



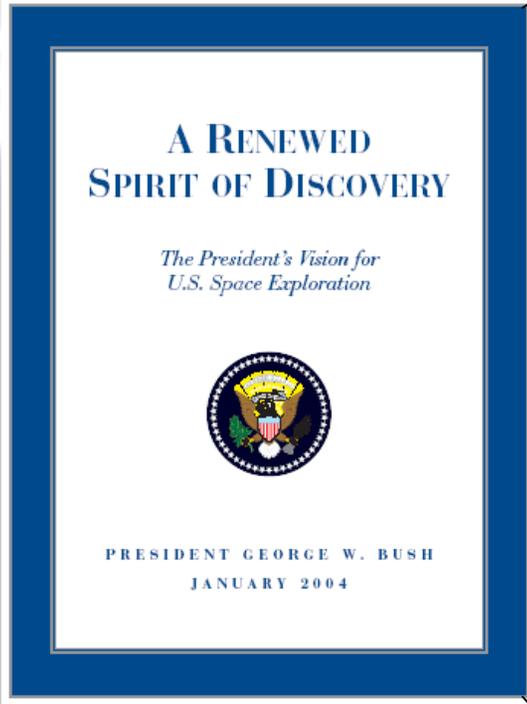
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Why is this relevant to the Vision?

THE FUNDAMENTAL GOAL OF THE VISION FOR U.S. SPACE EXPLORATION IS TO ADVANCE U.S. SCIENTIFIC, SECURITY, AND ECONOMIC INTEREST THROUGH A ROBUST SPACE EXPLORATION PROGRAM



Implement a sustained and affordable human and robotic program to explore the solar system and beyond;

Extend human presence across the solar system, starting with a human return to the Moon by the year 2020, in preparation for human exploration of Mars and other destinations;

Develop the innovative technologies, knowledge, and infrastructures both to explore and to support decisions about the destinations for human exploration; and

Promote international and commercial participation in exploration to further U.S. scientific, security, and economic interests.



Export Control Compliance: Part of the NASA Mission

- “It is NASA policy to ensure that exports and transfers of commodities, technical data, or software to foreign persons are carried out in accordance with United States export control laws and regulations, and Administration and NASA policy.”

(NPD 2190.1, Section 1.a. (May 24, 2001))
- “We want to maximize the benefits of our international efforts while ensuring that we comply with U.S. export control laws and regulations.’ This is the personal responsibility of each employee.”

(NPR 2190.1, Section P.1. (April 10, 2003))
- “The United States is firmly committed to ensuring that certain key technologies, which we possess and some others do not, not be used against us or our allies. That priority is higher for us than partnership in various space endeavors, and this fact must be understood and carefully considered by the parties involved in any putative collaboration. I recognize the bluntness of this assertion, but I believe that each of us, as spacefaring nations, must respect each other’s national priorities, and must speak openly and honestly with each other if there are differences which hamper our ability to collaborate.

(NASA Administrator Griffin, IAC/Valencia, Oct 3, 2006)

Export control compliance is everyone’s job at NASA



Key Export Control & Nonproliferation Principles

- **Compliance with Primary Export Control Laws and Regulations**
 - Export Administration Act
 - Arms Export Control Act
 - Export Administration Regulations (EAR)
 - International Traffic in Arms Regulations (ITAR)
 - 10 CFR 810 Department of Energy regulations
- **U.S. Non-Proliferation and Export Control Policy**
- **P.L. 109-112 – Iran & Syria Non-Proliferation Act** 
 - Restricts extraordinary payments to certain Russian entities in connection with human space flight activities, including the ISS
- **P.L. 106-391 – NASA Authorization Act of 2000** 
 - Requires NASA certification to Congress for activities with Chinese (PRC) entities involving spacecraft, spacecraft systems, launch systems, or scientific or technical information. P.L. 101-246 also restricts activities with PRC



Main Reasons Certain Exports are “Controlled” by U.S. Law

- National Security (NS)
- Foreign Policy (FP)
- Proliferation (MT, NP, CB)





U.S. Nonproliferation & Export Control Policy

The United States will continue to oppose missile programs of proliferation concern, and will exercise particular restraint in missile-related cooperation. We will continue to retain a strong presumption of denial against exports to any country of complete space launch vehicles or major components.

The United States **will not support the development or acquisition of space-launch vehicles** in countries outside the MTCR.

For MTCR member countries, **we will not encourage new space launch vehicle programs, which raise questions on both nonproliferation and economic viability grounds.** The United States will, however, consider exports of MTCR-controlled items to MTCR member countries for peaceful space launch programs on a case-by-case basis . . .



