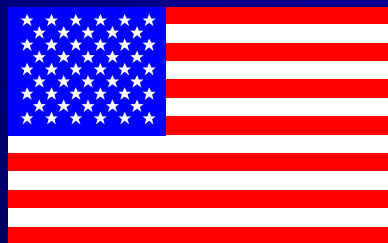




US Export Regulations Compliance

**Presented by Larry Disenhof
Cadence Design Systems, Inc.**



Agenda

- **Why export regulations?**
- **What is an export**
- **Compliance process**
- **Global operations and compliance**
- **Resources**

Why Export Regulations?

- **Export Regulations are created to:**
 - **Implement US national security policy**
 - **Prevent proliferation of weapons technology**
 - **Prevent exports to terrorist organizations**

***When the government says “Sanctions”
... think Export Regulations***

US Government Regulations

- **Two Government Agencies are focused on US Export Compliance:**
 - **US Department of Commerce, Bureau of Industry and Security (BIS)**
 - Commercial “Dual Use” Goods and Technology
 - EAR – Export Administration Regulations
 - www.bis.doc.gov
 - **US Department of State, Office of Defense Trade Controls (DTC)**
 - Military Goods, Technology and Services
 - ITAR – International Traffic in Arms Regulations
 - www.pmdtc.org

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- **What is an export**
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What is an export?

- An export occurs whenever product or technology is released to a “Foreign National”* ... wherever and however it takes place!
- Exports occur by:
 - Shipment (mail, freight, personal delivery)
 - Electronic transmission (email, internet)
 - “Oral or visual release of technology” to a foreign national



* “Foreign National” = H-1B visa holders, foreigners, etc.
(Green card holders are not considered foreign nationals.)

Deemed Exports

- **Export does not require shipment out of the US**
- **Showing code, technology, etc. to foreign nationals inside the US is an export**
- **Foreigners working in the US on your code are receiving exports**
 - **Caution should be taken with Russian and Chinese programmers with H-1B visas**

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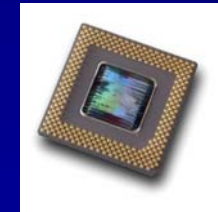
Compliance Process

- To accurately determine controls on your export, you must follow these steps:
 1. Classify software, hardware or technology
 2. Check destination country
 3. Check end-user and end-use
- Outcome will be either:
 - No License Required (NLR)
 - License Exception Available
 - Export License Required
- Written Assurances



Step 1 – Product Classification

- Items are controlled based upon their dual-use (civilian and/or military) capabilities
- Classifications are based on their end-use:
 - Electronics, Computers, Security, Telecommunications, Avionics, Navigation, Marine, Specialized devices
- Training, processes and procedures are classified as “technology”
- Encryption classification may trump technical classification



