



Dual-Use Export Controls DoD Perspective

*Ed Auger
Defense Technology Security
Administration (DTSA)
Farnborough International Airshow
July 17, 2008*





Licensing – General

- **The US Export Laws divide the responsibility for export licensing:**
 - **Arms Export Control Act: Department of State for defense articles**
 - **Export Administration Act: Department of Commerce for dual use items**
- **The Department of Defense reviews of the exports are in support of the licensing department.**



Defense Technology Security Administration

**DUSD for Technology Security Policy and National Disclosure Policy
& Director, Defense Technology Security Administration (DTSA)**

Deputy Director, DTSA

**Licensing
Directorate**

- License Reviews
- Commodity Jurisdictions
- Voluntary Disclosures
- Regulations

**Technology
Directorate**

- Aeronautical/JSF
- Electronics
- Information Systems/Communications
- Missile Defense/Space
- NBC/Land/Naval/Materials/Machine Tools
- Sensors & Lasers

**Policy
Directorate**

- Int'l Regimes
- Guidelines
- End-user Reviews

**Space
Directorate**

- Monitoring/License Enforcement
- Technical Exchanges
- Tech Data Reviews

**Management
Directorate**

- Personnel
- Security
- Logistics



DTSA's Mission & Strategic Goals

To promote United States national security interests by protecting critical technology while building partnership capacity

- Preserve critical US military technological advantages
- Support legitimate defense cooperation with foreign friends and allies
- Assure the health of the defense industrial base
- Prevent proliferation and diversion of technology that could prove detrimental to U.S. national security
- Implement enterprise-wide resources to ensure organizational structures, processes and procedures effectively support DTSA's mission



DoD Licensing Community

- **Defense Technology Security Administration (DTSA)**
- **US Military Services:**
 - **US Air Force – Secretary of the Air Force, International Affairs Division (SAF/IA)**
 - **US Army - Assistant Secretary of the Army, Acquisition, Logistics & Technology (ASA(ALT))**
 - **US Navy and US Marine Corps - Navy International Programs Office (Navy-IPO)**



DoD Licensing Community (Cont'd)

- **Other DoD Organizations**
 - **National Security Agency (NSA)**
 - **Joint Chiefs of Staff (JCS/J5)**
 - **Defense Security Cooperation Agency (DSCA)**
 - **Under Secretary of Defense for Policy**
 - **Under Secretary of Defense for Acquisition, Technology and Logistics**
 - **Other (Defense Intelligence Agency, Defense Information Systems Agency, Defense Logistics Agency, National Geospatial-Intelligence Agency, National Reconnaissance Office, etc.)**



DoD Review of Defense Transactions Assessing Impact on National Security

- **Among the Factors Considered:**
 - **Policies (Region, Country & Technology)**
 - **Level of Technology (vs. U.S. systems and countermeasures)**
 - **End-user & End-use History**
 - **Military Operational Impact**
 - **Inter-operability Requirements**
 - **Bilateral, Multilateral and International Agreements**
 - **Foreign Availability of Like Systems**
 - **Classified Data Transfers**

