Export Controls & Export Restricted Research



Export Controls

The goals of this presentation are to:

- I. Provide a brief introduction to Export Controls
- II. Discuss how/why research becomes export restricted and what that means to a project
- III. Discuss University systems and processes in place to help track and manage export restricted research
- IV. Discuss what you can do to ensure that you stay in compliance with all export control regulations and restrictions

Export Controls?





The U.S. Government actively regulates, and in some cases, restricts the export of certain information, items or technologies deemed to be critical to the interests of national security, economy and/or foreign policy.

In general, restrictions apply to information, items, technologies or services that include:

- military, weapons, missile technology, defense services
- "dual use" items (those items having a potential military as well as commercial use)
- chemical/biological weapons



- Encryption technology & related software
- High performance computers
- Lasers and other high technology medical devices
- Funding, information, services or items provided to certain countries or blocked/sanctioned entities



In addition to activities involving military items or weapons it is **critical** to note that many normal, everyday University activities are subject to Export Controls, including:

- Traveling overseas to conduct University business (e.g., conferences, field work, international symposia)
- Traveling with some types of equipment including laptop computers, web-enabled cell phones, or other items
- Traveling with unpublished, proprietary information or restricted information
- Research collaborations with foreign nationals (here in the U.S. or abroad)



- Visits or tours of research facilities by foreign nationals
- Sponsoring research (e.g., via a subcontract) or providing any financial assistance to an embargoed or sanctioned country
- Providing financial assistance to any one that is considered a blocked or sanctioned party, specially designated national
- Providing professional services (e.g., consulting) to problematic end-users or sanctioned countries

TAKE HOME MESSAGE:

Export Controls do not only apply to military work or the shipment of equipment out of the U.S.

Export Controls impact the university community in a variety of ways.



What Are Export Controls?

The term "Export Controls" refers collectively to those U.S. laws and regulations that govern the transfer of controlled information or technologies to foreign nationals and/or foreign countries.

- Export Controls apply to all international university activities, not just sponsored research projects involving controlled information or technology.
- Export Controls apply regardless of the funding source and federal funding can be the most problematic.
- Export Controls are not intuitive.



How Export Controls impact you

Export controls directly impact your ability to:

- Ship items out of the U.S. (including project deliverables)
- Collaborate with foreign colleagues
- Allow the participation of foreign students or foreign researchers in research activities
- Provide services (including training) to foreign persons both here and abroad
- Conduct research freely without having to implement restrictive and inconvenient security access controls

Export Control Regulations

There are 3 primary federal agencies that oversee and enforce Export Controls:

- **State Dept.** <u>International Traffic in Arms Regulations</u> (ITAR) Governs military, weapons and space related technologies
- Commerce Dept. Export Administration Regulations (EAR) Governs technologies with dual uses (those with both military and commercial applications or strictly commercial applications)
- **Treasury Dept.** Office of Foreign Assets Control (OFAC) Governs transactions with countries subject to embargo, boycott, or trade sanctions



What constitutes an Export?

An export occurs whenever an item, commodity, technology, or software is sent out of the U.S. to a foreign destination.

- If the item being released or exported is a "controlled item" then an Export License may be required **before** the transfer can legally occur.
- An export can take any form not just physical shipments and the manner in which the transfer or release of the item takes place is not relevant to export control regulations.

Types of Export Activities

Examples of activities that are considered exports and would be subject to Export Controls include:

- Shipment or transfer of items out of the U.S.
- Written or oral communications
- Electronic or digital transmissions
- Hand-carrying items out of the U.S.
- Providing access or visual inspection or tours of facilities
- The use or application of a controlled service or technology on behalf of or for the benefit of a foreign national



Deemed Exports

In addition to the physical transfer of items out of the country, the U.S. Government also actively regulates the release or transmission of controlled technology or information to Foreign Nationals <u>within</u> the U.S (e.g., a foreign national graduate student at OSU). This is referred to as a "<u>Deemed Export.</u>"

- Deemed Exports are regulated by the same Export Controls as the actual transfer of items out of the U.S.
- Deemed Exports are considered an export to that person's home country.

