AN ANALYSIS OF THE ECONOMIC ESPIONAGE ACT OF 1996

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I. Introduction

On October 11, 1996, President William Jefferson Clinton signed the Economic Espionage Act of 1996 [EEA] into law.[1] From the onset of the debate over the EEA, the purpose of the legislation was clear: the EEA was to provide greater protection for the proprietary and economic information of both corporate and governmental entities from foreign as well as domestic theft and subsequent use.[2] The enactment of the EEA into law marked a major step forward in the United States' efforts to protect its citizens and governmental agencies from the infiltration and theft of proprietary and trade secret information.[3]

Although there was a consensus among both governmental and corporate entities regarding the need for legislation to protect the United States against the theft of trade secrets and other forms of propriety information, the exact breadth and formulation of the impending legislation was the focus of some debate.[4] Experts called to testify before Congress were not at all certain that Congress had fully considered all of the ramifications of the proposed EEA.[5]

This note will explore the issues surrounding the enactment and subsequent implementation of the EEA in light of the concerns of both Congress and the public at large. In order to facilitate a procedural understanding of the EEA's congressional path, Part II of this note will discuss the legislative history of the EEA. Part III will discuss the need for the legislation, and the EEA's strengths and weakness in light of

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1 *See* Economic Espionage Act of 1996, Pub. L. No. 104-294, 18 U.S.C. 31 §670 (1996).

2 *See* Senator Arlen Specter, Opening Statement to the Senate Select Committee on Intelligence, Federal Document Clearing House Inc., February 28, 1996.

3 *See* Kent Alexander, *Information Security and Corporate Espionage: Economic Espionage Act of 1996,* at 2 (visited July 19, 1999) http://www.kslaw.com/mem/espionag.htm

4 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 64 (1996) (statement of Peter F. McCloskey, President, Electronic Industries Association). Mr. McCloskey, while supporting Congress' initiative, encouraged Congress to take additional time to consider the legislation so as to present a fair and workable statute.

5 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 88 (1996) (statement of Thomas W. Brunner, Partner, Wiley, Rein & Fielding, on behalf of the United States Chamber of Commerce). While all the panelists encouraged Congress to consider, if not pass immediately into law, comprehensive legislation that protected trade secrets, Mr. Brunner and others made clear that Congress must balance the effects of the legislation so as not to stifle "actually aggressive but fair competition" among industries.

those needs. Next, Parts IV and V will address previous federal and state laws that have been utilized in an effort to prosecute those involved in the theft and dissemination of proprietary information. Based on the above, Parts VI and VII will break down the provisions of the EEA so as to provide the reader with a full understanding of the amendment's coverage and concerns. Part VIII will examine the effectiveness of the EEA through a discussion of the cases prosecuted under the Act. Finally, Part XI will offer the author's thoughts and conclusions on the matters discussed.

II. Legislative History

On June 6, 1996, Representative Bill McCollum (R-FL), a member of the House of Representatives Committee on the Judiciary, sponsored the EEA.[6] Along with Representative McCollum's sponsorship, the Economic Espionage Act enjoyed the co-sponsorship of two additional members of the House of Representatives, Representative Charles E. Schumer, the ranking democrat on the Subcommittee on Crime (D-NY) and Representative William Hamilton (D).[7]

After its sponsorship, the EEA was initially referred to the House of Representatives Committee on the Judiciary on June 26, 1996.[8] Subsequently, on July 10, 1996, the Chairman of the Judiciary Committee, Henry J. Hyde (R-Ill.), referred the EEA to the Judiciary Committee's Subcommittee on Crime for its consideration.[9] On July 10, 1996 the Subcommittee on Crime held its first and only mark-up session.[10] Upon completion of this mark-up session, the EEA in its

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6 *See* 142 CONG. REC. H6914 (daily ed. June 26, 1996).

7 *See* 142 CONG. REC. H7155 (daily ed. July 9, 1996). See Economic Espionage Act of 1996, Report on H.R. 3723, page 1, Representative Charles E. Schumer co-sponsored the EEA on June 26, 1996. *See id.* Subsequently Representative William Hamilton co-sponsored the EEA on July 9, 1996. *See id.* When the EEA was introduced by Representative McCollum, and subsequently approved by the full House of Representatives, the legislation's short title was/is The Economic Espionage Act of 1996. *See id.* As is customary, however, the official title of the legislation was expanded and thus reads: "A bill to amend title 18, United States Code, to protect proprietary economic information, and for other purposes." *Id.*

8 *See* 142 CONG. REC. H6914 (daily ed. June 26, 1996).

9 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. (1996). Representative McCollum chairs the House of Representatives Committee on the Judicary, Subcommittee on Crime.

10 *See* 142 CONG. REC. D179 (daily ed. July 10, 1996).

revised state was forwarded to the full Committee on the Judiciary for consideration.[11]

After passing the House of Representatives, the House sought Senate concurrence of its action. To this end, the House of Representatives presented the Economic Espionage Act to the United States Senate for consideration on September 18, 1996.[12] Upon receiving and taking up the legislation, there were two proposed amendments regarding the EEA.[13] First, Senator Stevens, for Senator Arlen Spector (R-PA) and Senator Kohl, sponsored amendment number 5384 on September 18, 1996.[14] Second, during the same daily legislative schedule, Senator Stevens, for Senator Grassley and Senator Kyle, sponsored amendment 5835.[15] The United States Senate passed both of the above amendments on the day they were introduced.[16]

With the completion of the amendment process, the United States Senate approved the Economic Espionage Act of 1996 on September 18, 1996.[17] The legislation was then sent to the United States House of Representatives. On September 28, 1996, the House agreed to the Senate amendment by voice vote.[18] The United States Senate in turn agreed to the amendment as passed by the House with a voice vote.[19] In

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11 *See id.* The full Committee on the Judiciary met on September 11, 1996, for the purposes of holding a mark-up session in consideration of the EEA. Upon completion of the mark-up session, Chairman Hyde called for a vote in consideration of the amended Economic Espionage Act of 1996 on September 16, 1996. *See id.* The Judiciary committee, having considered and amended the bill, reported it to the House of Representatives on September 16, 1996. *See id.* The EEA was then placed on the Union Calendar on September 16, 1996, for the full consideration of the House of Representatives. *See id.* Having cleared the committee process, the EEA was called up for consideration by the full House of Representatives on September 17, 1996, under suspension of the rules. *See id.* Subsequently, on September 17, 1996, by an overwhelming majority of 399 yeas to 3 nays, the House of Representatives passed the Economic Espionage Act of 1996. *See id.*

12 *See* 142 CONG. REC. S10836 (daily ed. September 18, 1986).

13 *See id.*

14 *See* 142 CONG. REC. S10862 (daily ed. September 18, 1996). The purpose of the amendment was to strike everything after the enacting clause of H.R. 3723.

15 *See* 142 CONG. REC. S10684 (daily ed. September 18, 1996). The purpose of the amendment was to prohibit the use of certain computer programs in relation to encryption and scrambling technology.

16 *See* 142 CONG. REC. S10844-S10845 (daily ed. September 18, 1996). *See* Economic Espionage Act of 1996. Neither of these amendments had a serious effect on the complexion of the EEA as introduced by Representative McCollum; rather, the purpose was to effect amendments to other areas of Title 18.

17 *See also* 142 CONG. REC. S10884-S10885 (daily ed. September 18, 1996).

18 *See* 142 CONG. REC. H12145 (daily ed. September 28, 1996).

19 *See* 142 CONG. REC. S12216 (daily ed. October 2, 1996).

so doing, the Economic Espionage Act was cleared for presentation and approval by the President.[20]

The 104th Congress presented President Clinton with the Economic Espionage Act of 1996 on October 4, 1996.[21] After its presentation, President Clinton signed the bill into law on October 11, 1996.[22] H.R. 3723, the Economic Espionage Act, thus became Public Law No: 104-294 on October 11, 1996.[23]

III. Legislative Need

A. *The Loss of Proprietary Information*

The United States is the leading research and development nation in the world today.[24] Through federally sponsored programs, the U.S. spends over $249 billion annually in basic research endeavors.[25] Unfortunately, due to the ever-increasing value of proprietary information in the emerging world markets, the benefits of these expenditures have too often landed in the hands of foreign and corporate raiders.[26]

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20 *See id.*

21 *See* 142 CONG. REC. H12304 (daily ed. October 21, 1996).

22 142 CONG. REC. D1059 (daily ed. October 21, 1996).

23 Public Law No: 104-294.

24 *See generally* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. (1996).

25 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 5, 70 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation, and Professor James P. Chandler, President, The National Intellectual Property Law Institute). *See also* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 17 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). According to the FBI, the industries most often targeted for theft of trade secrets include biotechnology, aerospace, telecommunications, including the technology to build the National Information Infrastructure, computer software and hardware; advanced transportation and engine technology, advanced materials and coatings, including stealth technologies, energy research, defense and armaments technology, manufacturing processes, semiconductors. In addition, proprietary business information such as bids, contracts, customer and strategy information, government and corporate financial data and trade data as well. *See id.*

26 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 17 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation).

