DISA
DEFENSE INFORMATION SYSTEMS AGENCY
The IT Combat Support Agency

Synchronizing DISA

Lead Standards Activities and Joint Enterprise Standards Committee Intersections

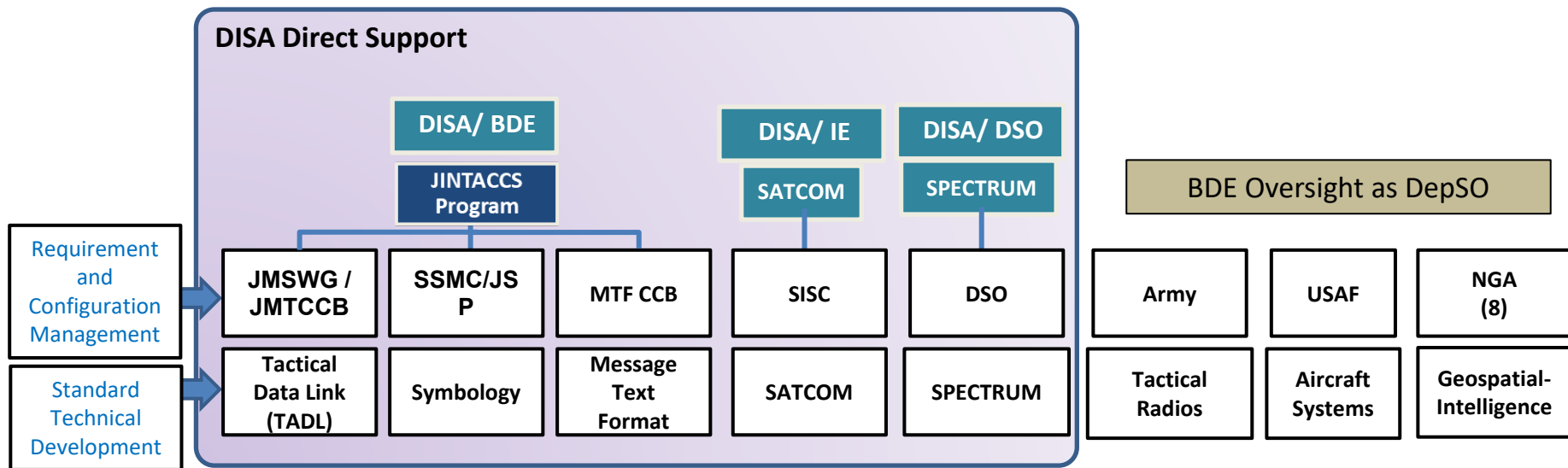Sherman L. Charles

DISA/BDE

October 2020

Synchronizing Issue

- **DISA is the Lead Standards Activity (LSA) for several IT technology areas**
- **LSAs research, develop and approve IT standards for adoption**
- **Some LSAs have structured development and governance processes**
- **The Joint Enterprise Standards Committee (JESC) consists of Technical Working Groups and has a structured governance process**
- **DISR Standards are either in the status of Emerging, Mandated or Retired**
- **Mil-Standards come before the JESC TWGs for adoption either in an Emerging, Mandated or Retired status**
- **On occasion, we find that a Military Standard approved by an LSA may be on a newer version than mandated by the JESC; this creates a lot of confusion**
- **We must synchronize these efforts to provide a united position on these standards for use by the IT standards community**

DISA Support for IT Military Standards

DISA Direct Support

DISA/ BDE			DISA/ IE	DISA/ DSO		BDE Oversight as DepSO	
JINTACCS Program			SATCOM	SPECTRUM			

| Requirement and Configuration Management	JMSWG / JMTCCB	SSMC/JSP	MTF CCB	SISC	DSO	Army	USAF	NGA (8)
Standard Technical Development	Tactical Data Link (TADL)	Symbology	Message Text Format	SATCOM	SPECTRUM	Tactical Radios	Aircraft Systems	Geospatial-Intelligence

