



U.S Department of Commerce  
Bureau of Industry and Security

***NOAA Export Control Workshop***

*September 25<sup>th</sup> & 26<sup>th</sup>, 2007*



# Agenda

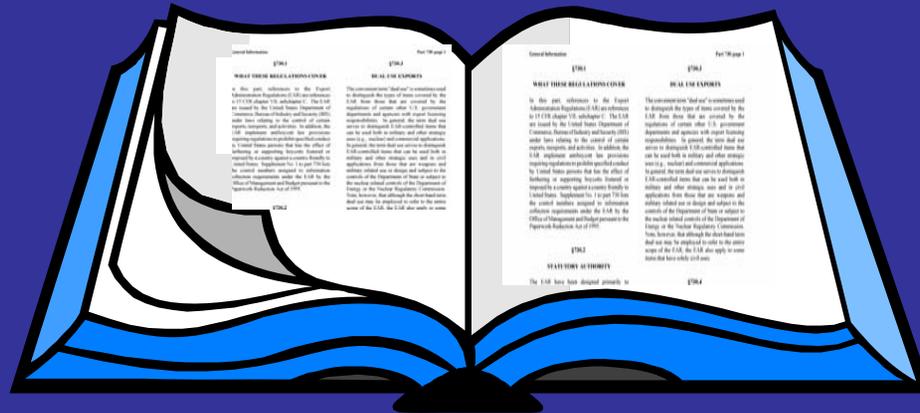
- Review of export controls:
  - EAR
  - Commerce Control List (CCL)
  - Commodity Classification
- Deemed exports
  - Decision making sequence of analysis
  - Issues:
    - “Use” technology
    - Export controls in the context of fundamental research
    - Country of origin based on country of birth
  - Licensing:
    - Technology Control Plan
    - License exception
    - Deemed Export license processing



# *Export Controls Review*

# Authority for Export Controls

- Export Administration Act (EAA) of 1979, as amended
- International Emergency Economic Powers Act, as amended





# Export Administration Regulations (EAR)

- Implement the Export Administration Act
- Apply to “dual-use” items
  - Civil as well as military use
  - Not primarily for weapons or military related use
- **Broad jurisdiction but narrow controls**
- [www.bis.doc.gov](http://www.bis.doc.gov)



# Department of Commerce Export Licensing Jurisdiction

- Is the item subject to the Export Administration Regulations?
- Is the item not subject to the Export Administration Regulations?
  - Export jurisdiction of another agency
  - Publicly available technology
  - De minimis
- “Dual-use” items include hardware, materials and associated production, development or use technologies
- Jurisdiction includes exports and reexports of U.S. origin items



# Other Regulatory Agencies

- **U.S. Department of State - Directorate of Defense Trade Controls**
- U.S. Department of Justice - Drug Enforcement Administration
- U.S. Department of Interior - Fish & Wildlife Service
- U.S. Department of Energy
- U.S. Nuclear Regulatory Commission
- U.S. Department of Treasury - Office of Foreign Assets Control
- U.S. Department of Commerce - Office of Patent & Trademarks
- U.S. Department of Agriculture
- U.S. Department of Health and Human Services - Food & Drug Administration



# Export Control Regimes

- Wassenaar Arrangement
  - Supplement 1 to Part 743
- Missile Technology Control Regime (MTCR)
  - Supplement 1 to Part 740 (A:2)
- Australia Group (AG)
  - Supplement 1 to Part 740 (A:3)
- Nuclear Suppliers Group (NSG)
  - Supplement 1 to Part 740 (A:4)



# Important EAR Terms

- “Subject to the EAR”
- Item
- Export
- Re-export
- Deemed export/release of technology
- Export Control Classification Number (ECCN)

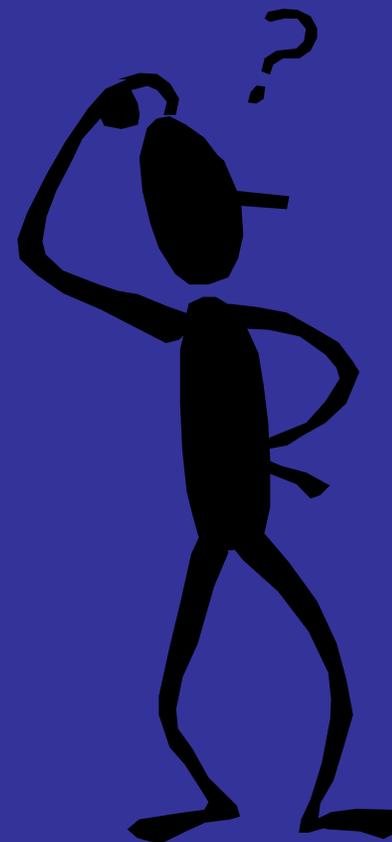


**Items Subject to the**  
**Export Administration Regulations (EAR)**



# *“What is Subject to the EAR?”*

- Items in the U.S.
- Items located outside of the U.S.
- Activities of U.S. Persons & Foreign Nationals





# Subject to the EAR

## Part 734.3

### Items in the U.S., except:

- Publicly available technology & software (excluding encryption)
- Items subject to the exclusive jurisdiction of another Federal Department or Agency
- Publications that are artistic or non-technical in nature



# Subject to the EAR

## Part 734.3

### Items located outside the U.S.:

- U.S. Origin items wherever located
- Certain foreign-made items, if:
  - The foreign-product item is the direct product of U.S. technology or software
  - The value of the U.S. content exceeds the *de minimis* percentage
    - Supplement 2 to part 734 - *de minimis* calculation



# Subject to the EAR

## U.S. Persons & Deemed Export and Reexports

- Certain activities of U.S. persons (section 744.6)
- Deemed exports and reexports of technology or source code released to foreign nationals (section 734.2(b)(4) & (5))



# *How to Classify*



## *“How is an Item Classified for Export Control Purposes?”*

- The Commerce Control List
- Export Control Classification Numbers
- Reasons for Control
- The Country Chart
- Classifying Items
- Technology & Software Controls



# Structure of the Commerce Control List

- Supplement 1 to Part 774
  - Alphabetical Index
  - 10 Categories
  - Entries (Export Control Classification Number)
- General Technology and Software Notes-  
Supplement No. 2



# Export Control Classification Number “ECCN”

- What items are controlled?
- Why BIS controls the product?
- Which destinations require a license?
- Which license exception(s) apply?



# STRUCTURE OF THE ECCN

3 A 001

**3** CATEGORY

**A** PRODUCT GROUP

**001** TYPE OF CONTROL



# Category

- 0 Miscellaneous / Nuclear
- 1 Materials, Chemicals, Microorganisms and Toxins
- 2 Materials Processing
- 3 Electronics
- 4 Computers
- 5 Telecommunications (Pt. 1) and Information Security (Pt. 2)
- 6 Sensors/Lasers
- 7 Navigation & Avionics
- 8 Marine Technology
- 9 Propulsion Systems, Space Vehicles & Related Equipment



# Product Group

A - Systems, Equipment, & Components

B - Test, Inspection & Production Equipment

C - Materials

D - Software

E - Technology



# Numbering System

- 001-099 National Security
- 100-199 Missile Technology
- 200-299 Nuclear Nonproliferation
- 300-399 Chemical & Biological
- 900-999 Foreign Policy
- 980-989 Short Supply/Crime Control
- 990-999 Anti-Terrorism/United Nations



# Reasons for Control

AT = Anti-Terrorism

CB = Chemical &  
Biological Weapons

CC = Crime Control

EI = Encryption Items

FC = Firearms  
Convention

MT = Missile Technology

NS = National Security

RS = Regional Stability

SI = Significant Items

SS = Short Supply

UN = United Nations

NP = Nuclear  
Nonproliferation

SL = Surreptitious  
Listening



# How to Read an ECCN Entry

- Heading - ECCN and Description
- License Requirements
  - Reasons For Control
- License Exceptions (List-Based)
- List of Items Controlled
  - Units
  - Related Controls
  - Related Definitions
  - Items



**3A292**

Deemed Export ECCNs

**Digital Oscilloscope**

Analog-digital conversion, greater than 1 giga-sample per second, 8 bits or greater resolution, stores 256 or more samples

**3D292**

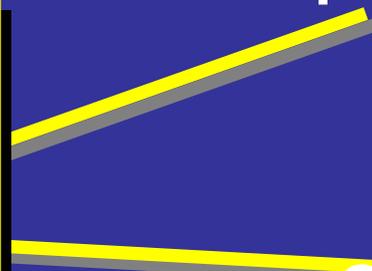
Oscilloscope Software

**3E292**

Oscilloscope Technology

**The deemed export rule affects technology and software.**

Production, development or use technology is controlled



# Acoustics

## 6A001

Object detection systems having any of the following: 1) Transmit frequency below 10kHz; 2) SPL greater than 224 dB for equipment that operate 10kHz-24kHz inclusive; 3) SPL greater than 235 dB for equipment that operate between 24kHz and 30 kHz; 4) Form beams less than 1 degree on any axis operating less than 100kHz; 5) Unambiguous display range exceeding 5120m; or, 6) Withstand pressure at depths exceeding 1000m.

