COMMUNICATIONS SATELLITES AND U.S. EXPORT CONTROLS: CORRECTING THE BALANCE

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"Unless export controls are more narrowly defined and carefully targeted, they will increasingly do more harm than good."

I. INTRODUCTION

In 1998, the United States Congress tied the hands of the domestic commercial communications satellite industry by shifting all commercial satellites from the business-friendlier export controls of the Department of Commerce to the Department of State's more stringent control. To an extent, Congress knew that the decision could have a large impact on the industry.

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4 See Transfer of Satellite Technology to China: Hearing Before the S. Comm. on
Since Congress’ decision, a wave of increased defense spending has overburdened the Department of State’s already scarce resources to approve satellite hardware and technology exports. During the same period, increased privatization and globalization trends have created intense competition in the global communications satellite market. The more heavy-handed regulations administered by the Department of State (“DOS” or “State Department”) have put great strains on the American communications satellite industry’s progress in research, development, sales, and international collaboration. As the United States loses ground as the world’s primary economic superpower, other countries and foreign companies are able to avoid the U.S. regulations by simply excluding American satellite companies. This effect ultimately harms both American commercial interests and national security.

Prior to Congress shifting control to the State Department, the president, under authority granted by Congress, decided which agency was responsible for controlling the exports of a particular piece of hardware or technical data. Under this authority, in 1996, President William J. Clinton designated the Department of Commerce (“DOC” or “Commerce Department”) to regulate non-military satellites.


9 Wallerstein, supra note 1, at 13–14.

10 Arms Export Control Act of 1976, 22 U.S.C. § 2778 (2006) (“AECA”). Decisions were made under the president’s delegated authority under the AECA, and this authority was then delegated to the Secretary of State. Exec. Order No. 11,958, 3 C.F.R. 79 (1977). See 22 C.F.R. § 120.6 (2009) (defining defense article); 22 C.F.R. § 120.10 (defining technical data); 22 C.F.R. § 120.9 (defining defense service).

However, in 1998 Congress launched an investigation into two United States based satellite companies’ transfer of sensitive data to China.\textsuperscript{12} The committee investigating the transfer of sensitive data blamed the incident on the inadequacies of the DOC export controls.\textsuperscript{13} Yet, the data transfer would have been illegal under Department of State regulations as well.\textsuperscript{14} Critics of the Clinton administration also used the incident to highlight what was perceived as the president’s favoritism for the satellite industry’s commercial interests.\textsuperscript{15} With concern mounting over how China’s military capabilities could be enhanced from this data transfer,\textsuperscript{16} Congress quickly passed legislation removing the president’s authority to decide which system of export controls were the best fit for all satellites.\textsuperscript{17} While the jurisdictional decision for all other items remained under the executive branch, satellites became the exception.\textsuperscript{18}

Congress should return to the president the power to determine which agency should control export of commercial communications satellites. Congress has entrusted the president with deciding the proper controls for all other exports including those of nuclear weapons, missiles, and warships.\textsuperscript{19} Failed attempts to revise the Arms Export Controls Act in past years\textsuperscript{20} have also shown that Congress cannot react quickly enough to this problem even when the American communications satellite industry is unnecessarily losing global market share that will not be easily recovered.\textsuperscript{21} There is a strong case for the Department of Commerce to regain control, and it is in both the commercial and national security interests of the United States to allow the president to


\textsuperscript{12} See Gerth, \textit{supra} note 11.


\textsuperscript{14} See infra Part II.C and accompanying notes 48–86 (discussing how export controls are put in place).


\textsuperscript{16} See Richard D. Fisher, Jr., \textit{Commercial Space Cooperation Should Not Harm National Security}, Backgrounder (Heritage Found., Wash., D.C.), June 26, 1998, at 1, 4, 5, 7, available at http://www.heritage.org/research/nationalsecurity/upload/23722_1.pdf (discussing various forms of technology that China was believed to have obtained or could obtain in the future from the data transfer).


\textsuperscript{18} Id.

\textsuperscript{19} 22 U.S.C. § 2778 (allowing the president to control items on the United States Munitions List); 22 C.F.R. § 121.1.


\textsuperscript{21} See DEF. INDUS. BASE ASSESSMENT, \textit{supra} note 7, at 46.
make this decision.

Part II of this Comment provides a background on communications satellites, export controls, and their interrelation throughout modern history. Part III presents the reasons why Congress' decision to move commercial communications satellites under State Department control has proven to be a mistake, as the trends of globalization and privatization have increased competition in the international market. Part IV analyzes why Congress originally made the decision to transfer control to the Department of State and remove presidential authority over the export designation of satellite communications, and argues that Congress seized the opportunity to remove power from the executive branch. Part V argues that on this particular issue, the president is best suited to decide which agency should control satellite exports, and that the Department of Commerce should be that agency. Part VI concludes that Congress should make this change immediately.

II. COMMUNICATIONS SATELLITES AND EXPORT CONTROLS

Since its inception, the American communications satellite industry has made significant technological advancements with considerable competition from around the world.22 At the same time, U.S. export controls have evolved along two separate paths: one strictly involving military equipment and technologies and the other for items that have both military and civilian applications.23 As an increasing number of communications satellites have been used for commercial purposes, the federal government has struggled to conclude which set of export controls best protects both national security and business interests.24

A. Introduction to Communications Satellites

In 1957, the U.S.S.R. launched Sputnik I, “the world's first artificial satellite.”25 As the Cold War continued, the Sputnik I launch initiated a period of fierce competition between the Soviets and Americans called the “Space Race,” leading to rapid advances in space technologies.26 However, some

22 See NASA, Sputnik and the Dawn of the Space Age, http://history.nasa.gov/sputnik/ (last visited March 10, 2010) [hereinafter Sputnik and the Dawn of the Space Age] (outlining the competition between the U.S. and Soviet Union to be the first country to reach space).
23 See infra discussion accompanying notes 51–86 (describing at length the export controls of the State Department and the Commerce Department).
24 See infra discussion accompanying notes 87–92.
25 Sputnik and the Dawn of the Space Age, supra note 22.
Americans feared that the Soviet Union had developed the capability to launch nuclear missiles from Europe at the United States, and the U.S. Department of Defense quickly provided additional funding for projects to expedite America's entry into space. In 1958, Congress passed the National Aeronautics and Space Act, which provided funding for U.S. space development and created the National Aeronautics and Space Administration ("NASA").