While it is impossible to calculate with certainty the exact loss suffered by the United States due to the theft of proprietary information, the Director of the Federal Bureau of Investigations, The Honorable Louis J. Freeh, estimated that the annual loss of proprietary information to private companies and the U.S. government exceeds $24 billion.[27] However, Director Freeh freely admits that the $24 billion estimate is a "very soft estimate."[28] Since theft of proprietary information is a seriously under-reported crime that is difficult to prosecute, others have estimated the loss to the United States at a much higher figure.[29] For example, for the years 1980 through 1990, one study placed the loss of intellectual property suffered by the United States to the Japanese alone at $1.2 trillion.[30] Additionally, a study performed by *Focus* magazine estimated that the "unauthorized copying and counterfeiting of medicines by Argentina, Brazil, India and Turkey is costing U.S. drug firms more then $1.5 billion annually."[31] Finally, a study performed by the American Society for Industrial Security stated that the amount of intellectual property lost by American industries could be as high as $63 billion.[32] This study suggests that American industries are currently losing intellectual property valued at over $2 billion per month.

Statistical losses for individual companies are equally compelling. For example, Intel, a manufacturer of computer microchips with a research and development budget of $1.6 billion in 1996, suffered a loss of chip technology valued at $300 million.[33] In addition, smaller

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27 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 4 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation).

28 *See id.*

29 *See id.*

30 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 70 (1996) (statement of Professor James P. Chandler, President, The National Intellectual Property Law Institute).

31 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 12 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation).

32 *See* "Cybercrime, Transnational Crime and Intellectual Property": Hearing before the Joint Economic Committee, United States Congress, 106th Cong. 1 (1998) (statement of Neil J. Gallagher, Deputy Assistant Director, Criminal Division, Federal Bureau of Investigation).

33 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 40 (1996) (statement of David M. Shannon, Senior Counsel, Worldwide Sales and Marketing, Intel

companies like Fonar Corporation are equally vulnerable to misappropriation of their technical and proprietary information. Because of this theft, companies such as Fonar have seen their growth potential stifled and their ability to compete in world markets ever more difficult. [34]

B. *State-Sponsored Theft of Proprietary Information*

Based on the estimates discussed above, it is clear that the theft and dissemination of proprietary information has reached a crucial stage. At this point, the more critical determination is identifying the party responsible for the theft. Both corporate raiders and foreign governments steal proprietary information.[35] As of 1996, the Federal Bureau of Investigations had 800 pending investigations involving 23 foreign countries, all of which involved state-sponsored theft of proprietary information.[36]

The techniques used to misappropriate information vary greatly. Some foreign governments have gone as far as planting student interns in U.S. companies, charging them "with the specific task of collecting foreign business and technological information."[37] Additionally, many

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Corporation).

34 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 29-30 (1996) (statement of Raymond Damadian, M.D., President and Chairman, Fonar Corporation). In 1977, Fonar Corporation, a company that currently employs roughly 300 people, developed and constructed the first MRI machine. *See id.* Shortly after the development and creation of the first scanner, however, a complete technical drawing of the scanner was stolen. *See id.* A few years later, magnet technology, which is a crucial component of MRI scanners, was stolen from Fonar as well. *See id.* The combination of the above events has resulted in foreign corporations producing the vast majority of the world's MRI scanners, rather than the United States. *See id.* In fact, while a United States firm developed MRI technology, only two of the companies that currently manufacture MRI scanners are U.S. companies; the other six are foreign-based. *See id.*

35 *See* Senator Arlen Spector, Opening Statement to the Senate Select Committee on Intelligence, Federal Document Clearing House, Inc. February 28, 1996.

36 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 7 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). State-sponsored theft of proprietary information refers to foreign governments that initiate and fund the surveillance and theft of proprietary information from other governments and corporations.

37 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 12 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation).

companies require that a government liaison officer is on site during joint U.S. and foreign research and development projects, to protect U.S. interests.[38]

While countries frequently employ their own countrymen to steal economic and other proprietary information, the FBI has also uncovered theft schemes that involve American officials.[39] For example, foreign countries will often hire an individual who is either well connected, or in some cases a former high-ranking American government official.[40] The individual is then charged with utilizing their contacts and colleagues to obtain sensitive proprietary information from current government officials.[41]

Because of the lack of accurate reporting of misappropriation, it is difficult to estimate the precise impact that this conduct has had on United States companies and government agencies. However, the FBI has concluded that state-sponsored activities have victimized companies such as IBM, Litton, Texas Instruments, Corning Glass, Motorola, Ford,

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Due to pending investigations, the FBI has not released specific examples of students misappropriating information. *Id.* However in 1989 the FBI conducted interviews of persons who had admitted to having been recruited by a foreign intelligence service. Two of the individuals stated that they were recruited by the intelligence service just prior to their departure to study in the United States and they worked at the behest of the intelligence service while in school. Upon completion of their studies, both obtained positions with U.S. firms and continued their espionage activities, then directed at their employer, on behalf of the intelligence service [for 20 years]. *See id.*

38 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 13 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). For example, in 1984 Recon Optical signed a contract with a foreign government to design an airborne surveillance system for the respective government. *See id.* The contract permitted three foreign Air Force Officers to work in Recon's plant outside of Chicago. *See id.* In May of 1986, work was halted and the officers authorized to work in the plant were witnessed removing documents which contained detailed plans on how they had stolen technical drawings of the systems designed by Recon Optical, and passed that information on to their government. *See id.*

39 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 13 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation).

40 *See id.*

41 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 13 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). Due to pending investigations, the FBI is unable to release specific instances of former United States government officials involved in the misappropriation of trade information. *See id.* However, the FBI has determined that former officials have been contacted and hired to write reports on topics they were intimately involved with while in government. *See id.* This information is then passed on to foreign governments. *See id.*

Intel, Hughes Aircraft, Mobil and Kodak.[42] What is even more fascinating is that many of the foreign countries who threaten the United States are those with whom the U.S. has a warm and working relationship.[43]

C. *Competitor Theft of Proprietary Information*

Aside from state-sponsored activities, domestic companies are often the victims of trade secret theft conducted by their own employees. FBI Director Freeh stated in testimony before the Subcommittee on Crime that the best source of stolen information is an insider.[44] In addition to instances of straight-out theft of proprietary information, there are also instances in which high-ranking company executives leave a particular company for a competitor and take with them valuable proprietary information.[45] Dan Whiteman, Corporate

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42 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 7 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). The examples cited by FBI Director Freeh are not the only companies harmed by state sponsored activities, but rather the most visible and damaging.

43 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 7 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). In his testimony before the subcommittee, Director Freeh read the following statement into the record:

> Recently a former head of a foreign intelligence service from a friendly country was interviewed on German television. . . He said talking about his country, the State is not just responsible for lawmaking, it is in business as well. It is true that for decades the State regulated the markets to some extent with its left hand, while its right hand used the secret services to procure information for its own firms.

Id.

While Director Freeh did state that the FBI tracks many countries concerning theft of trade information, he was unable to list the countries for security purposes. *See id.*

44 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 12 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). An example of insider theft of trade secrets occurred when Schering-Plough and Merck Co. invested $750 million in two separate fermentation processes. *See id.* Upon the completion of the research, two inside individuals stole the resultant fermentation processes. *See id.* On this occasion the FBI was able to successfully prevent the information from being sold, thus preventing billions of dollars in lost sales for Schering and Merek. *See id.*

45 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 46 (1996) (statement of Dan Whiteman, Corporate Information Security Officer, General Motors). For

Information Security Officer for General Motors, is of the opinion that "the number one way you lose [a company's proprietary information] is employees going over to another company."[46] Regardless of whether an employee simply steals technical information, or a high-ranking official takes such information to a competitor, the loss of this information is devastating.

IV. Previous Federal Laws

Clearly, in order for the United States to protect its proprietary information, prosecution for trade and proprietary theft must become a primary focus. The FBI has recently increased both its interdiction and attempted prosecution of domestic and international parties who engage in the theft and use of proprietary information.[47] However, the problem is compounded by the lack of explicit and effective federal legislation.[48]

Prior to the enactment of the Economic Espionage Act of 1996, federal legislation that "addressed economic espionage or the protection of proprietary information in a thorough systematic manner" did not exist.[49] The FBI and the Attorney General's Office combated the problem of economic espionage through various criminal statutes and other federal laws that were created in the 1930s.[50] The first problem

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example, General Motors, the world's largest manufacturer of automobiles, was faced with a situation in which the head of their purchasing department, Ignacio Lopez, left General Motors for a competitor. *See id.* Unlike the Schering/Merck case, the FBI was not only unable to prevent proprietary information from ending up in the hands of a competitor, but also encountered difficulties in obtaining an indictment against Mr. Lopez for alleged theft of proprietary information. *See id.*

46 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 46 (1996) (statement of Dan Whiteman, Corporate Information Security Officer, General Motors).

47 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 3 (1996) (opening statement of The Honorable Bill McCollum (R-FL), Chairman, Subcommittee on Crime of the Committee on the Judiciary).

48 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 14 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation).