Deemed Export ECCNs

## 6D001

Acoustics Software

## 6E001/2

Acoustics Technology

The deemed export rule affects technology and software.

Development and production technology is controlled



**Telemetry Equipment**  
**5A101**

**Deemed Export ECCNs**

Designed or modified for UAVs  
or rocket systems

**5D101**

**Telemetry Software**

**5E101**

**Telemetry Technology**

**The deemed  
export rule  
affects  
technology  
and software.**

Production, development or  
use technology is controlled





# Review

The structure of the ECCN has 3 main parts.

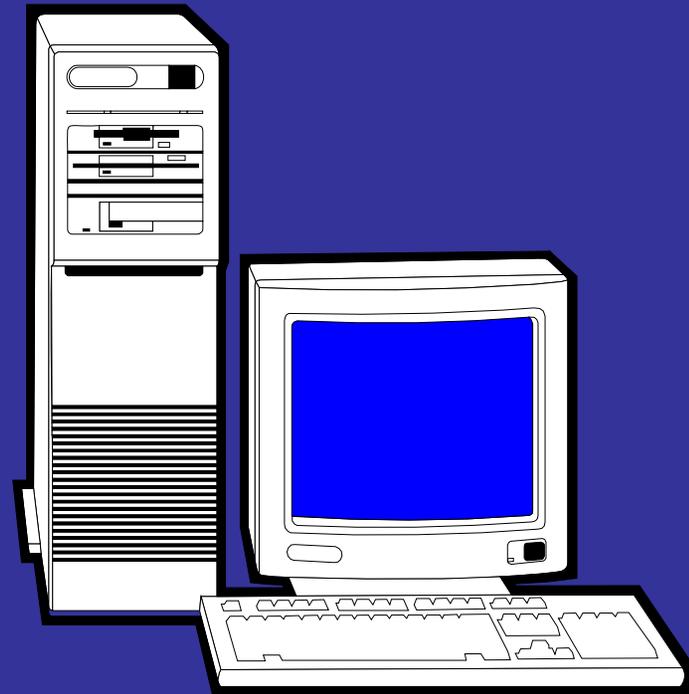
What are they?



Name three reasons for control.

# Technology and Software

- Scope
- Publicly Available
- Classification





# General Technology Note

## Supplement 2 to Part 774

The export of technology that is required for the development, production or use of items on the CCL is controlled according to the provisions in each category.

# Technology and Software Terms

- “Development”
- “Production”
- “Use”





# Technology and Software Exports and Re-exports

- Includes direct transfers
  - consultations, visual inspection
- Includes transfers regardless of the media
  - floppy disk, blueprints, hardcopy...
- Includes electronic transfers
  - via the INTERNET, electronic mail...



# Is an Export License Required?

- X in the box
  - License
  - License Exception
- No X in the box
  - NLR - No License Required
- Must check General Prohibitions

# Country Chart Structure (Supplement 1 to Part 738)

## Commerce Country Chart

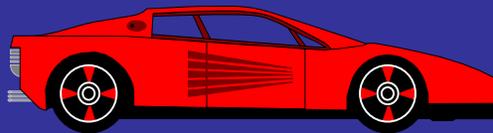
### Reason for Control

Countries	Chemical & Biological Weapons			Nuclear Nonproliferation		National Security		Missile Tech	Regional Stability		Firearms Convention	Crime Control			Anti-Terrorism	
	CB	CB	CB	NP	NP	NS	NS	MT	RS	RS	FC	CC	CC	CC	AT	AT
	1	2	3	1	2	1	2	1	1	2	1	1	2	3	1	2
Afghanistan	X	X	X	X		X	X	X	X	X		X		X		
Albania	X	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 & Barbuda	X	X		X		X	X	X	X	X	X	X		X		
Argentina	X					X	X	X	X	X	X	X		X		
Armenia	X	X	X	X		X	X	X	X	X		X	X			
Aruba	X	X		X		X	X	X	X	X		X		X		
Australia	X					X		X	X							
Austria	X					X		X	X	X		X		X		
Azerbaijan	X	X	X	X		X	X	X	X	X		X	X			
Bahamas, The	X	X		X		X	X	X	X	X	X	X		X		
Bahrain	X	X	X	X		X	X	X	X	X		X		X		



# EAR99

If an item subject to the EAR does not fall within a specific ECCN, it is designated as EAR99.





# No License Required NLR

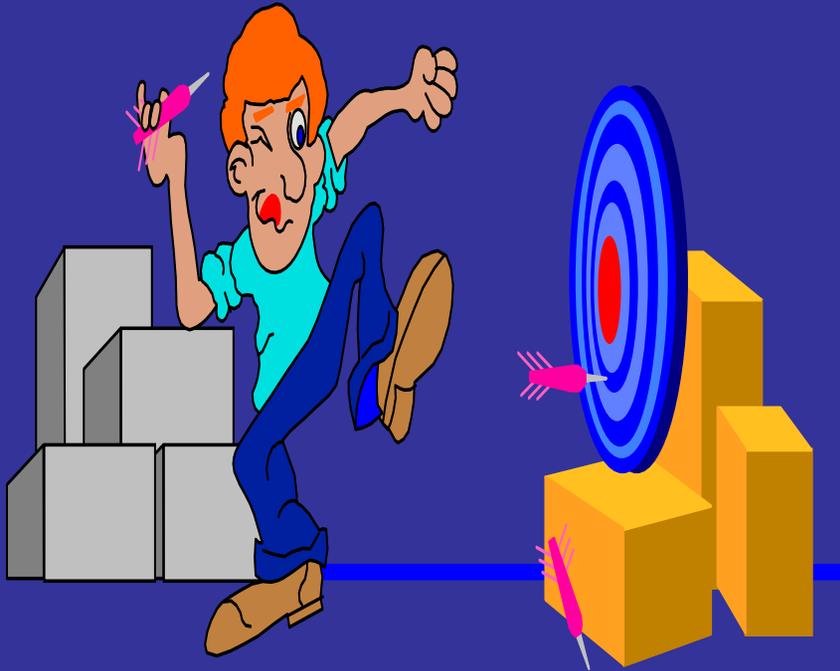
- Items not listed on the CCL but falling under the scope of the EAR and no General Prohibitions apply to the export.
- Items listed on the CCL not requiring a license to intended destination and no General Prohibitions apply to the export.



# Review

- Does an “x” in the box on the Commerce Country Chart mean that there is a license requirement?
- If your item is EAR99, then you may export this item using the license authorization symbol NLR, true or false?