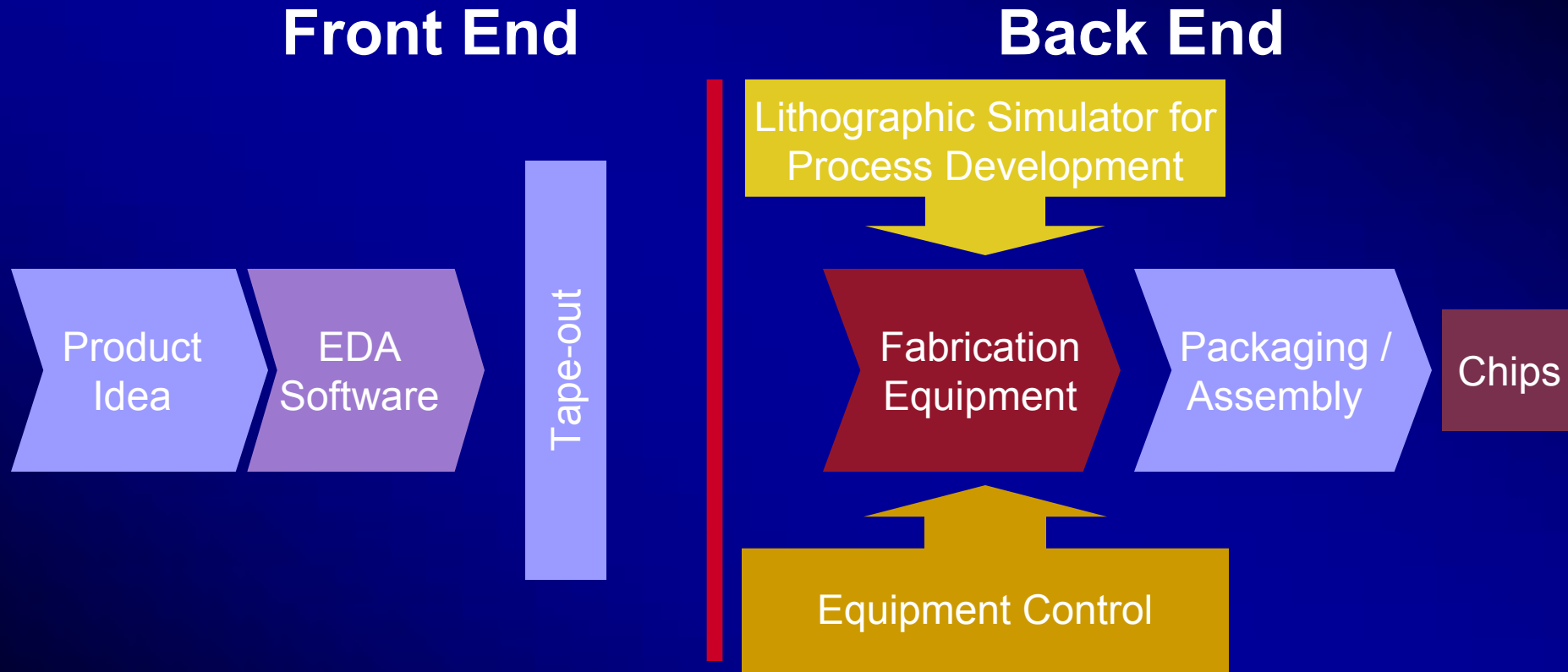
Step 1 – Classifying EDA tools

- **“Front End” tools are Decontrolled. “EAR99”**
 - Free to export to all “non proscribed” destinations.
 - “Front End” tools decontrolled in 1991
- **“Back End” tools that simulate the lithographic manufacturing processes are controlled. “3D003”**
 - Export restrictions are applied.
 - Licenses required to China, former USSR countries

Step 1 – Classifying EDA tools

- **Data supplied by the customer is “technology”, and controlled based upon the type of product being designed**
 - Classification and restrictions vary by technology
- **Designs created with EDA tools are considered software or technology**
 - Classification based on technology and end-use
 - Restrictions based on classification
- **Processes and procedures are classified as “technology”**
 - This includes training curricula and materials

Step 1 – EDA Process Overview



Legend

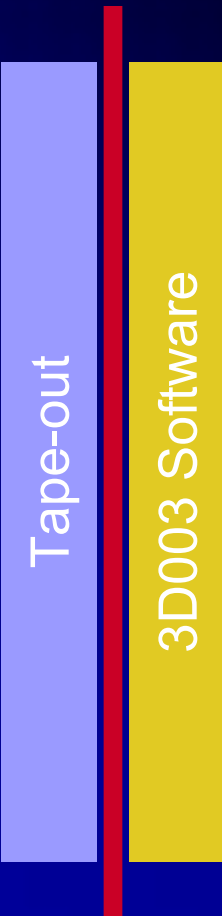
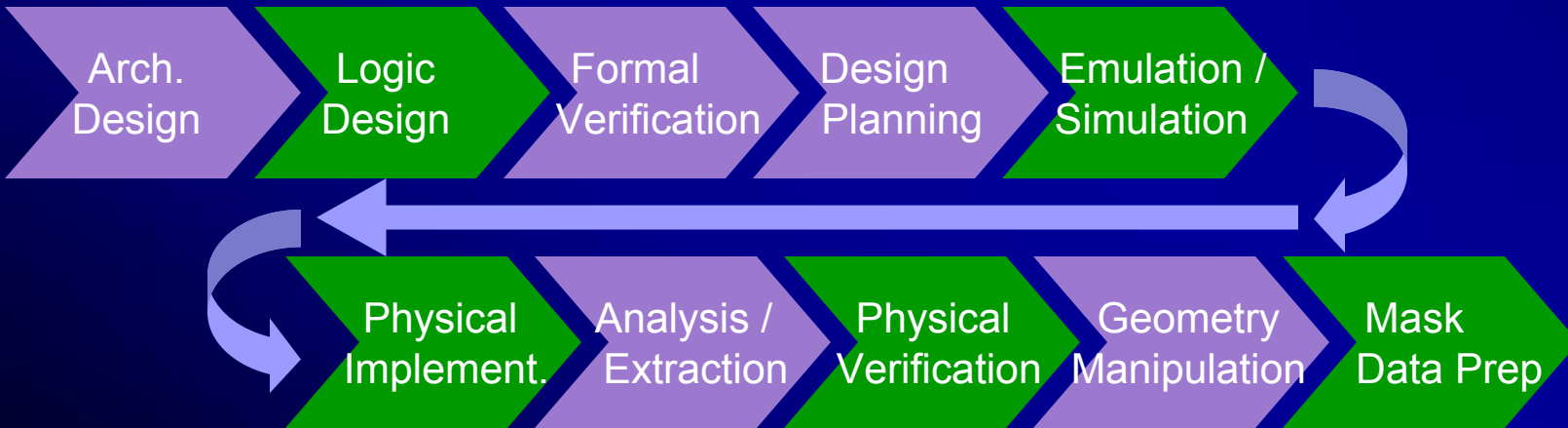
3.A	3.D.2	3D or 3E/EAR99
3.B	3.D.3	Uncertainty

