Beyond reach? How to develop ITAR-free systems

The ITAR goes where other regulations fear to reach. Steven Brotherton examines its extraordinary extraterritorial powers and explains how companies can avoid its grasp.

The extraterritorial reach of US export control laws and regulations is often challenged and criticized. A longstanding favourite target is the US International Traffic in Arms Regulations (‘ITAR’). The ITAR is part of the US export control regime and is administered by the US Department of State, Directorate of Defense Trade Controls (‘DDTC’). In general, the ITAR regulates US origin items specifically designed, modified, configured or adapted for military and space applications, as well as, related technical data and services. Though some exemptions exist, the general rule is that DDTC approval is required prior to the export, re-export or re-transfer in a foreign country of any ITAR-controlled article. The application of the ITAR is broad and reaches activities that occur outside the United States.

Problem components
One of the key complaints during recent years is related to the ITAR’s ‘See Through’ rule. Under this rule, an article that is subject to the ITAR will retain its ITAR status even when incorporated into a higher level platform. For example, a European-manufactured satellite that incorporates an ITAR semiconductor will become subject to the ITAR itself, even if the semiconductor is playing only a minor role in the satellite’s functionality. Many companies in Europe and Asia are finding this outcome particularly troublesome given the significant restrictions that accompany an ITAR-controlled article. In the most poignant example, US government approval is required for delivery to any non-US party along the manufacturing, supply, and delivery chain – from the first incorporation of the ITAR article to testing houses to launch sites. Any change, if not already approved by the US government, will require a new approval. This can be particularly challenging given that many projects take place over several years and an initial approval will not cover new parties added at a later date. Moreover, applications involving some countries such as the People’s Republic of China are subject to a general policy of denial.

If the requirements for re-export and re-transfer aren’t enough, also accompanying ITAR-controlled articles and related technical data is a requirement to ensure access to such articles is restricted to approved nationalities. This means setting up systems to screen and segment employees from non-approved nationalities while balancing employment discrimination and privacy laws.

Heavy price for getting it wrong
The cost of non-compliance can be more significant. ITAR violations may result in not only civil or criminal penalties, but also denial of US government contracting privileges and/or debarment. In one recent case, a Luxembourg company agreed to a $25m settlement relating to, among other things, a Singapore affiliate releasing ITAR-controlled technical data to employees from China, Myanmar, India, Indonesia, Germany, and Malaysia as well as exporting ITAR-controlled articles to China and other countries. Fortunately, DDTC suspended $10m in fines as long as the company applied the funds to improve its compliance program.

While US origin articles remain highly desired for their technical capabilities, many non-US companies – especially those in the space industry – are sourcing non-US components or are developing indigenous capabilities to avoid ITAR requirements. This article explores what it means to be ‘ITAR-free’.

A screw could be subject to the ITAR if it was specifically designed for a fighter jet or other military or space application.

ITAR overview
The ITAR is one of the most broad and stringent export control regulations in the world, largely due to the fact that the regulations control not only major military equipment but similarly control innocuous components, parts, accessories and attachments if specifically designed, developed, configured or adapted for a military or space application. This may lead to nonsensical results, whereby something as simple as a screw could be subject to the ITAR if it was specifically designed for a fighter jet or other military or space application. Items subject to the ITAR are termed ‘defence articles’.

In general, ITAR controls the export, re-export, re-transfer and temporary import of defence articles (including technical data) and the provision of technical assistance. An export includes not only physical exports, but also oral and visual disclosures of technical data to a foreign person. For purposes of the ITAR, a ‘foreign person’ is any natural person who is not a US citizen, US

Notes and links

1 WorldECR
The Control List

The ITAR includes the United States Munitions List (USML) – a list of 21 broad categories that includes firearms, military vehicles and aircraft, military electronics, and spacecraft systems, among other items. Also controlled is any item that is specifically designed, developed, configured, adapted or modified for a military or space application.

One key difference from many other countries’ export control regulations is that the ITAR regulates spacecraft systems, including commercial satellites, and any specifically designed components, as a ‘munition’ rather than a ‘dual-use’ item. This results in a requirement to not only obtain US government approval prior to most exports, re-exports and transfers but also invokes the ‘See Through’ rule that triggers ITAR requirements for system-level integrators who incorporate an ITAR-controlled component into a higher level system.

The ‘See Through’ rule

Many entities outside the United States have learned of the ITAR by learning that a system contains an ITAR-controlled component and, accordingly, any export or transfer of that system requires US government approval. This can have a devastating impact, leading to shipment delays, plant downtime, or even the inability to use certain supply chain partners given the location in an ITAR-prohibited destination.

The natural questions from these non-US entities, and ones we are hearing quite often in our practice, is ‘What is the See Through rule?’ and ‘How do I avoid being potentially subject to ITAR requirements?’