In January 1958, the United States launched its first satellite, Explorer L29. In 1960, AT&T shocked the U.S. government by seeking permission from the Federal Communications Commission ("FCC") to launch its own experimental communications satellite. Congress responded by passing the Communications Satellite Act of 1962 to address the commercialization of communications satellites and created the Communications Satellite Corporation ("COMSAT") to facilitate industry cooperation. In 1965, COMSAT launched its first satellite, beginning the era of truly global communications satellites.

Today, more than fifty years after Sputnik I's launch, there are hundreds of satellites in space. Of the orbiting satellites still in working operation, approximately two-thirds are used for communications. Modern society has become dependent upon the capabilities provided by communications satellites:

Communications satellites serve as relay stations, receiving radio signals from one location and transmitting them to another. A communications satellite can relay several television programs or many thousands of telephone calls at once. Countries and commercial organizations, such as television broadcasters and telephone companies,
use these satellites continuously.  

Satellite communications also facilitate communications in developed nations in the event of a natural disaster or terrorist attack. These satellites facilitate communications involving sensitive matters of national defense and security. For example, communications satellites allow soldiers to know where their allies are and even where their enemies are hiding. Although the space industry's initial rapid growth was fueled by national security concerns and Department of Defense funding, “[s]atellite communications is . . . the only truly commercial space technology . . .”

B. Communications Satellite Industry

The space industry consists of manufacturers and service providers of spacecraft, propulsion systems, ground systems, and specialty materials, and the industry includes companies with varying degrees of concentration on military items. “Industry,” as used in this Comment, is the commercial communications satellite industry that includes manufacturing, launching, and other services relating to communications spacecraft such as antenna, microwave, and digital technology; switching equipment, transponders, laser technology, and software involved with communications spacecraft. There are four major U.S. manufacturers—Boeing, Lockheed Martin, Orbital, and Space Systems/Loral. The analysis below will focus on the commercial portion of the industry, conceding for these purposes that the best place for military communications satellites is under military type controls.

The space industry is a significant sector of the U.S. economy, and spends an average of $2.2 billion annually on research and development. The satellite industry directly employs approximately 250,000 people in the United States,

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40 Id.
41 See Whalen, supra note 30.
42 Cf. DEF. INDUS. BASE ASSESSMENT, supra note 7, at Appendix 10–13.
43 Cf. id.
44 Export Controls on Satellite Technology: Hearing Before the Subcomm. on Terrorism, Nonproliferation and Trade, 111th Cong. 43 (2009) [hereinafter Export Controls Hearing] (statement of Patricia Cooper, President, Satellite Indust. Assoc.).
45 DEF. INDUS. BASE ASSESSMENT, supra note 7, at 27.
including a large number of highly-skilled and highly-trained workers.\textsuperscript{46} Although only a part of the global space industry, the number of commercial communications satellites launched "represent[s] a key measure of competitiveness and an indicator for future manufacturing capabilities."\textsuperscript{47}

C. Introduction to Export Controls

In general, U.S. export controls function by designating certain types of hardware and technical data as warranting special procedures to leave the country.\textsuperscript{48} Transfers of the designated items require prior authorization in the form of a license or other approval.\textsuperscript{49} The Department of State and the Department of Commerce have historically controlled the exports of commercial communications satellites.\textsuperscript{50}

\textit{1. Department of State}

The Department of State controls the transfers of hardware and defense services with a predominant military application.\textsuperscript{51} The State Department's authority comes from the Arms Export Control Act ("AECA"), which was enacted during the Cold War in 1976.\textsuperscript{52} The AECA placed stringent requirements on the president to administer an export control regime in order to protect U.S. defense technologies\textsuperscript{53} and retain a competitive advantage.\textsuperscript{54} Under AECA authority, the State Department regulates arms exports and temporary imports through the International Traffic in Arms Regulations ("ITAR").\textsuperscript{55}

Within the ITAR is the United States Munitions List, which contains twenty-one categories designating the hardware and technical data requiring the

\textsuperscript{46} Export Controls Hearing, supra note 44, at 38 (statement of Patricia Cooper, President, Satellite Indust. Assoc.).
\textsuperscript{47} DEF. INDUS. BASE ASSESSMENT, supra note 7, at 16.
\textsuperscript{48} See WILLIAM A. ROOT ET AL., UNITED STATES EXPORT CONTROLS xxii (5th ed. 2007).
\textsuperscript{49} See 15 C.F.R. § 736.2(b)(1); 22 C.F.R. § 123.1.
\textsuperscript{50} See Zelnio, supra note 2.
\textsuperscript{51} See 22 C.F.R. §§ 120.1–120.3 (2009). A predominant military application is either based on whether an article or service is "specifically designed, developed, configured, adapted, or modified for a military application, and does not have predominant civil applications" as well as lacking a civil performance equivalent, or if it has significant military or intelligence applicability as to warrant this level of control. 22 C.F.R. § 120.3.
\textsuperscript{53} Arms Export Control Act of 1976, 22 U.S.C. § 2778(a) (2006). "Technologies" is used here in the broad sense to indicate both defense articles and services.
\textsuperscript{54} See 22 U.S.C. § 2778.
\textsuperscript{55} Id.; 22 C.F.R. § 120.1 (2009).
most rigid export controls. The ITAR definition of an export includes not only the physical sending of a defense article out of the United States, but also oral and visual disclosures of technical information to non-U.S. persons in the U.S. or abroad, transfers to embassies in the U.S., transfers of aircraft, vessel, or satellite registration, control or ownership, and the performance of defense services anywhere for the benefit of a foreign person. As a result and for example, an office conversation, e-mail, or telephone call with a Canadian colleague without proper government approval can create an export violation. Similarly, the simple act of handing out fliers to potential customers at a trade show could require prior government approval. As each violation of these export laws presents the possibility of a one-million dollar fine, export privileges suspension, and ten years imprisonment, the industry has quickly learned that ITAR compliance is not to be taken lightly.