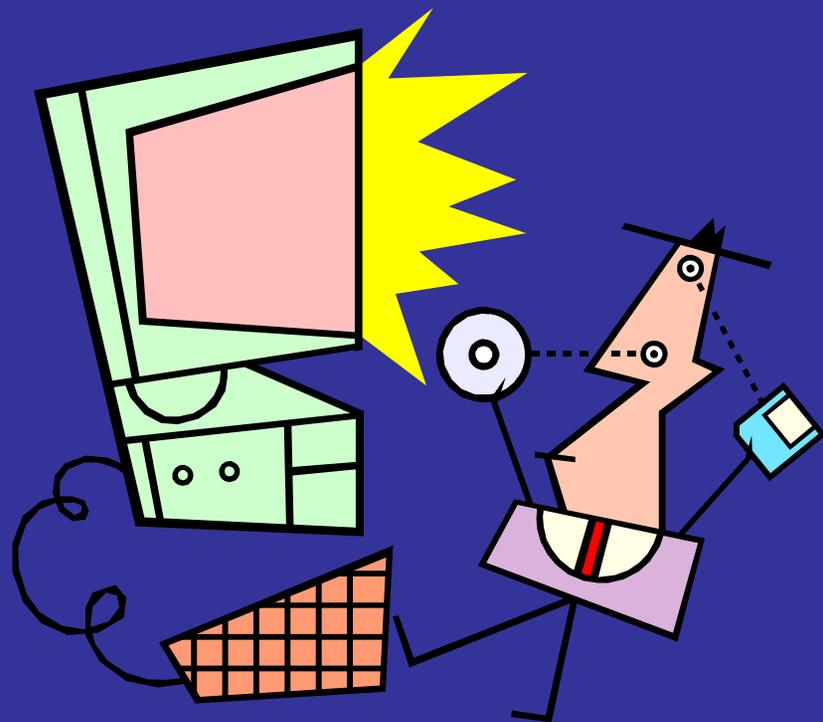
# How to Classify Your Item



- *The Manufacturer*
- *Your Company Engineer*
- *Official Request to BIS*

# An Approach to Classifying Items

- Function/Characteristic
- Index Comparison
- Written Request





# How to Request a Classification

*Form BIS-748P or SNAPR*

- Manufacturer
- Model / Part Number
- Applications
- Specifications
- Pictorial Illustration  
e.g. Sales Brochures





# Improper Classification Results

- Delays in Exporting
- Violation(s) of the EAR





*Lunch*



# Exercise



## *Deemed Exports*



# What are “Deemed Exports”

The Export Administration Regulations (EAR) define a deemed export as the release of technology or source code subject to the EAR to a foreign national in the United States. Part 734.2(b)(2)(ii).

Such release is “deemed” to be an export to the home country of the foreign national.

Situations that can involve release of U.S technology or software include:

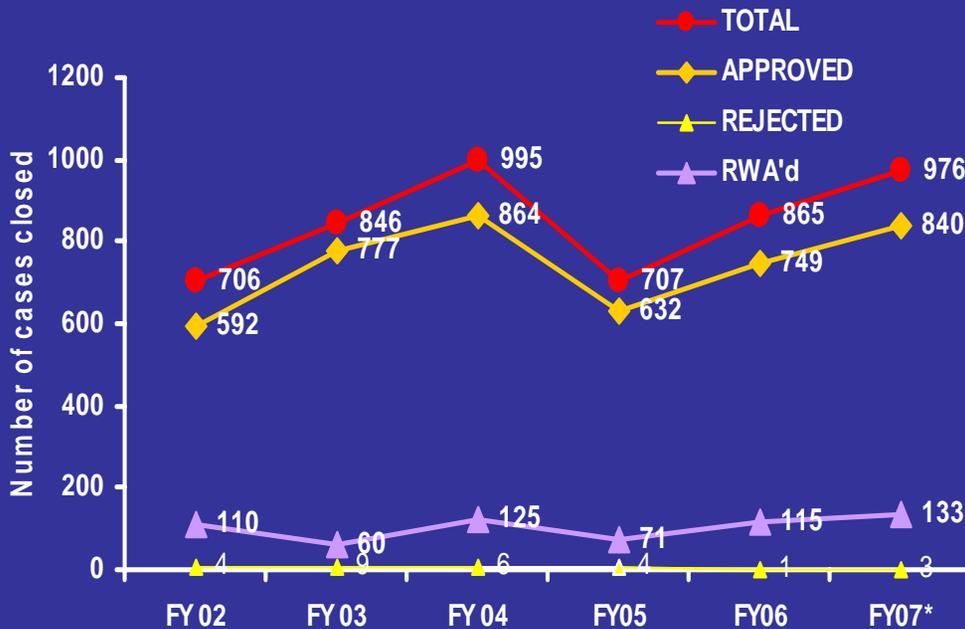
- Tours of laboratories
- Foreign national employees involved in certain research, development, and manufacturing activities
- Foreign students or scholars conducting research
- Hosting of foreign scientist



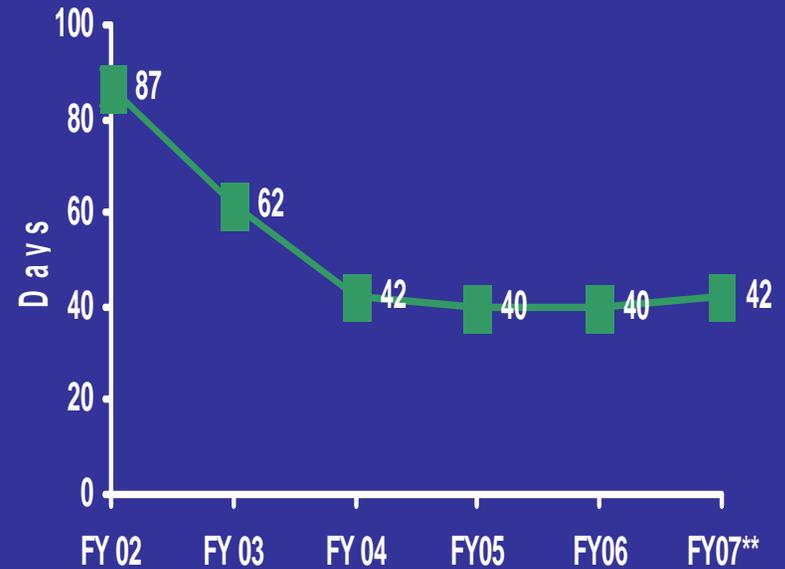
# “Deemed Export” Concerns

- The deemed export program, in place since 1994, remains an important mechanism to prevent the diversion of sensitive dual use technologies to countries and end users of concern.
- The deemed export program balances two concerns:
  - The vital role of foreign nationals in U.S. industry and academia, contributing to the strength of our industrial base and our high-technology advantage, and ultimately our national security;
  - Foreign countries seek to illegally acquire controlled U.S. technology that could be diverted to the development of weapons programs.

# Annual Deemed Export Licensing Trends



\* Projected



\*\* To Date

## Most Common Deemed Exports:

- Semiconductor & Electronics - Category 3
- High Performance Computers - Category 4
- Telecommunications - Category 5



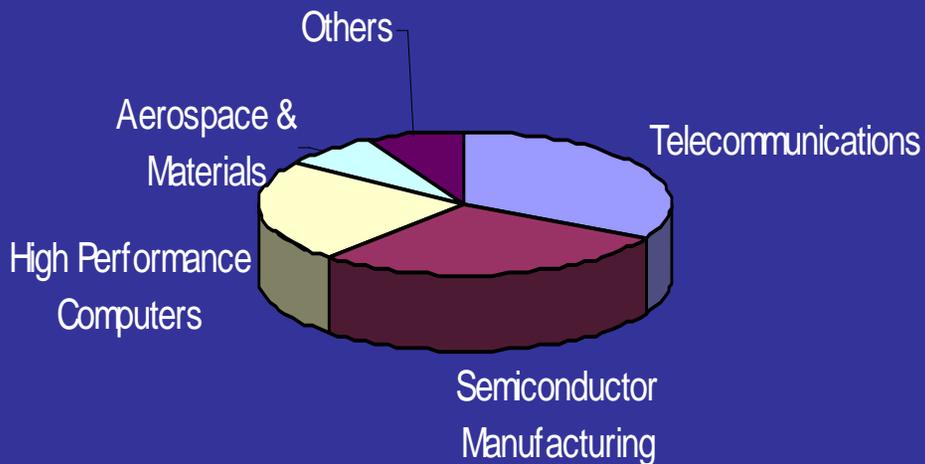
# Breakdown of Largest Deemed Export License Holders

- Top industries and license holders:
  - Telecommunications (33%)
  - Semiconductor Manufacturing (29%)
  - High Performance Computers (23%)
  - Aerospace & Material (7%)
  - Others (8%)