- DISA is the LSA for 70% (34 of the 47) IT Military Standards;
- DISA is both LSA & Preparing Activity for 51% (25 of 47) IT Military Standards

Mission Statement

- **DISA is the DoD Executive Agent for the Joint Interoperability of Tactical Command and Control Systems (JINTACCS)**

- **BDE is responsible for the configuration management of MIL-STD and STANAG document production**

- **Execute the foreign disclosure and release for all JINTACCS program related documents**
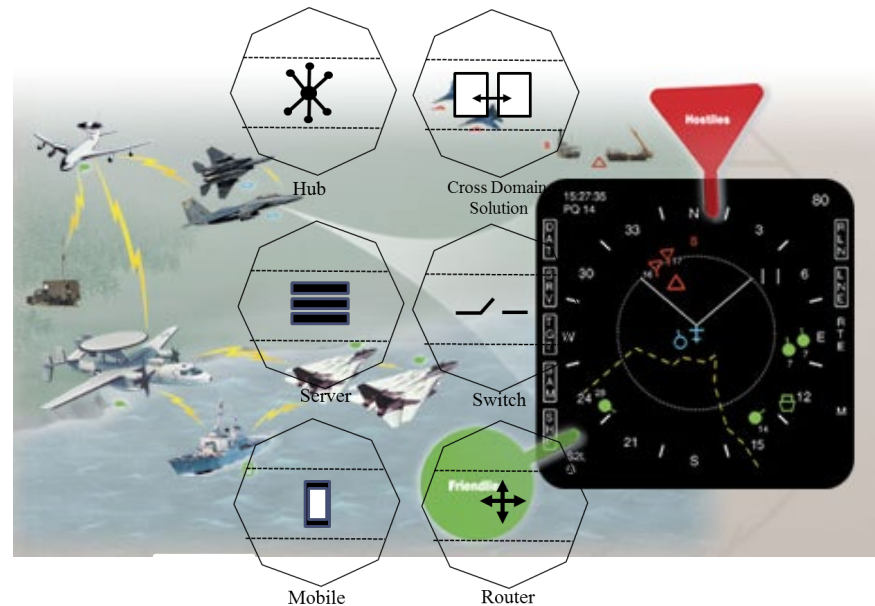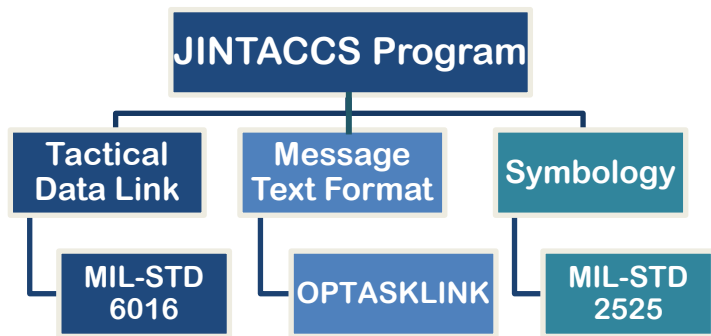
JINTACCS - Foundation of Interoperability

JINTACCS

TDL
"bit oriented"