U.S. manufacturers, exporters, and brokers of items listed on the USML are subject to strict registration, licensing, and recordkeeping requirements. Foreign companies may also be subject to portions of these regulations if they are using parts and components from a U.S. company, have an office located in the U.S., or employ U.S. citizens or nationals. Foreign companies are also subject to these regulations if they are involved in a defense project or program in which U.S. nationals are involved, are sending or receiving technical drawings that originated in or passed through the U.S., or are manufacturing hard-
ware based on U.S. specifications.\textsuperscript{73} Legislation controlling defense articles often takes a very broad scope.\textsuperscript{74} For example, “if a satellite is on a munitions list, every component down to a simple screw becomes a munition.”\textsuperscript{73}

2. \textit{Department of Commerce}

The Department of Commerce controls exports of hardware and technology which may have both civilian and military applications, otherwise known as “dual use.”\textsuperscript{76} Under the Export Administration Act (“EAA”) of 1979,\textsuperscript{77} the president is delegated the authority to administer controls over exports of dual use hardware and technical data.\textsuperscript{78} The Commerce Department administers these exports through the Export Administration Regulations (“EAR”).\textsuperscript{79} The president’s authority also extends to designating which items the DOC will control on the Commerce Control List (“CCL”).\textsuperscript{80} The term dual use generally “serves to distinguish EAR-controlled items that can be used both in military and other strategic uses and in civil applications . . . .” However, some of the items on the CCL may also be strictly commercial in nature.\textsuperscript{81}

The EAR and the ITAR define export similarly, and the definition includes actual shipments and releases of technology to foreign nationals.\textsuperscript{82} The EAR also requires prior approval of designated transfers\textsuperscript{83} and meticulous record-keeping.\textsuperscript{84} However, unlike under the ITAR, the countries involved are taken

\begin{itemize}
  \item \textsuperscript{73} Cf. §§ 120.9, 120.10 (defining defense service and technical data to include transfers of specifications to foreign nationals in the United States or sending such data abroad).
  \item \textsuperscript{74} See Wallerstein, supra note 1, at 11. See, e.g., 22 C.F.R. § 120.17 (2009) (export definition); 22 C.F.R. § 120.10 (2009) (technical data definition); 22 C.F.R. § 120.4 (2009) (policy on designating and determining defense articles and services); 22 C.F.R. § 129 (2009) (definitions of brokering); 22 C.F.R. § 121.1 (2009) (entries broadly defined on the USML). In November 2009, a new definition of “brokering” was proposed which acknowledged the previous definition’s overly broad scope. At the time of writing, this proposed regulation is still in notice and comment period. See FR Public Notice RIN 1400-AC37.
  \item \textsuperscript{76} 15 C.F.R. §§ 730.1, 730.3, 772.1 (2009).
  \item \textsuperscript{77} Export Administration Act of 1979, Pub. L. No. 96-72, 93 Stat. 503.
  \item \textsuperscript{78} 50 U.S.C. app. §§ 2403–2404 (2006).
  \item \textsuperscript{79} See 15 C.F.R. § 730 (2009); see generally §§ 730–744.
  \item \textsuperscript{80} 15 C.F.R. § 774 (2009). The DOC’s CCL is similar to the DOS’s USML. In the event that jurisdiction between the two agencies is unclear, DOS’s jurisdiction has priority. See William A. Root, John R. Liebman, & Roszel C. Thomsen II, \textit{UNITED STATES EXPORT CONTROLS} § 1.2 (5th ed. supp. 2008).
  \item \textsuperscript{81} 15 C.F.R. § 730.3 (2009). For example, Export Control Classification Number (“ECCN”) 0A980 controls horses by sea and ECCN 1C988 controls western red cedar. 15 C.F.R. § 774 (2009).
  \item \textsuperscript{82} Compare 15 C.F.R. §§ 772.1, 734.2(b) (2009), with 22 C.F.R. § 120.17 (2009).
  \item \textsuperscript{83} 15 C.F.R. § 736.2(b)(1) (2009).
  \item \textsuperscript{84} 15 C.F.R. § 762 (2009). For example, records may be kept in an electronic format
into consideration when determining if a transfer under the EAR requires a license.\textsuperscript{85} Commerce Department regulations do not require prior approval for brokering transactions, registration fees, or the application for approval of certain transfers through a specialized form of agreement.\textsuperscript{86}

\begin{table}[h]
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\begin{tabular}{|l|l|l|}
\hline
\textbf{Enabling Act} & \textbf{Department of State} & \textbf{Department of Commerce} \\
\hline
\textbf{Regulations} & ITAR & EAR \\
\textbf{Control List} & USML & CCL \\
\hline
\end{tabular}
\caption{Summary of Relevant Export Control Acronyms by Agency}
\end{table}

D. Brief History of Export Controls for U.S. Communications Satellites

Like many other newly developed technologies with potential military applications, communications satellites started under State Department jurisdiction.\textsuperscript{87} As commercial communications satellites progressed along the product life cycle\textsuperscript{88} and became more commonplace, President Clinton removed them from the USML in 1996.\textsuperscript{89} Commercial communications satellite regulation only if meeting a number of conditions including preservation of both sides of each paper record, even if blank. § 762.5(b).