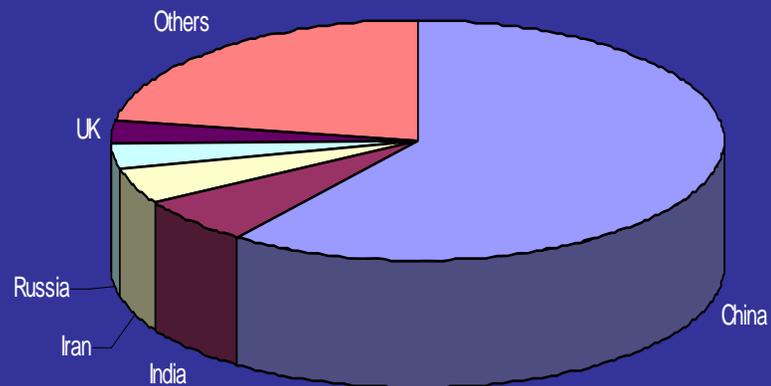


# FY06 Licenses by Industry and Country

Licenses by Industry



Licenses by Country



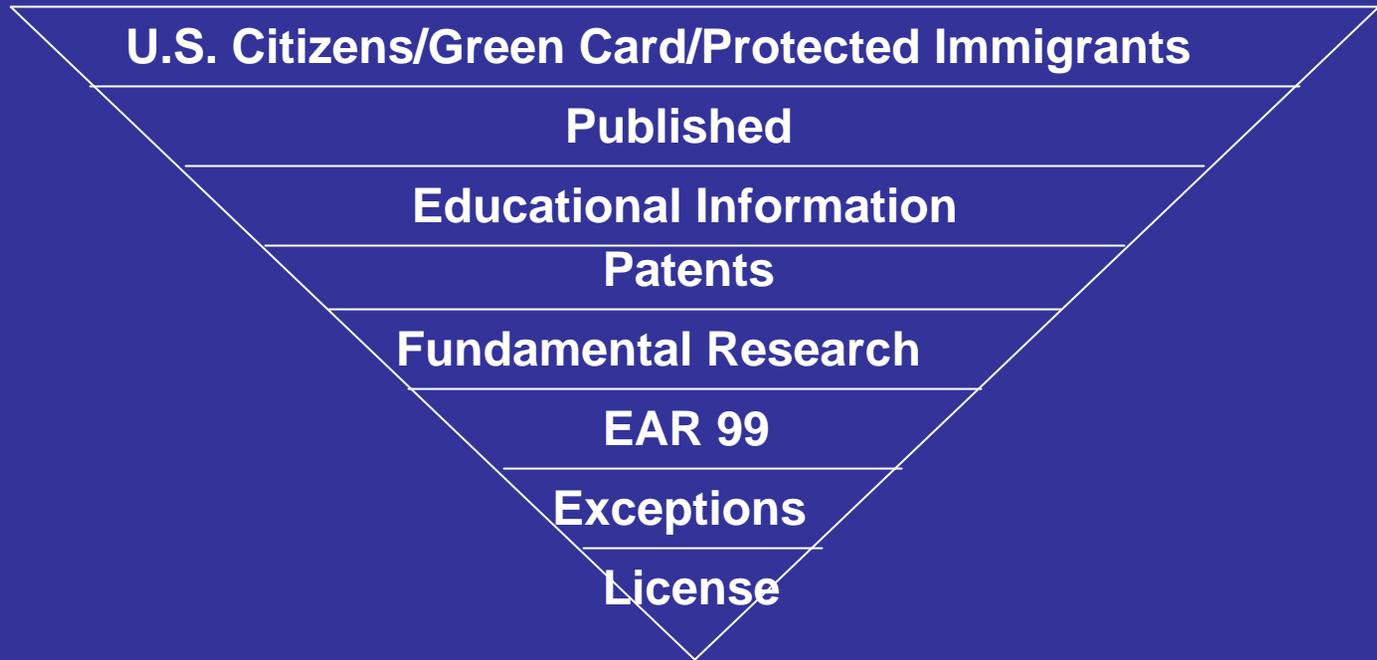


# Deemed Export FY06 Year-End Summary

- The deemed export program remains an important mechanism to prevent the diversion of sensitive dual use technologies to countries and end users of concern
- In FY2006, the Bureau approved 85%, returned without action approximately 14%, and denied less than 1% of the total of 865 deemed export license applications
- Almost 60% of the deemed export licenses processed are for PRC foreign nationals
- Followed in descending order by foreign nationals from India (13%), Iran (7%), Russia and Germany (2%) and UK (1%)
- Most deemed export licenses are processed in 42 days



# Sequence of Analysis





# Foreign Nationals Not Subject to the Deemed Export Rule

- Any foreign national is subject to the deemed export rule except:
  - A foreign national granted U.S. citizenship;
  - A foreign national granted permanent residence status (i.e., “Green Card” holders);
  - A foreign national granted status as a “protected individual” under 8 U.S.C. 1324b(a)(3). Protected individuals include political refugees and political asylum holders.



# Licensing Policy Reference

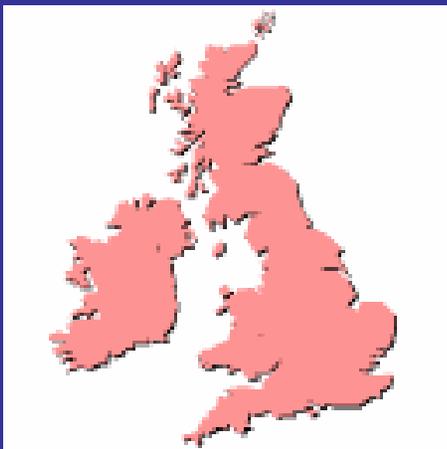
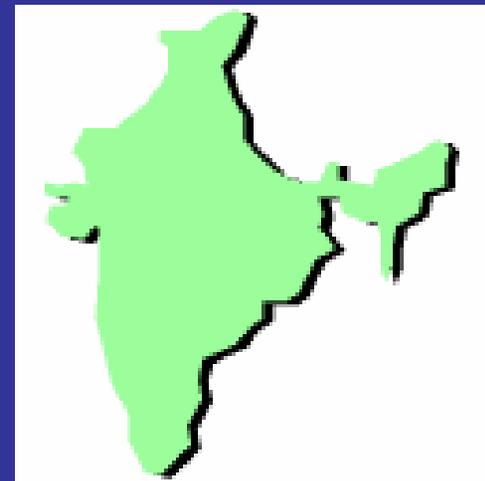
## Citizenship/Permanent Residence

- Under current export licensing policy, a foreign national's recently established citizenship or residency is used to determine the licensing requirements.
- Guidance on this can be found at:  
<http://www.bis.doc.gov/DeemedExports/DeemedExportsFAQs.html>



## Country of Origin (Permanent Residency)

Release of controlled technology to a foreign national of one country, say India, who has obtained permanent residency in another, say the U.K., is treated as if the technology transfer were being made to the U.K. and licensing requirements would be the same as for a British national in the U.K.

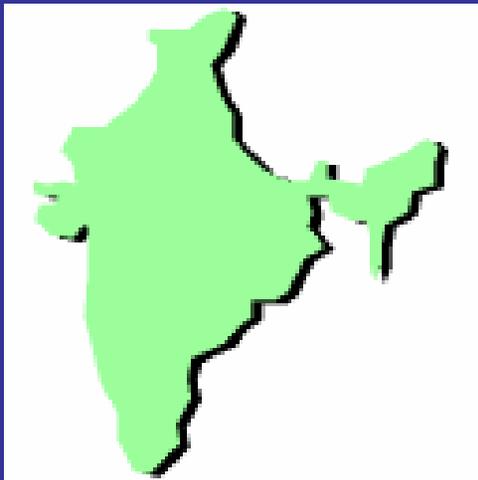


If the former Indian national becomes a British citizen, transfers of technology would be viewed as transfers to the U.K.



## Home Country (Dual Citizenship)

As a general principle, a foreign national's most recently obtained citizenship governs the licensing requirement.



If an Indian foreign national becomes a citizen of the U.K. but retains Indian citizenship, the most recent citizenship is with the U.K. and releases of technology would be viewed as releases to the U.K.