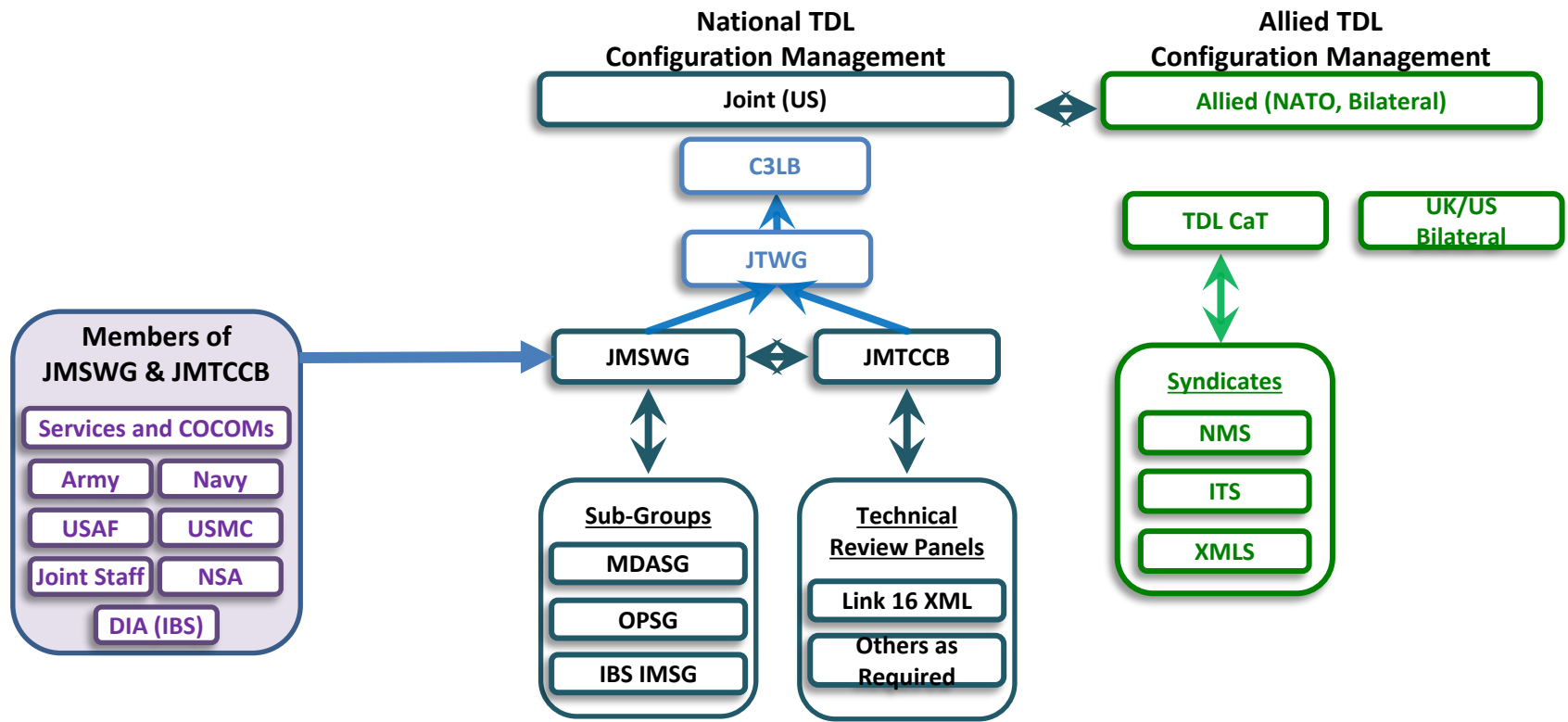**MTF**
"Character based"

Symbology
"shape oriented"

Delivers Joint Warfighter information exchange definitions and specifications essential for interoperability:

- Digitizing the battlefield
- Implementing C2 functions vital to weapon systems and tactical operations
- Disseminating Intelligence
- Increasing situational awareness

MIL-STDs are enablers of system to system interoperability

TADL and MTF Governance

**National TDL
Configuration Management**

Joint (US)

**Allied TDL
Configuration Management**

Allied (NATO, Bilateral)

C3LB

TDL CaT

UK/US
Bilateral

JTWG

JMSWG   JMTCCB

**Members of
JMSWG & JMTCCB**

Services and COCOMs

Army   Navy

USAF   USMC

Joint Staff   NSA

DIA (IBS)

