U.S. Export Controls on Technology Transfers

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Transforming Ideas into Opportunities

Webinar Description

- Technology practitioners are often unaware of U.S. government regulations governing the export of technology outside the U.S. or with foreign nationals located in the U.S. or abroad. Whether you work for a corporation, university, or any other institution, you should have a general awareness of legal restrictions on the export of certain technical information. Restricted transfers can take place when you send technical information via:
  - email
  - data downloads, or
  - oral conversations

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Webinar Description (cont'd)

- Who is authorized to receive such information and when do you need to obtain an authorization from the government?

- How will that information be used abroad (or in the U.S.)?

- Do you have procedures for sharing restricted technology with foreign persons in the U.S. and abroad?

- Does your institution have a procedure for laptop travel abroad?

- Violations of the rules could yield penalties in the millions of dollars and jail time. We will cover the basics of U.S. export controls under the Export Administration Regulations, case examples, and best practices.
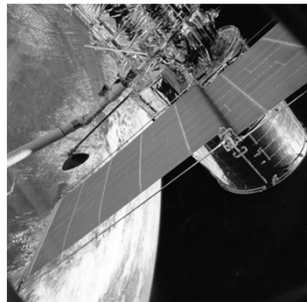
Agenda

- Overview of U.S. Export Control Agencies

- Scope of Export Administration Regulations

- Restricted End users/End-uses

- Technology Transfers/Deemed Exports

- Penalties

- Case Examples

- Best Practices

Overview of U.S. Government Export Laws

- Exports are highly controlled for various reasons
    - National Security
    - Trade Secrets
    - Statistics

Multilateral Export Regimes

Who Controls U.S. Exports?

U.S. Department of Commerce, Bureau of Industry and Security (BIS)
- Export Administration Regulations (EAR)
- Dual-use items and lower level military
- Commerce Control List (CCL)

U.S. Department of State, Directorate of Defense Trade Controls (DDTC)
- International Traffic in Arms Regulations (ITAR)
- Defense articles, or items
- United States Munitions List (USML)

Who Controls U.S. Exports? (cont'd)

Homeland Security, U.S. Customs and Border Protection
- "Police" the borders
- Enforce exports at all U.S. borders

Department of Commerce, Census Bureau
- Collects and reports trade statistics

Department of Treasury, Office of Foreign Assets Control
- Enforces U.S. mandated embargoes and sanctions

Bureau of Industry and Security (BIS)

- BIS controls exports of commercial and dual-use articles

- BIS also controls associated
    - production equipment
    - technology
    - software
    - materials

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Structure of the EAR and Commerce Control List

- The Export Administration Regulations (EAR)
    - 15 CFR Parts 730-744
    - Commerce Control List

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Scope of the EAR

- Goods in the U.S.
- Foreign goods with U.S. content
- Foreign persons
- U.S. persons
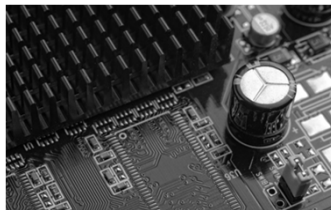
What is an "Export?"

- Exports
  - Tangible and Intangible
- Re-Exports
  - Shipments from one foreign country to another of US-origin goods, or foreign made goods containing certain US-origin parts, components or materials
- In-Country Transfers
  - Shipment from a party in one country to another party in the same country

Export Licenses

- You, as the "exporter of record," must determine whether your export requires a license
- Required for a small percentage of US exports
- Issued by BIS
- Factors considered
    - technical characteristics
    - end-user
    - end-use
    - destination country
- Most exports are "NLR" (No License Required)

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Questions to Ask

- What are you exporting?
- Where are you exporting?
- Who will receive your item?
- What will your item be used for?