U.S. Space Transportation Policy

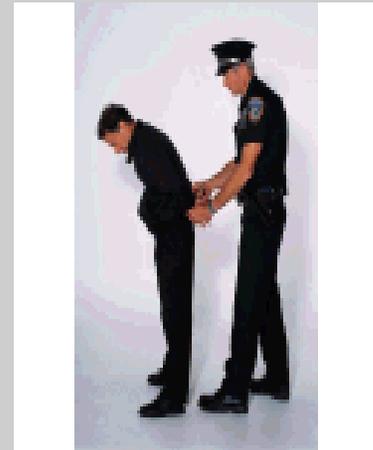
- **Strongly** encourages the use of U.S.-manufactured launch vehicles for U.S. Government payloads, and
- Subjects the use of foreign launch vehicles to significant governmental review & coordination requirements



Here's an important principle

Export Control Violations are Federal Crimes

- Protect Yourself: The Export Laws and Regulations Have Teeth and Can “Bite”
 - **ITAR** Criminal and Civil Penalties
 - Fine of up to \$1 million per violation
 - Imprisonment - 10 years per violation
 - **EAR** Criminal and Civil Penalties
 - Fine of \$1 million
 - Imprisonment for up to 20 years



That's one reason why You need to be concerned about Your export practices



NASA's Export Control Program

- **Formally instituted in November 1995, in close cooperation with the Departments of State and Commerce**
 - Perhaps the U.S. Government's first Agencywide Export Control Program
 - NASA Policy Directive 2190.1: *"The NASA Export Control Program"*
 - NASA Procedural Requirements 2190.1: *"The NASA Export Control Program"*
- **Agency export control policy is centralized in a single office at NASA Headquarters and operated Agencywide under standardized procedures**
- **21 Export Control Administrators and Counsel – appointed by NASA Senior Management – in place at each NASA Center**
 - NASA's experts on export control matters

NASA's Export Control Program supports responsible implementation of the Space Act, the Vision for U.S. Space Exploration, and U.S. National Space Policy



NASA's International Agreements

- **NASA's International Agreements - the basis for NASA foreign cooperative (or reimbursable) activity**
 - **define the responsibilities of the parties, scope of the work to be performed, & the terms and conditions under which the cooperation will be effected**
- **All NASA International Agreements contain a clause on transfers of controlled goods & data**
- **NASA's International Agreements do **NOT** trump export control laws & regulations**

An International Agreement does not replace contractor's need for a TAA or Technical Assistance Agreement



So Just What is An Export?

- **The transfer of anything to a “FOREIGN PERSON” or a foreign destination by any means, anywhere, anytime, or a transfer to a “U.S. PERSON” with knowledge that the item will be further transferred to a “FOREIGN PERSON”**

- **Therefore, it’s all of the following and more:**
 - **Placing information on the Worldwide Web, making data available via ftp sites**
 - **Placing information in the Public Domain**
 - **Verbal discussions w/foreign nationals or presentations to groups that include foreign nationals**
 - **Hand-carrying items outside the U.S.**
 - **Traditional “Shipments” abroad of items via Center transportation offices**
 - **Mailing, faxing, e-mailing items abroad – or to foreign nationals in the U.S.**
 - **etc., etc.**



Deemed Exports

- Exports to Foreign Nationals within the U.S. are considered exports to the FNs Home Country and/or Organization
- NASA Personnel Acting as “Hosts” for FNs Visiting NASA Facilities are Responsible for Screening for Deemed Export Issues



Public Domain v. Export Controlled Information

- Not all “exports” are controlled
- Information in the *Public Domain* is “uncontrolled” and is eligible for unrestricted dissemination
- Information subject to *Export Control* is restricted for dissemination
 - May require a license, or
 - May be eligible for a license exception or exemption



Key Export Control Definitions - ITAR

- **Important ITAR Definitions**

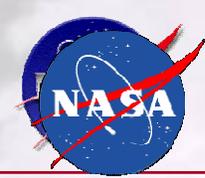
- **“Defense Article”** - any item on the **USML**, including **“technical data”**.