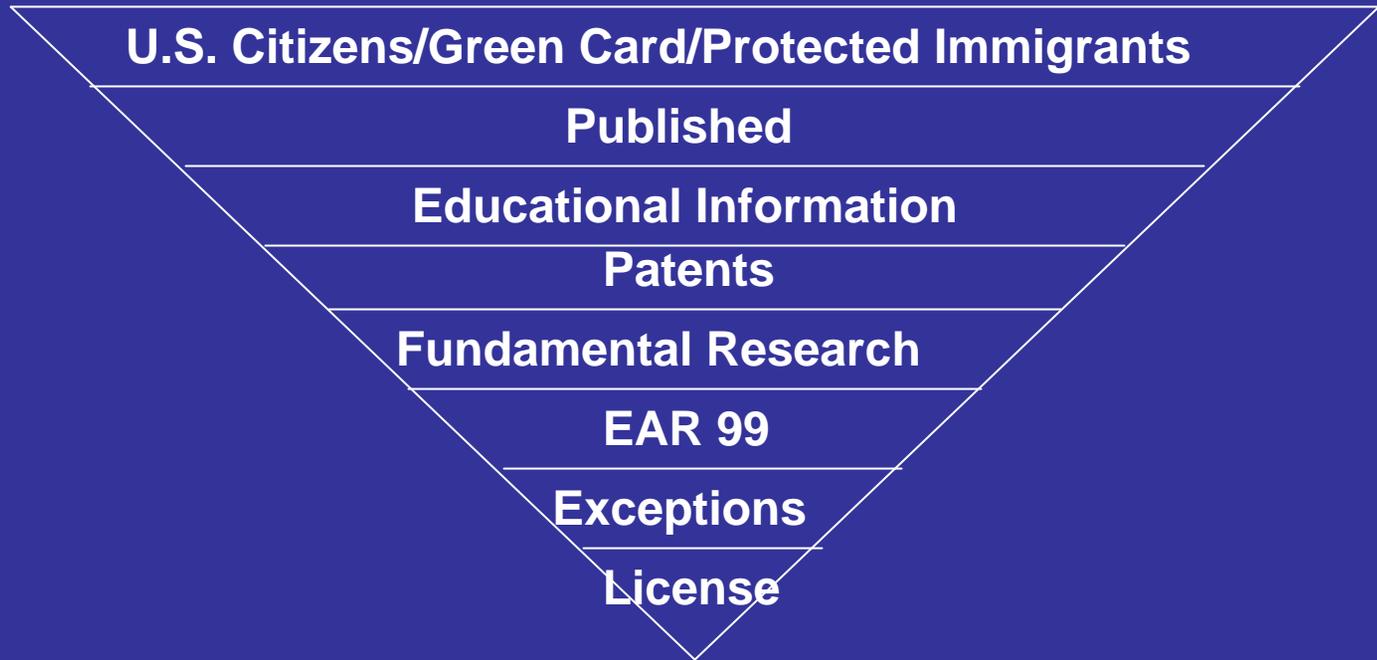


# What are “Deemed Reexports?”

- The release of technology or source code subject to the EAR to a foreign national of another country is a deemed reexport to the home country of the foreign national.
- For example, a Russian foreign national requiring access to EAR controlled technology in the UK would require deemed reexport licensing authorization.
- Exporters of controlled technology need to know that there are deemed reexport implications for foreign national employees of other countries.



# Sequence of Analysis





# Technology Not Subject to the EAR

- **Publicly available (EAR 734.7)**
  - **Generally accessible to the interested public**
  - **Periodicals, books, print, electronic other media forms**
  - **Libraries (university, public etc)**
  - **Open patents**
  - **Open conferences**
- **Fundamental Research (EAR 734.8)**
  - **Basic and applied research where resulting information is ordinarily published and broadly shared within scientific community**
- **Educational information (EAR 734.9)**
  - **Released by instruction in catalog courses**
  - **Associated teaching laboratories of academic institutions**
- **Patent information (EAR 734.10)**
  - **Public information available on patent application**



# Scope of Fundamental Research

- Confusion exists over the scope of fundamental research.
- Some research entities believe fundamental research regulatory language provides relief from all export licensing consideration.



# Fundamental Research Regulatory Language

- EAR 734.8- information resulting from fundamental research is not subject to EAR licensing requirements:

*“Fundamental research is basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community.”*

- This definition of fundamental research is echoed in NSDD-189, Presidential Policy Directive issued by President Reagan in 1985 and is still in effect today.

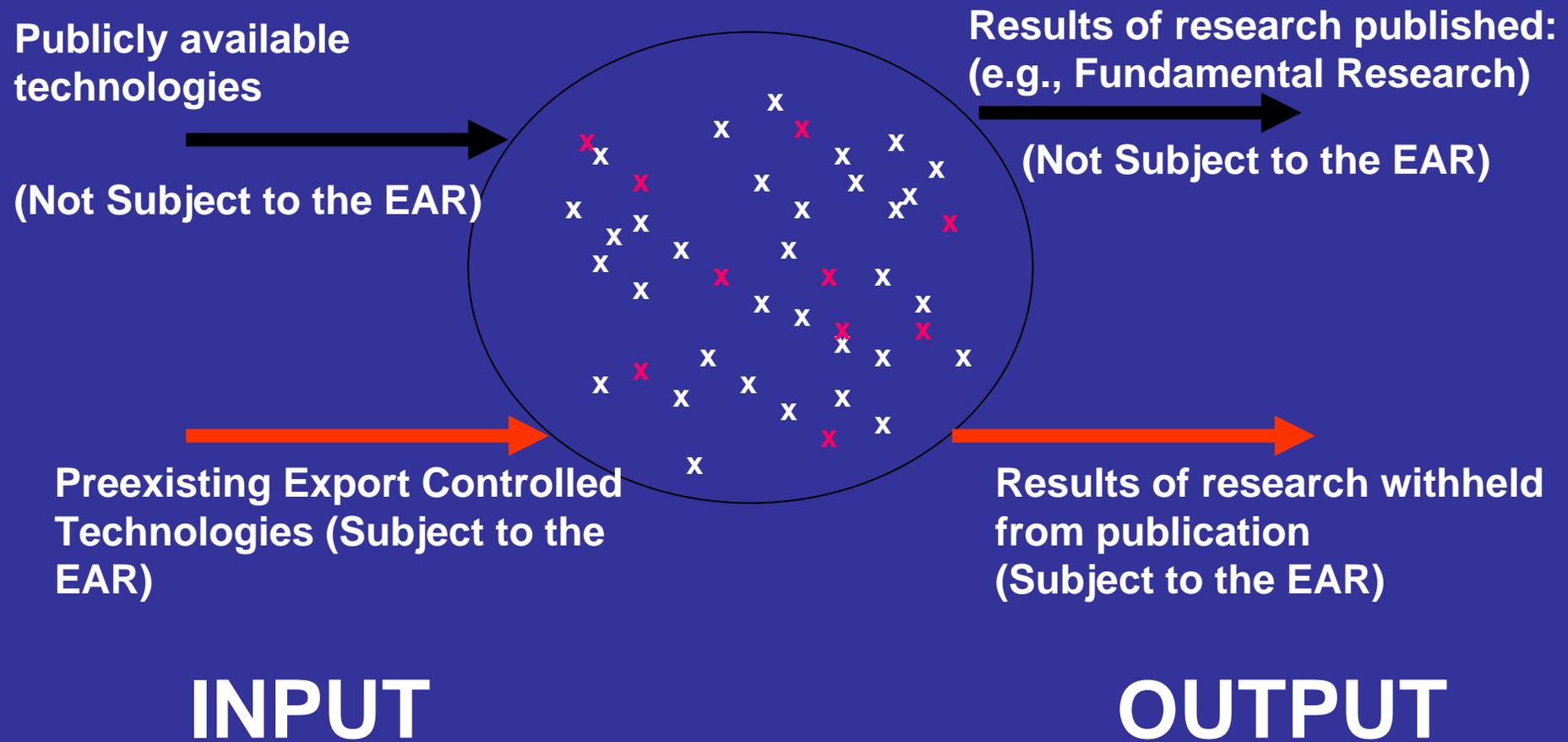


# Fundamental Research

- **Fundamental research only applies to information that “arises during or results from” the research.**
- **There is no “blanket exemption” for all information that is transferred in the context of such research.**
- **If there is preexisting export controlled technology required to conduct the research then deemed export licensing implications must be considered.**