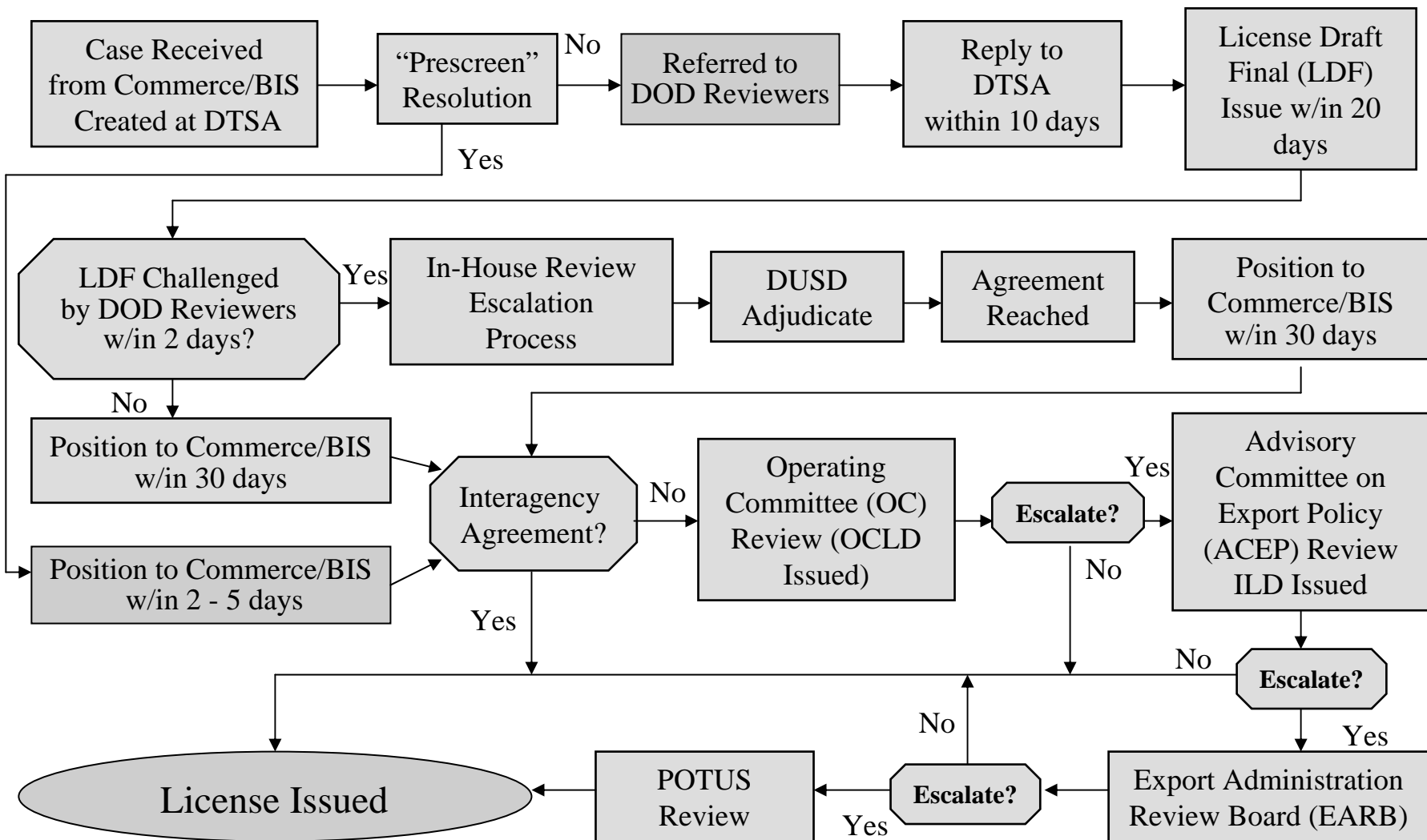


What DTSA Provides to the Licensing Process

- **Warfighter Protection**
- **Technical Expertise**
- **National Security Perspective**
- **Honest Broker**
- **Program Insight**