- **Note: Contrary to popular opinion, Defense Articles are not exclusively “military” items; (e.g., with the exception of the Space Station, all *spacecraft* are “Defense Articles”; the Space Shuttle is a “Defense Article”, etc.)**
 - ***Note: A University submitted a commodity jurisdiction to State Department which resulted in reiteration that all scientific instruments that are designed or modified for spacecraft are considered defense articles on the USML under Category XV(e) Spacecraft components.***



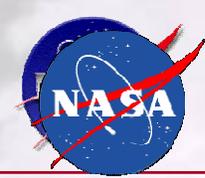
Key Export Control Definitions - ITAR

- **Technical Data -**
 - **information** which is required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance, or modification of “**defense articles**”
 - **classified** information related to “**defense articles**”
 - **information covered** by an invention secrecy order
 - **software** directly related to “**defense articles**”
 - does not include information **concerning general scientific, mathematical or engineering principles commonly taught in schools, colleges and universities** or information in the “**public domain**”.
 - does not include basic marketing information **on function or purpose or general system descriptions** of “**Defense Articles**”.



Key Export Control Definitions - ITAR

- **“Public Domain” refers to information which is published and which is generally accessible or available to the public:**
 - through sales at newsstands and bookstores;
 - through subscriptions available without restriction to any individual who desires to obtain or purchase the published information;
 - through second class mailing privileges granted by the U.S. government
 - at libraries open to the public/from which the public can obtain documents;
 - through patents available at any patent office;
 - through unlimited distribution at a conference, meeting, seminar, trade show or exhibition, generally accessible to the public, in the U.S.;
 - **through public release (i.e., unlimited distribution) in any form (e.g., not necessarily in published form) after approval by the cognizant U.S. government department or agency;**
 - through **fundamental research** in science and engineering at accredited institutions of higher learning in the U.S. where the resulting information is ordinarily published and shared broadly in the scientific community.



Key Export Control Definitions - ITAR

Fundamental Research

- is defined to mean basic and applied research in science and engineering **where the resulting information is ordinarily published and shared broadly within the scientific community, as distinguished from research the results of which are restricted for proprietary reasons or specific U.S. government access and dissemination controls.***
- *Note the similarity between this exclusion from export control and the exclusion from National Security classification for “basic scientific research” in Section 1.7 of Executive Order 12958, as amended.*
- **University research** will *not* be considered “**fundamental research**” if:
 - the University or its researchers **accept other restrictions on publication of scientific and technical information resulting from the project or activity, or**
 - **the research is funded by the U.S. government and specific access and dissemination controls protecting information resulting from the research are applicable.**



NASA Contractors and Export Control

- The Department of State and the Department of Commerce staff license applications to NASA for review
- NASA contractors, should be coordinating with NASA in advance of any license application that they intend to submit and which will further a NASA program
 - NASA might have useful input in framing the application and can advocate for its timely approval
 - Seeing applications after the fact can result in delays, and if not to our liking or not framed correctly, an RWA
- NFS Clause 1852.225-70 “Export Licenses” – required in all domestic contracts
- Contractors have responsibility to obtain any required licenses unless otherwise agreed with NASA
- NPR 2190.1 requires export plans and reporting for exports effected in support of NASA programs



The International Traffic in Arms Regulations (ITAR)

22 CFR 120-130

***Updated via Federal Register Notices**

<http://www.pmdtc.org/>



United States Munitions List (USML) - 22 CFR 121

- I - Firearms
- II - Artillery Projectors
- III - Ammunition
- ****IV - Launch Vehicles, etc...***
- ****V - Explosives, Propellants, Incendiary Agents and Their Constituents***
- VI - Vessels of War and Special Naval Equipment
- VII - Tanks and Military Vehicles
- VIII - Aircraft and Associated Equipment
- IX - Military Training Equipment
- X - Protective Personnel Equipment
- XI - Military Electronics
- ****XII - Fire Control, Range Finder, Optical and Guidance and Control Equipment***
- ****XIII - Auxiliary Military Equipment***
- XIV - Toxicological Agents and Equipment and Radiological Equipment
- ****XV - Spacecraft Systems and Associated Equipment***
- XVI - Nuclear Weapons Design and Related Equipment
- XVII - Classified Articles, Technical Data and Defense Services Not Otherwise Enumerated
- XVIII - Directed Energy Weapons
- XIX - Reserved
- XX - Submersible Vessels, Oceanographic and Associated Equipment
- XXI - Miscellaneous Articles

Proscribed Countries - 22 CFR 126.1

- If a country appears on the “proscribed country” list, it is (generally) U.S. policy to deny licenses, or other approvals, associated with exports and imports of defense articles and defense services, destined for or originating in that country
- **ITAR** License Exemptions are trumped if a “**foreign person**” from any of these countries is involved; i.e., a license must be applied for.