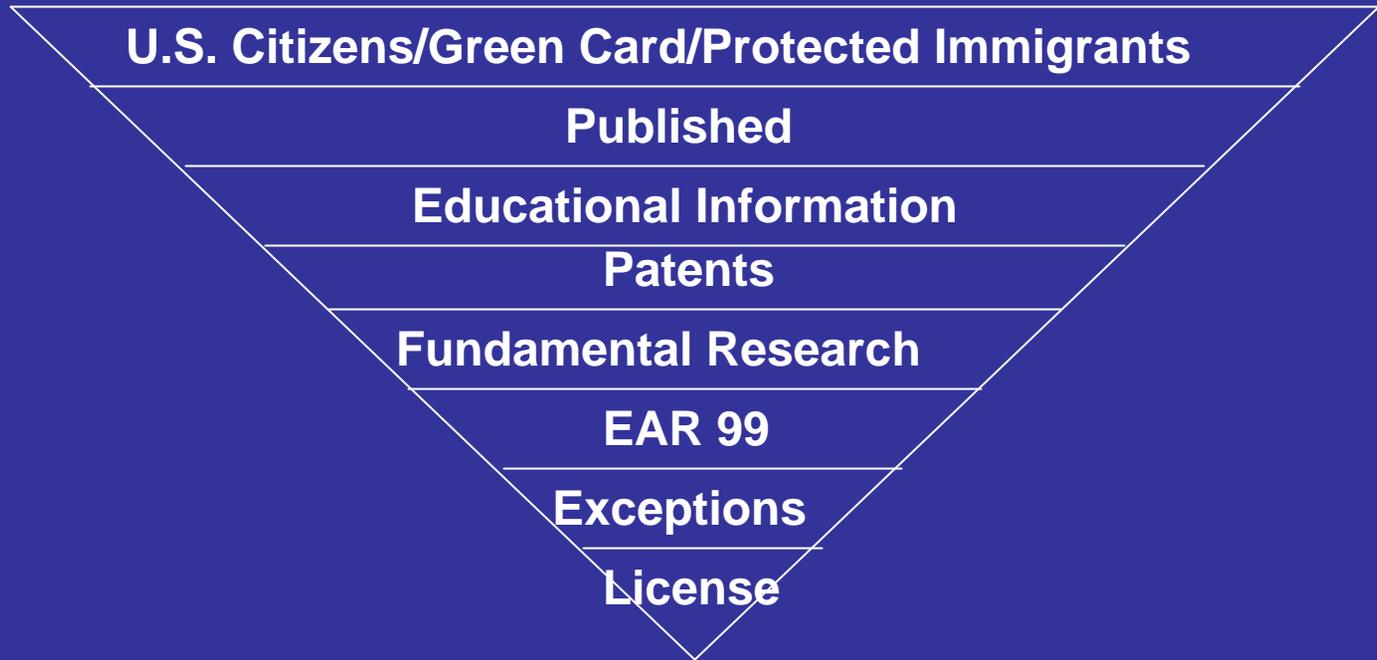


# Universe of Research





# Sequence of Analysis





# Commodity Classification is Important

- If an item, subject to the EAR, does not fall within a specific ECCN, it is designated EAR 99.
- Most technology is not controlled (EAR99 or publicly available).
- Sensitive technologies are controlled, based on specific Export Control Classification Numbers (ECCNs) in the Commerce Control List.
- Controlled technologies may require licensing based on the foreign national's country of origin.



# Export Controlled Technology

- The term “technology” as used in the EAR refers to specific information “required” for the “development,” “production,” or “use” of specific product
- “Required” technology refers only to that portion of technology which is peculiarly responsible for achieving or exceeding controlled performance levels, characteristics or functions.
- The use of export controlled equipment is not a deemed export.
- Deemed exports occur only if controlled technology is transferred.



# “Use” Technology Licensing Requirement

- There has been much focus on what “use” technology requires export control.
- A deemed export is the transfer of “required” export controlled technology: “Required” use technology is rarely transferred during the operation of an export controlled item.
- Issue underscores the need to correctly classify the controlled technology available to a foreign national.



# Clarification of “Use” Technology

- The use of export controlled equipment is not a deemed export. Deemed exports occur only if controlled technology is transferred.
- The regulatory definition of “use” is technology for “operation, installation (including on-site installation), maintenance (checking), repair, overhaul **and** refurbishing.”
  - All six attributes of the definition must be present in order to qualify as controlled “use” technology.
  - Otherwise the technology is likely EAR99.



# Commodity Classifying Technology Subject to the EAR

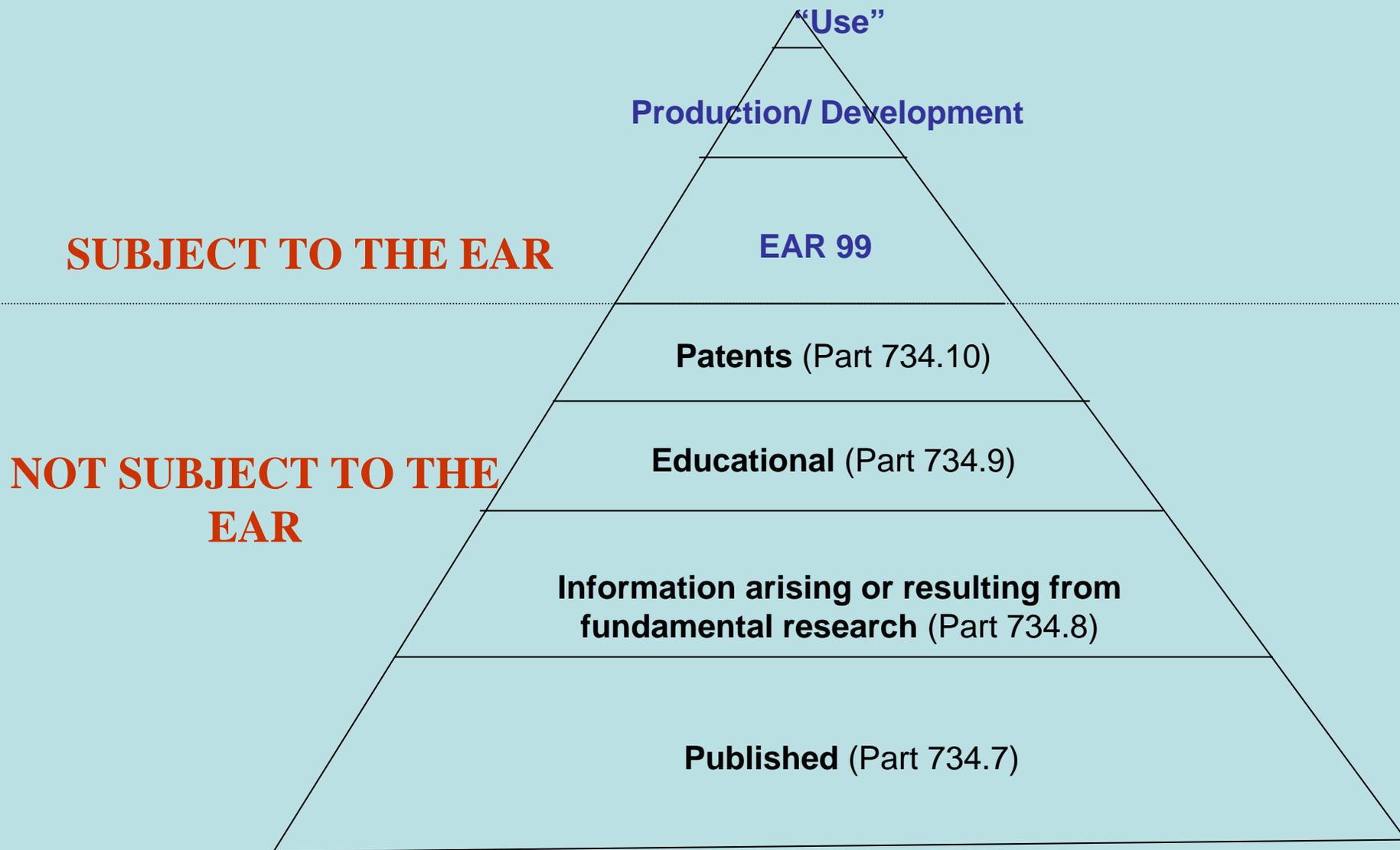
- Thumb rule

(If the technology is under DOC jurisdiction and not publicly available):

- Does the technology enable replication of the export controlled item (production technology)?
- Does the technology enable design improvement of the export controlled item (development technology)?
- Is the item being used to produce or design weapons of mass destruction, military hardware, export controlled dual use items (controlled use technology)?