\textsuperscript{85} Compare 22 C.F.R. § 123.1 (requiring an export license for all USML items under the ITAR), with 15 C.F.R. § 732 (process for determining whether a license is required under the EAR for items listed on the CCL). Under the ITAR, the general process for determining a license requirement is: (1) to see if any parties in the transaction have been sanctioned, (2) determine that the item is on the USML, (3) check to see if any license exemptions apply. Under the EAR, steps one and two are similar (with a determination on the CCL instead of the USML) but before step three there is an additional step of cross-referencing the reason for control of the particular entry on the CCL with the Commerce Country Chart to see if a license is required. Only if a license is required will step three be required. See also Root, Liebman, & Thomsen II, supra note 80, at 2-15-18, 4-16.

\textsuperscript{86} However, a number of exchanges under State Department control require the drafting, prior approval, then signing of either a Technical Assistance Agreement, a Warehousing and Distribution Agreement, or a Manufacturing License Agreement. See 22 C.F.R. § 124.1 (2009).

\textsuperscript{87} 22 C.F.R. § 121.1 (Category XV) (2009). See Zelnio, supra note 2.

\textsuperscript{88} The product life cycle is a management tool used to describe the four main stages that a new product goes through once introduced into the market. The stages are production, growth, maturity, and decline. During the third stage, the maturity stage, "[p]rofits stabilize or decline because of increased competition." See Philip Kotler & Kevin Lane, Marketing Management, 278–90 (2009); see also Michael E. Porter, Competitive Strategy, 157–62 (1980).

\textsuperscript{89} Removal of Commercial Communications Satellites and Hot Section Technology From State’s USML for Transfer to Commerce’s CCL, 61 Fed. Reg. 56,894–56,896 (Nov.
Communications Satellite and U.S. Export Controls

switched from State Department regulation to Commerce Department regulation before switching back again to the State Department in 1999. This reversal was not due to a new generation of innovation, but rather, the reversal was a result of a policy war between the executive and legislative branches that started long before the original 1996 move.

III. CONGRESS'S DECISION HAS PROVEN TO BE A MISTAKE

Treating the whole array of U.S. satellite technology with a one-size-fits-all approach under the State Department has created significant difficulties for the U.S. industry. This regulatory shift has overburdened the State Department, and frustrated the communications satellite industry, which is forced to navigate regulatory ambiguities and outdated control mechanisms—all of which are exacerbated by increased competition in the global market.

A. Overburdened Agency, Regulatory Ambiguities, and Outdated Controls Create Barriers

Following the terrorist attacks of September 11, 2001, the United States commenced a war on terror in Afghanistan and Iraq. As a result, the U.S. defense budget increased by 67 percent between 2001 and 2008. Nearly overnight, the State Department became inundated with export license applications


91 See Porter, supra note 88, at 157–62; Kotler & Lane, supra note 126, at 278–90.


94 Travis Sharp, Growth in U.S. Defense Spending Over the Last Decade, Center for Arms Control and Non-Proliferation, Feb. 26, 2009, http://www.armscontrolcenter.org/policy/defense/spending/articles/022609_fy10_topline_growth_decade/. This figure was calculated based on Sharp’s data of U.S. defense spending, concluding that $426 billion was spent in 2001 and $709 billion was spent in 2008. See id. See also Anup Shah, World Military Spending, Global Issues, http://www.globalissues.org/article/75/world-military-spending#tab-content-us-military-spending-1 (comparing world military spending over the past decade) (last visited March 9, 2010).
for shipping hardware to U.S. troops and allies. As the volume of applications has risen, the number of Directorate of Defense Trade Controls (“DDTC”) licensing personnel have not increased at a comparable levels. The commercial communications satellite industry has been forced to compete with requests for war-time necessities in the State Department’s approval review queue. The DDTC reviews applications for all activities involving the transfer of defense articles and services listed on the USML on a case-by-case basis. On average, nearly 7,000 new applications are received each month, but historically DDTC has not been able to close that many applications per month. Therefore, the DDTC begins each month with an increased backlog.

The effect of the delays may be amplified because a U.S. satellite manufacturer could need up to six licenses for all phases of marketing, manufacturing, design, and launch of a single commercial communications spacecraft. Transactions over a certain monetary threshold or involving certain technologies also require congressional notification before a license authorizing their transfer can be approved. These delays leave American companies at a competitive disadvantage, unable to commit to a firm project schedule or delivery date, which foreign companies in the satellite industry can do.

The ITAR creates additional problems as well. For example, much of the State Department’s export control system depends upon companies properly self-classifying their products and services against broad entries on the USML. These broad entries sometimes do not include technical parameters,

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99 See U.S. Dept. of State, License Processing Times, http://www.pmddtc.state.gov/metrics/ (last visited March 9, 2010). From April 2009 through March 2010, the average number of cases received was 6,833; the average number of cases closed was 6,818, and the average backlog carried over to the next month was 3,199. Id.
100 See Export Controls Hearing, supra note 44, at 57 (statement of Patricia Cooper, President, Satellite Indus. Assoc.).
101 22 C.F.R. § 123.15 (2009) (requiring Congress be notified before any license over $14 million (or $50 million for North Atlantic Treaty Organization (“NATO”) countries) is approved). Congress must provide a certification in order for approval to take place. Id.
102 See 22 C.F.R. § 120.3–120.4 (2009) (providing the policy on designating and determining defense article and services).
which can lead industry and government alike to over-classify certain products that do not have military capabilities.\textsuperscript{103} Companies may submit a request to DDTC for formal classification;\textsuperscript{104} however, these requests are also generally delayed and leave companies in a holding pattern.\textsuperscript{105} ITAR also defines brokering very broadly,\textsuperscript{106} leading to regulatory confusion regarding exactly who has these obligations. This confusion is partially due to unsettled limits of extraterritorial application of ITAR claimed by the DDTC.\textsuperscript{107}