ITAR Proscribed Countries - 22 CFR 126.1

- **AFGHANISTAN (case by case)**
- **BELARUS**
- **BURMA**
- **CHINA (PRC)**
- **CONGO (case by case)**
- **CUBA**
- **CYPRUS**
- **ERITREA**
- **FIJI**
- **HAITI**
- **INDONESIA (case by case)**
- **IRAN**
- **IVORY COAST**
- **IRAQ (case by case)**
- **LEBANON**
- **LIBERIA**
- **LIBYA (case by case)**
- **NORTH KOREA**
- **PALESTINIAN AUTHORITY**
- **RWANDA (case by case)**
- **SOMALIA**
- **SUDAN**
- **SYRIA**
- **THAILAND**
- **VENEZUELA**
- **VIETNAM**
- **YEMEN**
- **ZIMBABWE**

NOTE: Fiji and Thailand are identified as a result of State Department press statements posted in the Jan 07 ITAR Handbook notes, 22CFR §126.1.



The International Traffic in Arms Regulations (ITAR)

- **“Temporary” v. “Permanent” exports of “defense articles”**
 - Under the **ITAR** a **temporary export** is less than four (4) years with no transfer of title.
 - A **permanent export** is four years or over, or anytime there is a transfer of title.
- **“Temporary” imports***
 - Temporary import is up to four (4) years
- **Examples of Permanent v. Temporary Exports**
 - The export of an **ITAR** controlled NASA satellite or satellite component outside the U.S. solely for launch on a foreign launch vehicle is a **“Permanent Export”**
 - The transfer of control of an **ITAR** controlled NASA satellite on-orbit to a **“foreign person”** is an export and can be either **“Permanent”** or **“Temporary”**.

- **Licenses v. Exemptions**

- When required, NASA seeks and obtains **ITAR** export licenses prior to effecting an export
- As a government agency, NASA enjoys certain license exemptions not available to industry
- These exemptions do not apply in all circumstances and **never** when dealing with “**foreign persons**” of **proscribed** countries (22 CFR 126.1)

- **Export Licenses**

- Export licenses are issued by the Dept of State for the export of “**defense articles**”. Most frequently used **ITAR** license type by NASA:
 - DSP-5 - Permanent Export License (for Unclassified Defense Articles)
- When required, **NASA licenses are obtained per our internal Export Control Program (ECP)**, contact local export officials for procedures

- **License Exemptions**

- The **ITAR** contains numerous **exemptions*** to licensing requirements, but not to the fact that an item is subject to control
 - *Use of **exemptions** is pursuant to the specific provisions of the **ITAR**, the **NASA ECP** and the **NASA/Foreign Partner International Agreement**



The ITAR in Civil Space

Commonly-used ITAR License Exemptions

- 123.4(a) & (b) – Temporary imports
- 123.16(b) – Exports of parts, components, models
- 125.4(b)(1) – Technical data exports directed by DOD
- **125.4(b)(3) – Technical data exports directed by USG agency**
- 125.4(b)(5) – Technical data exports for lawfully exported articles
- 125.4(b)(7) – Technical data returned to sender
- 125.4(b)(10) – Technical data disclosed to university employees
- 125.4(b)(11) – Technical data authorized by DTC written exemption
- 125.4(b)(13) – Publicly available data about defense articles
- **125.5(c) – Plant visits**
- **126.4(a) – Exports by or for USG agency**
- 126.4(c) – Imports/Exports for use by USG agency abroad
- 126.5 – Canadian Exemptions



The ITAR in Civil Space

ITAR Defense Service Exemptions

- Except for the new University exemption, a DOD bid proposal exemption, and the Canadian exemption, don't bother looking for "defense service" exemptions
- And be mindful that a Technical Assistance Agreement is required even if assistance on a defense article involves 100% public domain information
- NASA is working to change this for NASA programs



Rule of Thumb - NASA seeks and obtains ITAR export licenses for . . .

- the permanent transfer of hardware on the USML,
- for any export of information (technical data) required for the detailed design, development, manufacture or production of a Defense Article
- for any transfer of hardware or technical data involving a “foreign person” in or from a “proscribed country”.