Foreign Nationals/Entities

Foreign Nationals are persons who:

- Are not U.S. Citizens
- Are not permanent resident aliens of the U.S. (i.e., they do not have a Green Card)
- Are not in the U.S. as a refugee or with asylum status

Foreign Entities are those businesses, organizations, and governments that are not incorporated or organized to do business in the U.S.



Deemed Exports

Deemed Exports is the area of biggest concern for universities and the area where there is the greatest compliance exposure.

Foreign nationals are major drivers of university research and it is critical to the overall research mission that we continue to have free and open exchange of ideas with scholars and students of all nationalities.



Why do you need to be concerned?

Following the events of 9/11 there has been a heightened level of awareness and scrutiny of all export activities with an growing emphasis on **enforcement.**

- Federal agencies are increasingly focused on Universities and their compliance with export regulations.
- Non-compliance with export regulations can lead to substantial and severe criminal and monetary penalties imposed on both individual researchers and institutions.

Does the government really care about academic institutions?

Don't let this happen to you...



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Retired University of Tennessee Professor Convicted of Arms Export Violations

KNOXVILLE - On Wednesday, September 3, 2008, a federal jury convicted retired University of Tennessee professor Dr. J. Reece Roth, after a seven day trial, of illegally exporting military technical information relating to plasma technology designed to be deployed on the wings of drones operating as a weapons or surveillance systems.

The Arms Export Control Act prohibits the export of defense-related materials, including the technical data, to a foreign national or a foreign nation, without the required U.S. government license. The illegal arms exports by Dr. Roth related to technical data and information that was developed through a U.S. Air Force research and development contract to develop this advanced form of a drone.

Dr. Roth was specifically convicted of one count of conspiring with Atmospheric Glow Technology, Inc., a Knoxville, Tennessee, technology company, to unlawfully expect in 2005 and 2006 fifteen different "defense articles" to a citizen of the People's Republic of China in violation of the Arms Export Control Act. He was also convicted of 15 counts of violating the Arms Export Control Act and one count of wire fraud relating to defrauding the University of Tennessee of the honest services by illegally exporting sensitive military information relating to this U.S. Air Force contract.

The maximum punishment for the conspiracy conviction is five (5) years imprisonment and a fine of \$250,000. The maximum penalty for each of the Arms Export Control Act offenses is ten (10) years imprisonment, a criminal fine of \$1,000,000, and a mandatory special assessment of \$100 for each offense. Dr. Roth's sentencing has been set for January 7, 2009, at 1:30 p.m., in United States District Court in Knoxville.

"Today's guilty verdict should serve as a warning to anyone who knowingly discloses restricted U.S. military data to foreign nationals. The illegal export of such sensitive data represents a very real threat to our national security, particularly when we know that foreign governments are actively seeking this information for their military development," said Patrick Rowan, Acting Assistant Attorney General for National Security.

United States Attorney Russ Dedrick said, "The strict enforcement of the export technology laws protects our country and its citizens. This verdict, by a jury of Dr. Roth's peers, demonstrates that our citizens and the United States will not tolerate such intentional conduct to undermine the security and the economy of our country. Our scientific and educational communities must take precautions to insure that technology and research are protected, when required, from disclosure to foreign governments."

Export Controls & University Activities

Export Controls & University Research

The good news: the vast majority of research conducted at U.S. universities is exempt from export controls under 3 exclusions provided for under the current federal regulations.

They are:

- The Fundamental Research Exclusion
- The <u>Educational Information Exclusion</u>
- The <u>Public Information Exclusion</u>

Although research may be exempt from Export Controls under these exclusions, the University must demonstrate that the appropriate export control reviews were performed.

Fundamental Research Exclusion

The <u>Fundamental Research Exclusion</u> applies to any basic or applied research in science or engineering where the resulting information is ordinarily published and broadly shared in the scientific community.

Research performed as Fundamental Research is <u>not</u> subject to Export Controls and no licenses are required to release or transfer information to a foreign national in the U.S. or abroad.

It is important to note that the fundamental research exclusion only covers the "<u>results</u>" of research. It does not cover actual materials, items or technologies involved in or resulting from the research. Export Controls may still apply to these items.

Fundamental Research Exclusion

For research to qualify as Fundamental Research all of the following must be true:

- There can be no restrictions on publication (normal prepublication review is ok if limited in time)
- There can be no access or dissemination restrictions
- The research must be based at an accredited institution in the U.S.