Step 1 – Then vs. Now

1991 – Government's View of EDA Software



2003 – Simplified Modern EDA Design Flow



Step 1 – EAR 3D003

- Related Controls: 3D003 does **not** control "software" specially designed for schematic entry, logic simulation, placing and routing, layout verification or pattern generation tape.
- Related Definitions: 1.) Libraries, design attributes or associated data for the design of semiconductor devices or integrated circuits are considered as "technology". 2.) A lithographic processing simulator is a "software" package use in the design phase to define the sequence of lithographic, etching and deposition steps for translating masking patterns into specific topographical patterns in conductors, dielectrics or semiconductor material.
- Items controlled:
 - a. Designed for the "development" of semiconductor devices or integrated circuits; and
 - b. Designed to perform or use any of the following:
 - b.1. Design rules or circuit verification rules;
 - b.2. Simulation of the physically laid out circuits; or
 - b.3. Lithographic processing simulators for design.

Step 1 – Proposed 3D003

**EDA Consortium's proposed 3D003 language:
(if adopted will occur in 2004+)**

Physics-based “software” for the “development” of lithographic, etching or deposition processes for translating masking patterns into specific topographical patterns in conductors, dielectrics or semiconductor materials.

N.B.: For the purposes of 3.D.3, physics-based means using computations to determine a sequence of physical cause and effect events based on physical properties (e.g., temperature, pressure, diffusion constants and semiconductor materials properties).

EDA in the Future

- **As EDA solutions become tied more deeply into the manufacturing “back end”, our products will be subject to increased levels of controls.**
 - **Know where the line is so you are proactive in obtaining needed licensing.**

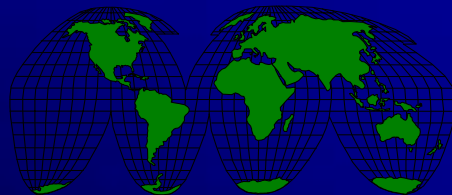
Step 1 – Encryption

- **Controls on encryption may trump controls on EDA software**
 - **Current control levels**
 - Symmetric key lengths ≤ 64 bit decontrolled.
 - Symmetric key lengths > 64 bit controlled, can ship after 30 day review by BIS
 - RSA encryption is controlled.
- **While controls are easing, there are still controls on encryption. Check the BIS website for details www.bis.doc.gov/encryption**
- **Import restrictions apply in China, France, Hong Kong, Israel, Poland, Russia, Singapore, etc.**

Step 2 – Check Destination Country

- BXA classifies every country based on the degree of concern it has on the governance within the country
- Exports restrictions are determined by the classification of the country
- Major EDA Export Issues
 - China
 - Former USSR
 - India
- “T7” = No Exports
 - Cuba
 - Iraq
 - Iran
 - Libya
 - North Korea
 - Syria
 - Sudan

*No
surprises
here!*



Step 2 – Check Destination Country

Country Policies in the news:

■ Wassenaar Arrangement

- Multinational regime created to align member countries' export control policies.
- 33 countries in membership
- Annual meetings to review and adopt regulation changes.

