

GSAW 98

JTA/DII COE

Samuel E. Bowser

TOPICS

- **What is DoD Joint Technical Architecture (JTA)?**
- **What is the Basis for JTA?**
- **What is the JTA Standards Profile?**
- **What is JTA Compliance?**
- **What is the Defense Information Infrastructure (DII) Common Operating Environment (COE)?**
- **What is the Basis for DII COE?**
- **What is DII COE Compliance?**
- **How does JTA/DII COE Impact new systems?**

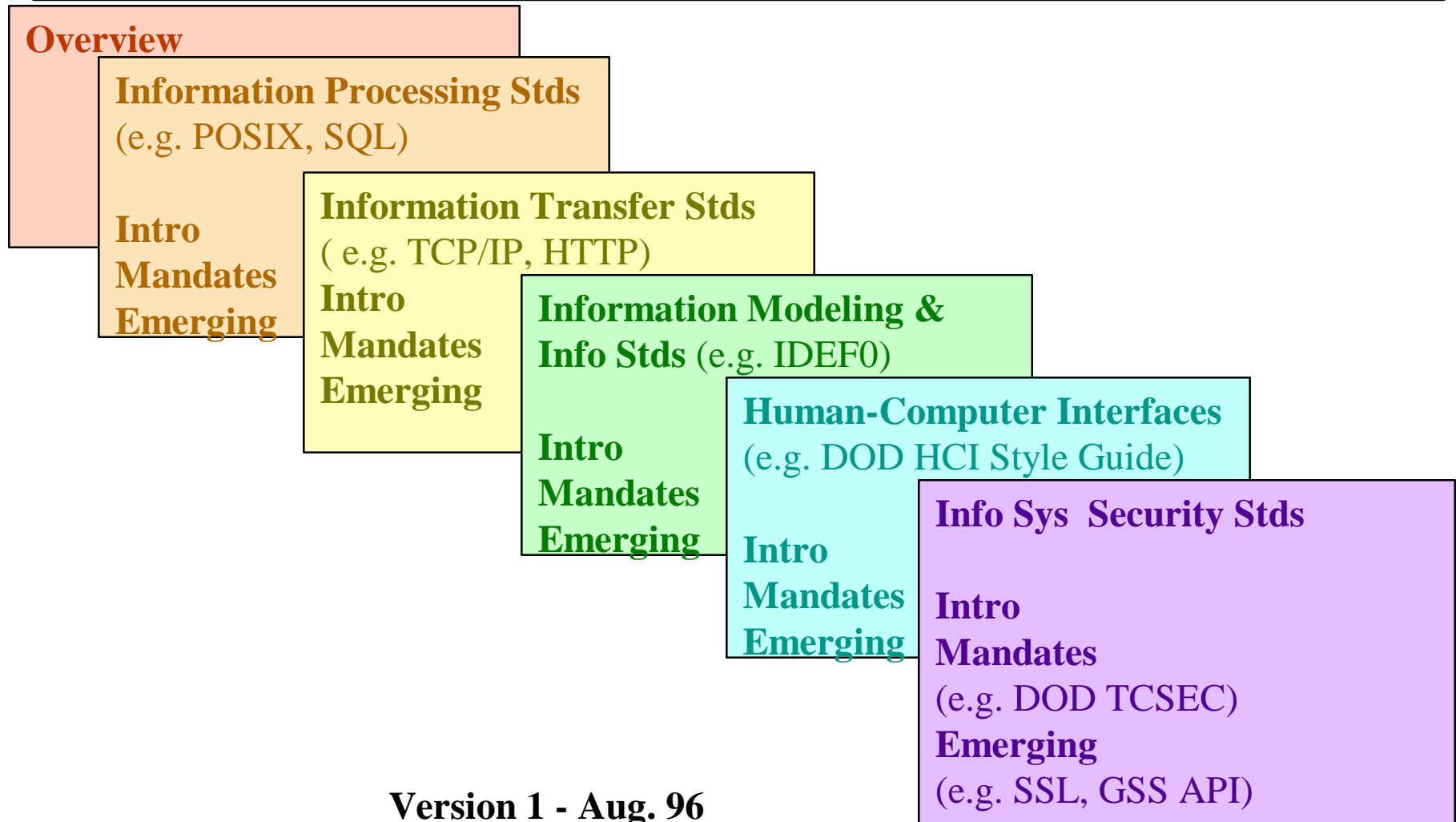
The DoD Approach

- **Open Systems Framework**
 - TAFIM
- **Technical Architectures / Standards**
 - ATA (Army) then JTA
- **Common Infrastructure and Support Software**
 - JMCIS (Navy) then GCCS then COE
- **Data Integration Framework**
 - SHARED Data Environment
- **Responsible Organization**
 - DISA's Joint Interoperability Engineering Organization (JIEO)