Delays in finalizing sponsored research agreements can be encountered when sponsors try to insert publication or access restrictions in agreements which would nullify the Fundamental Research Exclusion.

Problematic Clauses

In some cases, sponsors will try to add in contract language that can nullify the Fundamental Research Exclusion.

Examples include:

- DFARS 252.204-7000 Disclosure of Information
- ARL 52.205-4401 Release of Information
- ARL 52.004-4400 Foreign Nationals Performing under contract
- AFMC 5352.227-9000 Export Control Data Restrictions

Important to get these clauses removed if at all possible. If included, project cannot shelter under FRE.

Educational Information Exclusion

The <u>Educational Information Exclusion</u> covers information commonly taught in universities via instruction in catalog courses and/or through the associated teaching laboratories.

Information that qualifies as Educational Information is <u>not</u> subject to Export Controls and no export license is required to share information with foreign nationals in the U.S. or abroad.

Public Information Exclusion

The <u>Public Information Exclusion</u> covers any information that is already published or out in the public domain. Information in the public domain is not subject to Export Controls. Examples include:

- Books, newspapers, pamphlets
- Publically available technology and software
- Information presented at conferences, meetings or seminars open to the public
- Information included in published <u>U.S. patents</u>
- Websites freely accessible to the public

Information in the public domain is <u>not</u> subject to Export Controls and no export license is required to share information with foreign nationals in the U.S. or abroad.

Why is this project export restricted?

Export Restricted Research

In general, most research done at the University is <u>not</u> subject to export controls because of the Fundamental Research Exclusion. As noted, however, there are some projects that can't be sheltered under the FRE and are thus subject to export controls including:

- > Project has contract restrictions regarding access, dissemination, or publication that nullify the FRE;
- > Project involves the use of 3rd party information, technology or software that is export controlled;
- > Project involves the transfer or shipment out of the US of export controlled items, technology or software (including project deliverables);

Export Restricted Research

In cases where we have a project the is export controlled, the University must ensure that information/technology is protected from inadvertent transfer or release out of the U.S. The University takes the following required actions:

- 1. Complete assessment of project and license determination;
- 2. Generation of a Technology Control Plan (as needed);
- 3. Training of all involved personnel regarding their obligations and responsibilities on the project;
- 4. Monitoring and tracking of projects in University systems to ensure on-going compliance with all federal regulations.

Export License Needed?

Export Licenses

An Export License is a document issued by the U.S. government granting you the right to export a specific product, technology, or software to a specific country under a set of defined conditions.

Whether a license is needed is driven by the following factors:

- The nature of information or item
- Where the information or item is going
- To whom the information or item is going
- What the end-user will be doing with it

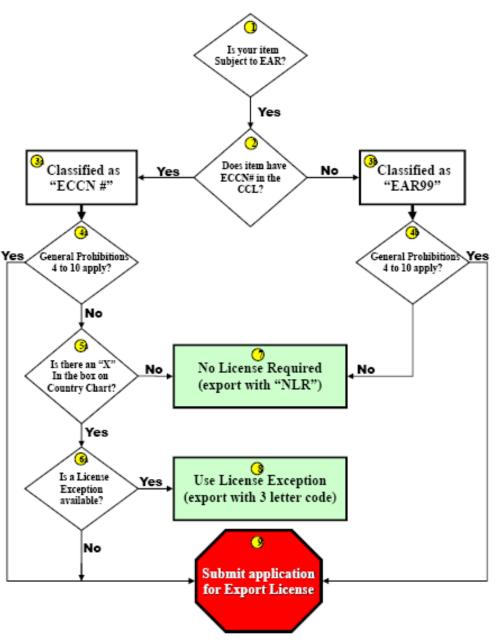
Determining if a license is required

The following steps are used when determining if an export license is required:

- Is the item/activity subject to Export Controls? Does the item/activity qualify for the FRE or other exclusion?
- Determine jurisdiction Does the item/activity fall under the jurisdiction of the EAR, ITAR, OFAC or other agency?
- Determine if a export license is required. License requirements are always item and country specific.