The NASA ITAR Experience

- **Some important successes**

- The Departments of State, Defense, Commerce, and NASA have fashioned a longstanding, cooperative, and productive relationship to improve the NASA ECP and enhance compliance
- Prompt turnaround of critical NASA licenses on an as-requested basis (e.g., MiniSAR and M³ for the Chandrayaan-1 mission)
- Cooperative interagency development and approval of a unique Global Technical Assistance Agreement (TAA) for the NASA Space Flight Operations Contract (SFOC)

- **Some significant challenges**

- Foreign Governments' reluctance to sign TAAs
- Problematic TAA provisos (conditions) regarding anomaly resolution, third-country nationals/dual-nationals, and Non-Disclosure Agreements (NDAs)
- Delays in processing NASA contractors' licenses and TAAs (improving)



The Export Administration Regulations (EAR)

15 CFR 730-774

***Updated via Federal Register Notices**

<http://bis.doc.gov>



The Export Administration Regulations (EAR)

- Regulations which control the export of goods and technical data on the Commerce Control List (CCL), including certain items on the Missile Technology Control Regime Annex.
- Items on the CCL are typically referred to as “dual-use” items.



The Commerce Control List (CCL) - 15 CFR 774

- Category 0 - Nuclear Materials, Facilities and Equipment and Misc.
- Category 1 - Materials, Chemicals, Microorganisms and Toxins
- Category 2 - Materials Processing
- *Category 3 - Electronics*
- *Category 4 - Computers*
- Category 5 - Telecommunications and Information Security
- *Category 6 - Lasers and Sensors*
- *Category 7 - Navigation and Avionics*
- Category 8 - Marine
- *Category 9 - Propulsion Systems, Space Vehicles and Related Equipment*



The EAR in Civil Space

Commonly-used EAR License Exceptions

- NLR No License Required
- **GOV (15 CFR § 740.11) Governments & International Org**
- GBS (15 CFR § 740.4) Country Group B Shipments
- RPL (15 CFR § 740.10) Servicing and Replacement
- LVS (15 CFR § 740.3) Limited Value Shipments
- **CIV (15 CFR § 740.5) Civil End-Users**
- CTP (15 CFR § 740.7) Computers
- TSU (15 CFR § 740.13) Technology & Software Unrestricted
- TSR (15 CFR § 740.6) Technology & Software Restricted
- **TMP (15 CFR § 740.9) Temporary Imports & Exports**
- ENC (15 CFR § 740.17) Encryption Commodities & Software

CAUTION - *Only use an exception after reading all conditions & provisions and ensuring it applies to your particular situation*

- **Rule of Thumb for Controlled Exports**
 - Unless a license exception exists for which the export qualifies, **NASA seeks and obtains export licenses from BIS**



Imports By or For NASA

TWO DISTINCT ASPECTS

- IMPORT LICENSING
 - IMPORT “DUTY”
-
- When NASA “temporarily” imports ITAR Defense Articles, we use our ITAR license exemption authority at 22 CFR 126.4
 - authorizes Defense Article imports pursuant to an approved international activity
 - When NASA “permanently” imports ITAR Defense Articles, no license is required per 27 CFR § 47.53 - BATF Regulations
 - In general, import licenses are not required under the EAR



Import Duty

- Most NASA No-Exchange-of-Funds International Agreements provide for the waiver of U.S. import duty (and vice-versa for foreign import duty)
- NASA authority for such waivers is found in the Harmonized Tariff Schedule of the U.S. -- 9808-00-80
- NASA policy on such waivers is found in 14 CFR § 1217
- Space Act Agreements Manual, Import Duty Clause
 - **3.5.r; 4.2.a. "Customs/Taxes/Immigration" Sample Clause**
 - In accordance with its laws and regulations, each party shall facilitate free customs clearance and waiver of all applicable customs duties and taxes for equipment and related goods necessary for the implementation of this agreement. In the event that any customs duties or taxes of any kind are nonetheless levied on such equipment and related goods, such customs duties or taxes shall be borne by the party of the country levying such customs duties or taxes. The parties` obligation to ensure duty-free entry and exit of equipment and related goods is fully reciprocal.
- ***N.B.: Don't confuse Duty-Free Import Authority with whether or not an "Import License" is required***



Closing

- The Department of State is the regulatory authority for defense articles and defense services. Contact the Directorate of Defense Trade Controls for questions, export licenses, commodity jurisdiction requests, and technical assistance agreements
<http://www.pmdtcc.state.gov/>
- The Department of Commerce is the regulatory authority for dual-use items. Contact the Bureau of Industry and Security for licenses and classification requests for dual use items
<http://www.bis.doc.gov/>
- My email is pgeisz@nasa.gov
- The NASA Export Control Program is at
<http://www.hq.nasa.gov/office/oer/nasaecp/index.html>