BASIS FOR JTA STANDARDS PROFILE

- **The Army Technical Architecture (ATA) was the starting point for the JTA.**
- **DoD Technical Architecture Framework for Information Management (TAFIM)**
 - The Technical Reference Model (TRM) TAFIM Volume 2.
 - the DoD Index of Specifications and Standards (DoDISS) Profile of the DoD TAFIM Volume 7.
- **Defense Information Infrastructure (DII) Common Operating Environment (COE)**
 - Documented in the DII Integration and Runtime Specification (I&RTS)
- **Air Force Technical Reference Codes (TRCs)**
- **Navy Computer Resources Management (CRM)**
- **Marine Corps MAGTF/C4I Technical Architecture**
- **Intelligence Community Standards**
- **Conventions and Guidelines, and functional profiles such as those developed for the United States Imagery System.**

Joint Technical Architecture (JTA)



JTA STANDARDS PROFILE

- **JTA shall be used to determine the specific standards to be implemented within new or upgraded C4I systems or systems that interface with C4I systems. BUT:**
 - Mandatory standards in JTA must be implemented by systems that have a **NEED** for the corresponding services.
 - The JTA is a "forward-looking" document.
 - Specification of standards outside of JTA must be additive, complementary, and not conflict with JTA mandated standards.

Current JTA Status

- **Version 2 currently in progress**

- First draft reviewed July 97, second draft reviewed November 97, final version expected April 98