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Commerce Control List

Categories	
0	Nuclear and Miscellaneous
1	Materials, Chemicals, Microorganisms and Toxins
2	Materials Processing
3	Electronics
4	Computers
5, Part 1	Telecommunications
5, Part 2	Information Security
6	Sensors and Lasers
7	Navigation and Avionics
8	Marine
9	Aerospace and Propulsion

Product Groups	
A	Systems, Equipment & Components
B	Test, Inspection & Production Equipment
C	Materials
D	Software
E	Technology

Commerce Control List (cont'd)

- Is your product described on the CCL?
  - If so, your item is subject to the EAR and *may* require a license, depending on
    - Reasons for control
    - Destination country

Reasons for Control Under the EAR

- AT   Anti-Terrorism
- CB   Chemical and Biological Weapons
- CC   Crime Control
- CW   Chemical Weapons Convention
- EI   Encryption Items
- FC   Firearms Convention
- MT   Missile Technology

- NS   National Security
- NP   Nuclear Nonproliferation
- RS   Regional Stability
- SS   Short Supply
- UN   United Nations Embargo
- SI   Significant Items
- SL   Surreptitious Listening

EAR Country Chart

- Use the EAR Country Chart to cross reference the Reason(s) for Control with the destination country to determine whether a license is required

SUPPLEMENT No. 1 TO PART 738—COMMERCE COUNTRY CHART

[Reason for control]

Countries	Chemical and biological weapons			Nuclear nonproliferation		National security		Missile tech	Regional stability		Firearms convention	Crime control			Anti-terrorism	
	CB 1	CB 2	CB 3	NP 1	NP 2	NS 1	NS 2	MT 1	RS 1	RS 2	FC 1	CC 1	CC 2	CC 3	AT 1	AT 2
Afghanistan	X	X	X	X		X	X	X	X	X		X		X		
Albania[2][3]	X	X		X		X	X	X	X	X			X			
Algeria	X	X		X		X	X	X	X	X		X		X		
Andorra	X	X		X		X	X	X	X	X		X		X		
Angola	X	X		X		X	X	X	X	X		X		X		
Antigua and Barbuda	X	X		X		X	X	X	X	X	X	X		X		
Argentina	X			X		X		X	X		X	X		X		

Commerce Control List

- Remember
  - CCL is not limited to tangible items
  - Certain software and technology are also listed in the CCL

Commerce Control List (cont'd)

- Example – Software
  - 2D002
    - "Software" for electronic devices, even when residing in an electronic device or system, enabling such devices or systems to function as a "numerical control" unit, capable of coordinating simultaneously more than 4 axes for "contouring control"
- Example – Technology
  - 3E101
    - "Technology" according to the General Technology Note for the "use" of equipment or "software" controlled by 3A001.a.1 or .2, 3A101, or 3D101

Commerce Control List (cont'd)

- How does US Government decide which items and technology to control?

  - Multilateral Export Control Regimes

  - Unilateral Controls

Information Not Subject to the EAR

- "Publicly Available" information

  - Information already **published** or will be published

  - Information that arises during, or results from **fundamental research**

  - **Educational** information

  - Information included in certain **patent** applications

  - Non-proprietary system descriptions

Information Not Subject to the EAR (cont'd)

- What is "published information?"
    - When made available to the public **without restrictions** upon further dissemination
        - Subscriptions
        - Libraries
        - Unlimited distribution at a conference, meeting, seminar, trade show, or exhibition generally accessible to the public
        - Public dissemination in any form, including posting on the internet on sites available to public

Information Not Subject to the EAR (cont'd)

- What is "fundamental research?"
    - Research in science, engineering, or mathematics, the results of which ordinarily are **published** and shared broadly within the research community, and for which the researchers have **not** accepted restrictions for proprietary or national security reasons.

Information Not Subject to the EAR (cont'd)

- What educational information is excluded from the EAR?
    - Information released by **instruction** in a catalog course or associated teaching laboratory of an academic institution

Unauthorized End Users/ End Uses

- Exporters responsible for conducting due diligence to ensure export is not destined for prohibited end-use, end-user, or destination

| IRAN | Abbas Goldoozan, No. 86 Negin Tower, Farmaniyeh St., 1937944633 Tehran, Iran (See also alternate address under Turkey). | For all items subject to the EAR. (See §744.11 of the EAR) | Presumption of denial | 80 FR 22640, 4/23/15. |

Unauthorized End Users/ End Uses (cont'd)

- You cannot proceed with a transaction with knowledge that a violation of the export regulations is occurring or is about to occur

- "Knowledge" does not always mean "you knew"
    - It also means you "should have known"
    - Cannot self-blind

- "Know Your Customer" and "Red Flag" Guidance on BIS website

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How to Access the EAR and CCL

- The BIS website is www.bis.doc.gov
    - Contains guidelines, online training, and links to resources
    - BIS also has regional offices in Newport Beach and San Jose, CA