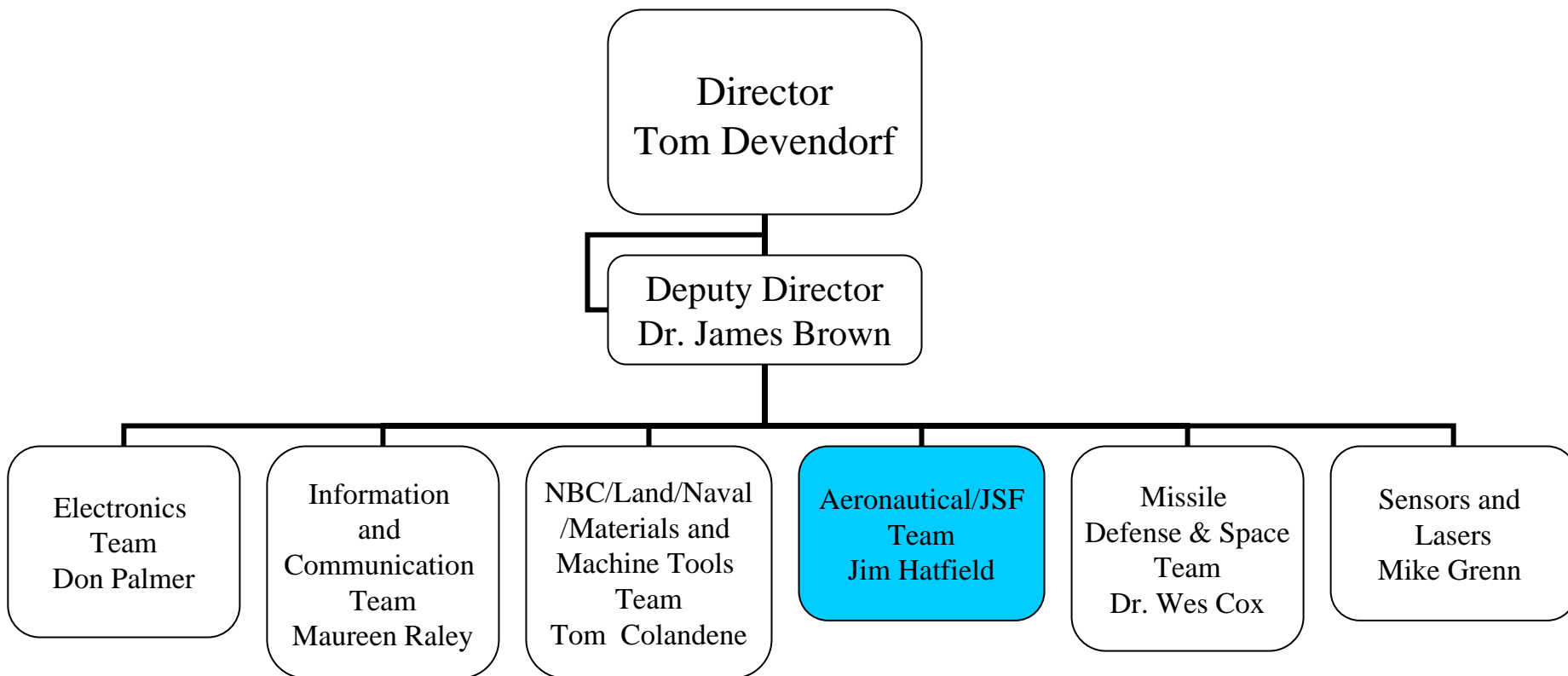


DoD Dual-Use License Review Timeline (Calendar Days)





Defense Technology Security Administration Technology Directorate





Technology Directorate: Mission

- **To provide comprehensive, in-depth technical analysis to support the DoD export review process.**
 - **To ensure that the DUSD (TSP/NDP)'s technology security objectives are considered in the planning and implementation of major international cooperative programs.**
 - **To chair Technical Working Groups in technology specific areas to pinpoint critical U.S. technologies and develop sound export control recommendations for leadership consideration.**
 - **To provide technical advice and consultation to U.S. Defense Industry on proposed international exports.**



Technical Review Process

- **Technical review template:**
 - **What is the item?**
 - **What capabilities does it provide?**
 - **Are there other applications in addition to stated end-use?**
 - **What is the foreign availability?**
 - **What is the critical technology we are trying to protect?**
 - **Options:**
 - **Approve**
 - **Approve with provisos**
 - **Deny**
 - **Return without action**
 - **Justification is provided for all recommendations**



Aerospace Technologies

- **Matrix Support of Aerospace Licenses within the Technology Directorate (TD)**
- **Aeronautical/JSF Team is TD Focal Point for Aerospace Systems Licenses, excluding UAVs and Spacecraft**