Subject to EAR Decision Tree Yes Does the item information relate to the proliferation of chemical or biological weapons or other WMD? No Yes Does the item/information relate to software encryption? No. Is the item/information prohibited by any order issued Yes under the EAR? Nο Yes Does the item/information qualify as Fundamental Research? No Yes Has the information/item been published? ↓ No Yes Is the item/information publically or commercially available? (excluding encryption software) No Yes Is the item/information subject to the exclusive jurisdiction of another Agency? No Yes Is the item/information located in the U.S.? No Yes Is the item/information outside the U.S. but of U.S. Origin? No Is the item/information outside the U.S. but made with Yes 1 materials of U.S. Origin? Nο No Is the item/information outside the U.S. Yes but made with use of U.S. software of technology? NOT SUBJECT TO EAR SUBJECT TO EAR

Export License Decision Tree



Determining if a license is required

Example: Researcher is interested in doing field research in Sudan, mapping the effects of refugee relocations on local culture. Researcher will be taking GPS units to support the mapping, is an export license required?

- 1) Subject to Export Controls? FRE covers research results but <u>does not</u> cover the export of items. Export of item will always require a license assessment.
- 2) Jurisdiction? A commercial GPS is probably under EAR rather than ITAR jurisdiction.

7A117 "Guidance sets" capable of achieving system accuracy of 3.33% or less of the range (e.g., a "CEP" of 10 km or less at a range of 300 km). (These items are subject to the export licensing authority of the U.S. Department of State, Directorate of Defense Trade Controls. See 22 CFR part 121.)

7A994 Other navigation direction finding equipment, airborne communication equipment, all aircraft inertial navigation systems not controlled under 7A003 or 7A103, and other avionic equipment, including parts and components, n.e.s.

License Requirements

Reason for Control: RS, AT

Control(s)

Country Chart

RS applies to QRS11-00100-100/101 and QRS11-00050-443/569 Micromachined Angular Rate Sensors. See Related Controls. RS Column 1

AT applies to entire entry

AT Column 1

License Requirement Notes: There is no de minimis level for foreign-made commercial primary or standby instrument systems that integrate QRS11-00100-100/101 or commercial automatic flight control systems that integrate QRS11-00050-443/569 Micromachined Angular Rate Sensors (see §734.4(a) of the EAR).

License Exceptions

LVS: N/A GBS: N/A CIV: N/A

List of Items Controlled

The list of items controlled is contained in the

B. TEST, INSPECTION AND PRODUCTION EQUIPMENT

7B001 Test, calibration or alignment equipment specially designed for equipment controlled by 7A (except 7A994).

License Requirements

Reason for Control: NS, MT, AT

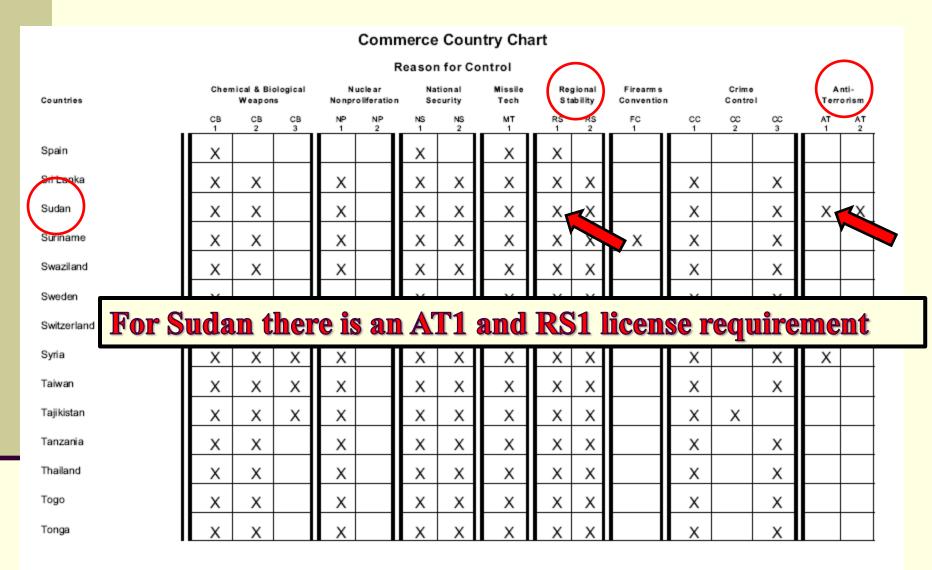
Related Controls: QRS11 Micromachined Angular Rate Sensors are subject to the export licensing jurisdiction of the U.S. Department of State. Directorate of Defense Trade Controls, unless the ORS11-00100-100/101 is integrated into and included as an integral part of a commercial primary or standby instrument system of the type described in ECCN 7A994, or aircraft of the type described in ECCN 9A991 that incorporates such systems, or is exported solely for integration into such a system; or the QRS11-00050-443/569 is integrated into an automatic flight control system of the type described in ECCN 7A994, or aircraft of the type described in ECCN 9A991 that incorporates such systems, or are exported solely for integration into such a system. (See Commodity Jurisdiction requirements in 22 CFR Parts 121; Category VIII(e), Note(1)) In the latter case, such items are subject to the licensing jurisdiction of the Department of Commerce. Technology specific to the development and production of QRS11 sensors remains subject to the licensing jurisdiction of the Department of State.