Sub-Groups

MDASG

OPSG

IBS IMSG

**Technical
Review Panels**

Link 16 XML

Others as
Required

Syndicates

NMS

ITS

XMLS

US and NATO TDL, MTF, & Symbology Standards Crosswalk
JINTACCS Program

DISA

As of 15 Jun 2020

BDE Org	Applicability	United States	North Atlantic Treaty Organization	
BDE3	Link 1	not used by U.S.	STANAG 5501	ATDLP-5.01
BDE3	Link 11	MIL-STD-6011	STANAG 5511	ATDLP-5.11
BDE3	Link 16	MIL-STD-6016	STANAG 5516	ATDLP-5.16
BDE3	Link 22	future MIL-STD-6022	STANAG 5522	ATDLP-5.22
BDE3	Data Forwarding for Links 11, 16 and 22	MIL-STD-6020	STANAG 5616	ATDLP-6.16
BDE3	Joint Range Extension Application Protocol	MIL-STD-3011	STANAG 5518	ATDLP-5.18
BDE4	Variable Message Format	MIL-STD-6017	no NATO equivalent	
BDE3	Joint Multi-TDL Operational Procedures	CJCSM 6120.01 and JMTOP		ATDLP-7.33
BDE3	Technical Characteristics of MIDS	no U.S. equivalent	STANAG 4175	ATDLP-1.75
BDE3	Data Extraction and Reduction Guide	DERG for Link 11 and Link 16	no NATO equivalent	
BDE3	Multi-Function Advanced Datalink	future MIL-STD-6035	no NATO equivalent	
BDE3	Cursor on Target	future MIL-STD-xxxx	no NATO equivalent	
BDE4	Message Text Format	MIL-STD6040		ADatP-3/APP-11
BDE4	Symbology	MIL-STD 2525	STANAG 2019/APP-6	

Current TWG Structure Domains- Sep 2020

DISA

JESC

Computing, Platform, & Storage	Data	Applications	Comms, Networks & Physical Connectivity	Process Eng. Mgt	Air, Land, Sea, & Space	Business Systems	IA & Cyber	Geospatial & Intelligence	Modeling & Simulation	Forensics & Biometrics	Health & Medical

- **Computing, Platform, & Storage**
  - FG-CLOUD Computing
  - Operating Systems
  - Media
  - Middleware

- **Data**
  - Semantic Data Representation
  - Discovery Metadata & Services
  - Web Desktop Publishing
  - Data Oriented Basic
  - Metadata-Pubs XML and IRM XML

- **Applications**
  - Human Computer Interfaces
  - Query Language
  - Graphic Interfaces
  - App to App communication
  - Programming Languages

- **Comms, Networks & Physical Connectivity**
  - Information Transfer
  - Network Mgt
  - Collaboration
  - FG-IPV6

- **Air, Land, Sea, & Space**
  - Aviation
  - Weapons Systems
  - Radio Based Systems
  - **FG- SATCOM**
  - C4ISR
  - **Tactical Military Messaging**
  - **Military Symbology**

- **Business Systems**
  - Accounting & Finance
  - Acquisition
  - Human Resources Mgt
  - FG-Medical & Health
  - Legal
  - Logistics
  - Strategic Planning & Budgeting

- **IA & Cyber**
  - Security Services & Protocols
  - Cyber Defense
  - Protecting Data in Transit
  - Cryptography & Key Mgt
  - Biometric Blue Force
  - Integrity Assurance-HW & SW solutions
  - ICAM

- **Geospatial & Intelligence**
  - FG-National Imagery
  - FG-Motion Imagery
  - FG-Community Sensor Model
  - FG-Geographic Portrayal
  - FG-Application Schemas for Feature Encoding
  - FG-Metadata
  - FG-Geospatial Web Services
  - FG-Overhead Persistent Infrared
  - FG-World Geodetic Systems & Geomatics

- **Modeling & Simulation**
  - Mission Rehearsal Capabilities
  - Analysis of Alternatives
  - Test & Evaluation
  - Investment Analysis
  - M&S Operations
  - Cost Modeling
  - M&S Engineering