- You can find the EAR and CCL on the BIS website

- Most recent regulations available on Government Printing Office website (http://www.ecfr.gov)

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Technology and Deemed Exports

- Technical information or "technology" relating to a controlled product is also controlled under the export regulations

  - Drawings
  - Manuals
  - Blueprints
  - Photographs
  - Instructions

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Technology and Deemed Exports (cont'd)

- Sharing of technical information with foreign persons (in the U.S. or abroad) is considered an export and should be reviewed for licensing requirements

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Technology and Deemed Exports (cont'd)

- Definition of "export" under the EAR

  - An actual shipment or transmission of items subject to the EAR out of the United States, or

  - The <u>release of technology or software subject to the EAR to a foreign national within the US</u>

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Technology and Deemed Exports (cont'd)

- Understanding the EAR Terminology

  - What is a "release?"

  - Who is a "foreign person?"

  - What is "technology?"

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Technology and Deemed Exports (cont'd)

- "Release"

  - visual or other inspection by foreign nationals of U.S.-origin items that reveal technology

  - oral or written exchanges of technology with a foreign person in the U.S. or abroad

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Technology and Deemed Exports (cont'd)

- "Foreign Persons"
  - Not U.S. Citizens
  - Not Legal Permanent Residents ("green card" holders)
  - Not Protected Persons as defined under special provisions of U.S. law (for example, refugees, asylees)

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Identifying Technology Under the EAR

- Under the EAR, "Technology" is defined as
  - Specific information necessary for the "development," "production," or "use" of a product
- Information can take the form of "technical data" or "technical assistance"

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Identifying Technology Under the EAR (cont'd)

- **Development:** Development is related to all stages prior to serial production, such as: design, design research, design analyses, design concepts, assembly and testing of prototypes, pilot production schemes, design data, processing of transforming design data into a product, configuration design, integration design, layouts

- **Production:** Means all production stages, such as: production engineering, manufacture, integration, assembly (mounting), inspection, testing, quality assurance

- **Use:** Means operation installation (including on-site installation), maintenance (checking), repair, overhaul and refurbishing

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Form I-129 Export Control Certification

- **Question**: Will the foreign worker <u>in the U.S.</u> have access in the workplace to technology for which an export license is required?

  - Applies to workers employed as H-1B, L-1 or O-1A beneficiaries

  - If license required, petitioner must certify it will prevent foreign worker's access to controlled technology until license is obtained

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Form I-129 Export Control Certification (cont'd)

Part 6. Certification Regarding the Release of Controlled Technology or Technical Data to Foreign Persons in the United States

(This section of the form is required only for H-1B, H-1B1 Chile/Singapore, L-1, and O-1A petitions. It is not required for any other classifications. Please review the Form I-129 General Filing Instructions before completing this section.)

Select Item Number 1. or Item Number 2. as appropriate. DO NOT select both boxes.

With respect to the technology or technical data the petitioner will release or otherwise provide access to the beneficiary, the petitioner certifies that it has reviewed the Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR) and has determined that:

1. ☐ A license is not required from either the U.S. Department of Commerce or the U.S. Department of State to release such technology or technical data to the foreign person; or

2. ☐ A license is required from the U.S. Department of Commerce and/or the U.S. Department of State to release such technology or technical data to the beneficiary and the petitioner will prevent access to the controlled technology or technical data by the beneficiary until and unless the petitioner has received the required license or other authorization to release it to the beneficiary.

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Technology Releases

What is your area of risk?

- Discussions
- Site visits
- E-mails
- Product design
- Server access

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Technology Releases (cont'd)

- Risk area: technical information provided by 3rd party business partners
    - Must also be evaluated for license
        - Business partner may be "providing access to" the foreign national
        - Example
            - joint R&D projects
        - Non-disclosure agreements between parties do not eliminate licensing requirements for sharing of technology with foreign nationals

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Continuous Monitoring of Technology

- Identify your methods of export/reexport of technology
    - How is that information accessed
    - Review is an ongoing process
- Where is your technology located?
    - Servers, laboratory, drawings, file cabinets, intranet, within U.S., outside U.S.

