

Written Testimony for Patricia A. Cooper

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Hearing on Export Controls, Arms Sales, and Reform: Balancing U.S. Interests (Part II)

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Introduction

Madam Chairwoman, Ranking Member Berman, distinguished members of the Committee, thank you for inviting the Satellite Industry Association (SIA) to testify today on the critical issue of U.S. export control reform. I commend Chairwoman Ros-Lehtinen and Ranking Member Berman for holding this hearing on the Export Control Reform (ECR) process and thank the members of the Committee for your continued focus on improving the nation's export control policies.

As the President of SIA¹, I represent here the unified voice of the nation's satellite industry. Our members build and launch spacecraft for both the commercial and U.S. government sectors, operate hundreds of commercial satellites that support voice, video, and data transmissions around the globe, and provide essential communications services and ground equipment to the U.S. military, public safety, natural resource, media, retail and banking sectors. The satellite industry earns about 60 percent of all U.S. space revenues and operates a third of all satellites currently on orbit. In 2010, our industry posted \$168 billion in global revenues, with an average annual growth rate of around 11 percent over the past five years.

SIA speaks when the satellite industry holds a common view on policy, regulatory, and legislative issues that affect our sector. Our members agree that the time is ripe for Congress to revisit and reform the U.S. export control laws governing satellites and space-related products.

SIA and its members ask Congress to remove its long-standing mandate requiring that all satellites and related items be regulated uniformly as munitions, without regard to their technological sensitivity. While the current one-size-fits-all satellite export control laws were originally intended to enhance national security, a decade of experience shows that this

¹ SIA Executive Members include: Artel, Inc.; The Boeing Company; The DIRECTV Group; EchoStar Satellite Services L.L.C.; Harris CapRock Communications; Hughes Network Systems, LLC; Integral Systems, Inc.; Intelsat, S.A.; Iridium Communications Inc.; LightSquared; Lockheed Martin Corporation.; Loral Space & Communications, Inc.; Northrop Grumman Corporation; Rockwell Collins Government Systems; and SES S.A. SIA Associate Members include: ATK Inc.; Cisco; Cobham SATCOM Land Systems; Comtech EF Data Corp.; DRS Technologies, Inc.; Eutelsat, Inc.; GE Satellite; Globecom Systems, Inc.; Glowlink Communications Technology, Inc.; iDirect Government Technologies; Inmarsat, Inc.; Marshall Communications Corporation.; Orbital Sciences Corporation; Panasonic Avionics Corporation; Segovia, Inc.; Spacecom, Ltd.; Spacenet Inc.; Stratos Global Corporation; TeleCommunication Systems, Inc.; Telesat Canada; Trace Systems, Inc.; Ultisat, Inc.; ViaSat, Inc. and XTAR, LLC. Additional information about SIA can be found at <http://www.sia.org>.

requirement to over-regulate has undermined the nation's security and the satellite industry's international competitiveness. SIA asks that Congress restore the Executive Branch's authority to regulate satellites, as they do every other U.S. technology – by making careful and expert differentiations between commonly-available items and the most sensitive technologies, the latter of which are then safeguarded with our strictest export controls.

Both Congress and the Administration have sought to reduce regulatory excesses that unduly hinder economic growth and impair our national security. Satellite export control policy is an area ripe for reform. Right-sizing satellite export control policy would allow the U.S. satellite industry to compete internationally, continue to invest and innovate, and support critical government and industry communications.

The Need To Reform Satellite Export Controls

Satellites are the only category of products mandated by Congress for blanket treatment as munitions under the U.S. Munitions List (USML). Every item in USML Category XV – “Spacecraft Systems and Associated Equipment” – is legally required to be regulated as a munition, no matter how outmoded or how widely-traded the item. The most mundane bolts are regulated with the same controls as the most sensitive imaging technology.

SIA asks that Congress remove this blanket requirement and restore Executive Branch authority over the regulation of satellite export controls. The satellite industry will not reap the benefits of export control reform unless Congress passes satellite-specific legislation. In fact, without specific legislative action to “normalize” satellite export control policy, the United States would need to retain a satellite-specific export control system and another for all other items and technologies, the very redundancy and confusion that reform seeks to avoid.