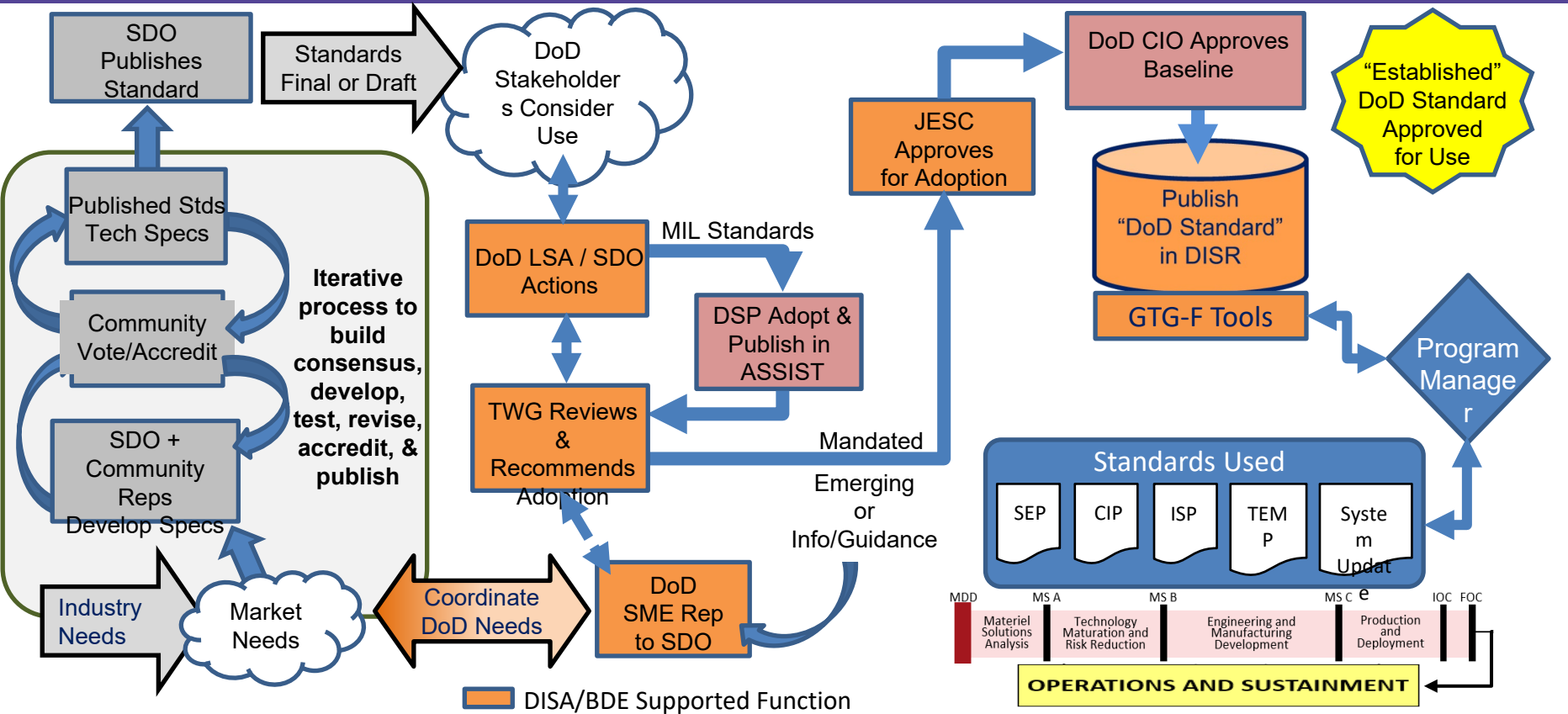- **Forensics & Biometrics**
  - DNA
  - Digital & Multimedia
  - Anatomical & Biometrics
  - Derived Biometrics
  - Info/Computer Forensics
  - Facial Image
  - Fingerprint
  - Biometric Modalities
  - Data via Biometric Processes