While you won’t find the See Through rule in the ITAR itself, DDTC has consistently applied the rule in settlement agreements and other official communications. Under this rule, if an item that is subject to the ITAR is incorporated into another article, that article also becomes subject to the ITAR. To this end, ITAR-controlled defence articles, including subsystems, components and parts do not cease to be subject to the ITAR when incorporated into another product. This remains true even when the higher level article is designed for civilian or commercial end-use. The legal basis for this rule is that the ITAR does not have a de minimis or limited percentage value exemption, so the ITAR applies even if the resulting content constitutes a very small percentage of the total value. In essence, this rule requires one to ‘see through’ the product to identify any ITAR-controlled content.

One example helps illustrate the illogical application of the rule: Non-US ‘Company A’ manufactures satellites and discovers that the satellite is subject to ITAR requirements because it uses an ITAR-controlled semiconductor such as a radiation-tolerant ceramic packaged EEPROM. The result is that the manufacturer must comply with the ITAR when transferring or exporting the resulting satellite. This includes avoiding transactions with any unlicensed party and, perhaps even more significantly, avoiding transactions with certain countries subject to a US arms embargo or similar restriction (e.g. China).

Learning of the restrictions, Company A replaces the EEPROM with a non-ITAR controlled version and, having no other ITAR-controlled components, the satellite is no longer subject to ITAR requirements. The practical result is that non-US manufacturers are establishing systems to screen for ITAR-controlled components, having suppliers warrant that the parts are not subject to the ITAR via contract language or similar mechanism.

In a recent address, while commenting on US export control reform efforts, US Department of Commerce, deputy under secretary Daniel Hill recognized that ‘US companies are sometimes being “engineered out” of collaborative foreign projects due to US export control requirements’3. These export control reforms will hopefully remove most components from ITAR control, though it remains to be seen how the reforms will play out with space systems and commercial satellites.

‘ITAR-free’ systems

After the See Through rule, the second commonly asked question from non-US companies is ‘How do I avoid being potentially subject to ITAR requirements?’ A non-US article, whether it is a system, product or even a component, may become subject to the ITAR if it meets the below criteria.

1. US origin item or technical assistance

In this case, an article may be subject to the ITAR if it is:

(a) specifically designed, developed, modified, configured or adapted for a military or space application; and

(b) the specific military or space design, development, modification, configuration or adaptation:

1) originated in the US;

2) was developed using US origin technical data, or

3) otherwise utilized the technical assistance of US persons.

Until legislation is passed, companies must deal with the current reality that commercial satellites are potentially subject to the ITAR.

US origin technical data is information that is required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance or modification of a defence article. Technical data can come in many forms, including blueprints, engineering drawings, photographs, plans, manufacturing know-how, assembly instructions or similar documentation. The definition does not include information in the public domain, basic marketing information on function or purpose or general system descriptions.
Technical assistance from US persons is considered a defence service under the ITAR and includes assistance (including training) to foreign persons in the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, demilitarization, destruction, processing or use of defence articles. A defence service also includes the provision of ITAR-controlled technical data to a foreign person and certain military training to foreign units or forces.

Examples of defence services provided by a US person include conducting or participating in a design review, disclosing how to conduct engineering investigations or analysis, transferring design methodologies or processes, disclosing manufacturing know-how, or providing training on the operation of a defence article. For purposes of a defence service, it does not matter whether the subject defence article is of US or foreign origin.

As a practical matter, for ITAR-free product lines, a non-US company must carefully segregate US and non-US design, development and engineering efforts in order to avoid potential taint.

An example of a non-US item becoming subject to the ITAR through US ‘technical data’ or ‘technical assistance’ is as follows: ‘Company B’ is manufacturing a commercial telecommunications satellite. It has effectively screened the components to ensure none is subject to the ITAR. However, Company B engages assistance from a US company to design a communications board that will meet satellite requirements. The technical assistance provided by the US company will potentially render the communications board subject to ITAR requirements. Once the board is incorporated into the satellite the entire satellite becomes subject to the ITAR via the See Through rule.

(2) Foreign article incorporating ITAR-controlled component

Systems integrators in the European Union are all too familiar with this criterion and the application of the See Through rule. In this case, a system or higher level assembly is subject to the ITAR if it simply incorporates a component, part, accessory or attachment that is subject to the ITAR. When designing a compliance program, these non-US integrators establish screening mechanisms to ensure that the systems do not, in fact, contain ITAR components.

Winds of change are blowing

US export controls on commercial satellites have a long history and two events are of primary importance. The first occurred in October 1996 when the export control jurisdiction of commercial satellites and related items was transferred from the US Department of State to the US Department of Commerce. As background, the Department of Commerce administers and the US Export Administration Regulations (‘EAR’), which controls exports and re-exports of items that are ‘dual use’ (i.e. of general design and having both civil and military/space applications) or civil in nature. Prior to this transfer, many items related to commercial satellites were subject to the ITAR and under the jurisdiction of the Department of State.