The ITAR’s controls are also outdated in their substance and approach. While the USML is reviewed by the president and obsolete technologies are removed or downgraded to DOC control,\textsuperscript{108} these reviews are not conducted with the frequency necessary to remain connected to new innovations.\textsuperscript{109} Additionally, ITAR only has special provisions for transactions involving a handful of current U.S. allies.\textsuperscript{110} The outdated approach of the regulations is shown through examples of an isolationist, Cold War mentality that dominated U.S. foreign policy when they were written.\textsuperscript{111} Revealing controlled technical data to a non-U.S. citizen or resident is deemed to be an export of this information to the person’s home country;\textsuperscript{112} therefore, U.S. companies must request this information from customers and partners. The substance and approach of the ITAR has frustrated both U.S. and foreign companies and has only been made exacerbated by the long delays and ambiguities associated with these regulations.

\textsuperscript{103} See 22 C.F.R. § 121.1 Cat. XXI (controlling “miscellaneous articles”). In contrast, the Department of Commerce often bases entries to the CCL on technical specifications of the products instead of actual or intended users. 15 C.F.R. § 774 (2009). Particular hardware and technology are added to the USML for their military applications. 22 C.F.R § 120.2-3 (2009). But they can also be added as part of a more general catch-all category if any military worldwide is interested in the hardware or technology. Id.

\textsuperscript{104} See 22 C.F.R. § 120.4 (providing a commodity jurisdiction procedure for classifying articles in which “doubt exists as to whether [it] is covered by [USML].”) (2009).

\textsuperscript{105} See GAO INEFFICIENCY REPORT, supra note 98, at 20.

\textsuperscript{106} See 22 C.F.R. § 129.2(a) (2009).

\textsuperscript{107} See Charles L. Capito III, Inadequate Checks and Balances: Critiquing the Imbalance of Power in Arms Export Regulation, 64 WASH. & LEE L. REV. 297, 327, 329–31 (analyzing the differences between the interpretations of the extraterritorial application of ITAR and the ACEA made by the DDTC, the courts, and Congress).


\textsuperscript{109} See Export Controls Hearing, supra note 44, at 42 (statement of Patricia Cooper, President, Satellite Indust. Assoc.).

\textsuperscript{110} Canada is the only country currently eligible for a list of specialized license exemptions. See 22 C.F.R. § 126.5 (2009). The United Kingdom and Australia are to be given priority license review under the ITAR. See § 126.15. Member countries of the NATO as well as Australia, New Zealand, and Japan are given special treatment with regards to the handling of technical data transfers to foreign nationals of those countries and for other priority situations. See 22 C.F.R § 123.27(a)(1) (2009).

\textsuperscript{111} See supra notes 52–55 and accompanying text.

\textsuperscript{112} 22 C.F.R § 120.17 (4) (2009).
B. Global Trends

The trends of globalization and privatization of related industries support the conclusion that shifting control to the State Department has significantly damaged American satellite companies' ability to compete in the global marketplace.

1. Globalization + Privatization = Heavy Competition

Globalization has transformed every industry and has opened up local businesses to global supply chains and new sources of information. Products and services in any country may contain the labor and materials of a dozen other countries before reaching the final market. Given the restrictions imposed on the U.S. industry by the ITAR, such collaboration becomes extremely difficult and in some cases impossible. U.S. commercial communications satellites are increasingly rejected in the world market because of the regulatory strings attached.

Stringent regulations that lead to the exclusion of American companies are particularly problematic in an interconnected world. Speaking to the competitiveness of U.S. defense articles, one commentator noted that, "[t]he assumption that the United States always will be on the leading edge of technology is false. As the increasing competitiveness of other countries is making clear, it is very likely that a greater number of innovative technologies with military applications will come from abroad." While American companies remained the most innovative and competitive for years, the State Department regulations have made it difficult for U.S. companies to regain their edge. Globalization brings increased competitiveness, but with the current regulatory scheme, the American industry is not positioned well to compete in the global economy. Furthermore, the intensity of competition among commercial satellite manufacturers is exacerbated by the relatively limited number of high-value, long-term contracts.

Competition has also increased during this time due to increased private in-

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114 See id.
116 See DEF. INDUS. BASE ASSESSMENT, supra note 7, at 46, 48.
117 Guay, supra note 6, at 67.
118 See DEF. INDUS. BASE ASSESSMENT, supra note 7, at 46–49.
119 See id.
120 See Export Controls Hearing, supra note 44, at 42 (statement of Patricia Cooper, President, Satellite Indus. Assoc.).
Communications Satellite and U.S. Export Controls

volvement in the space sector overall. The ORBIT Act was passed in 1999 to allow private companies to bring satellite communications to "every corner of the globe." NASA has started relying upon private carriers to send supplies to the International Space Station. Similarly, for $8,000 private citizens can even purchase their own personal satellite for launch. All of these events are further indications that competition in the space industry has and will continue to increase. If U.S. firms are to compete as the market continues to transform and open up, they cannot be confronted with unnecessary regulatory hurdles and the added costs of compliance.

2. ITAR-Free Satellites

The growing frustrations of foreign companies over ITAR were exemplified in 2007 when Thales Alenia Space, a French satellite manufacturer, announced that it had successfully completed a new “ITAR-free” satellite. ITAR-free is used to designate a hardware or technology that does not have any development history, components, or manufacturing that would trigger the requirements of the ITAR. In other words, the product must be entirely commercial in nature or, in the case of satellites, be entirely outside of any U.S. design, manufacture, or supply.