■ China

- **GAO report April 2002 titled “Rapid Advances in China’s Semiconductor Industry Underscore Need of Fundamental U.S. Policy Review”**
- Be on the lookout – there may be regulation changes!

Step 3 – Know your Customer

- **US Government maintains various lists of “Prohibited Destinations” in different places**
 - **Denied Parties List (BIS)**
 - Persons and Organizations convicted of exporting illegally.
 - ½ the list contains USA organizations!
 - **Unverified and Entities Lists (BIS)**
 - Organizations involved in Nuclear / Missile technologies
 - China, India, Israel, Pakistan, Russia
 - **Specially Designated Nationals List (OFAC)**
 - Terrorist organizations and their sponsors
 - **Arms Export Control Debarred Parties List (ITAR)**

Step 3 – Know your Customer

- **“Red Flags”**
 - **BIS suggested list of concerns:**
 - Shipping address is PO box or Freight forwarder
 - Customer would not have use for EDA products
 - Customer pays cash – does not want maintenance
- **Is your customer in a sensitive industry?**
 - Defense, missile, nuclear

If it doesn't seem right – check it out!
Do not Self – Blind!

Written Letter of Assurance

Required statements on the Letter of Assurance:

- Acknowledge that export is subject to US regulations
- Acknowledge intent to use products for legitimate purposes
- Acknowledge restrictions on resale or re-export to prohibited parties or destinations
- Acknowledge that US regulations survive the termination of relationship between exporter and recipient

Written Letter of Assurance

The undersigned acknowledges that the software and other technical data that is being provided by _____ is subject to export controls imposed by the United States Export Administration Act of 1979, as amended (the “Act”) and the regulations promulgated thereunder. The undersigned certifies that:

The software and other technical data being obtained is not intended to be used for any purpose prohibited by the Act or regulations, including, without limitation, Nuclear, Missile or Chemical & Biological Weapons activities.

Except as specifically authorized by the U.S. Export Administration Regulations, or by written approval from the Bureau of Export Administration, we will not re-export, resell, or otherwise dispose of any items supported by this statement:

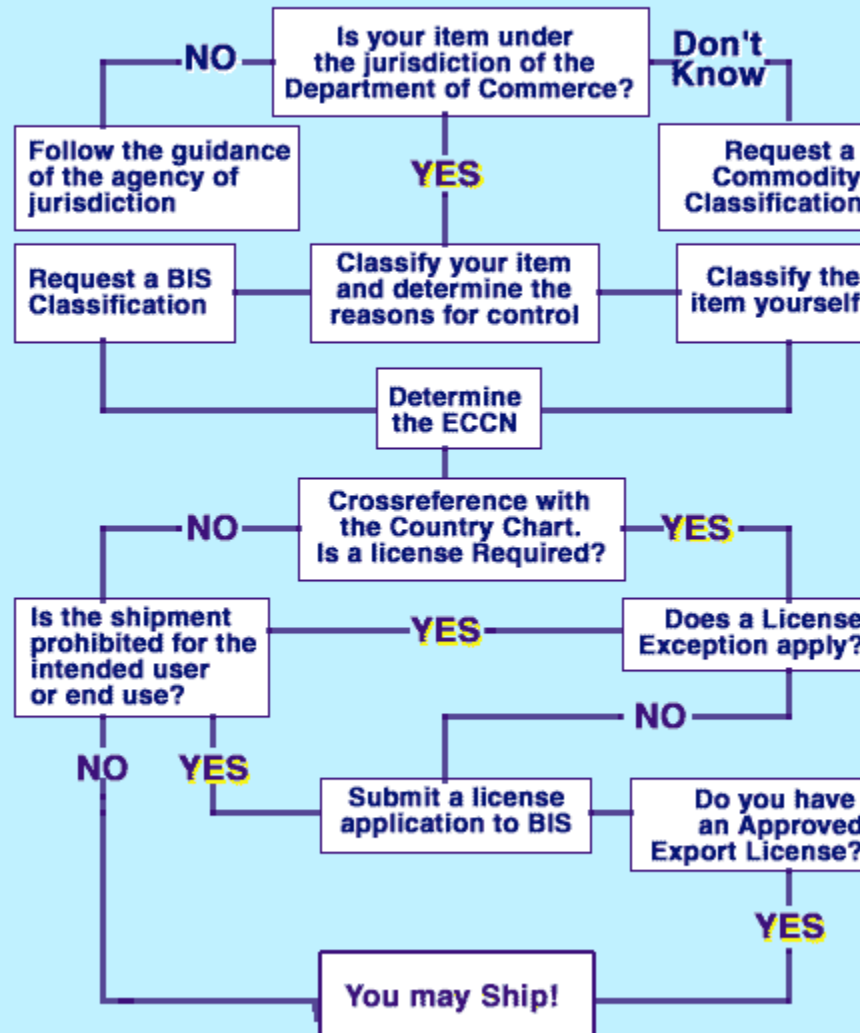
- To any person if there is reason to believe that it will result directly or indirectly in disposition of the items contrary to the U.S. Export Administration Regulations, or
- To any country not approved for export as brought to our attention by the U.S. exporter. As of 2003, these countries are Cuba, Iran, Iraq, Libya, North Korea, Sudan, Syria, UNITA territory of Angola.