The second key event occurred in 1999 when commercial satellites were transferred back to the ITAR. The impetus for this decision was a US government investigation into exports of sensitive satellite technology from the US to China. In response to the investigation, the US Congress passed legislation that removed authority from the President to determine the export controls placed on commercial satellites and subsequently transferred jurisdiction back to the ITAR.

Over the past decade, the US satellite industry and other interested parties (including ourselves) have advocated for the return of commercial satellites to the EAR. In 2009, Congress took an important step and passed legislation that would give back to the President the authority to determine export controls over commercial satellites. The legislation also includes an important exception. In order to address concerns related to China, the presidential authority may not be exercised with respect to any satellite or related component that may be transferred to, or launched into outer space by China.

The bill was received by Senate in 2009 and has been referred to the Committee on Foreign Relations where it remains today. We are hopeful that movement will occur during 2011, though stiff political opposition is expected by some key congressman. The central concern, though seemingly based in politics rather than national security, is that the transfer of commercial satellites to the EAR will lead to the acquisition of such technology by China. However, it’s difficult to argue that control over innocuous components (see EEPROM example above) is truly the best approach to prevent acquisition of sophisticated and cutting-edge satellite technology.

Until legislation is passed, companies must deal with the current reality that commercial satellites are potentially subject to the ITAR. If a non-US company is evaluating whether to go ‘ITAR-free’, it must first carefully consider and address the design flow, bill of materials, and supply chain.

As a practical reference guide, each of these elements is discussed below. The assumption for purposes of this discussion is that the underlying article is specifically designed, developed, modified, configured or adapted for military or space application and therefore potentially subject to the ITAR.

Design flow – ITAR technical data and services

As a threshold matter, a non-US company must first determine if the product can be made without utilizing US origin technical data or assistance in the design, development, modification, or configuration. This means the product must be free from ITAR-controlled technical data and defence services that may take the form of engineering drawings, acceptance criteria, specifications, engineering methods, design philosophy, engineering experience (e.g. lessons learned), analytical methods/tools (e.g. mock-ups, computer models), and manufacturing processes or techniques.

As a practical matter, for ITAR-free
product lines, a non-US company must carefully segregate US and non-US design, development and engineering efforts in order to avoid potential taint. In an ITAR-free environment it is critical to make sure US persons are not involved in providing technical assistance in product design or development activities. This requires consideration and management of the following:

- Composition of design teams
- Location of design databases
- Use of common process or manufacturing technology
- Use of US origin design specifications

### Bill of materials – ITAR defence articles

Through operation of the See Through rule, a company may taint an ITAR-free product line by incorporating a US defence article. This is the primary way that a product manufactured or assembled outside the United States can become subject to the ITAR. Therefore, it is important to know the export classification for all items and materials used in the bill of materials for a product. This includes parts, components, and other materials.

**In order to prevent application of ITAR brokering requirements for US persons, the non-US company’s sales organization should also be segregated.**

Key considerations in evaluating materials to be used in an ITAR-free product include:

- What is the export classification of the item?
- Where is the item sourced?
- What are the technical features?
- Was the item specifically designed for use in the product?

One common practice is to request an export control certification from vendors and suppliers. That said, if a supplier does change the classification of an item or material to ‘ITAR’, the entire supply chain may be disrupted. Therefore, it is important to maintain open communication with suppliers on issues related to export classification and any proposed or subsequent changes.

### US involvement – sales and support

The ITAR also controls the activities of parties that serve as ‘brokers’. A broker is ‘any person who acts as an agent for others in negotiating or arranging contracts, purchases, sales or transfers of defense articles or defense services in return for a fee, commission, or other consideration’.

Focusing on brokering requirements as they apply to US persons, the non-US company’s sales organization should also be segregated.

Another way a product can become subject to the ITAR is by entering the United States. While certain exemptions exist, once a product that is specifically designed for military or space applications enters the US it becomes subject to the ITAR. Therefore, a company must consider the specific location for each step in the product lifecycle. This includes, but is not limited to product design, manufacturing, assembly, testing, distribution, warehousing and repair.

This segregation should continue after the sale to include activities such as application support, integration, customization, troubleshooting and failure analysis. This requires using hotlines and helpdesks outside of the United States.

### Conclusion

For a number of reasons, non-US companies continue to implement ITAR-free programmes, though many US and foreign companies are hopeful that the US export control reform effort will lead to a system which allows for the open procurement of US origin parts and technical assistance without the accompanying restrictions.

In the interim, those non-US companies implementing an ITAR-free programme must do so via a robust and carefully managed system. An error in any one area could lead to a system or product that is ITAR-controlled, posing potentially unforeseen delivery or other supply chain related challenges.

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