SIA and its members believe that there are compelling reasons for Congress to restore to the Executive Branch the authority for satellite export control policy.

The current satellite framework arose from concerns in the late 1990s that U.S. technology was not protected after two failures of Chinese launches of U.S.-made satellites. Although these original concerns were specific to an individual country and those particular launch investigations, Congress reacted by passing legislation that captured virtually all satellite trade with all countries. The current law captures communications satellites, their parts, components, technical and marketing data, and ground support and test equipment. The regulations govern everything from the marketing discussions related to selling a satellite TV spacecraft to a Canadian communications company to the information required by British insurers to insure a spacecraft owned by a U.S. satellite operator. They affect the ground control stations and systems that monitor and communicate with the spacecraft and every bolt, screw, and piece of insulation incorporated on a communications satellite.

This outmoded law offers no mechanism to differentiate between items that are sensitive for national security reasons and items that are benign or widely available, nor any way to update treatment of technology as it transitions from leading-edge to commonly-available. If the same situation were applied to computers, exports of 1950s-era computers with vacuum tubes would be treated the same as today's cutting edge microchips. It is this over-regulation that SIA asks Congress to correct.

Vigilance against the transfer of sensitive technology to countries of concern should remain a top priority. The satellite industry is committed to U.S. export policies that ensure that the nation's most advanced technologies do not fall into the hands of our adversaries. We also support the vigorous enforcement of existing rules. SIA supports satellite export control reform legislation that provides for appropriate restrictions on exports of satellites and satellite technology to countries of concern, including China. Further, SIA and its members do not seek any legislative erosion of the safeguards already in place that have effectively prohibited satellite technology exports to China. We strongly believe that achieving satellite export control reform is consistent with our goal protecting advanced technologies.

The Unintended Consequences of Current Satellite Export Control Policies

I wish that I could provide the Committee with the net value of the satellite business lost since the 1998 ITAR legislation was passed. One U.S. government study reported that the value of contracts lost due to ITAR between 2003 and 2006 was \$2.35 billion.² While the satellite industry has been subjected to over-regulation for more than a decade, statistical smoking guns remain difficult to locate and the direct impact difficult to quantify. Companies exiting the satellite manufacturing or R&D fields do not issue press releases, nor do international satellite operators describe their internal decision-making processes when they select non-U.S. suppliers.

However, SIA can point to several indicators to help demonstrate the unintended harmful consequences of the current export policy for satellites:

1) *U.S. Share of the International Market.*

First, we can look at the U.S. share of the international marketplace for satellite manufacturing. Generally, U.S. share of the global market for purchases of completed satellites has dropped from around three quarters before the establishment of the 1998 ITAR rules to below one half of the global market. According to data SIA has collected annually for the past 15 years, in 1995, U.S. satellite manufacturers enjoyed a 75 percent share of the global market; ten years later, this had dropped to 41 percent, and has hovered between 35 and 50 percent since then.

² U.S. Department of Defense, "Defense Industrial Base Assessment: U.S. Space Industry," August 31, 2007, http://www.bis.doc.gov/defenseindustrialbaseprograms/osies/defmarketresearchrpts/exportcontrolfinalreport08-31-07master_3---bis-net-link-version---101707-receipt-from-afri.pdf, p. 34.

Alone, this data does not tell a complete story about the loss of U.S. competitiveness due to overly broad export restrictions on satellites. The revenues cited only capture those for completed satellites, not the exports of satellite inputs – components, parts and sub-assemblies – which numerous studies demonstrate have been heavily affected by ITAR regulations. However, market share data does reflect the general downward trend in U.S. dominance of the global marketplace and aggressive international competition.

2) Perception in the Marketplace and the “ITAR-Free Satellite.”

Second, we can look at the effect that blanket ITAR regulation has had on different types of U.S. satellite companies – prime manufacturers of completed spacecraft, parts and components manufacturers, and operators of satellites.