Related Definitions: N/A

Items:

ECCN heading.

Unit: \$ value



Export Administration Regulations

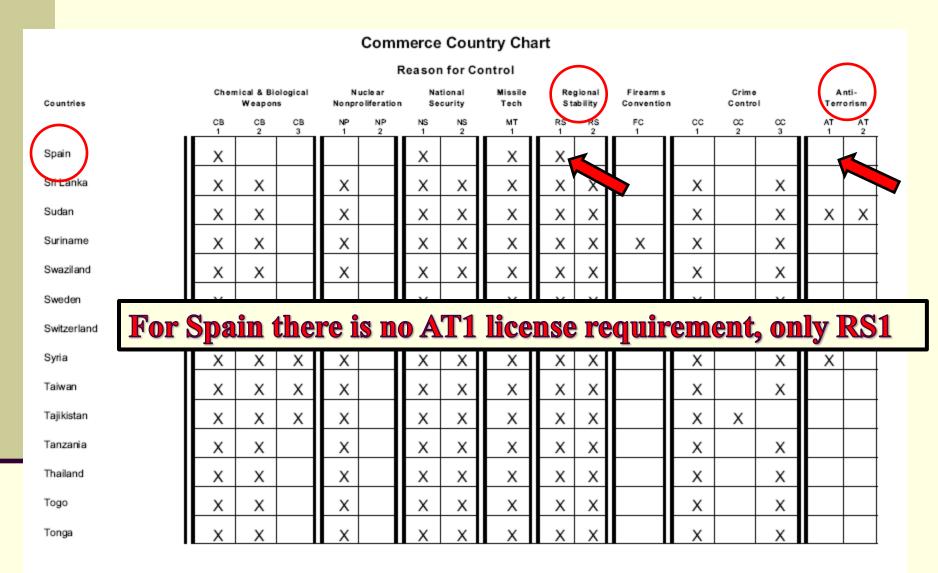
September 2, 2008

Determining if a license is required

So... YES, a license from BIS would be required to take the GPS units from the U.S. to Sudan under AT1 and RS1 reasons for control.

Example (part 2): Researcher decides to conduct a different project involving research in Spain instead of Sudan with the same GPS units, would a license be required?





Export Administration Regulations

September 2, 2008

7A117 "Guidance sets" capable of achieving system accuracy of 3.33% or less of the range (e.g., a "CEP" of 10 km or less at a range of 300 km). (These items are subject to the export licensing authority of the U.S. Department of State, Directorate of Defense Trade Controls. See 22 CFR part 121.)

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License Requirements

Reason for Control: RS, AT

Control(s)

Country Chart

RS applies to QRS11-00100-100/101 and QRS11-00050-443/569 Micromachined Angular Rate Sensors. See Related Controls. RS Column 1

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License Requirement Notes: There is no de minimis level for foreign-made commercial primary or standby instrument systems that integrate QRS11-00100-100/101 or commercial automatic flight control systems that integrate QRS11-00050-443/569 Micromachined Angular Rate Sensors (see §734.4(a) of the EAR).