- *If the answer to all of the above questions is no: The item is likely EAR 99*

# Universe of DUAL-Use Technology





# Updates in the Federal Register

- Establishment of Advisory Committee and Clarification of Deemed Export-Related Regulatory Requirements:
  - *<http://a257.g.akamaitech.net/7/257/2422/01jan20061800/edocket.access.gpo.gov/2006/pdf/E6-7778.pdf>*
- Withdrawal of the Deemed Export Advanced Notice of Proposed Rulemaking (ANPR):
  - To be published 5/31/06
  - *<http://www.bis.doc.gov/FreedomForInformation/FINAL%20deemed%20doc%20without%20respective%20comments%20revised.pdf>*



# Review

The University of Chicago wants to export its findings from research and development performed at the University on new techniques relating to gas turbine engines for aircraft applications. The findings will be presented next month at a symposium that will be open to the public.

**Is the technology  
subject to the EAR?**

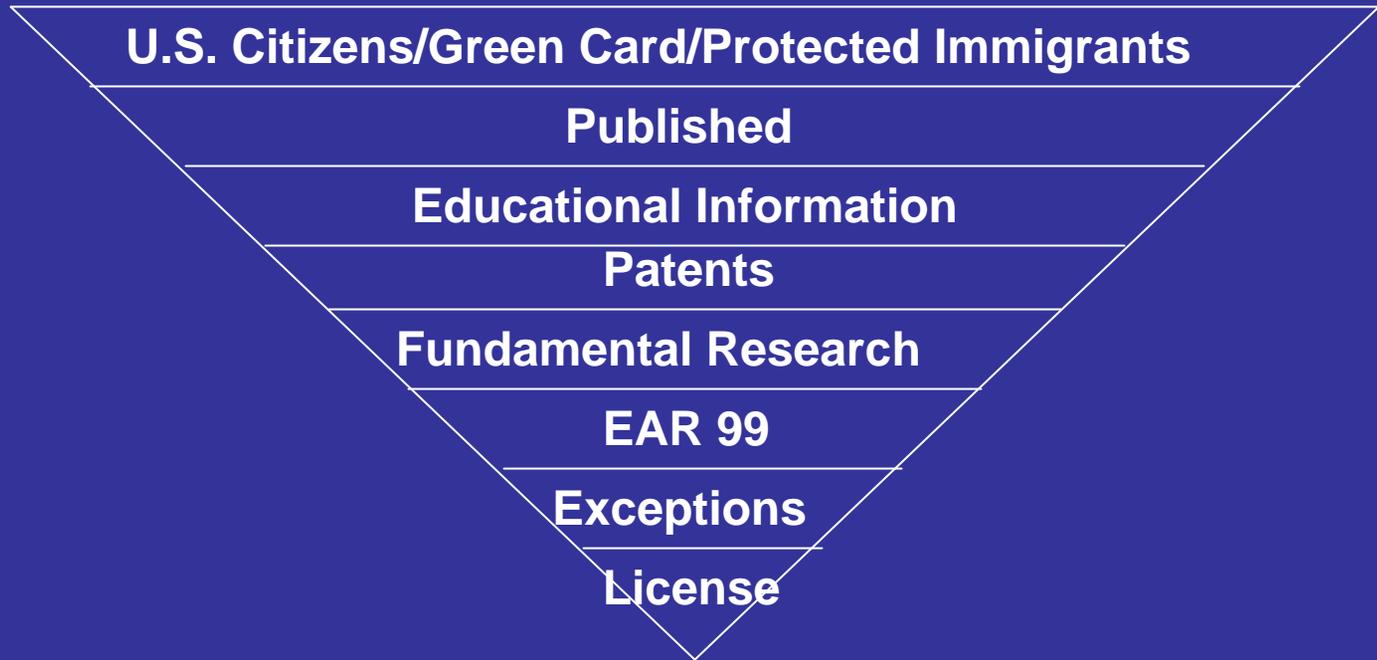




**Break**



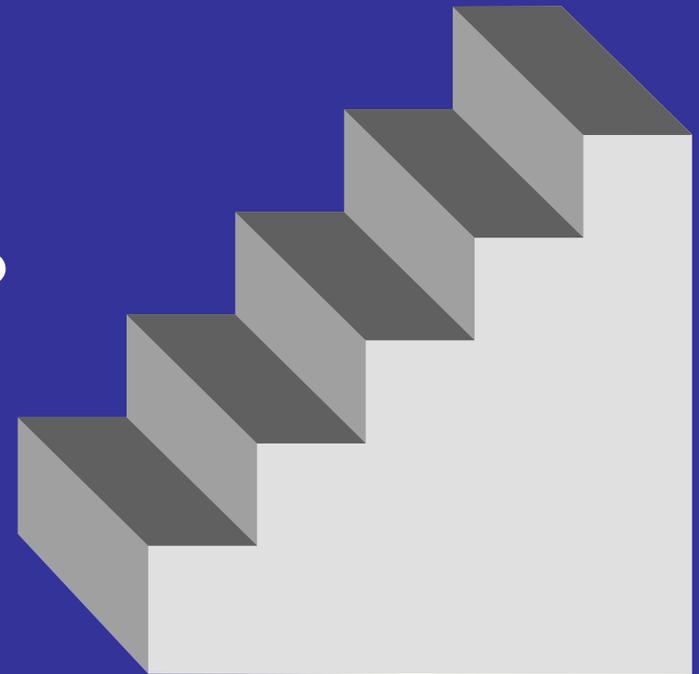
# Sequence of Analysis





# Steps

- Determine ECCN
- Check Country Chart
- Is there an “X” in the Box?  
If yes,
- Is a License Exception Available?





# What is a License Exception?

- Authorization to export or reexport without a license
- Each exception has a three letter symbol
- Part 740 of EAR used for export clearance purposes
- Some require notification, review, or supporting documentation prior to use



# General Restrictions

## §740.2

- Authorization suspended or revoked
- Subject to one of the 10 General Prohibitions
- ECCN 5A980
- Crime control and detection items
- Most items controlled for MT reasons
- Certain space qualified items
- ECCNs 2A983, 2D983, 2E983