The international customers of U.S. prime manufacturers of spacecraft see ITAR regulations and the processes they require as adding time, cost and risk to U.S.-made products – regardless of whether these effects are real or significant. Under current rules, ITAR licenses are required to engage in discussions and exchange the technical data needed to actually sell a commercial spacecraft to a prospective operator and to discuss spacecraft or ground system design with non-U.S. component suppliers and site operators. U.S. companies must argue that ITAR regulations do not increase the risks of price increases or schedule delays, and overcome marketing arguments made to the contrary by their foreign competitors; in fact, U.S. manufacturers must argue that U.S.-manufactured satellites offer significantly better value to offset the impact of the ITAR process.

It is clear that ITAR has become a market differentiator for our competitors. Since I last testified before Congress in April 2009, the number of European “ITAR-free” satellites launched has jumped from six to thirteen, and another seven have been sold or are under construction. Whether or not the claims that these satellites are ITAR-free prove to be correct or not, the commercial success of twenty “ITAR-free” spacecraft sold – and often at prices higher than their U.S. equivalents – underscores the competitive impact of the ITAR designation. Again, that designation comes as the result of a general legislative mandate, not out of a determination of technological sensitivity.

For U.S. satellite parts and component manufacturers, the lack of *de minimis* rules under ITAR regulations act as a deterrent for foreign satellite builders to buy American. If even the smallest U.S. component is incorporated into a foreign-made satellite, the entire spacecraft must be treated as an ITAR item. This over-regulation acts as a powerful dis-incentive for foreign satellite manufacturers to include U.S. content in their spacecraft because they can freely buy parts and components off-the-shelf from other non-U.S. suppliers.

For satellite operators, the current rules limit their ability to meet the customer service expectations of their international telecom and television customers. If there is a spacecraft malfunction while on orbit, the U.S. operator is constrained from discussing with its international

customers what went wrong or how to restore functionality without an ITAR license. Although companies can obtain a technical assistance agreement to prepare for malfunctions, there is no way of knowing in advance if the agreement will apply to any specific anomaly experienced by the spacecraft in question.

3) Broader Impact on Space Industrial Base.

Third, we can look at the impact of over-regulation on the overall health of the U.S. space industrial base, a well-documented national security concern. A January 2012 Aerospace Industries Association (AIA) study provides a fresh depiction of the adverse impact of ITAR on our sector's competitiveness and investment decisions. The AIA conclusions reinforce conclusions of numerous studies by government agencies and private entities dating back to 2005 that link satellite export control policies to erosion of the U.S. industrial base, and particularly the third, fourth and fifth tiers of the industry. These suppliers of input materials, parts, and components are relied upon by manufacturers of commercial, military, civil space, and intelligence spacecraft alike, and their health has been of increasing concern to the U.S. national security community.

Former Deputy Secretary of Defense William J. Lynn III put things rather bluntly in a speech in November 2010: *"Our current export policy puts us in a double bind. We are hurting our own space suppliers in the international market. But we are not really hindering states of concern from acquiring sensitive space technologies."*³ In March 2011, Deputy Assistant Secretary of Defense for Space Policy Gregory L. Schulte described the Department's perspective in his testimony before your colleagues on the House Armed Services Committee:

"The United States seeks to foster a space industrial base that is robust, competitive, flexible, healthy, and delivers reliable space capabilities on time and on budget. International advances in space technology have put increased importance on reforming U.S. export controls to ensure the competitiveness of the U.S. space industrial base while addressing technology security. Secretary Gates has actively called for an overhaul of our export control system. Reforming export controls will facilitate U.S. firms' ability to compete in the international marketplace for capabilities that are, or will soon become, widely available globally, while strengthening our ability to protect the most significant U.S. technology advantages. The National Security Space Strategy reaffirms the necessity of these reforms and echoes the National Space Policy's call for giving favorable consideration for export of those items and technologies that are

³ William J. Lynn III, "Remarks on Space Policy at U.S. Strategic Command Space Symposium," November 3, 2010, <http://www.defense.gov/speeches/speech.aspx?speechid=1515>.

generally available on the global market, consistent with U.S. national security interests.”⁴

Most recently, a 2011 study conducted for the Office of the Undersecretary of Defense for Acquisition, Technology and Logistics identified five new satellite technology areas at high risk (those with one or no U.S. suppliers) and an additional nine with the potential to create bottlenecks or cost increases for government space programs.