The Thales Alenia Space satellite was entirely devoid of any U.S. components or technical situations that would bring it under the jurisdiction of the ITAR. The satellite’s materials cost over six percent more than similar U.S. components, signifying that sourcing considerations—and the accompanying regulations—go outside of economic supply and demand curves. This satellite project demonstrated that while U.S. legislation and regulations may be aimed at protecting American national security, they also provide an incentive to stop partnering with American satellite companies. ITAR-free bids are now required for some programs of the European Space Agency.

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121 See Flying High, THE ECONOMIST, Sept. 12, 2009, at 87–88 (detailing different ways that the space sector is becoming increasingly privatized) [hereinafter Flying High].
124 See Flying High, supra note 121, at 87–88.
126 Peter B. de Selding, supra note 8.
127 See id.
128 Id.
129 See Export Controls Hearing, supra note 44, at 41–44 (statement of Patricia Cooper, President, Satellite Indust. Assoc.).
130 Id. at 44.
the first ITAR-free satellite, at least six more have been sold to satellite operators in China, Hong Kong, Indonesia, Egypt, and Europe.\footnote{Id. at 43.}

C. Net Result: Significant Loss in Global Market Share

In 2007 a comprehensive study by the DOD on the effect of export controls on the overall space industrial base found that since the ITAR policy change in 1998, the U.S. share of commercial communications satellite manufacturing had fallen by nineteen percent.\footnote{Id. at 46.} In 2009 an industry group reported that the number had dropped even further.\footnote{Export Controls Hearing, supra note 44, at 43 (statement of Patricia Cooper, President, Satellite Indust. Assoc.).} For the overall space industry, lost sales directly attributable to the ITAR totaled a cumulative $2.35 billion from 2003 to 2006.\footnote{Def. Indust. Base Assessment, supra note 7, at 34.} While there has been overall economic growth of the global industry during the time in question, the U.S. portion of this growth has diminished in both manufacturing and launching services. As a result, the U.S. space sector is becoming increasingly dependent upon U.S. government spending to provide for the industry.\footnote{Id. at 26.} A large number of U.S. firms, especially smaller ones, no longer market their products overseas because of ITAR regulations.\footnote{Id. at 37; Marty Hauser & Micah Walter Range, ITAR and the U.S. Space Industry, Space Foundation, 2, 7, available at http://www.spacefoundation.org/docs/SpaceFoundation_ITAR.pdf.}

IV: WHY CONGRESS TARGETED COMMERCIAL SATELLITES

Congress passed the legislation moving all satellites under State Department regulations for two reasons. First, Congress was concerned that China could gain valuable information from satellite launch technology that could harm America’s national security interests.\footnote{China Satellite Technology Hearing, supra note 15, at 1 (statement of Sen. McCain).} Second, some members of Congress believed that President Clinton had allowed campaign contributions to improperly favor commercial interests above national security interests.\footnote{Id. at 2–4.}

A. China

In 1998 Congress held hearings on the national security consequences of the Commerce Department’s approved satellite exports to China, as well as allega-
tions that China had acquired American satellite technology illegally. China has been of historic concern to U.S. national security because of its ties with proliferation countries and the sheer size of its armed forces. Following human rights abuses during the Tiananmen Square uprising in 1989, President George H.W. Bush placed sanctions on the export of military equipment to China. Under those sanctions, such items could only be exported to China by a presidential waiver.

While control of commercial communications satellites was still originally under State Department control, the agency issued export licenses to Loral, a U.S. manufacturer of satellites, allowing it to export satellites for launch in China. President George H.W. Bush had signed the appropriate sanction waivers. Shortly after the waiver was issued, Loral sent the satellite to China for launch, and upon launch, in February 1996, the $200 million satellite blew up and was destroyed.

Loral created an Independent Review Committee which shared with the Chinese government its findings on the cause of the accident. Loral provided China with controlled technical data related to the inner workings of the satellite, information that required prior export approval from the United States. Beyond the transfer violating U.S. laws, the incident concerned the U.S. government because the Chinese government could possibly use the technical information provided to improve their country’s missile program.

In addition, Loral had transferred other regulated information before the 1996 explosion. The potential for future satellite launch failures concerned

139 See KAN, supra note 13, at 22–27.
142 See KAN, supra note 13, at 17. Presidents George H.W. Bush and President Bill Clinton waived export restrictions 13 times for satellite projects from time the restrictions were first imposed in 1989. Id. at 19.
144 See KAN, supra note 13, at 21.
145 Id. at 21, 50.
146 See Gerth, supra note 11.
148 See KAN, supra note 13, at 5–6.
149 Id. at 5. Export violations are punishable by civil fines and criminal prosecutions. See 15 C.F.R. § 764.3(a)(1), (b) (2009); 22 C.F.R. § 127 (2009).
150 See COX REPORT, supra note 140, at Vol. II, 115.
151 See KAN, supra note 13, at 24–25; see also COX REPORT, supra note 140, at vol. 2, 2.
those in the Senate who were proponents of revisiting DOC authority to approve these transactions. They were also concerned that the DOC did not place additional provisos on license applications that would have required technology control plans and other safeguards.

The Commerce Department argued that the agency had followed all statutory requirements before approving subsequent satellite licenses. The Commerce Department also argued that "treating China as a committed adversary is the quickest way to ensure it becomes one" and urged Congress to consider the Chinese people who depended on these satellites for communication. Finally, the Commerce Department believed that Chinese access to communications satellites benefits the United States.

Congress, in shifting satellite communication export control to the State Department, clearly disagreed that a less restrictive trade policy with China would benefit U.S. economic interests more than it would endanger American national security interests.