Commerce Licenses

Engine Hot Section Technology

- "Technology" "required" for the "development", "production" of:
- ECCN 9E003.a.1. - Gas turbine blades, vanes or tip shrouds made from directionally solidified (DS) or single crystal (SC) alloys having (in the 001 Miller Index Direction) a stress-rupture life exceeding 400 hours at 1,273 K (1,000øC) at a stress of 200 MPa, based on the average property values
- ECCN 9E003.a.2. - Multiple domed combustors operating at average burner outlet temperatures exceeding 1,813 K (1,540ø C) or combustors incorporating thermally decoupled combustion liners, non-metallic liners or non-metallic shells
- ECCN 9E003.a.4. - Uncooled turbine blades, vanes, tip-shrouds or other components designed to operate at gas path temperatures of 1,323 K (1,050øC) or more
- ECCN 9E003.a.5. - Cooled turbine blades, vanes or tip-shrouds, other than those described in 9E003.a.1, exposed to gas path temperatures of 1,643 K (1,370øC) or more
- **Design Methodology, Design Tools, Manufacturing Processes, Geometries**



Commerce Licenses

Directionally Solidified/Single Crystal Castings

- ECCN 9B001. - Specially designed equipment, tooling and fixtures for manufacturing gas turbine blades, vanes or tip shroud castings. a. Directional solidification or single crystal casting equipment. b. Ceramic cores or shells.
- ECCN 9D004.c. - "Software" specially designed to control directional solidification or single crystal casting
- ECCN 9E001/9E002 – "Technology" according to the General Technology Note for the "development" of equipment or "software" or "production" of equipment controlled by 9A001.c, 9A004 to 9A011, 9B (except 9B990 or 9B991), or 9D (except 9D990 or 9D991).
- ECCN 9E003.a.1. - Gas turbine blades, vanes or tip shrouds made from directionally solidified (DS) or single crystal (SC) alloys having (in the 001 Miller Index Direction) a stress-rupture life exceeding 400 hours at 1,273 K (1,000øC) at a stress of 200 MPa, based on the average property values
- **Casting Equipment and Tools, Manufacturing Processes, Geometries**



Commerce Licenses

Full Authority Digital Engine Controls (FADEC)/Engine Test Technology

- ECCN 9B002 – On-line (real time) control systems, instrumentation (including sensors) or automated data acquisition and processing equipment, specially designed for the "development" of gas turbine engines, assemblies or components incorporating "technologies" controlled by 9E003.a.
- ECCN 9D003 - "Software" specially designed or modified for the "use" of full authority digital electronic engine controls (FADEC) for propulsion systems controlled by 9A (except 9A018, 9A990 or 9A991) or equipment controlled by 9B (except 9B990 or 9B991), as follows (see List of Items Controlled).
- ECCN 9E003.a.9. – "Technology" "required" for the "development", "production" of full authority digital electronic engine control (FADEC) for gas turbine and combined cycle engines and their related diagnostic components, sensors and specially designed components;
- ECCN 9D004.b - "Software" for testing aero gas turbine engines, assemblies or components, specially designed to collect, reduce and analyze data in real time, and capable of feedback control, including the dynamic adjustment of test articles or test conditions, as the test is in progress;
- **System Architecture, Software**



Commerce Licenses

Engine Related Coatings Technology

- ECCN 2E003.f. - "Technology" for the application of inorganic overlay coatings or inorganic surface modification coatings (specified in column 3 of the following table) to non-electronic substrates (specified in column 2 of the following table), by processes specified in column 1 of the following table and defined in the Technical Note.
- **Processes, Materials, Coated Part Design**