4) *The Future of U.S. Space Leadership.*

Finally, SIA can point to the chilling effect that the over-regulation of satellites and related items has had on our universities’ willingness to teach space-related subjects and on our research labs’ ability to conduct cutting-edge space research. Because of the expansiveness of the current ITAR regulations, space-related research projects, university courses on satellite technology, and agreements involving international students or faculty all require an ITAR license. According to Professor Bob Twiggs of Stanford University’s Space Systems Development Lab, “*ITAR is driving research out of the United States, isolating the United States, and causing markets to be developed outside of the United States.*”⁵ According to the Universities Space Research Association (USRA), if ITAR forces the next generation of space engineers to learn, research and experiment abroad, the U.S. edge in space technology will eventually erode.

Next Steps Towards Reform

Given the number and severity of concerns arising out of the existing satellite export control regime, it is no surprise that several Members of Congress have proposed reforms in recent years. SIA applauds Ranking Member Berman’s introduction last year of H.R. 3288, the “Safeguarding United States Satellite Leadership and Security Act of 2011,” legislation which would correct the historical over-regulation of satellite exports while retaining protections on critical technologies. SIA supports this Bill and we note with appreciation that twelve additional Members, both Republicans and Democrats, have co-sponsored H. R. 3288, including several Members of this Committee, Representatives Manzullo, Connolly, and Keating.

SIA appreciates that before considering H.R. 3288, Congress awaits the Administration’s expert guidance on the national security risks of moving satellites off the USML, as requested in Section 1248 of the National Defense Authorization Act for Fiscal Year 2010 (Final Section 1248 Report). Although the Interim Section 1248 Report delivered in May 2011 already

⁴ Ambassador Gregory L. Schulte, “Statement Before the House Committee on Armed Services, Subcommittee on Strategic Forces,” March 15, 2011, http://armedservices.house.gov/index.cfm/files/serve?File_id=efb3bac7-cf58-4fd8-8dad-9aa2ee404d6f

⁵ Richard Kusiolek, “ITAR: Balancing the Global Playing Field,” *Via Satellite*, August 1, 2008, http://www.satellitetoday.com/via/features/ITAR-Balancing-the-Global-Playing-Field_23882.html.

identified six broad types of satellite items that could safely be moved off the USML if it had the authority to do so, SIA and our members eagerly await the more complete analysis and recommendations that a Final Report would provide from our national security, intelligence and export control experts. SIA understands that the Final Section 1248 Report will reflect a thorough technical review of the satellites and related items contained in Category XV. SIA urges the Administration to deliver the Final Section 1248 Report to Congress expeditiously, to pave the way for critical legislative reform.

Conclusion

In conclusion, SIA encourages both the Administration and Congress to continue efforts to implement export control reform. We stand ready to support that effort. However, our industry will not reap the benefits of export control reform without satellite-specific legislation.

For the satellite sector specifically, SIA urges this Committee to prioritize the reform of satellite export controls as soon as the Administration delivers its Final Section 1248 Report and move to act on H.R. 3288. The 1998 Congressional requirement to treat all satellite items uniformly as munitions regulated too broadly and eliminated discretion. We believe that the Congressional requirement that satellites be treated as munitions has harmed the industry's international competitiveness, fueled the growth of international satellite manufacturing companies, dampened investment and innovation in the sector, and deterred training and advanced research in satellite and space technologies.

We urge Congress to right-size the long-standing one-size-fits-all export policy for satellites, and allow the satellite sector to be regulated as other sectors are. This reform is critical to the health of the U.S. satellite industry and, in turn, the overall U.S. space sector. As a high-tech growth industry that provides critical support for our nation's defense industry and drives innovation and investment, we urge Congress to reform U.S. export controls for satellites and related items to secure the United States' future as a leading space-faring nation. It is time to regulate satellites as we do every other high-tech industry, and we look to this Committee to act on needed satellite reform legislation.

Madam Chairwoman, Ranking Member Berman, distinguished members of the Committee, this concludes my testimony. On behalf of the members of the Satellite Industry Association, thank you again for the opportunity to testify, and I look forward to your questions.