- **Health & Medical**
  - FG-Medical & Health

DISA Support for DoD IT Standards Program

SDO Publishes Standard

Standards Final or Draft

DoD Stakeholders Consider Use

Industry Needs

Market Needs

Coordinate DoD Needs

Iterative process to build consensus, develop, test, revise, accredit, & publish

Published Stds Tech Specs

Community Vote/Accredit

SDO + Community Reps Develop Specs

DoD LSA / SDO Actions

MIL Standards

DSP Adopt & Publish in ASSIST

TWG Reviews & Recommends Adoption

DoD SME Rep to SDO

Mandated

Emerging or Info/Guidance

JESC Approves for Adoption

DoD CIO Approves Baseline

"Established" DoD Standard Approved for Use

Publish "DoD Standard" in DISR

GTG-F Tools

Program Manager

Standards Used

SEP | CIP | ISP | TEMP | System Update

MDD	MS A	MS B	MS C	IOC	FOC
Materiel Solutions Analysis	Technology Maturation and Risk Reduction	Engineering and Manufacturing Development	Production and Deployment		

OPERATIONS AND SUSTAINMENT

■ DISA/BDE Supported Function

Synchronizing Issue

- **We must synchronize these efforts to provide a united position on these standards for use by the IT standards community**

TRUST IN DISA: MISSION FIRST, PEOPLE ALWAYS!

Closing

TRUST IN DISA: MISSION FIRST, PEOPLE ALWAYS!

Backups

ROE for Adopting, Adapting, or Developing IT Standards

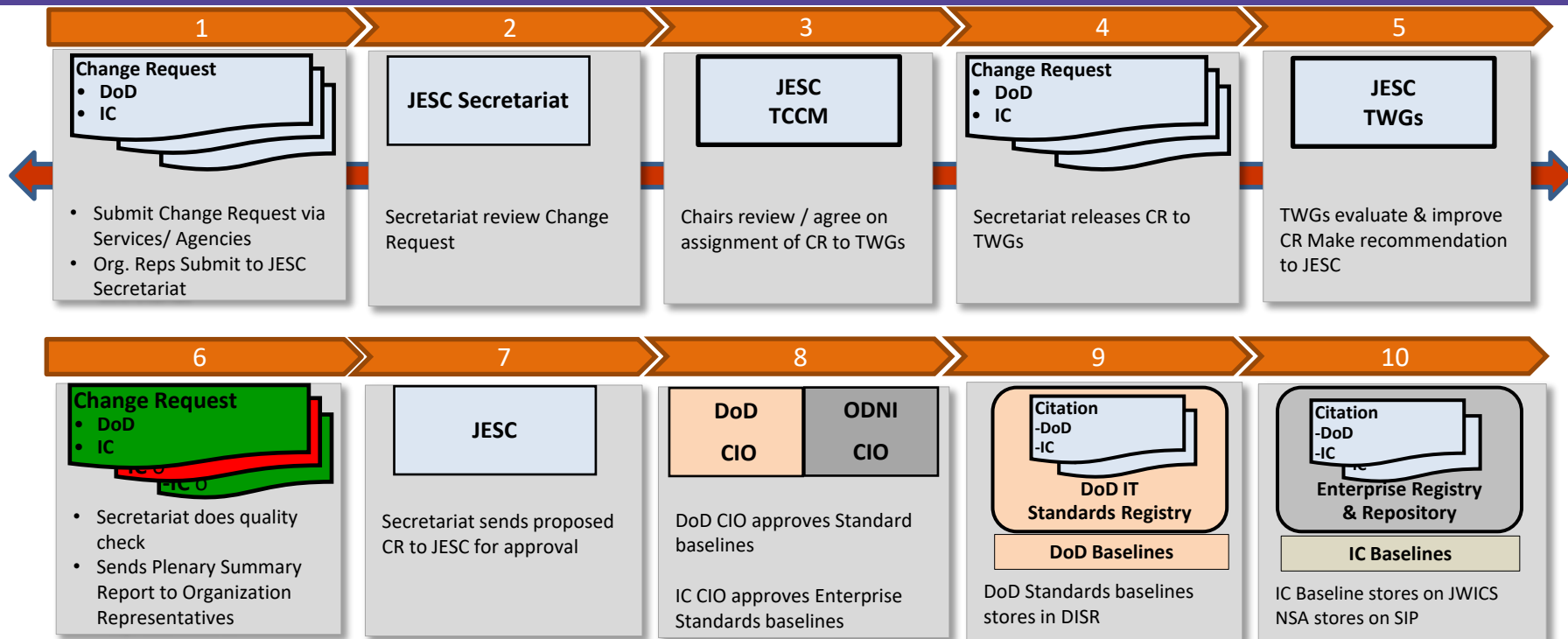| Priority	Source	Example
1st	Internationally Accredited and Treaty Based	ISO, IEC, UN/ECE, ITU, STANAG (If ratified by the US)
2nd	National	ANSI
3rd	Professional Society, Technology Consortia, Industry Association	IETF, W3C, OASIS, OMG
4th	Federal	Federal Information Processing Standard (FIPS)
5th	Military	MIL-STDs, standardization agreements