49 *See id.*

50 *See* 18 U.S.C. §2314, the Interstate Transportation of Stolen Property Act. *See also* 18 U.S.C. §1341, the Mail Fraud Act; 18 U.S.C. §1343, the Fraud by Wire Act. *See generally* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation).

encountered was that these laws were developed for varying purposes.[51] Second, due to the age of the statutes the FBI was forced to use, it was difficult to apply them to highly technological fields and factual scenarios.[52] Thus, the FBI's efforts often led to mixed results.[53]

One statute is the primary focus of the above shortcomings: the Interstate Transportation of Stolen Property Act.[54] The purpose of this act was to prosecute criminals who used automobiles to transport goods across state lines.[55] The functional phrases and words of this act center on "goods, wares or merchandise,"[56] a clear reference to tangible property.[57] Thus, the type of proprietary and intellectual property currently under siege was not considered at the time of the Interstate Transportation of Stolen Property Act's adoption.[58] However, because the language of the Interstate Transportation of Stolen Property Act is outdated, the FBI's attempts to apply the statute to modern cases have met with considerable difficulty.[59] In other words, while the FBI might

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51 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 14 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation).

52 *See id.*

53 *See* 18 U.S.C. §2314, The Interstate Transportation of Stolen Property Act.

54 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 14 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation); *See generally* 18 U.S.C. §2314. The Interstate Transportation of Stolen Property Act was created in the 1930s "to foil the roving criminal whose access to automobiles made movement of stolen property across state lines sufficiently easy that state and local law enforcement officials were often stymied." *Id.*

55 *See id.*

56 *See* 18 U.S.C. §2314, The Interstate Transportation of Stolen Property Act.

57 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 14 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). In reference to the age and use of the Interstate Transportation of Stolen Property Act, Director Freeh stated:

> while the law works well for crimes involving traditional goods, wares, or merchandise, it was drafted at a time when copy machines, computers, and fax machines didn't even exist. It is, consequently, not particular well suited to deal with situations in which information alone is wrongfully duplicated and transmitted electronically across domestic and international borders.

Id.

58 *See id.*

59 *See* United States v. Brown, 925 F.2d 1301 (10th Cir. 1991). In that case, the 10th Circuit concluded that "the element of physical goods, wares or merchandise in 18 U.S.C. §§2314 and 2315 is critical. The limitation which this places on the reach of the Interstate Transportation of Stolen Property Act is imposed by the statute itself, and must be

seek to prosecute under 18 U.S.C §2314, the plain language of the statute is not suited for cases involving intellectual and proprietary information.[60]

The FBI has also prosecuted the theft of proprietary information under the Mail Fraud Act and the Fraud by Wire statutes, 18 U.S.C §§ 1341 and 1343.[61] In order to successfully invoke the Mail Fraud Act, the economic espionage or theft must have occurred through the mail system.[62] Likewise, in order for the Fraud by Wire Statute to be successfully invoked the economic espionage must occur through the use of wire, radio or television.[63]

Consequently, just as the out-dated text of the Interstate Transportation of Stolen Property Act often prevents its successful application in cases of economic espionage, the narrow confines of the Mail Fraud and Wire Fraud Statutes also limit their success in similar cases.[64] Further, while the FBI has encountered serious setbacks in its attempt to prosecute technological thievery, problems occur even when the FBI successfully applies these statutes to more contemporary

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observed." *Id.*

See also Dowling v. United States, 473 U.S. 207. (10th Cir. 1991). In a similar case, the United States Supreme Court went one step further than the 10th circuit. *See id.* In *Dowling,* the Supreme Court concluded that trade secrets do not constitute "goods, wares, merchandise, securities or moneys" as considered by §§2314, 2315 and others. *Id.*

60 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 14 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). Director Freeh noted, "the non-tangible nature of proprietary information has been the cause for a number of prosecutive declinations in cases of economic espionage. In some cases, prosecutors have specifically cited the lack of goods, wares or merchandise as the reason for their declinations."

61 *See id.*

62 *See id.*

63 *See id.* Because of the lack of comprehensive federal legislation concerning the theft of proprietary information, Director Freeh believed it was unclear whether Wire and Mail Fraud statutes covered issues such as:

> if an individual downloads a computer program code without permission of the owner and without stealing the original, [whether] a theft has occurred? Similarly, if a company doing business in the United states licenses a foreign company located abroad to use proprietary economic information and an employee of the second company makes an unauthorized copy of the information and sells it to agents of a third country, has any U.S. crime been committed.

Id.

64 *See generally* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation).

situations.[65] Despite some successful prosecutions for theft of proprietary information, many companies, after suffering a loss of sensitive information, are unwilling to institute legal proceedings because of the potential for additional damage.[66]

V. Previous State Laws and the Uniform Trade Secrets Act

Intellectual property is protected under both federal and state statutes. The framers of the Constitution originally considered protection of intellectual property and other non-tangible proprietary

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65 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 15 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation).

First, there are instances in which one is charged and convicted of conspiracy and fraud charges, but due to the lack of serious legislation in this area, the guilty escape penalty. *See id.* For example, in 1993 the FBI prosecuted and convicted two individuals under 18 U.S.C. §371, Conspiracy to Deprive the U.S. of Its Right to Honest and Competitive Bidding on Contract, and under 18 U.S.C. §2 for Wire Fraud. *See id.* The two individuals were convicted on both charges after they sold proprietary information that belonged to Hughes Aircraft Company. *See id.* However, even after being convicted of these serious offenses, which could have potentially cost Hughes Aircraft millions of dollars, "one defendant was sentenced to probation for one year and ordered to participate in a home detention program for 60 days, [while] the other was sentenced to four months in prison, with credit for time served, and four months of home detention." *Id.*

Another example in which the FBI was able to charge and successfully prosecute persons involved in economic espionage and theft of proprietary information, was the Schering/Merck case discussed above. *See id.* In that situation, two individuals had stolen two distinct fermentation processes that were the result of $750 million of research. *See id.* The individuals were offering the fermentation process for sale at a minimum of $1.5 million a piece. *See id.* The FBI, in this case, was able to successfully prevent the sale of either process. *See id.* However, the question remains how to prosecute these individuals. *See id.* Because of the lack of any federal legislation in this area, the case was treated as a fraud matter. *See id.* Both individuals were charged with 13 counts of conspiracy, fraud by wire, interstate transportation of stolen property and mail fraud. *See id.* The seriousness of these charges is evident considering the amount of money involved. *See id.* However, despite each individual's conviction on twelve (12) of the above counts, one participant received nine (9) years in prison and the other received only five (5) years in prison. *See id.*

66 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 15 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). The value of proprietary information is inborn in its "confidentiality and exclusivity." *Id.* If the information is revealed, the value of the information is decreased considerably. *See id.* However, during the litigation process, the damage suffered is often compounded because not only is sensitive information revealed, but additional material as well. *See id.* Consequently, due to the lack of legislation protecting companies against the potential loss of additional sensitive materials during litigation, companies have often forgone prosecution. *See id.*

information to be of such importance that they incorporated protections into the United States Constitution.[67] In order to protect proprietary information, they created Article I, Section 8, Clause 8 of the Constitution, which has become known as the Patent Act of 1790.[68] Unfortunately, the Patent Act of 1790 and other legislation intended to protect proprietary information does not provide adequate protection in the current market of high technology proprietary information.[69]

Many states have some form of statutory protection of proprietary and trade information. While some have devised their own statutory law, the majority of states have adopted the "Uniform Trade Secrets Act."[70] The Uniform Trade Secrets Act provides that one can recover in tort for the improper misappropriation of a trade secret.[71] According to the UTSA, the term "improper" includes "theft, bribery, misrepresentation, breach or inducement of a breach of a duty to maintain secrecy or espionage through electronic or other means."[72]

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67 *See generally* United States Constitution Article I, Section 8, Clause 8.

68 *See id.*

69 *See* 18 U.S.C. §2314, the Interstate Transportation of Stolen Property Act. *See also* 18 U.S.C. §1341, the Mail Fraud Act; 18 U.S.C. §1343, the Fraud by Wire Act.

70 *See* http://www.lexis.com/research/retrieve – ("Uniform Trade Secrets Act) – 7/29/99. Those states which have adopted the Uniform Trade Secrets Act, or portions thereof, include; Alabama, Alaska, Arizona, Arkansas, Colorado, Connecticut, Florida, Kansas, Kentucky, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Hampshire, Ohio, Oklahoma, Rhode Island, South Dakota, Utah, Virginia, Washington, West Virginia and Wisconsin. *See id.*

71 *See id.*

72 *See* C.R.S. 7-74-102 (1998). *See also* Unif. Trade Secrets Act 1(4) (West Supp. 1997). Likewise, the term "misappropriation" means:

> an acquisition of a trade secret of another person who knows or has reason to know that the trade secret was acquired by improper means; or disclosure or use of a trade secret of another without express or implied consent by a person who: (I) used improper means to acquire knowledge of the trade secret; or (II) at the time of disclosure or use, knew or had reason to know that his knowledge of the trade secret was (A) derived from or through a person who had utilized improper means to acquire it; (B) acquired under circumstances giving rise to a duty to the person seeking relief to maintain its secrecy or limit its use; or (III) before a material change of his position, knew or had reason to know that it was a trade secret and that knowledge of it had been acquired by accident or mistake.