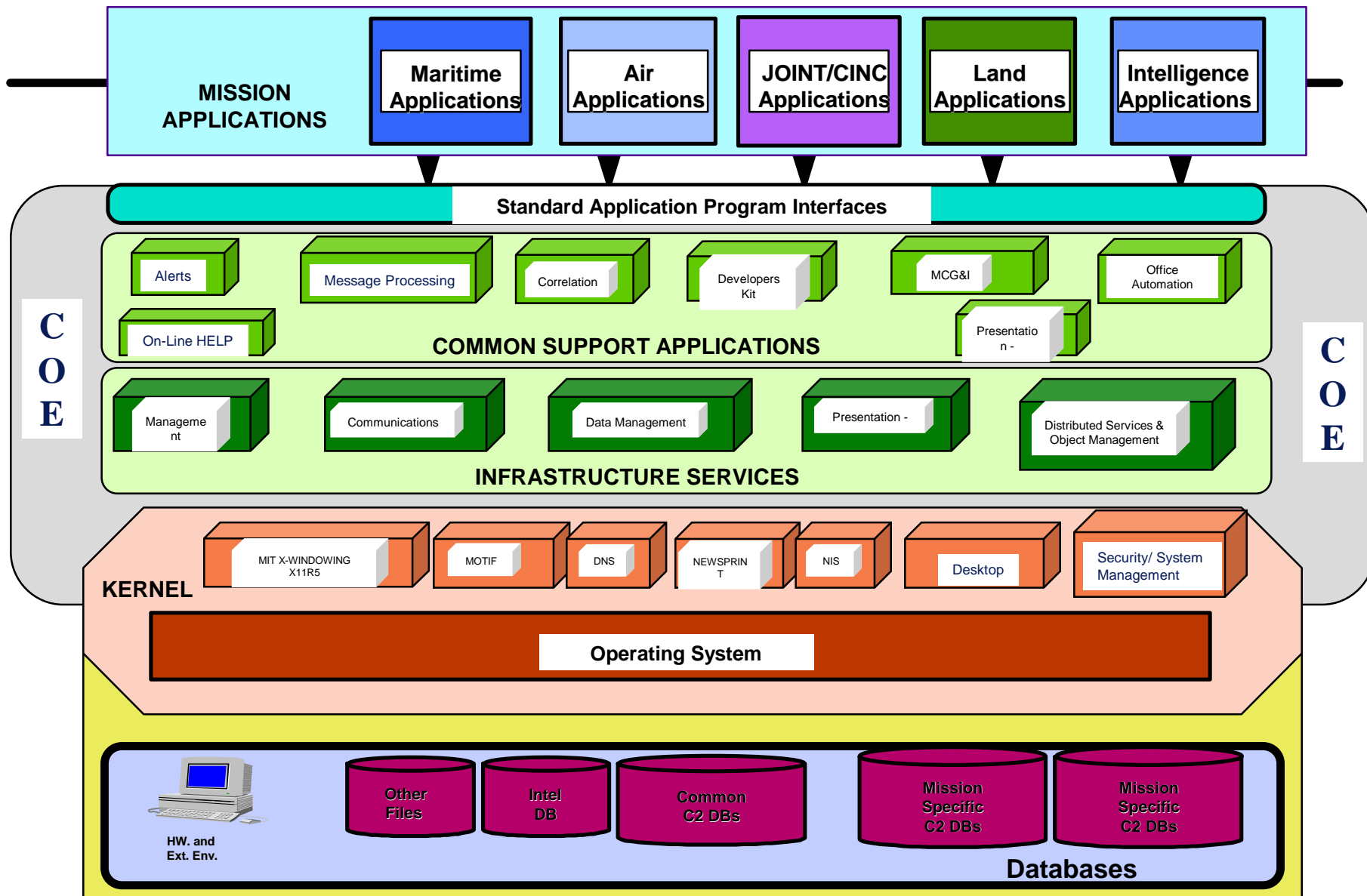
- **Expanding Scope**

- JTA Version 1 (Aug 96): C4I systems
 - “This document ... mandates the minimum set of standards and guidelines for all DOD C4I system acquisition”
- JTA Version 2 draft (Oct 97): Much broader
 - “... all DoD systems that produce, use or exchange information”

Defense Information Infrastructure (DII) Common Operating Environment (COE)

- **DII COE Architecture is Mandated by JTA Standards Profile**
- **DII COE is a software suite**
- **DII COE is Middleware**
- **DII COE must be reviewed by Developers**

DII COE



Compliance with DII COE

Level 1: Standards Compliance Level.

Level 2: Network Compliance Level.

Level 3: Workstation Compliance Level.

Level 4: Bootstrap Compliance Level.

Level 5: Minimal COE Compliance Level. All segments share the same kernel COE, and functionality is available via the Executive Manager. Boot, background, and local processes are specified through the appropriate segment descriptor files. Segments are registered and available through the on-line library. Applications appear integrated to the user, but there may be duplication of functionality and interoperability is not guaranteed. Segments may be successfully installed and removed through the COE installation tools.

Compliance with DII COE (Cont'd)

Level 6: Intermediate COE Compliance Level. Segments utilize existing account groups, and reuse one or more COE component segments. Minor documented differences may exist between the *Style Guide* and the segment's GUI implementation.

Level 7: Interoperable Compliance Level. Segments reuse COE component segments to ensure interoperability. These include COE provided comms interfaces, message parsers, database tables, track data elements, and logistics services. All access is through published APIs with documented use of few, if any, private APIs. Segments do not duplicate any functionality contained in COE component segments.

Level 8: Full COE Compliance Level. Proposed new functionality is completely integrated into the system (e.g., makes maximum possible use of COE services) and is available via the Executive Manager. The segment is fully compliant with the *Style Guide* and uses only published public APIs. The segment does not duplicate any functionality contained elsewhere in the system whether as part of the COE or as part of another mission application segment.