Best!

- Use an existing, widely accepted standard from one of these sources to satisfy the need.
- Adapt an existing accepted standard to meet mission needs
- If no existing standard can meet mission needs, a new standard will be developed.
- Precedence per DoDI 8310.01, IT Standards in DoD

JESC Change Request Process – The Present

1

Change Request
- DoD
- IC

- Submit Change Request via Services/ Agencies
- Org. Reps Submit to JESC Secretariat

2

JESC Secretariat

Secretariat review Change Request

3

JESC TCCM

Chairs review / agree on assignment of CR to TWGs

4

Change Request
- DoD
- IC

Secretariat releases CR to TWGs

5

JESC TWGs

TWGs evaluate & improve CR Make recommendation to JESC

6

Change Request
- DoD
- IC

- Secretariat does quality check
- Sends Plenary Summary Report to Organization Representatives

7

JESC

Secretariat sends proposed CR to JESC for approval

8

DoD CIO | **ODNI CIO**

DoD CIO approves Standard baselines

IC CIO approves Enterprise Standards baselines

9

Citation
-DoD
-IC

DoD IT Standards Registry

DoD Baselines

DoD Standards baselines stores in DISR

10

Citation
-DoD
-IC

Enterprise Registry & Repository

IC Baselines

IC Baseline stores on JWICS NSA stores on SIP

ACRONYMS

TWG: Technical Working Group
JESC: Joint Enterprise Standards Committee;
DISR: DoD Information Technology Standards Registry
TCCM: Technical Working Group Chairs Coordination Meeting;

Key Standardization Organizations for DoD

Under Construction

Top 10 External Standards Development Orgs	Mandated & Emerging Standards	% of Mandated & Emerging Standards
Internet Engineering Task Force	471	35.5%
International Organization for Standardization	135	10.2%
International Telecommunications Union	79	6.0%
Alliance for Telecommunications Industry Solutions	24	2%
World Wide Web Consortium	53	4.0%
Telecommunications Industry Association	37	2.8%
National Institute of Standards and Technology	35	2.6%
Open Geospatial Consortium	34	2.6%
Data Standards Coordination Activity	30	2.3%
Organization for the Advancement of Structured Information Standards	27	2.0%
Total of Top 10 SDOs	998	75%

DoD & Military Lead Standardization Orgs/Activities	Mandated & Emerging Standards	% of Mandated & Emerging Standards	LSA/PA for # of MIL STDs
MIL-STD	47	3.5%	NA
NATO/STANAG	22	1.7%	NA
USAF	3	0.2%	9
Army	9	0.7%	5
NGA	73	5.5%	8
DISA	25	1.9%	25
NSA	8	0.6%	0
DFBA	3	0.2%	0
J8/GFMD-I	1	~ 0%	0

- DoD predominantly uses commercial/industry standards
- DISA and LSAs engage with external SDOs to convey DoD needs, participate in development, and influence standards

As of: DISR Baseline 20-1, May 2020