Commerce Licenses

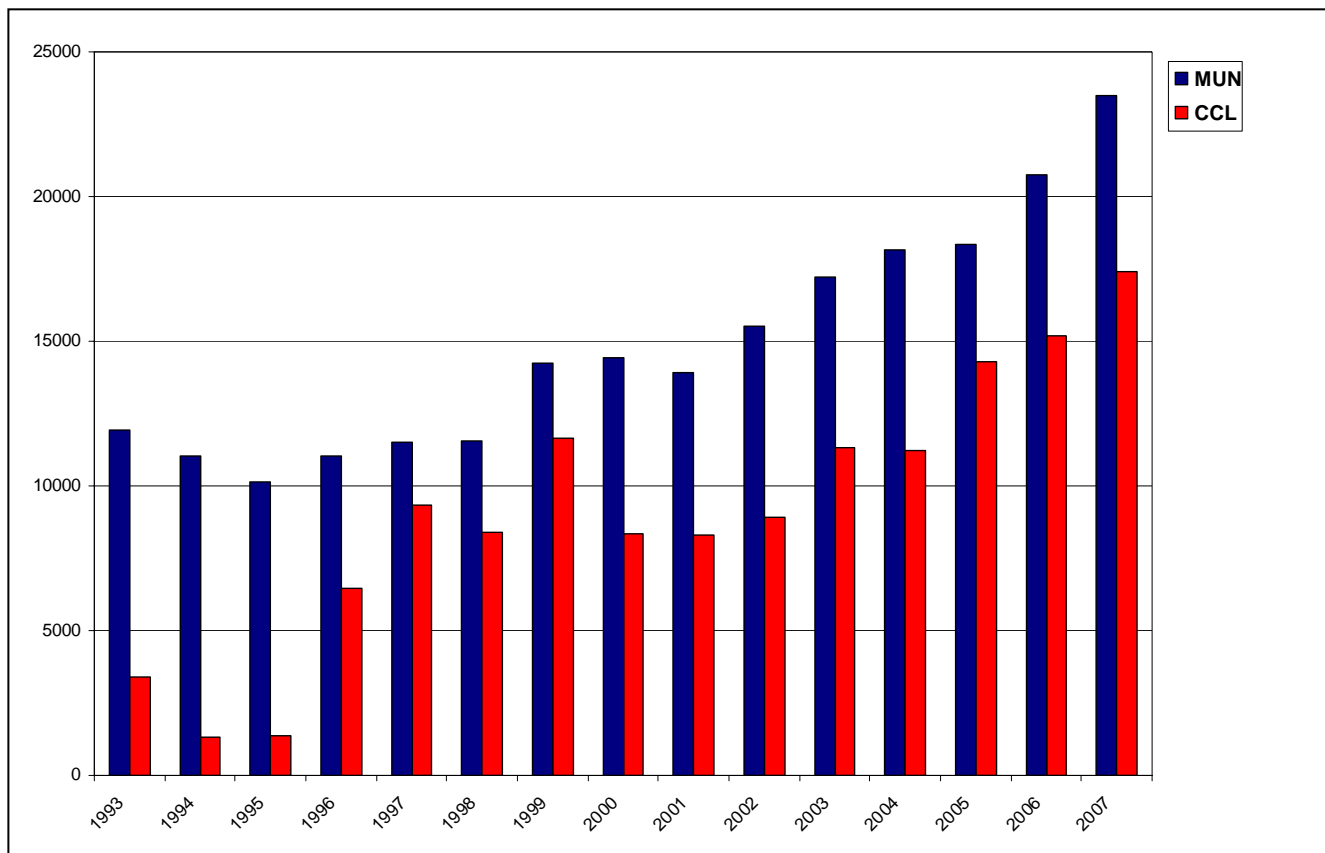
Other ECCNs of Interest

- ECCN 1E001 – "Technology" according to the General Technology Note for the "development" or "production" of items controlled by 1A001.b, 1A001.c, 1A002, 1A003, 1A004, 1A005, 1A101, 1B, or 1C (except 1C355, 1C980 to 1C984, 1C988, 1C990, 1C991, 1C992, and 1C995).