# Country Groups

## Supplement 1 to Part 740

Group A: Regime  
Members

Group B: Less Restricted

Group D: Countries of  
Concern

Group E: Terrorist  
Supporting



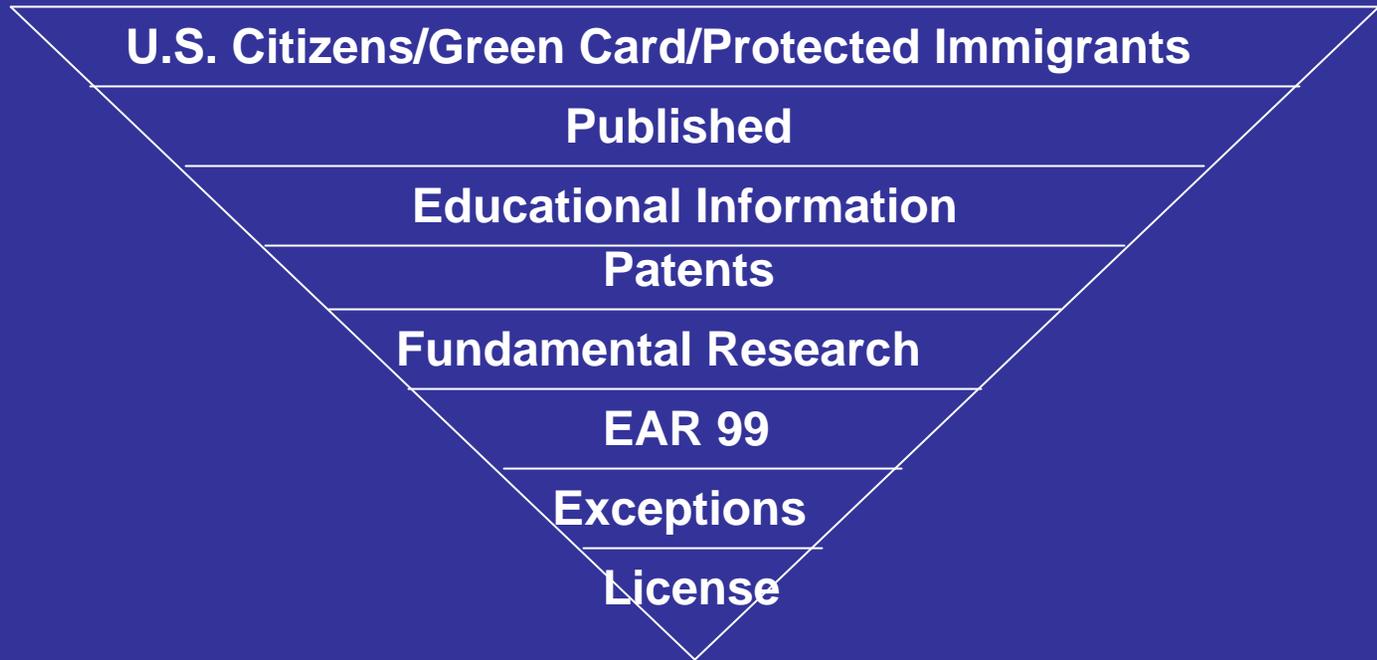


# Available License Exceptions for Deemed Exports

- **CIV: Civil End Use (EAR §740.5)**
  - ❖ Applies to deemed exports for 3E002 technology.
  - ❖ Requires Foreign National Review (FNR)
- **TSR Technology and Software Under Restriction: (EAR §740.6)**
  - ❖ Applies to technology and software under national security only for country group “B” nationals.
  - ❖ Requires Letter of Assurance
- **APP: Applied Peak Performance (EAR §740.7)**
  - ❖ Applies to deemed exports for 4D001/4E001 software and technology. (FNR Required)



# Sequence of Analysis





# The Deemed Export Application

- Same as other technical data exports plus
  - Detailed Letter of Explanation
  - Comprehensive Bio/Resume
  - Complete job description
  - Safeguards to restrict access to that approved (Technology Control Plan)



# Deemed Export Evaluation Factors

- Personal background, including visa status
- Technology and purpose of the release
- Applicant's Technology Control Plan (TCP)
- Projected outcome of employment (becoming U.S. citizen)
- Permanent employee
- Applications are easier to approve if they include details such as:
  - Any strong ties to the U.S. (e.g., family here)
  - No ties to home country (no bank account, immediate family, etc.)
  - Any special benefits or expertise the foreign national brings to the applicant (i.e., why the foreign national brings more to the company than he or she will take away)



# Letter of Explanation

- Identities of all parties to the transaction
- Exact project location (where the technology or software will be used)
- Type of technology and scope
- Availability abroad of comparable foreign technology or software
- Form in which the technology will be released and the uses for which the technology will be employed.
- Applicant's internal technology control plan



# Foreign National's Resumé

- All educational institutions attended beyond high school, with street addresses and degrees and/or certificates received.
- All positions held, with employers' names and street addresses, and brief description of work done.
- All time from high school graduation should be accounted for and presented in month/year format, with no gaps greater than 30 consecutive days.
- Brief abstracts of all scientific and technical papers published, and presentations at scientific and technical conferences.



# Helpful Information

- Applications are easier to approve if they include details such as:
  - Any strong ties to the U.S. (e.g., family here)
  - No ties to home country (no bank account, immediate family, etc.)
  - Any special benefits or expertise the foreign national brings to the applicant (i.e., why the foreign national brings more to the company than he or she will take away)



## Technology Control Plan (TCP)

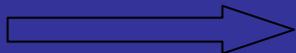
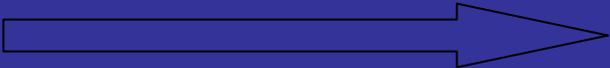
- TCPs are a standard condition found in deemed export and technology exports licenses
- A TCP should contain the following essential elements:
  - Corporate commitment to export compliance
  - Physical security plan
  - Information security plan
  - Personnel screening procedures
  - Training and awareness program
  - Self evaluation program
- *TCPs are a good practice for all holders of export controlled technology*



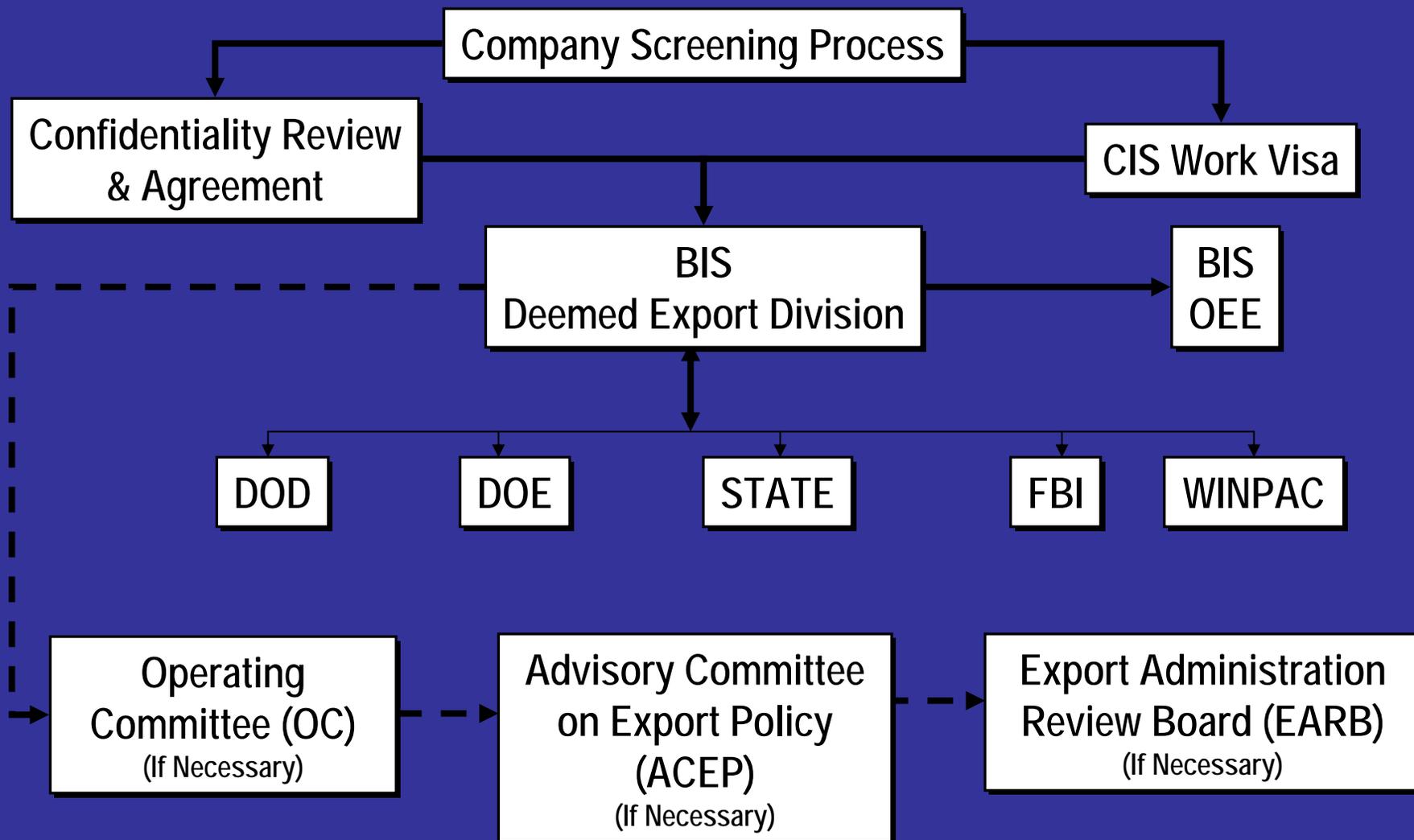
# BIS Deemed Export Security Evaluation

- Deemed export licenses receive a thorough and security intensive review.

## Security Review:

- State Department   Consular Affairs  
Embargo Countries
- Export Enforcement  Pre-license Checks (if required)
- Federal Bureau of Investigation  Law enforcement
- WINPAC  Intelligence check

# Review and Escalation Process





# The Good News!

- Most deemed export licenses are processed in 42 days



# BIS Web site

[www.bis.doc.gov](http://www.bis.doc.gov)

- **Licensing**

- **Deemed Exports**

- [Process Improvements](#)
    - [Licensing Guidance](#) (pdf)
    - [Frequently Asked Questions](#)



**Framing Deemed Export Issues with the**  
**Actual Security Threat**