Id. The term "trade secret" is defined as:

> information, including a formula, pattern, compilation, program, device, method, technique or process that (1) derives independent economic value, actual or potential, from not being generally known to and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use and, (2) is the subject of efforts that are reasonable under the circumstances to

While a majority of states have adopted the UTSA, like the federal legislation discussed there are serious shortcomings to the UTSA as well.[73] Although the enactment provides some protection against the theft of sensitive trade secrets, the UTSA is not a criminal statute.[74] Thus, even if one is found to have violated the UTSA, and has stolen or misappropriated a trade secret, the courts are not authorized to impose any criminal sanctions such as prison time or fines.[75] Rather, the purpose of the Act, and the sole deterrent effect, is to provide a cause of action in tort for the recovery of damages and other equitable relief for victims of proprietary theft.[76] However, as Director Freeh testified, in order for the FBI to prevent and punish those who have stolen sensitive information, a comprehensive federal statute that explicitly provides for criminal prosecution is needed.[77]

In order for any form of relief to be granted, one must file a complaint and subsequently prove their case. However, this poses a dilemma for some victims of trade theft. If a suit is initiated in an attempt to recover damages, there exists the potential additional loss of sensitive materials. Although the UTSA does attempt to protect

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maintain its secrecy.

Id.

73 *See* Unif. Trade Secrets Act 1(4) (West Supp. 1997).

74 *See* Fla. Stat. §688.003 (1998).

75 *See id. See also* Unif. Trade Secrets Act 1(4) (West Supp. 1997).

76 *See* Fla. Stat. §688.003 (1998). The court will award monetary damages for the improper misappropriation of a trade secret, so long as the damages can be properly calculated, and so long as the rendering of a monetary award would not be inequitable. *See id.* In addition, the court can also award equitable relief in the form of a temporary and/or final injunction to "prevent or retrain actual or threatened misappropriation of a trade secret." *Id.*

77 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 8 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). Director Freeh testified that:

> First of all, one systematic legislative scheme to prepare and support criminal enforcement in this area is absolutely necessary. It would outlaw economic espionage by or on behalf of foreign government or entities. It would outlaw the stealing or illegal possessing of proprietary economic information on the domestic side. It would give extraterritoriality where in many cases that would be a necessary element for investigation and prosecution. It would provide confidential judicial processes, whereby we could prosecute such a case, but also at the same time protect in the courtroom the proprietary information.

Id.

sensitive materials from being exposed,[78] such protections provide no assurance that further loss of sensitive materials will not occur.[79]

Further, the original purpose of the Uniform Trade Secrets Act was to combine the existing state common law on trade secret theft in order to create one working legislative enactment.[80] The drafters sought to create legislation that states could adopt which would provide a uniform method of prosecution, as well as criminal and civil penalties.[81] The goal of the drafters of the UTCA, however, has not been achieved. First, the Uniform Trade Secrets Act does not provide for any criminal penalties.[82] As drafted, the UTCA provides only for legal and/or equitable damages for those who are injured through the theft of proprietary information.[83] Second, commentators have reached the

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[78] *See* Fla. Stat. §688.003 (1998). Courts are authorized to issue protective orders in regard to discovery, hold hearings before the judge, seal court documents, and place a gag order on all participants in a particular case in order to prevent against a further loss of sensitive information that is either the focus of, or tangential to, the trial. *See id.*

[79] *See id.*

[80] *See* Spencer Simon, Article I. Intellectual Property: Trade Secret: a) Federal Legislation: The Economic Espionage Act of 1996, 13 Berkeley Tech. L.J. 305. *See also* Gerald J. Mossinghoff, The Economic Espionage Act: A New Federal Regime of Trade Secret Protection, 79 J. Pat. & Trademark Off. Soc'y 191, 194 (1997).

[81] *See* Spencer Simon, Article I. Intellectual Property: D. Trade Secret: a) Federal Legislation: The Economic Espionage Act of 1996, 13 Berkeley Tech. L.J. 305. While state courts took an active role in the area of trade secret theft, there was a lack of symmetry in the decision-making of the various courts. *See id.* Viewing the lack of symmetry and uniformity in the area of trade secrets to be a serious shortcoming, the drafters of the UTCA felt this problem was one that could be fixed through the creation of one legislative enactment. *See id. See also* Gerald J. Mossinghoff, The Economic Espionage Act: A New Federal Regime of Trade Secret Protection, 79 J. Pat. & Trademark Off. Soc'y 191, 196 (1997); James H. A. Pooley, Mark A. Lemley, and Peter J. Toren, "Understanding the Economic Espionage Act of 1996," 5 Tex. Intell. Prop. L.J. 177. As of 1997, only 24 states had a criminal statute that was designed to prevent and prosecute trade secret theft. *See id.* However, "the applicability of these state criminal laws is limited by jurisdiction and lack of state resources, particularly in cases with international ramifications." *Id.* Those states which have some form of criminal statute are: Alabama, Arkansas, California, Colorado, Florida, Georgia, Illinois, Indiana, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas and Wisconsin. *See id.*

[82] *See* Fla. Stat. §688.003. *See also* C.R.S. 7-74-104; Spencer Simon, Article I. Intellectual Property: D. Trade Secret: a) Federal Legislation: The Economic Espionage Act of 1996, 13 Berkeley Tech. L.J. 305: "Only a few states have any form of criminal law dealing with the theft of [sensitive proprietary] information. Most such laws are only misdemeanors, and they are rarely used by state prosecutors."

[83] *See* Spencer Simon, Article I. Intellectual Property: D. Trade Secret: a) Federal Legislation: The Economic Espionage Act of 1996, 13 Berkeley Tech. L.J. 305. Mr. Spencer states,

> what state law there is [on protection of proprietary information] protects

conclusion that the Uniform Trade Secrets Act has not created the "uniformity" among state laws that the drafters of the UTCA desired.[84] According to one commentator, "the trade secret protection granted in each state is far from uniform relative to the other states.[85] The result is that the ability to recover for theft of a trade secret becomes a choice of law or a contract interpretation question."[86]

Consequently, while the drafters of the UTCA sought to create a comprehensive piece of legislation that would provide guidance to the majority of states on this matter, the end result has been quite the contrary. The need for comprehensive federal legislation is clearly evidenced by the failure of previous federal laws and the Uniform Trade Secrets Act in light of the overall rise in theft of sensitive proprietary information and intellectual property.

VI. The Economic Espionage Act of 1996

A. *Purpose of the EEA*

The Economic Espionage Act of 1996 amends Chapter 31 of Title 18 of the United States Code by adding after chapter 90: "Protection of Trade Secrets."[87] The purpose of the Act is to create a comprehensive

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> proprietary economic information only haphazardly. The majority of States have some form of civil remedy for the theft of such information – either adopting some version of the Uniform Trade Secrets Act, acknowledging a tort for the misappropriation of the information, or enforcing various contractual arrangements dealing with trade secrets. These civil remedies, however, often are insufficient.

Id.

84 *See id.*

85 *See* Gerald J. Mossinghoff, The Economic Espionage Act: A New Federal Regime of Trade Secret Protection, 79 J. PAT. & TRADEMARK OFF. SOC'Y 191, 194 (1997). *See also* Spencer Simon, Article I. Intellectual Property: D. Trade Secret: a) Federal Legislation: The Economic Espionage Act of 1996, 13 Berkeley Tech. L.J. 305.

86 *Id.*

87 *See* Economic Espionage Act of 1996, 18 U.S.C §1831. *See also* H.R. Rep. NO. 104-788, (1996), at 3. The Economic Espionage Act of 1996, creates a new crime of:

> Wrongfully copying or otherwise controlling trade secrets, if done with the intent to benefit any foreign government, instrumentality, or agent, or (2) disadvantage the rightful owner of the trade secret and for the purpose of benefiting another person. The term trade secret is defined in the bill to include all types of financial, business, scientific, technical, economic, or engineering information, whether tangible or intangible, and regardless of the means by which information is stored or compiled, or memorialized.

federal enactment that provides for both criminal and civil penalties for the theft of a trade secret that benefits either a foreign government or private entity.[88]

The initial goal of the EEA is to define what "economic espionage" covers within the meaning and purpose of the enactment, and how one can be convicted of economic espionage.[89] The end result is that economic espionage consists of any action of theft of proprietary information by any individual or group, intended to or known to benefit a foreign government, foreign instrumentality, or foreign agent.[90]

There are two key phrases in section 1831(a).[91] The first is that the action of espionage must be an "intended" or "knowing" theft of proprietary information.[92] Significantly, the EEA does not protect against negligent or reckless transfer of sensitive proprietary infor-

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Id.

88 *See* H.R. Rep. NO. 104-788, (1996), at 3.