However, this regulatory shift did not stop China from increasing its military, missile, and satellite capabilities. In 2007, China demonstrated its increased missile capabilities when it launched an anti-satellite missile into Earth's low orbit. China has also launched "ITAR-free" satellites, which showed that China does not need the involvement of the United States in order to continue launching satellites into space. Many other countries of concern continue to grow their space programs despite the U.S. restrictions.

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153 See id. at 27–28. A technology control plan ("TCP") is a plan that a company submits to either BIS or DDTC to obtain licenses to transfer controlled technical data. The TCP lays out a plan for controlling access to that data at all stages of the transaction and transmission. TCPs for similar transactions approved by DDTC require U.S. persons to accompany the communications satellites and secure them from unauthorized access prior to launch. See id. at 28 (statement of Franklin Miller, Principal Deputy Assistant Secretary of Defense).
154 See id. at 19–20.
158 See de Selding, supra note 8.
B. An Improper Balance of Commercial and National Security Interests?

Some members of Congress also expressed concern that the transfer of control from DOS to DOC may have been partially motivated by the fact that the president's political party had received financial contributions from those associated with the Chinese government. Senator John McCain believed that the President's decision to transfer control allowed "the export of commercial satellites with less oversight from those vested with safeguarding our national security." Senator McCain also alleged that the Commerce Department had caved to pressures from the American satellite industry instead of taking the time necessary to conduct a proper review of license applications. He argued that the Commerce Department was not the proper agency for approving satellite exports because its decisions are primarily based on political and economic considerations, not national security. In passing the law, Congress believed that the only way to properly balance the country's commercial and national security interests was to move control of all satellites to the State Department indefinitely. However, an investigation by the Department of Justice ("DOJ") into any potential wrongdoing by the Clinton Administration with the Loral incident concluded without criminal charges being filed.

The need to balance the country's commercial and security interests has not changed with time. Because a large amount of military innovation occurs within the commercial sector, a thriving commercial space sector is also necessary in order to protect national security. Mitchel B. Wallerstein, a former U.S. Deputy Assistant Secretary of Defense for Counter-proliferation Policy and Senior Defense Representative for Trade Security Policy, recently wrote that the general approach to U.S. export controls "undermine national security in at least four ways." Wallerstein notes that U.S. firms may focus on purely commercial technologies to avoid the controls; foreign manufacturers with more advanced products may not compete for U.S. defense contracts; the U.S. military cannot get parts or maintenance on equipment in the field; and U.S. defense attachés are impeded from collaborating with foreign defense officials.

General Kevin P. Chilton, commander of the U.S. Strategic Command, ex-
pressed his concerns about the current system of export controls for satellites: "[O]ur own civil and commercial space enterprise, which is essential to the military space industrial base, may be unnecessarily constrained by export control and regulation."\textsuperscript{168} Although Congress attempted to correct the perceived imbalance of favoring commercial interests over national security, time has shown that shifting all control to the State Department has instead managed to damage both sides of that balance.\textsuperscript{169}

Despite American efforts to control exports to many countries which threaten its national security, many nations, including North Korea and Iran, have attempted to launch satellites in the past year.\textsuperscript{170} The Center for Strategic and International Studies concluded that "current space export control system has not prevented the rise of [foreign space capabilities] . . . ." and may have actually encouraged it in some cases.\textsuperscript{171}

In addition, arguing that satellites should be moved to State Department control to improve a perceived imbalance is a slippery slope because that rationale could be applied to nearly every item on the CCL, since each of those items is "dual use."\textsuperscript{172} With the transfer of jurisdiction for commercial satellites to the Department of Commerce in 1996, the Commerce Department held the responsibility to neutrally weighing commercial and national security interests as mandated under the EAA.\textsuperscript{173} Now that commercial satellites fall under State Department control, this balance has tilted strongly towards national security concerns, away from commercial interests.

V. SATELLITE JURISDICTION SHOULD BE DECIDED BY THE PRESIDENT

Congress’ directive to move export controls to the DOS has failed to sufficiently address commercial and national security concerns. Removing this authority from the president’s discretion has created unnecessary inconsistency, inflexibility, and harmed American commercial interests without any increase


\textsuperscript{169} \textit{Def. Indus. Base Assessment}, \textit{supra} note 7, at 48–49.


\textsuperscript{171} \textit{Export Controls Hearing}, \textit{supra} note 44, at 22 (statement of Pierre Chao, Non-Resident Senior Associate, Center for Strategic and International Studies).

\textsuperscript{172} See 15 C.F.R. §§ 734.2, 772.1, 774 (2009); see discussion \textit{supra} Part II.C.2 and accompanying notes 76–86.

Communications Satellite and U.S. Export Controls

in national security. Congress should restore authority to the President to decide which agency controls these exports. As the Commerce Department’s purpose is best suited to regulate these exports, it should be given that control.

A. Congress’s Failure to Respond to the Industry’s Legitimate Concerns

Studies have shown that America’s global market share of the satellite communications industry has been negatively affected by Congress’ decision. If Congress believed that continuing to treat commercial communications satellites as munitions was in the country’s best national security interests, it should have also increased the State Department’s budget in order to properly handle the influx of war-time export applications. Despite congressional efforts to address major problems in the administration of the AECA and DDTC, these bills have failed on the floor of Congress, including the most notable proposed change that would restore the president’s authority to decide which agency should control exports of all satellites. Congress should pass this bill immediately.