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Penalties

- Penalties have increased over the last ten years

  - Civil fines up to $300,000 or twice the amount of the transaction at issue, whichever is greater; and

  - Criminal penalties up to $1,000,000 per violation, with the potential length of imprisonment up to 20 years per violation

  - Denial of export privileges

  - Personal liability for parties involved

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In the News

- 2017 National Security Strategy Priority Areas

  - Artificial Intelligence
  - Data Science
  - Encryption
  - Autonomous Technologies
  - Gene editing
  - New materials
  - Nanotechnology
  - Advanced Computing Technologies

NATIONAL SECURITY
STRATEGY
of the United States of America

DECEMBER 2017

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In the News

- Potential Restrictions on Chinese Researchers in Academia

The New York Times — April 30, 2018

White House Considers Restricting Chinese Researchers Over Espionage Fears

NATIONAL SECURITY STRATEGY
of the United States of America

DECEMBER 2017

TIGHTEN VISA PROCEDURES:
The United States will review visa procedures to reduce economic theft by non-traditional intelligence collectors. We will consider restrictions on foreign STEM students from designated countries to ensure that intellectual property is not transferred to our competitors, while acknowledging the importance of recruiting the most advanced technical workforce to the United States.

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In the News

- U.S. Restrictions on Foreign Investment in Technology

THE FOREIGN INVESTMENT RISK REVIEW MODERNIZATION ACT OF 2018 (FIRRMA)
FIRRMA was signed into law on August 13, 2018.

The Committee on Foreign Investment in the United States (CFIUS)

- Congress expanded scope of transactions subject to CFIUS national security review if they encompass certain "critical technologies," which now include "emerging and foundational technologies," to be determined in the future.

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Case Examples

- 2008: Retired physics professor J. Reece Roth tried and convicted for technology transfer violations
    - Allowed two students (Chinese and Iranian) unrestricted access to information about technology used in a U.S. Air Force project
    - Took documents related to that project on a trip to China in 2006
    - 18-count indictment, and full 18-count conviction

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Case Examples (cont'd)

- Roth sentenced to 4-year prison term
- In January 2011, the 6th Circuit denied Roth's appeal and affirmed the prison term
- Supreme Court denied Writ of Certiorari
    - Argued that he should be held to a 'heightened standard of intent'
        - The Government must show that he intended to violate specific laws, not just any law
        - Also that the regulations were ambiguous and difficult to understand
        - In October 2011, the U.S. Supreme Court turned him down
- Moral of the Story: Claiming 'ignorance of the law" will not work

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Best Practices

- Identify and classify your inventory of products, software and technology
- Identify methods of export/reexport of technology
- Adopt a Technology Control Plan

Best Practices (cont'd)

- Create a classification database of products, software, and the technology associated with those products and software

Best Practices (cont'd)

- Identify your methods of export / reexport of technology
  - How is your information accessed or released
    - visual inspection / oral exchanges / travel abroad
  - Who are foreign persons
    - U.S. citizens employed by subsidiaries abroad
    - interns
    - visitors
  - Identification is an ongoing process

Best Practices (cont'd)

- Assign priorities based on a risk assessment
  - Start with the highest risk
    - Sensitivity of technology and countries involved

Best Practices (cont'd)

- Conduct periodic **testing** of IT and physical security technology controls
    - Are control groups properly populated / permissions set properly
    - Determine level of potential access by foreign persons within IT system and physical spaces
- Outside party review can help identify gaps

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Best Practices (cont'd)

- Provide Export Compliance Training to Employees
    - Many organizations require that all new employees attend export compliance training
- Adopt a Technology Control Plan (TCP)
    - Outlines your formal processes/procedures to limit unauthorized access to controlled items and technology

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Best Practices (cont'd)

- Who is responsible for Technology Control Plan (TCP)
    - Designate a Technology Control Officer
    - Establish Technology Control Team comprised of
        - technical staff
        - operations staff
        - IT representative
        - IP representative
        - security representative
        - HR representative
    - Create formal process to review products and technologies prior to release to foreign persons

Best Practices (cont'd)

- Content of a Technology Control Plan (TCP)
    - Definitions relating to releases of technology
    - Identifies specific information that constitutes "technology"
    - Outlines procedures to limit unauthorized access
        - Building security procedures
        - Information security procedures
    - Personnel screening
    - Hard copy technology
    - Training
    - Laptop Travel Policy

Best Practices (cont'd)

- Implementing a Technology Control Plan (TCP)
    - Conduct formal roll-out of TCP with employee training
    - Provide copies of TCP to all new employees
    - Provide regular training on content and use of TCP
    - Modify content of TCP as new situations arise

Contact Information

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