89 *See* 18 U.S.C §1831(a). In general:

> Whoever, intending or knowing that the offense will benefit a foreign government, foreign instrumentality, or foreign agent, knowingly – (1) steals or without authorization takes, carries away, or conceals by fraud, artifice, or deception obtains a trade secret; (2) without authorization copies, duplicates sketches, draws, photographs, downloads, uploads. Alters destroys, photocopies, replicates, transmits delivers, sends mails, communicates or conveys a trade secret; (3) receives, buys, or possesses a trade secret, knowing the same to have been stolen or appropriated obtained or converted without authorization; (4) attempts to commit any offense described in any paragraphs (1) through (3); or (5) conspires with one or more other persons to commit any offense described in any of paragraphs (1) through (3) and one or more of such persons do any act to effect the object of the conspiracy, shall except as provided in subsection (b) be fined not more than $500,000 or imprisoned not more than 15 years, or both.

Id.

See 18 U.S.C. §1831(b) Organizations. (Any organization that commits any offense described in subsection (a) shall be fined not more than $10,000,000).

90 *See* 18 U.S.C. §1839(1) - Foreign Instrumentality:

> The term 'foreign instrumentality' means any agency bureau, ministry, component, institution, association, or any legal, commercial, or business organization, firm or entity that is substantially owned, controlled, sponsored; commanded, managed, or dominated by a foreign government; *See also* 18 U.S.C. §1839(2). Foreign Agent: ("the term 'foreign agent' means any officer, employee, proxy, servant, delegate, or representative of a foreign government.")

Id.

91 *See* 18 U.S.C. §1831(a)

92 *See* 18 U.S.C §1831(a) ("In general whoever, intending or knowing that the offense will benefit any foreign government, foreign instrumentality, or foreign agent. . ."). *See id.*

mation from one corporate entity to another, or from one corporate or government agency to a foreign government.[93] The reason for this limitation is that the EEA does not remove all responsibility for the protection of sensitive materials from corporate entities.[94] Rather, the purpose of the EEA is to protect corporations and government agencies from well-funded larceny by insiders who intend to transfer sensitive data to competitors.[95] Thus, the EEA was designed by Congress to deal with the massive loss of intellectual property suffered by the United States and the resultant economic repercussions created by those losses. By contrast, the EEA was not designed to penalize or prevent transfers of proprietary information which are the result of the negligence of corporations or government who did not intend to transfer information illegally.[96]

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93 *See id.*

94 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 45 (1996) (statement of Dan Whiteman, Corporate Information Security Officer, General Motors Corp.) *See also id.* at 37 (statement of John P. Melton, Vice President, Business Operations, SDL, Inc.). Most companies, both large and small, do have some form of security protection in place to guard against both the negligent and reckless transfer of sensitive materials and to protect against the theft of such materials. *See id.*

95 *See* 18 U.S.C. §1831(a). *See also* H.R. Rep. NO. 104-788, (1996) at 11. This section punishes:

> the theft, unauthorized appropriation or conversion, duplication, alteration, or destruction of a trade secret. This section is intended to cover both traditional instances of theft where the object of the crime is removed from the rightful owner's control, as well as non-traditional methods of misappropriation or destruction that involve duplication or alteration. When these non-traditional methods are used the original property never leaves the control of the rightful owner, but the unauthorized duplication or misappropriation effectively destroys the value of what is left with the rightful owner. Given increased use of electronic information systems, information can now be stolen without appropriation and the original usually remains intact. The intent of this statute, therefore, is to ensure that the theft of intangible information is prohibited in the same way that the theft of physical items is punished.

Id.

96 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 43 (1996) (statement of David M. Shannon, Senior Counsel Worldwide Sales and Marketing, Intel Corp.). For an example of corporate carelessness - In 1994, Security personnel for Intel Corporation were contacted by "dumpster divers," or "those who search through corporate trash for valuable property," who had been sifting and searching through corporate trash at an Intel site in Arizona and had located valuable materials. *Id.* Intel paid to retrieve the materials, however, the corporation was made aware that the documents originated on the desk of its employee, Bill Gaede. *See id.* Mr. Gaede was fired after this disclosure. *See id.*

The second key phrase of section 1831(a) is that it applies only to foreign governments, agents or instrumentalities.[97] While the EEA protects corporate and governmental bodies from the theft of proprietary information, section 1831(a) applies to transfers of information that occur with government support.[98] Thus, in a case where a private corporation steals sensitive proprietary information from a competitor, section 1831 is not implicated.[99] Therefore, in order for section 1831 to apply, there must exist an intention to provide economic or other proprietary information to a foreign government for its beneficial use.[100]

Section 1832 of the EEA discusses the theft of trade secrets.[101] As in section 1831, section 1832 states that the theft of trade secrets occurs when one intends to remove a trade secret from its rightful owner for the benefit of another who does not have legal title or authorization for the use of the trade secret.[102] The statute provides for criminal and civil penalties for those who steal sensitive information and subsequently provide that information to a competitor in the private sector.[103]

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97 *See* 18 U.S.C. §1831(a).

98 *See id.*

99 *See id.*

100 *See* 18 U.S.C. §1831(a) ("Whoever, intending or knowing that the offense will benefit any foreign government, foreign instrumentality, or foreign agent. . ."). *See also* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 13 (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation). *See also* the Recon Optical prosecution described *supra*, note 38.

101 *See* 18 U.S.C. §1832(a). This section reads:

> Whoever, with intent to convert a trade secret, that is related to or included in a product that is produced for or placed in interstate commerce, to the economic benefit of anyone other than the owner thereof, and intended or knowing that the offense will injure any owner of that trade secret, knowingly (1) steals or without authorization appropriates, takes, carries away or conceals, or by fraud, artifice, or deception obtains such information; (2) without authorization copies, duplicates, sketches draws, photocopies, replicates, transmits, delivers, sends, mails, communicates, or conveys such information; (3) attempts to commit any offense described in paragraphs through (3); or (4) conspires with one or more other person to commit any offense described in paragraphs (1) through (3) and one or more of such persons do any act to effect the object of the conspiracy, shall except as provided in subsection (b), be fined under this title or imprisoned not more than 10 years, or both (b) any organization that commits any offense described in subsection (a) shall be fined not more than $5,000,000.

Id.

102 *See generally* 18 U.S.C §1832.

103 *See* H.R. Rep. No. 104-788 (1996), at 11.

Like section 1831, section 1832 requires intent to steal sensitive proprietary information.[104] The difference, however, is that in addition to stealing the proprietary information, there must be an actual transfer of that information to one who does not have a legal right to the data in the private sector.[105] While the purpose of section 1831 was to define what economic espionage consists of, and to create perimeters of coverage for the Economic Espionage Act in relation to foreign intervention, section 1832 is charged with applying section 1831's parameters to the illegal transfer of trade secrets in the private sector.[106]

Prosecution under section 1832 requires the existence of a "trade secret" within the meaning of the Act.[107] According to section 1839, a trade secret is virtually any tangible or intangible information which has been protected or held to be confidential by the owner, and which acquires value from the secrecy or confidentiality which the owner has created for its protection.[108] Consequently, successful conviction under section 1831 or 1832 of the EEA requires proof beyond a reasonable doubt that a trade secret was misappropriated with the intent or knowledge that the information would be provided to a foreign or domestic corporate entity or foreign governmental entity that does not have a legal right to utilize the information.[109]

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104 *See* 18 U.S.C §1832(a).

105 *See id.*

106 *See* 18 U.S.C. §1839(3) - Trade Secrets. This section reads:

> The term 'trade secret' means all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, programs devices formulas, designs prototypes, methods, techniques, processes, procedures, programs, or codes, whether tangible or intangible and whether or how stored, complied, or memorialized physically, electronically, graphically, photographically, or in writing if (A) the owner thereof has taken reasonable measures to keep such information secret; and (B) the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by the public.

Id. See also 18 U.S.C. §1839(4). ("the term 'owner' with respect to a trade secret means the person or entity in whom or in which rightful legal or equitable title to, or license in, the trade secret is reposed).

107 *See generally* 18 U.S.C. §1831.

108 *See generally* 18 U.S.C. §1839. A trade secret is often an intangible piece of information that does not contain any external or innate value, but one that has created value due to the technology or process it represents, and the secrecy with which it has been kept. *See id.* Further, a trade secret's created value is enhanced through its owner's legal right to dispense the information as he/she/they see fit, and in such a manner that maximizes the economic and productive value of the information. *See id.*

109 *See* Kent Alexander, Former U.S. Attorney, N.D.Ga. "Information Security and

As in all cases of "reasonable doubt" the government's burden is difficult to sustain. However, as stated previously, the purpose of the Economic Espionage Act of 1996 is to protect against situations in which there is a clear intent to defraud the United States government and/or corporations of the United States.[110] Thus, in order to maintain the integrity and purpose of the legislation, the government is forced to prove this intent element beyond a reasonable doubt.[111]

B. *Criminal Penalties Authorized by the EEA*

In addition to civil penalties, the EEA criminally prosecutes individuals convicted under the statute, and thus succeeds where the Uniform Trade Secrets Act fails.[112] Among the punishments available under the EEA is the possibility of jail time for those convicted under

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Corporate Espionage: Economic Espionage Act of 1996" (1997). The EEA "enumerates specific types of information such as patters, blueprints or formulas that may protected. Thus almost any type or form of information may qualify as a trade secret under the EEA." *Id.*

See also 18 U.S.C. §§1831, 1832; H.R. Rep. No. 104-788 (1996), at 11; Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 75 (1996) (statement of Prof. James P Chandler, President, The Intellectual Property Law Institute). (*Trade Secret.* Typically defined as "any valuable information not generally known, which affords your business an advantage").