The undersigned acknowledges that this assurance will be honored beyond any termination of business relationships with _____.

Summary: Compliance Checks

- **Classify your export product**
- **Country Location**
 - **T7 – No exports: Cuba, Iran, Iraq, Libya, North Korea, Sudan, Syria**
 - **Think current events: Serbia & Macedonia, Afghanistan**
 - **Arab Countries – watch out for Arab Boycott of Israel**
- **End User, End Use**
 - **Check Denials Lists**
 - **Check for Nuclear, Missile, Biological Weapons production**
 - **Check “Red Flag” Indicators**

Processing Your Export



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- **Global operations and compliance**
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Global Operations and Compliance

- **US Regulations apply to international subsidiaries.**
 - **The initial export to your international site is based upon the ultimate destination and end-use.**
 - **Technology developed by US subsidiary overseas becomes US Technology.**
- **Other concerns:**
 - **Deemed Exports - Country of Citizenship matters!**
 - **Design teams working on military and satellite technologies.**
 - **Foreign nationals working with customer IP.**
 - **International support calls – customers need to know.**

Global Operations and Compliance

- **Foreign visitors to the US**
 - **If you issue an invitation, you are responsible to verify the travel itinerary**
 - **Visiting Chinese engineers are in the spotlight**
- **Change in travel plans?**
 - **Contact INS and Export Enforcement**

Straight to the point: why should you care ?

- **The US government prosecutes individuals involved in an illegal export, not just the company. Everyone is subject to export regulations:**
 - **Individual Liability**
 - Fines and/or Federal prison.
 - **Corporate Liability.**
 - Fines and imprisonment
 - Loss of export privileges
- **Every government settlement includes a press release.**

Responsibility for Export Control

- **Corporate and individual responsibilities:**
 - Ignorance is not a defense
 - **Government policy has shifted from validated licensing to self-licensing with more audits and enforcement activities**
 - **It is the responsibility of all corporations to understand and comply with the regulations**
- **Executive responsibilities:**
 - **Open and public commitment**
 - **Support for compliance processes and procedures**

We are all responsible for compliance!

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Resources

- **Bureau of Industry and Security**

- www.bis.doc.gov

- **Western regional office**

- 152 North Third Street, Suite 550

- San Jose, CA 95112

- Phone: (408) 998-7402

- Fax: (408)998-7470

All non-military “dual use” items fall under BIS regulations.

Resources

- **Office of Defense Trade Controls, Department of State, administers ITAR regulations**
 - www.pmdtc.org
 - **All military products, technology and services are regulated under ITAR**
 - **Licensing requires annual registration**
 - **Registration required for domestic applications, not just export. If you work in the military sector, you should be registered.**
 - Registration takes several months.
 - Executive background checks.
 - \$600 annual fee. You can register for 3 years.

EDAC Export Committee

- **Larry Disenhof, Cadence**
- **Glen Driveness, Mentor**
- **Ron Duncan, Synopsys**
- **Douge Martin, Mentor**
- **Erik Oliver, Synopsys**
- **Pamela Parrish, EDA Consortium**
- **Kent Richardson, Numerical Technologies**
- **Mike Rieger, Synopsys**
- **Roszel Thomsen, Thomsen & Burke LLP**
- **Ted Vucurevich, Cadence**