- Category 7 ECCNs – Flight Controls, Navigation Systems

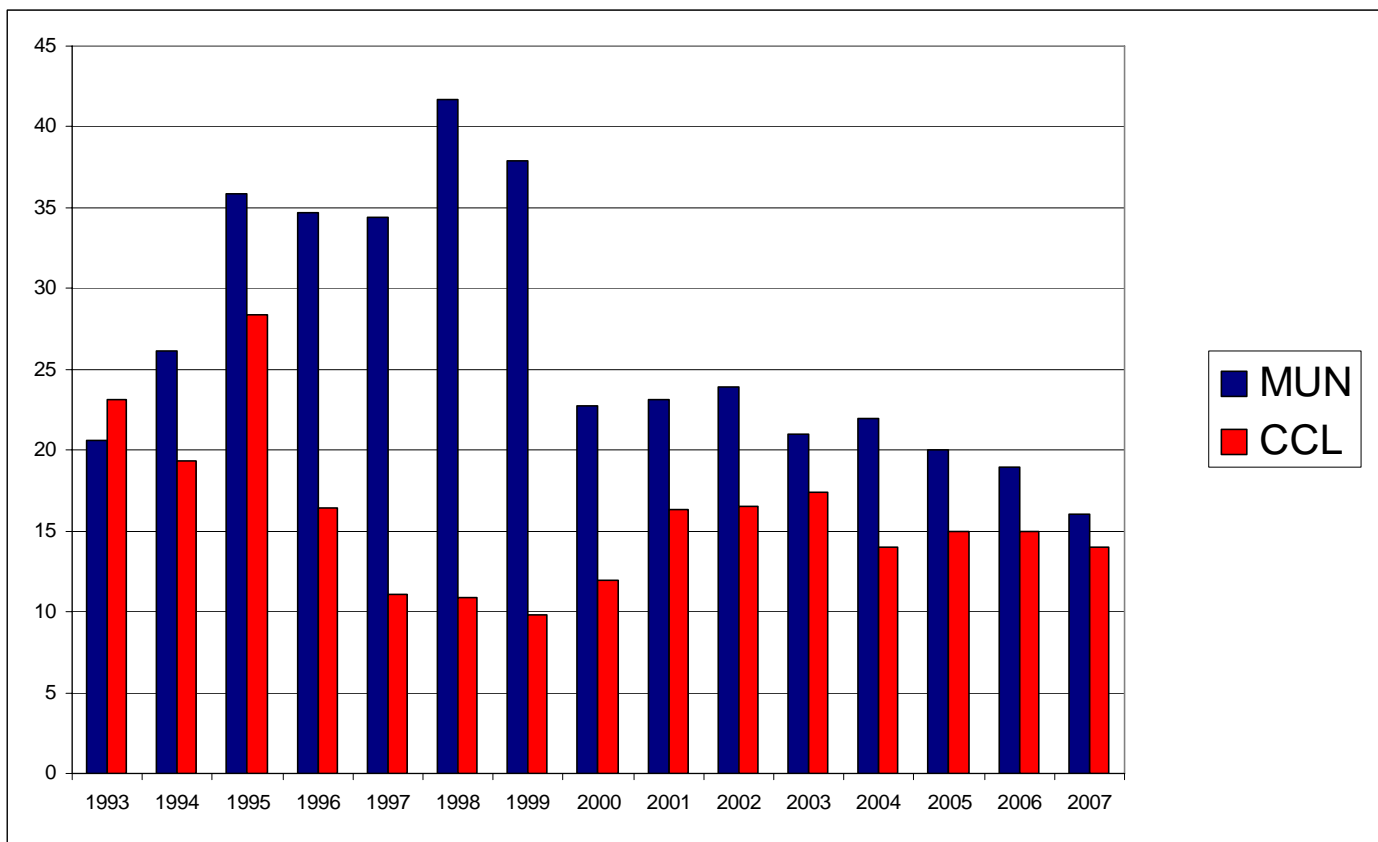


Total Cases Processed Jan 1993 – Dec 2007





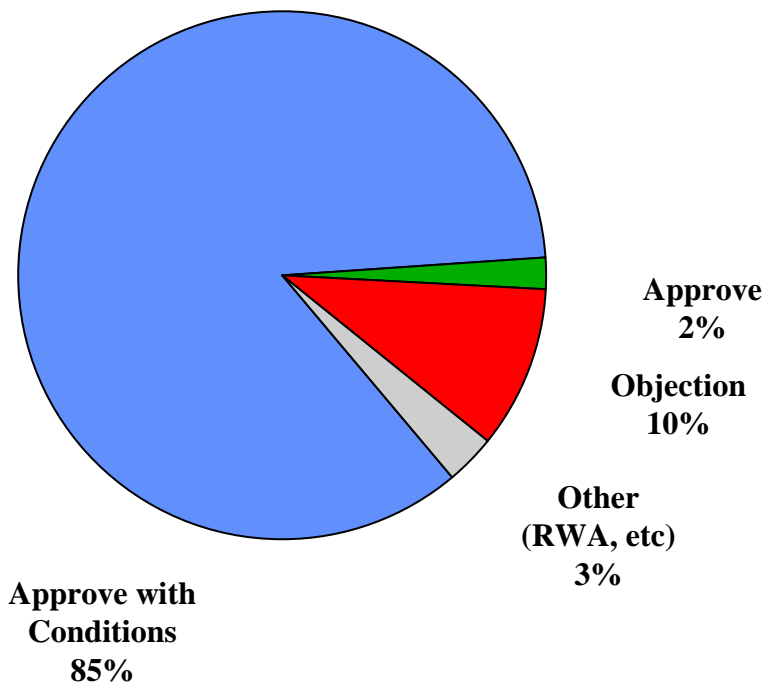
DoD Average Days Jan 1993 – Dec 2007





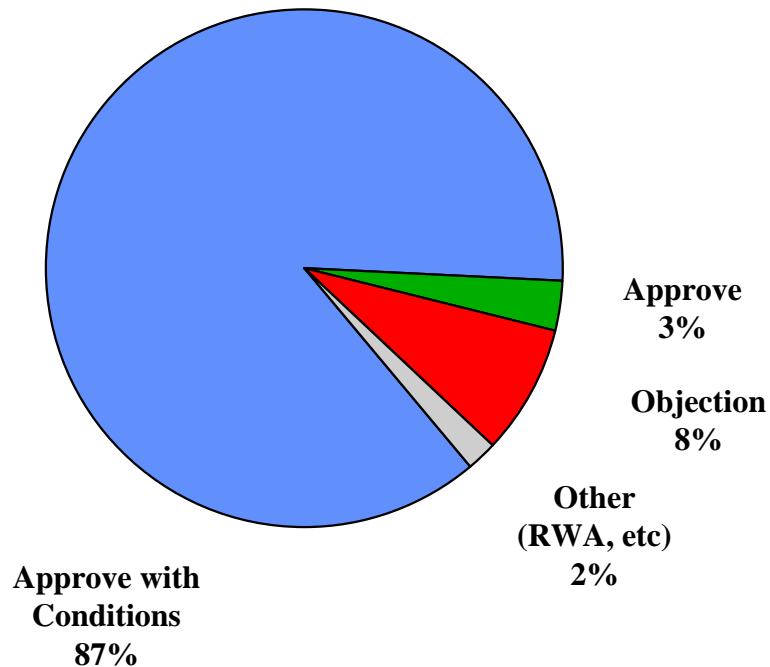
Outcome of DoD Dual Use License Review

Jan – Dec 2006



15,212 Licenses Reviewed

Jan – Dec 2007



17,422 Licenses Reviewed



Statistical Summary

Average case processing days 2007: **Munitions: 15.1**
Dual Use: 13.9

Number of Cases Processed in CY 2007:
- Munitions: 23,469
- Dual Use: 17,422

Percentage of Munitions cases electronically staffed (last 90 days): 22%

Percentage of cases prescreened: **Munitions: 37%**
(Tiger Team) **Dual Use: 43%**