110 *See* 18 U.S.C. §1831.

111 *See generally* 18 U.S.C. §1831. *See also* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 91 (1996) (statement of Thomas W. Brunner, Partner, Wiley, Rein & Fielding, on Behalf of the U.S. Chamber of Commerce). There has been some concern over the high burden of proof that must be established in order to sustain a prosecution. *See id.* For example:

> In. . . proving economic espionage to the exacting beyond a reasonable doubt standard applicable to criminal prosecutions is likely to be difficult in many cases. For those actually caught stealing, using or trafficking in stolen U.S. industrial property may not always have the requisite criminal intent, or such intent may not be readily provable. Foreign economic espionage cases will be inherently complex and difficult to assemble, usually requiring investigations on an international scale. With U.S. law enforcement agencies and prosecutors already facing numerous conflicting demands on their limited resources, economic espionage cases will not always be able to claim top priority. Prosecutors will sometimes not have available the extensive manpower and other capacity required to develop and try a complex economic espionage case.

Id.

112 *See generally* Uniform Trade Secrets Act.

the statute.[113] Furthermore, in addition to being sentenced to serve prison time, the EEA also authorizes courts to order those convicted under Section 1831 of the EEA to pay monetary fines.[114]

Moreover, section 1834 requires that any person convicted under the EEA forfeit all property or proceeds obtained through either a violation of 1831 (economic espionage) or 1832 (theft of a trade secret) to the custody of the United States.[115] Further, one must also forfeit to the United States government all personal property utilized or attempted to be utilized in the theft of a trade secret or the committing of economic espionage.[116] Unlike sections 1831 and 1832, section 1834 gives the court very little discretion in regard to sentencing.[117] Any piece of property, whether it be tangible or intangible, must be forfeited to the United States if obtained through illegal conduct, regardless of the court's reaction to the situation.[118] While section 1834(a) employs the phrase "shall impose," the EEA does provide courts with greater

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113 *See* 18 U.S.C. §1832(a)(5). *See also* 18 U.S.C. §1831(a)(5). Under sections 1831 and 1832, if an individual is convicted of economic espionage in regard to a foreign government, they can be sentenced to not more than fifteen (15) years in prison. *See id.* Likewise, if one is convicted of theft of a trade secret in regard to a private corporate body, they can be sentenced to not more than ten (10) years in prison. *See id.*

114 *See* 18 U.S.C. §1831(a)(5). If an individual is convicted under the EEA, the court can order one to pay fines of up to $500,000. *See id.* Further, if an organization is convicted of economic espionage, they can be ordered to pay fines of up to $10 million. *See id.* Likewise, if one is convicted of theft of a trade secret under section 1832, they can be ordered to pay fines as well, but there is no limitation for an individual. *See id.* However, if an organization is convicted, they can be ordered to pay fines of up to $10 million. *See id.*

115 *See* 18 U.S.C. §1384(a), which reads:

> The court, in imposing sentence on a person for a violation of this chapter, shall order, in addition to any other sentence imposed, that the person forfeit to the United States – any property constituting or derived from, any proceeds the person obtained, directly or indirectly, as the result of such violation; and (2) any of the person's property used or intended to be used in any manner or part, to commit or facilitate the commission of such violation, if the court in its discretion so determines, taking into consideration the nature, scope and proportionality of the use of the property in the offense.

Id.

116 *See id.*

117 *See* 18 U.S.C. §§§1831, 1832 and 1834. *See also* H.R. Rep. NO. 104-788 (1996), at 13.

118 *See* 18 U.S.C. §§§1831, 1832 and 1834. Sections 1831 and 1832 provide the court with a degree of discretion over the length of a prison term or the amount of fines if they are imposed. *See id.* In enacting section 1834, however, the drafters of the EEA used the phrase "shall impose" to describe the action the court must take in regard to the forfeiture of property. *See id.* According to section 1834(a)(1), the court is not provided with any degree of discretion regarding property obtained through theft of trade secret or economic espionage. *See id.*

discretion as to whether a violator should be required to forfeit personal property utilized in the action of economic espionage or theft of a trade secret.[119]

C. *Civil Remedies Authorized by the EEA*

The Economic Espionage Act is primarily a criminal statute.[120] It was enacted in response to the lack of criminal penalties in the area of trade secret theft and international economic espionage.[121] However, the EEA does provide for certain civil remedies.[122] Under section 1836, the Attorney General of the United States is authorized to obtain injunctive relief in a civil action.[123] In addition to being able to obtain injunctive relief, the EEA makes clear that it in no way seeks to supercede or preempt various civil remedies which may be imposed under other federal or state causes of action.[124] While the EEA does not provide for equitable relief (other than injunctive relief) or legal damages, the act allows civil action under other enactments, such as the Uniform Trade Secrets Act, in order to obtain monetary and other court provided awards.[125]

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119 *See* 18 U.S.C. §1834(a)(2). Section 1834(a)(2) provides the court with the ability to look at the nature and severity of the crime when determining whether to require a violator of sections 1831 or 1832 to forfeit personal property. *See id.* Therefore, if the court is of the opinion that the imposition of one or more of the penalties authorized by the EEA is sufficient punishment, the court is not required to order forfeiture. *See id.*

120 *See generally* 18 U.S.C. §§1831, 1832.

121 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 82 (1996) (statement of Prof. James P Chandler, President, The Intellectual Property Law Institute). Prof. Chandler states that because only thirty (30) states have some form of criminal sanction for the theft of trade secrets, there is a lack of coverage in the area, which creates "a tremendous need for the development of a national trade secret law." *Id.*

122 *See* 18 U.S.C. §1836(a). ("The Attorney General may, in a civil action, obtain appropriate injunctive relief against any violation of this section").

123 *See* 18 U.S.C. §1836.

124 *See* 18 U.S.C. §1838:

> This chapter shall not be construed to preempt or displace any other remedies, whether civil or criminal, provided by United States Federal, State, commonwealth, possession, or territory law for the misappropriation of a trade secret, or to affect the otherwise lawful disclosure of information by any Government employee under section 552 of Title 5.

Id.

125 *See* 18 U.S.C. §1838. *See also* H.R. Rep. No. 104-788 (1996) at 14.

D. *Confidentiality*

A victim of either economic espionage or theft of a trade secret is faced with the determination as to whether the filing of criminal or civil proceedings will cause further loss of sensitive materials.[126] While other enactments, such as the Uniform Trade Secrets Act, authorize the protection of trade secrets through court order, the Economic Espionage Act provides two-fold protection.[127] First, the EEA requires the court to take all necessary action to protect a trade secret from the public sphere or from further exposure.[128] Second, if a party is not satisfied with the protections afforded by the court, the EEA specifically authorizes an interlocutory appeal.[129]

Clearly, the protections afford by the EEA are not certain to prevent further exposure of sensitive information.[130] However, the Economic Espionage Act does provide greater protections than other laws in this area.[131]

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126 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 94 (1996) (statement of Thomas W. Brunner, Partner, Wiley, Rein & Fielding, On Behalf of the U.S. Chamber of Commerce). In regard to disclosures brought on by litigation, Mr. Brunner states:

> It may well be the ironic consequence of our legal rules that in order to obtain justice the victim of economic espionage will have to make public the very information whose theft it is complaining about. Indeed, it is at least theoretically possible that where the U.S. Attorney is determined to pursue a prosecution, the victim could be forced to make such disclosures even when it did not actively request the enforcement action. In civil litigation, protective orders to address such problems are typically available; in criminal cases, however, absent statutory relief, public disclosure may be unavoidable.

Id.

127 *See* C.R.S. 7-74-106 (1998).

128 *See* 18 U.S.C. §1835, which states:

> In any prosecution or other proceeding under this chapter the court shall enter orders and take such other action as may be necessary and appropriate to preserve the confidentiality of trade secrets, consistent with the requirements of the Federal Rules of Criminal and Civil Procedure, the Federal Rules of Evidence and all other applicable laws.

Id.

129 *See* 18 U.S.C. §1835 (". . .An interlocutory appeal by the United States shall lie from a decision or order of a district court authorizing or directing the disclosure of any trade secret").

130 *See generally* Economic Espionage Act of 1996.

131 *See generally id. See also* Uniform Trade Secrets Act 1(4) (West Supp. 1997).

E. *EEA Applicability Outside the United States*

As previously discussed, a major portion of the intellectual property which has been stolen from citizens, corporations and the government of the United States has been lost due to foreign intervention.[132] In an effort to try and limit this illegal activity from abroad, the EEA is applicable under limited circumstances to conduct that occurs outside the United States.[133]

Section 1837 of the EEA allows the United States to prosecute violations of the act committed by natural-born citizens of the U.S., and organizations formed under the laws of the United States.[134] In addition, if the government can prove that a component part of the illegal conduct occurred on U.S. soil, then an action for violation of the Economic Espionage Act can also be brought against an individual or group.[135] Although the EEA's applicability outside the U.S. is limited, the drafters of the EEA felt it important to take this additional step.[136]

VII. Concerns surrounding the EEA

While the Economic Espionage Act has been embraced by many in high technology industries, some corporations are discouraged with the

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132 *See generally* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. (1996) (statement of The Honorable Louis J. Freeh, Director, Federal Bureau of Investigation).