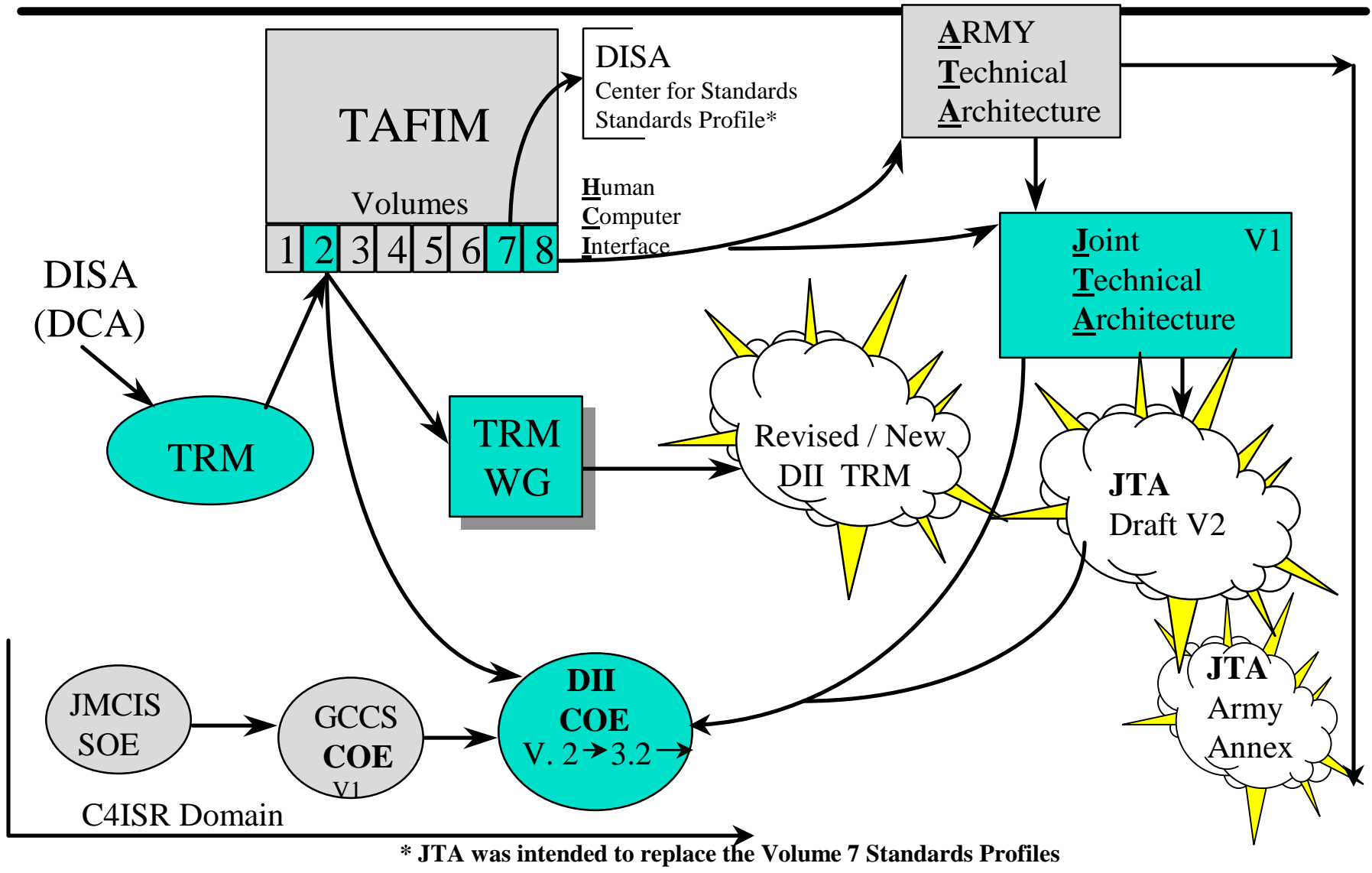
Current COE Status

- **Platforms**
 - Current platforms: Sun/Solaris, HP/HPUX, NT
 - Additional platforms: SGI, VMS
- **Data Management**
 - Adding SHADE (SHared Data Environment)
- **Distributed Computing**
 - Adding CORBA
- **Style Guide**
 - New style guide under development
- **Working on Y2K Compliance**

COE Releases

- **Current version 3.1 (Apr. 97)**
 - Solaris 2.5.1; HPUX 10.20; NT 4.0
 - Tivoli (v 3.0) , Netscape (v2) , DCE
 - Oracle (v7.3.2.3), Sybase (v10.02), Informix (v7.2), MS Access (v2)
- **Partial release of version 3.2 (Oct. 97)**
 - GSS API (Solaris and HP)
- **Next major release is version 4.0 (Apr. 98)**
 - Orbix (Solaris), Security fixes, JMTK for NT platform
- **One major release every 18 months (from 3.0 to 4.0 to 5.0, etc.)**
 - ‘Patch’ releases as required

Technical Architecture Framework for Information Management (TAFIM) is a compilation of DoD policies including DoDISS



CONCLUSIONS

- **JTA/DII COE Policy Impacts New Systems. Impacted Government and Contractor Groups need to be involved in the Policy Making Boards and Working Groups.**
 - Example: DII Architecture Oversight Group (AOG) and the associated Technical Working Groups.
 - There are 15 Technical Working Groups
- **JTA is a moving target and compliance is an interactive process.**
- **Implementation Plan: Bottom Line is all New and Upgrading Systems need a Migration Plan.**

References

- **JTA Homepage:**
 - <http://www.itsi.disa.mil/>
- **DII COE Homepage:**
 - <http://spider.osfl.disa.mil/dii>
- **Aerospace JTA Homepage:**
 - <http://ax.laafb.af.mil/~gowerj/jta/frames1.htm>
- **Aerospace Repository of JTA/COE Documents**
 - JTA/COE Lotus Notes Team Database