License Preparation Guidance



Applicant's Role

- **It is incumbent on the applicant to:**
 - **Provide the information DoD needs to conduct a thorough technical review**
 - **“Draw the box” for their export request in the application, so provisos are not imposed constraining the applicant for items they have no intention of exporting**



Good Habits That Should Be Hard To Break

- **Focus on the basic elements of every license request: country, commodity, end-user and end-use**
- **Identify license precedents or case history. Include copies**
- **Provide clear, concise cover/transmittal letter**
- **Learn the EAR, both layout and content**
- **Compliance before and after licensing**
- **Improve knowledge through recurrent training**



Reducing RWA's/ Avoiding Death by Proviso

- **Tell us in plain English:**
 - **What you are doing**
 - **Scope of the effort/Statement of Work (SOW)**
 - **Concise yet thorough**
 - **What you are not doing**
 - **May be more important**
 - **Avoid jargon, don't rely on program names**
- **Review previous license provisos**
- **Cite previous cases, more than one is OK**



Reducing RWA's/ Avoiding Death by Proviso

- **Government POC**
 - **Verify POC information provided**
 - **If none, what Service would be interested**
- **Countries - not all countries are created equal**
- **Temporary Licenses**
 - **Tell us how will you maintain control**
 - **Note that Government and Industry end-users are treated differently**
 - **Be realistic with quantities**
- **List internet web-site to assist tech review**
- **Bottom line, pass the “Grandma check.” Grandma should be able to determine your intentions by reading your application**



Provisos: Draw the Box!

- **Most provisos are imposed because the applicant has not satisfactorily “drawn the box.”**
- **Applicants should “draw their own box” on every application.**
- **If the applicant does NOT do a good job of “drawing the box” on their application,**
 - **We will recommend return without action (RWA), or**
 - **Recommend Denial, or**
 - **“Draw the box” (impose limitations/provisos). The applicant may not like our provisos if we are forced to “draw the box” for them.**



Program Technology Release Roadmap

- **The key to developing and implementing a program is to address technology release decisions as any other acquisition milestone (e.g., development, testing, production)**
- **The best way to do so is to develop a “Technology Release Roadmap” which defines what technology decisions are required and when they are required to meet program goals**
- **Work backward from the end state, set goals, brief and follow-up!**



Foreign National Employment

- **Include the following information for DTSA review:**
 - **Foreign national's biography/resume**
 - **Description of job duties**
 - **Company organization chart showing where the foreign national fits into the organization**
 - **List of all other foreign nationals working at the company, their job title, and where they fit in the organization**
 - **Copy of Non-Disclosure Statement**
 - **Copy of Technology Control Plan**



USXports Impact and Applicant's Role

- **We have improved our license review process by the deployment of a database called USXports. This database:**
 - **Accommodates electronically submitted licenses**
 - **Supports automated staffing**
 - **Allows “zero time” referral of cases**
 - **Permits rapid review of electronically submitted data**
- **Will NOT support rapid review if you don't submit electronic files in a text searchable format.**



Industry Briefings

- **DTSA is constantly asked if a company can come in to brief a program.**
 - **Wrong Answer: After the license is submitted (Too Late!)**
 - **Right Answer: When requested.**
 - **Best Answer: Before you start the program!**
 - **Gives us the opportunity to tell you our concerns so you may be able to engineer around them**
 - **Provides a heads up to you of USG concerns**
- **Remember, we are not buying your product, conduct brief accordingly**



Summary

- **Clearly Identify the Specific Items/Technologies Requested for Transfer**
- **Clearly Explain the Need to Transfer the Subject Items/Technologies**
 - **Clearly Identify the End-User and End-Use**
- **Defining “the Box” will Significantly Reduce the Potential for an RWA**
 - **Use Case History to Guide Your Submissions**
- **Good Licenses Make Short Reviews/Limit Provisos**