133 *See* 18 U.S.C. 1837, which states:

> This chapter also applies to conduct occurring outside the United States if – (1) the offender is a natural person who is a citizen or permanent resident of the United States, or an organization organized under the laws of the United States or a State or political subdivision thereof; or (2) an act in furtherance of the offense was committed in the United States.

Id.

134 *See* H.R. Rep. NO. 104-788 (1996), at 14.

135 *See id. See also* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 90 (1996) (statement of Thomas W. Brunner, Partner Wiley, Rein & Fielding, On Behalf of the U.S. Chamber of Commerce). Mr. Brunner argues that in regard to international law, the most basic question the Congress and the EEA face is to what extent the legislation will extend in "extraterritorial" application. *See id.* He further argues that while Congress is free to enact legislation "governing conduct elsewhere [which have] an effect on U.S. commerce". *Id.* While Mr. Brunner feels this extension is necessary, he does warn that expansive extraterritorial legislation will likely "irritate" many countries, including those who are not involved in the theft of sensitive materials. *See id.*

136 *See* H.R. Rep. No. 104-788 (1996), at 14.

enactment.[137] One concern is the protection of sensitive information once trial ensues.[138] Under the Economic Espionage Act, the government can petition the court for a protective order to prevent further leaks of sensitive materials.[139] However, there is no such right for a private company or individual to petition the court for similar relief.[140] According to the American Society for Industrial Security (ASIS), the failure to provide for such relief acts as a disincentive for the reporting and prosecuting of economic espionage and theft of trades secrets.[141]

Additionally, the EEA provides that proceeds derived from the sale of trade secrets or derived from the result of economic espionage are to be forfeited to the United States upon conviction.[142] The ASIS again sees the current claim of forfeiture as a disincentive to report and prosecute cases of economic espionage and theft of trade secrets.[143] According to the ASIS, the property that is forfeited should be forfeited to the entity from which it was stolen, to prevent further injury.[144]

Aside from disincentives to report and prosecute, there is a fear that the EEA goes too far in certain respects.[145] Specifically, some

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137 *See generally* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 88, 90 (1996) (statement of Thomas W. Brunner, Partner Wiley, Rein & Fielding, On Behalf of the U.S. Chamber of Commerce).

138 *See generally id.*

139 *See* 18 U.S.C. §1835.

140 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 60 (1996) (statement of Richard J. Heffernan, President, R.J. Heffernan & Associates, inc., on behalf of The American Society for Industrial Security). Mr. Heffernan argues that in order for the EEA to operate effectively there must not be anything in the law that discourages the reporting of incidents. *See id.* According to him, the lack of a private owner's right to petition for issuance of a protective order acts as just such a disincentive. *See id.*

141 *See id.*

142 *See* 18 U.S.C. §§1831, 1832.

143 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 60 (1996) (statement of Richard J. Heffernan, President, R.J. Heffernan & Associates, inc., on behalf of The American Society for Industrial Security).

144 *See id. See also* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 63 (1996) (statement of Richard J. Heffernan, President, R.J. Heffernan & Associates, inc., on behalf of The American Society for Industrial Security).

145 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 89 (1996) (statement of Thomas W. Brunner, Partner, Wiley, Rein & Fielding, on Behalf of the U.S. Chamber of Commerce). Mr. Brunner warned about over extension of the EEA when he stated, "I think we need to guard against the potential overcriminalization in this area. It is

commentators believe that prior to enacting any legislation, Congress must be sure to protect individuals who possess "general expertise and job knowledge so that simply changing jobs from one competitor to another does not risk committing a Federal crime."[146] While the EEA clearly needs to prohibit employees from taking sensitive designs/secrets and specifications from one company to another, it must not criminalize possession of make one liable for simply possessing a particularly applicable expertise.[147]

Moreover, commentators have also called for protection of those who alert authorities to possible economic espionage or theft of trade secrets.[148] In its current form, the EEA does not mention or consider any protections for "whistleblowers."[149] However, commentators have noted that if the FBI and other enforcement agency are going to rely on whistleblowers, the EEA must provide certain protections for those who are willing to cooperate.[150]

VII. Cases Prosecuted Under the EEA

To date, the Economic Espionage Act has not spawned a large body of case law.[151] However, since it was signed into law in 1996,

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tempting to say that everything involved, every tort, every questionable act, should become a Federal crime punishable by up to twenty five (25) years in jail, but we need to sort that out carefully." *Id.*

146 *Id.*

147 *See id.*

148 *See* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 89 (1996) (statement of Thomas W. Brunner, Partner, Wiley, Rein & Fielding, on Behalf of the U.S. Chamber of Commerce). Mr. Brunner articulated:

> We also think that we need to protect the sources and methods of the intelligence community and, a subject that is not addressed in any of the legislation, we need to make sure that the complaining witness, the whistleblower, is protected in his or her publicly interested activities in this area.

Id.

149 *See generally* 18 U.S.C. §1831.

150 *See generally* Economic Espionage Act of 1996: Hearing on H.R. 3723 before the Subcommittee on Crime of the Committee on the Judiciary, 104th Cong. 89 (1996) (statement of Thomas W. Brunner, Partner, Wiley, Rein & Fielding, on Behalf of the U.S. Chamber of Commerce).

151 *See* Kent Alexander, Former U.S. Attorney, N.D.Ga. "Information Security and Corporate Espionage: Economic Espionage Act of 1996" (1997). "There is no indication at this time that there will be an avalanche of [EEA] prosecutions crashing down on federal courthouses in the immediate future. In fact prosecutors have so far brought very few cases

several cases have been brought before the district and circuit courts of the United States. According to certain commentators, these recent cases do not represent the truly difficult issues facing implementation of the EEA.[152] However, cases that have been brought to trial do provide enforcement agencies with insight into future prosecutions under the act.[153]

A. *United States v. Pin Yen Yang*

Pin Yen Yang, the named defendant, owned and operated the Four Pillar Enterprise Company of Taiwan.[154] For several years, Pin Yen Yang attempted to obtain valuable trade information from a competitor, Avery Denison Corporation.[155] In 1997, Yang, along with his daughter Hwei Chen Yang and Four Pillars Enterprises, were indicted on charges of mail and wire fraud, conspiracy to steal trade secrets, money laundering and receipt of stolen goods from the Avery Denison Corporation.[156] The defendants were also charged with violating section 1832(a)(5) of the Economic Espionage Act, conspiracy to misappropriate trade secrets.[157]

In March of 1999, defendants filed several motions in the United States District for the Northern District of Ohio in an attempt to get the case dismissed.[158] Each of the motions brought by the defendants was

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under the EEA." *Id.*

152 *See* Kent Alexander, Former U.S. Attorney, N.D.Ga. "Information Security and Corporate Espionage: Economic Espionage Act of 1996" (1997) at 8.

153 *See id.*

154 *See* Dean Stureman, Wall Street Journal, "Secrets & Lies: The Dual Career of a Corporate Spy"; Dept. of Justice Criminal News Release, 1997 WL 607291 (D.O.J.) 10/1/97. The Corporation involved in this case, Four Pillars Enterprises, manufactured "pressure sensitive products" for sale in Eastern Asia. *See id.*

155 *See id.* Avery Denison, an Ohio corporation, is one of the world's leading producers and manufacturers of "adhesive products." In an effort to obtain the desired information, Pin Yen Yang and his company entered talks with a high-level Avery Denison research engineer for the unauthorized purchase of trade secret information. *See id.* Prior to disclosure, the FBI was able to uncover the plot to sell the information. *See id.* After confessing to the plot, the employee of Avery Denison agreed to allow the FBI to monitor the transfer of the information in a sting operation. *See id.*

156 *See id.*

157 *See id.*

158 *See* Dean Stureman, Wall Street Journal "Secrets & Lies: The Dual Career of a Corporate Spy," Dept. of Justice Criminal News Release, 1997 WL 607291 (D.O.J.) 10/1/97. Defendants filed a motion to dismiss several counts related to the evidence obtained through the sting operation described above. *See id.* In the alternative, the

denied respectively, and the case remains before the courts.[159]

B. *United States v. Steven Louis Davis*

Steven Louis Davis was employed by Wright Industries of Nashville as a "process control engineer."[160] In an effort to improve their next generation razors, the Gillette Corporation hired Wright Industries to aid them in development.[161] Apparently unhappy with the defendant's work, the Gillette Corporation requested that Wright Industries terminate Mr. Davis' involvement with the project.[162]

After his termination, Mr. Davis sent highly confidential materials, including design drawings, to Gillette's competitors.[163] Based on the foregoing as well as his soliciting of future contact through fax and e-mail medium, a grand jury indicted the defendant on wire fraud.[164] In addition, Davis was charged with violating section 1832(a)(2) of the Economic Espionage Act for theft of a trade secret.[165]

C. *United States v. Kai-Lo Hsu*

Yuen Foong Paper Company employed the defendant, Kai-Lo Hsu, as a technical director.[166] In recent years, Yuen Foong Paper had

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defendants also motioned the court to suppress the evidence obtained during the sting operation. *See id.* The district court ruled that there was no basis for either a dismissal of the indictments or a suppression of the evidence obtained during the sting operation. *See id.*

159 *See id.*

160 *See* Michael Davis, "Engineer Faces Fraud, Theft Charges," THE TENNESSEEAN, 9/27/97. *See also United States v. Steven Louis Davis,* (M.D. Tenn. 1997), 1997 WL 14649304.