License Exceptions

LVS: N/A GBS: N/A CIV: N/A

List of Items Controlled

Unit. S value

Related Controls: QRS11 Micromachined Angular Rate Sensors are subject to the export licensing jurisdiction of the U.S. Department of State. Directorate of Defense Trade Controls, unless the ORS11-00100-100/101 is integrated into and included as an integral part of a commercial primary or standby instrument system of the type described in ECCN 7A994, or aircraft of the type described in ECCN 9A991 that incorporates such systems, or is exported solely for integration into such a system; or the QRS11-00050-443/569 is integrated into an automatic flight control system of the type described in ECCN 7A994, or aircraft of the type described in ECCN 9A991 that incorporates such systems, or are exported solely for integration into such a system. (See Commodity Jurisdiction requirements in 22 CFR Parts 121; Category VIII(e), Note(1)) In the latter case, such items are subject to the licensing jurisdiction of the Department of Commerce. Technology specific to the development and production of QRS11 sensors remains subject to the licensing jurisdiction of the Department of State.

Related Definitions: N/A

Items:

The list of items controlled is contained in the ECCN heading.

B. TEST, INSPECTION AND PRODUCTION EQUIPMENT

7B001 Test, calibration or alignment equipment specially designed for equipment controlled by 7A (except 7A994).

License Requirements

Reason for Control: NS, MT, AT

Determining if a license is required

So... No license would be needed to take the GPS units to Spain as no AT1 control and no RS1 technology.

If the GPS units had contained QRS11 technology they would fall under DDTC/ITAR jurisdiction and we would need to look to ITAR regulations for licensing.



ITAR has a different (and more restrictive) licensing regime.

Technology Control Plans

Technology Control Plan (TCP)

A Technology Control Plan (TCP) outlines the export controlled technology/item and details the specific access and security controls that will need to be applied to the use of the export controlled item.

A typical TCP will include the following elements:

- Project description General summary of the project, implicated federal regulations and the export controlled technology/item;
- Physical security plan how item will be handled, marked, accessed, stored, returned and/or destroyed;
- ➤ <u>Information security plan</u> how electronic information materials will be handled, marked, accessed, stored, returned and/or destroyed;

Technology Control Plan (TCP)

- Personnel security plan a specific listing of who is authorized to access the technology/item;
- ➤ <u>Training plan</u> Where to get information regarding export control regulations and who to contact with questions. Training on each TCP will be provided to all project members;
- ➤ Monitoring plan TCPs are formally monitored annually to ensure compliance with export control regulations;
- ➤ <u>Certification</u> All individuals involved in an export restricted project will be asked to sign a certification acknowledging that they understand their obligations under the regulations.

University Systems in place to help with compliance

University Systems in place to help

- ➤ <u>PA-005</u> the Export Control box, when checked, causes a notification to be sent to Export Control office and an assessment is done. Please note that checking this box <u>does not</u> affect the processing or submission of a proposal.
- ➤ OSP Purchasing/Accounts Payable All international financial transactions are monitored and verified to ensure no payments to blocked or sanctioned parties;
- ➤ Technology Licensing & Commercialization MTAs and CDAs are monitored for any export control issues and to identify any projects with incoming 3rd party export controlled items;

University Systems in place to help

- ➤ Office of Sponsored Programs SPOs monitor all agreements to prevent inclusion of contractual restrictions that would nullify the FRE. In cases where restrictions are agreed to, SPOs ensure that the project is marked as export controlled in the PI Portal.
- Time & Effort Certification— When certifying effort, PI has a chance to verify that only appropriate people are appointed to export restricted projects.
- <u>University Export Control Website</u> Source of additional information, training materials, FAQs, and helpful websites.
- > <u>International Travel System (e-travel)</u> All international travel is monitored and depending on travel destination, purpose, and research area represented, travel advisories are provided to travelers.

When traveling abroad there are three basic questions you will want to ask when thinking about export controls:

- Where am I going?
- What am I taking with me?
- > What will I be doing?

#1 – Where am I going?

In general, travel to most countries is not a problem.

The sole exception is travel to Cuba where essentially all travel is prohibited.

There are a few exceptions to this Cuba travel prohibition including travel to conduct certain types of research activities or attendance at international conferences. Whether or not your travel activity would qualify would need to be confirmed. Contact the export control office for help with determining if your activity qualifies.

#2 – What am I taking with me?

<u>Items/Equipment</u> – In general, most common, commercially obtainable items do not require export licenses except for export to any of the T5 countries (Iran, Sudan, Syria, Cuba, and North Korea).