B. The Case for Department of Commerce Control

The Department of Commerce has made changes in its management and regulations that suggest that a change of jurisdiction is now appropriate. The agency has made internal changes that give a greater priority to national security interests. For example, the Commerce Department’s export control office has changed its name from the Bureau of Export Administration to the Bureau of Industry and Security to better reflect its increased security focus. The Department of Commerce employees perform many of the same export approval review processes as the State Department, but the Department of State has been historically understaffed. The Department of Commerce has a duty

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to further commerce in the United States.\textsuperscript{179} At the same time, it also has a duty to ensure that their regulations permit business to function with as few controls necessary to protect national security and other concerns.\textsuperscript{180}

Proposals to reform the ITAR, such as imposing limits to licensing times and streamlined processes, are already covered in the EAR and management of the Commerce Department.\textsuperscript{181} The exceptions to licensing requirements available from the agency are much broader and easier to use in application than the license exemptions available from the State Department because the Commerce Department exceptions are listed in one place.\textsuperscript{182}

The Department of Commerce has also introduced new authorizations within the last year to keep up with the increasingly global nature of many U.S. businesses. For example, the Validated End-User ("VEU") authorization introduced in 2007 allows U.S. exporters to ship to a specific list of pre-approved end users without additional approval.\textsuperscript{183} The EAR is better focused on countries and transfers of greatest concern without complicating all other transactions.\textsuperscript{184} Additionally, because the DOC's controls are more performance specific,\textsuperscript{185} the Commerce Department will better be able to notify the American communications satellite industry of exactly which technologies are of concern. Under Commerce Department regulations, the industry's ability to export both hardware and technical data will greatly improve.

\textsuperscript{181} 15 C.F.R. §§ 750.2, 750.4 (2009).
\textsuperscript{182} Compare 22 C.F.R. § 125.4(b), with 15 C.F.R. § 740.6 (illustrating the difference between the amount of controlled technical data that may be exported without a license); compare 22 C.F.R. § 123.4, with 15 C.F.R. § 740.9 (demonstrating the difference between the two regulations on temporary imports and exports). In a narrow set of circumstances, if the proposed transaction meets the requirements on an established license exemption or exception, an exporter may rely on the use of such an exemption or exception in place of obtaining an export license. See 15 C.F.R. § 740.
\textsuperscript{183} Revisions and Clarification of Export and Reexport Controls for the People's Republic of China (PRC); New Authorization Validated End-User; Revision of Import Certificate and PRC End-User Statement Requirements, 72 Fed. Reg. 33, 647 (June 19, 2007) (codified at 15. C.F.R § 748.15).
\textsuperscript{184} See ROOT ET AL., supra note 48, at 2-18, 4-16.
\textsuperscript{185} See, e.g., 15 C.F.R. § 774.2, Supp. No. 1, 0B001.
Table 2. Summary Comparing DOS and DOC Export Control Regimes.

<table>
<thead>
<tr>
<th></th>
<th>Department of State</th>
<th>Department of Commerce</th>
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<tbody>
<tr>
<td><strong>Approval Times</strong></td>
<td>No regulatory limit.</td>
<td>Capped at forty-five days with escalation process.</td>
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<td><strong>Congressional Notification</strong></td>
<td>Required for specified transactions.</td>
<td>Required for specified transactions.</td>
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<tr>
<td><strong>Commodity Jurisdictions</strong></td>
<td>Historically handled through ad hoc submission process.</td>
<td>Defer to the DOS on jurisdiction, but classifications of</td>
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<tr>
<td></td>
<td>Electronic process coming soon.</td>
<td>items within the CCL are handled through electronic application.</td>
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<tr>
<td><strong>Control List Updates</strong></td>
<td>No comprehensive evaluation has been completed in the last ten years.</td>
<td>Last comprehensive update was completed in 2008.</td>
</tr>
<tr>
<td><strong>Treatment of U.S. Allies</strong></td>
<td>Mostly limited to individual treaties, limited other preferential treatment for NATO allies</td>
<td>Licensing requirements are established by country.</td>
</tr>
<tr>
<td><strong>Brokering</strong></td>
<td>Broad definition and particularized requirements.</td>
<td>No special licensing required for brokering activities.</td>
</tr>
<tr>
<td><strong>Deemed Exports to Foreign Nationals</strong></td>
<td>All deemed exports to foreign nationals require a license unless exempted.</td>
<td>Deemed exports require a license only to foreign nationals of countries that would require a license.</td>
</tr>
<tr>
<td><strong>Reasons for Control</strong></td>
<td>End use based controls that include some product specifications.</td>
<td>Predominantly specification based controls with capability to control for end use.</td>
</tr>
<tr>
<td><strong>Registration Fees as Small Business Barrier</strong></td>
<td>$2,250 each year plus $250 for each approval requested after the first ten.</td>
<td>None.</td>
</tr>
</tbody>
</table>
VI. CONCLUSION

There is an improper balance between U.S. commercial interests and national security that once again must be adjusted. If the domestic communications satellite industry is to prevail during an era of globalization, it must be better able to collaborate with the rest of the world and not be burdened by regulatory barriers that its competitors do not face. Increased global competition has allowed U.S. prime and component manufacturers to be avoided and this trend of “ITAR-free” requests seems to be growing. American companies’ global market share continues to decrease. Countries of concern to the United States have continued to obtain and develop satellites and launching capabilities, illustrating that broad sweeping controls are not necessarily protecting national security either.

Congress’ original reasons for placing control of these exports under the State Department are no longer valid. Yet, Congress has refused to respond and restore presidential control to fix this problem. Federal agencies have more expertise on the export controls necessary for commercial communications satellites than Congress does. Moving the decision for which agency regulates export controls of satellites back under the power of the president would allow for the satellites to fall under Commerce Department control. As dual use technologies with predominant civilian applications, non-military communications satellites belong under Commerce Department control. The Department of Commerce is better suited to handle the American communications satellite industry’s legitimate commercial needs expediently, while still addressing national security concerns.

Congress should immediately pass legislation to give the president back his authority to decide which export controls are proper for satellites. While fixing the problem now will not undo all the damage experienced by the industry in the last decade, it will be a step in the right direction of restoring the balance between the interests of American industry and national security.