161 *See* Michael Davis, "Engineer Faces Fraud, Theft Charges," THE TENNESSEEAN, 9/27/97. *See also United States v. Steven Louis Davis,* (M.D. Tenn. 1997), 1997 WL 14649304. After being hired by Gillette, Wright Industries took the next step of assigning the project to the defendant, Steven Louis Davis. *See id.*

162 *See id.*

163 *See* Michael Davis, "Engineer Faces Fraud, Theft Charges," THE TENNESSEEAN, 9/27/97. *See also United States v. Steven Davis Louis,* (M.D. Tenn. 1997), 1997 WL 14649304. Those who received the confidential materials included Bic Corporation and Warner Lambert Corporation. *See id.*

164 *See* Michael Davis, "Engineer Faces Fraud, Theft Charges," THE TENNESSEEAN, 9/27/97. *See also United States v. Steven Davis Louis,* (M.D. Tenn. 1997), 1997 WL 14649304.

165 *See id.*

166 *See* Stan Crook and Jonathan Moore, "Corporate Spies Feel a Sting," BUSINESS WEEK, (7/14/97). *See also* United States v. Kai-Lo Hsu, 185 F.R.D. 192, 196 (E.Dist. Penn

ventured to enter the emerging biotechnology field.[167] In order to facilitate this endeavor, the defendant allegedly tried to obtain trade secret information from competitor Bristol Meyers Corporation.[168]

Prior to the exchange of any sensitive materials, however, the FBI conducted a successful sting operation that exposed the scheme devised by the defendant and his colleague, Chester Ho.[169] Based on the sting operation, the defendant was charged with violating sections 1832(a)(4) (attempting to steal a trade secret) and 1832(a)(5) (conspiring to steal trade secrets) of the Economic Espionage Act.[170] Nevertheless, after almost two years in litigation, the case remains before the courts.[171]

D. *United States v. Patrick and Daniel Worthing*

Patrick Worthing was employed by PPG Industries of Pittsburgh, Pennsylvania in the company's fiberglass research center.[172] In his research position, the defendant was able to obtain a variety of confidential information on computer diskettes and blueprints.[173] With this information in hand, Worthing attempted to sell the trade secrets he

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1999).

167 *See id.*

168 *See* Stan Crook and Jonathan Moore, "Corporate Spies Feel a Sting," BUSINESS WEEK, (7/14/97). Bristol Meyers Corporation created an anti-cancer drug called Taxol. *See id.* According to the indictment, the defendant had agreed to pay $400,000 for information relating to Taxol. *See id.*

169 *See id.*

170 *See Id.*

171 *See* Stan Crook and Jonathan Moore, "Corporate Spies Feel a Sting," BUSINESS WEEK, (7/14/97). The first action in the case was filed by the government in United States District Court for the Eastern District of Pennsylvania seeking a protective order relating to the "trade secrets" allegedly sought by the defendant. *See id.* The court ruled that the information in question was not a "trade secret" and thus denied the motion. *See id.* In 1998, the government appealed the denial of a protective order to the United States Court of Appeals for the Third Circuit. *See id.* Upon hearing the case, the Third Circuit reversed and remanded the denial of a protective order, holding that the district court erred in finding the information in question not to be a trade secret within the meaning of the EEA. *See id.* Subsequently in March of 1999, the defendant motioned the District Court for dismissal of two counts of the indictment. *See id.* The motion argued that the language, "related to or included in a product that is produced for or placed in interstate commerce" of the Economic Espionage Act of 1996 was unconstitutional vague. *Id.* After a hearing on the matter, the court denied the defendant's motion on March 11, 1999. *See* Stan Crook and Jonathan Moore, "Corporate Spies Feel a Sting," BUSINESS WEEK, (7/14/97).

172 *See* "15 Months for Selling Secrets," PITTSBURGH POST GAZETTE, (6/6/97). *See also* United States v. Patrick and Daniel Worthing, 1997 WL 4531006.

173 *See id.*

had obtained to Owens Corning, a chief competitor of PPG Industries.[174]

After being alerted to the defendant's activities, PPG informed the FBI. Subsequently, the Worthings were arrested and a grand jury indicted them under sections 1832(a)(1), (3) and (5) of the Economic Espionage Act.[175] The defendants pled guilty to the charges levied against them, and are currently serving their sentences.[176]

IX. Conclusion

The Economic Espionage Act of 1996 filled a void that existed in regard to the protection of proprietary and intellectual property. Prior to its enactment, federal authorities were placed in the position of trying to adapt older and outdated statutes too modern needs. Based on the examples discussed, it is clear that this approach was highly unsuccessful and provided sufficient cause for the enactment of a new comprehensive piece of legislation.

The Economic Espionage Act of 1996, while still in its infancy, appears to have filled the void left by preexisting statutes and enactments in regard to the protection of proprietary information. The United States now has a comprehensive statute that provides causes of action for economic espionage (sensitive information given to other nations) and theft of trade secrets (sensitive information given to another individual). With this enactment, the United States now joins other nations such as France, Japan, Germany, the People's Republic of China, Russia and Taiwan in the promulgation of a modern statute aimed at protecting proprietary information.

While the EEA was clearly a needed reform in the area of proprietary information, there are still many questions yet to be answered. The first issue is whether the EEA will prove truly effective against economic espionage. As previously discussed, all the cases

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174 *See* "15 Months for Selling Secrets," PITTSBURGH POST GAZETTE, (6/6/97). *See also* United States v. Patrick and Daniel Worthing, 1997 WL 4531006. Upon being petitioned by the defendant, an Owens executive alerted PPG Industries to the defendant's theft and attempted sale of sensitive materials. *See id.* The FBI was able to intercede prior to the exposure of any sensitive materials. *See id.*

175 *See id.*

176 *See* "15 Months for Selling Secrets," PITTSBURGH POST GAZETTE, (6/6/97). *See also* United States v. Patrick and Daniel Worthing, 1997 WL 4531006. After pleading guilty, Patrick Worthing was sentenced to serve 15 months in federal prison, while Daniel Worthing was sentenced to 5 years probation and 6 months of home detention. *See id.*

which have been prosecuted under the Economic Espionage Act of 1996 have implicated section 1832, the theft of a trade secret. Interestingly, in the brief history of this enactment, although the FBI is aware of some 23 countries that actively seek and obtain sensitive proprietary information from the United States, not one case of economic espionage has been brought to trial. The United States must be willing to protect its companies against the actions of other nations, as well as private citizens if the Act is to have its fullest effect.

In the event that such a case of economic espionage is brought, one might ask whether prosecution would be possible. Modern technology makes it conceivable for someone of foreign origin to remain in his or her homeland and obtain sensitive materials through various communication media. Although the Wire Fraud Act and other fraud acts do seek to prevent and prosecute persons for such theft, it is questionable whether the EEA will offer any additional support in this effort. As previously noted, the EEA reaches foreign nationals and persons of other foreign nations under limited circumstances. But outside these narrow confines, the EEA might very well have a difficult time sustaining economic espionage prosecutions under section 1831.

Aside from the lack of section 1831 prosecutions, questions continue to abound concerning the further protection of sensitive information once a trial has begun. While the EEA does provide the court with the ability to institute a protective order as to proprietary information, in *United States v. Kai-Lo Hsu*, one of the first cases to utilize the EEA, the district court initially rejected the government's request for a protective order. It was only after a lengthy appellate process that the government was able to obtain the needed protective order. The repercussions of this event have yet to be fully analyzed, but it is possible that other companies and organizations will be deterred by the *Kai-Lo Hsu* case and simply opt to forgo civil litigation in an effort to prevent further loss of sensitive materials.

Finally, one might ask about the deterrent effect of the civil remedies available under the EEA. Under the EEA, claimants can seek injunctive relief and subsequently seek other monetary damages under other state and federal statutes. But as some commentators have suggested, is that enough? It would be more productive for the EEA to incorporate into its civil penalties a direct right to receive other monetary and legal remedies. Although criminal penalties might provide a deterrent effect, they do not always provide an incentive to report illegal activity. The reason for this is that companies are not in

the business of putting people in jail, but rather seeking or generating a return on their investment. Therefore, while the theft of a trade secret will clearly have a detrimental effect on this return, the possibility of a monetary award provides both an incentive to report the activity as a well as the possibility for some return on investment.

Thus the Economic Espionage Act of 1996 provides the United States with a tool to deter and prosecute those who seek to obtain proprietary information through illegal means, but there are serious questions which only future prosecutions can address. Further application and clarification of the Act will determine whether the EEA is truly a monumental achievement in the protection of proprietary information, or simply another piece of legislation which appears useful but in practice fails to address the needs for which it was created.