” equals the change in earnings for all industries resulting from the reduction in U.S. business revenue losses due to the CACP initiative being implemented.

Sources:

- (1) Stephen Siwek, *The True Cost of Sound Recording Piracy to the U.S. Economy*, prepared for the Institute for Policy Innovation (IPI), Policy Report 188, August 2007, Table 8A, p. 14, Table 8B, p. 5, Appendix Tables C-1 and C-2, pp. 25-26.

- (2) Federal tax data for 2004: U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts, Table 1.10. Gross Domestic Income by Type of Income (Corporate Profits with Adjustments), Table 2.1. Personal Income and Its Disposition (Personal Income), and Table 3.2. Federal Government Current Receipts and Expenditures (Personal Income Tax, Production and Imports Tax, Corporate Income Tax, and Subsidies)
(<http://www.bea.gov/national/nipaweb/SelectTable.asp?Selected=N>).

II. Total State and Local Revenues

- A. 11.3% of personal income.
- B. Estimated total state and local revenues equal “earnings” times 0.113.
- C. The term “earnings” The term “earnings” equals the change in earnings for all industries resulting from the reduction in U.S. business revenue losses due to the CACP initiative being implemented.

Source: Federation of Tax Administrators, State and Local Tax Burdens, 2005 State & Local Revenues as a Percentage of Personal Income
(http://www.taxadmin.org/fta/rate/05stl_pi.html).

Appendix Table E.4
U.S. Output, Earnings, Employment, and Tax Revenue Increases Due to Implementing the CACP Initiative
(Billions of Dollars Unless Otherwise Noted)

Description	Coefficient	Pessimistic Case				Optimistic Case			
		Year 1	Year 2	Year 3	Total	Year 1	Year 2	Year 3	Total
Reduction in U.S. Business Revenue Losses									
U.S. Business Revenue Losses (Billions of Dollars)	\$225								
Percentage Reduction in Revenue Losses		1.0%	3.0%	5.0%		2.0%	6.0%	10.0%	
Reduction in Revenue Losses (Billions of Dollars)		\$2.25	\$6.75	\$11.25		\$4.50	\$13.50	\$22.50	
Total Present Value		\$2.25	\$6.31	\$9.83	\$18.38	\$4.50	\$12.62	\$19.65	\$36.77
Resulting Increases for All Industries									
Output	2.4076	\$5.42	\$16.25	\$27.09		\$10.83	\$32.50	\$54.17	
Earnings	0.6013	\$1.35	\$4.06	\$6.76		\$2.71	\$8.12	\$13.53	
Employment (Number)	15.4799	34,830	104,489	174,149		69,660	208,979	348,298	
Resulting Increases for Directly Affected Industries									
Direct Output		\$2.25	\$6.75	\$11.25		\$4.50	\$13.50	\$22.50	
Direct Earnings	2.7844	\$0.49	\$1.46	\$2.43		\$0.97	\$2.92	\$4.86	
Direct Employment (Number)	2.8873	12,063	36,189	60,316		24,126	72,379	120,631	
Resulting Federal Tax Revenue Increases									
Personal Income Tax	8.210%	\$0.111	\$0.333	\$0.555		\$0.222	\$0.666	\$1.111	
Corporate Income Tax	3.743%	\$0.051	\$0.152	\$0.253		\$0.101	\$0.304	\$0.506	
Production and Imports Tax	0.750%	\$0.010	\$0.030	\$0.051		\$0.020	\$0.061	\$0.101	
Total Current Value		\$0.172	\$0.516	\$0.859		\$0.344	\$1.031	\$1.719	
Total Present Value		\$0.172	\$0.482	\$0.751	\$1.404	\$0.344	\$0.964	\$1.501	\$2.809
Resulting State and Local Government Tax Revenue Increases									
Total Current Value	11.3%	\$0.153	\$0.459	\$0.764		\$0.306	\$0.917	\$1.529	
Total Present Value		\$0.153	\$0.429	\$0.668	\$1.249	\$0.306	\$0.857	\$1.335	\$2.498
Discount Rate and Factors	7.0%	1.0000	0.9346	0.8734	2.8080	1.0000	0.9346	0.8734	2.8080

Sources:

- (1): Table V-1 in the body of the report;
- (2): Appendix D, Tables D.1, D.2, and D.3;
- (3): Federal tax rates are derived from U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts, Table 1.10. Gross Domestic Income by Type of Income (Corporate Profits with Adjustments), Table 2.1. Personal Income and Its Disposition (Personal Income), and Table 3.2. Federal Government Current Receipts and Expenditures (Personal Income Tax, Production and Imports Tax, Corporate Income Tax, and Subsidies) (<http://www.bea.gov/national/nipaweb/SelectTable.asp?Selected=N>);
- (4): The federal discount rate is defined in Office of Management and Budget, Memorandum for Heads of Executive Departments and Establishments, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs, October 29, 1992 (<http://www.whitehouse.gov/omb/circulars/a094/a094.html>);
- (5): State and local tax rate: Federation of Tax Administrators, State and Local Tax Burdens, 2005 State & Local Revenues as a Percentage of Personal Income (http://www.taxadmin.org/fta/rate/05stl_pi.html).