Research Data/Information – You can take and share any information that comes from fundamental research or that is published or in the public domain. Do not take any sensitive, proprietary or controlled data with you.

Really important to ensure that you don't accidently export controlled items!

#3 – What will I be doing?

<u>Presentations</u> – Make sure that what you are presenting is published, in the public domain or qualifies as fundamental research.

<u>Collaborations</u> – If FRE then you can share information and results. Remember that the FRE does not cover tangible items.

<u>Provision of Financial Assistance</u> – Under OFAC regulations we can't provide any financial assistance to anyone on a blocked or sanctioned list or T5 country.

<u>Provision of Services</u> – Under the regulations some consulting activities would require an export license.

What Can You Do?

Strategies for Ensuring Export Control Compliance

- Review research activities for potential export control issues and if you think that they may be subject to Export Controls, contact Export Control Office. Obtaining a license can take 3 to 6 months and there is no guarantee that a license will be granted.
- If you are planning to receive or use Export Controlled information or technology from outside the University, contact Technology Licensing & Commercialization (TLC) and the Export Control Office and notify them of the incoming export controlled information.
- If you are planning to hire a foreign national or will be working with foreign collaborators on an export controlled project we must determine if an Export License is required. If required, a License must be obtained **before** work can proceed.

Strategies for Ensuring Export Control Compliance

- Work with your Sponsored Program Officer to ensure that all publication and access restrictions are negotiated appropriately to preserve the Fundamental Research Exclusion whenever possible.
- When shipping export controlled items, include the appropriate licensing information (e.g., license number, License Exception symbol or No License Required) on all export documents.
- Maintain original records of all Export documents including all assessments/reviews, shipping documents for five (5) years.
- Continue to follow all access or control provisions outlined in your Technology Control Plan through out the life of the project and beyond (as required).

The Cost of Noncompliance

Failure to comply with Export Controls can result in severe criminal and monetary fines to both the **individual** and the **University**.

The severity of the fine/penalty depends on many factors including which regulations were violated, the extent of the violation and more importantly the intent of the violation.

Non-compliance can lead to loss of export privileges, loss of federal funding, and significant harm to the integrity and reputation of the University.

Fines and Penalties

<u>Department of Commerce – Violations under the EAR:</u>

CIVIL FINES - \$10,000 to \$120,000 - <u>per violation</u>
Suspension/debarment from Government contracts, loss of export privileges
CRIMINAL PENALTIES -\$50,000 to \$1,000,000 - <u>per violation</u>
Up to 10 years in prison

<u>Department of State – Violations under the ITAR:</u>

CIVIL FINES – Up to \$500,000 - <u>per violation</u>
Suspension/debarment from Government contracts, loss of export privileges

CRIMINAL PENALTIES – Up to \$1,000,000 **per violation** Up to 10 years in prison

NOTE - these are institutional as well as individual penalties!

- For academic institutions, the vast majority of research is shielded from export controls under the Fundamental Research, Education and Public Domain exclusions.
- Almost everything made in the US or made with US technology and/or located in the US will be subject to the EAR, however very little of it is export restricted or requires a license.
- Export Controls apply to <u>all</u> international University activities not just shipping equipment overseas.
- Export Controls apply regardless of funding source.
- Export Controls apply to you as a US citizen and as an university employee and they apply to your personal items as well as any university owned items.

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- Most common, commercial goods are categorized EAR99 and no license is required to take them out of the US.
- Common items of most concern are computers, laptops, flash drives, external hard-drives (and associated encryption technology), smart phones (and associated wireless technology), and GPS units.
- ➤ <u>Scientific/Research Equipment</u> Should always be checked for license requirements as it is not the level of sophistication of an item but rather what item might also be used for that determines whether a license is required (e.g. valves).

- ➤ <u>International Presentations</u> Only present information that is published, in the public domain or that you know comes from a project that qualifies under the Fundamental Research Exclusion.
- Export Restricted/Proprietary Data Should never be taken out of the US. Take information off laptops, flash drives, external hard drives, etc. Be very careful with email attachments.
- Remember that taking or sending items to any of the T5 countries (Iran, Sudan, Syria, Cuba or North Korea) **is always** prohibited without a license.

Questions?

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Email: exportcontrol@osu.edu

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