

Headquarters U.S. Air Force

Integrity - Service - Excellence

Processes and Enabling Policy for Compliance with Materiel International Standardization Agreements (ISA)



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Engineering Policy Branch
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Questions... and Answers

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- **What are Materiel International Standardization Agreements (ISA)?**
- **What are the types of ISAs?**
- **How are they developed, ratified, implemented, and complied with?**
- **What is the applicable policy and enabling language for compliance?**




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What are Materiel ISAs?

NATO UNCLASSIFIED

STANAG 4686
(Edition 2)

NORTH ATLANTIC TREATY ORGANIZATION
(NATO)




NATO STANDARDIZATION AGENCY
(NSA)

STANDARDIZATION AGREEMENT
(STANAG)

SUBJECT: STANDARD INTERFACES OF UAV CONTROL SYSTEM (UCS) FOR
NATO UAV INTEROPERABILITY

Promulgated on 8 November 2007


Juan A. MORENO
Vice Admiral (ESPN)
Director, NATO Standardization Agency

NATO UNCLASSIFIED

**NATO
Standardization
Agreement
(STANAG)**

ASIC


AIR STD 2513A
(Change 2)
Approved
4 May 2005

Published - 24 August 1991
Amended - 14 February 1995
ASIC STD 2513A
ASIC STD 2513A
24 August 1991

Ch 1 - 31 October 1998

AIR STANDARD 25/13A

**In-Flight (Aerial) Refuelling Equipment,
Dimensions and Functional Characteristics**



AIR AND SPACE INTEROPERABILITY COUNCIL

Quadrupartite Standardization Agreement (QSTAG)
Number 236 Edition 1
MEDICAL GAS CYLINDERS

**American British Canadian
& Australian Armies
(ABCA)
Quadrupartite
Standardization Agreement
(QSTAG)**

ASIC


AIR STD 2513A
(Change 2)
Approved
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AIR STANDARD 25/13A

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AIR AND SPACE INTEROPERABILITY COUNCIL

**Air & Space
Interoperability Council
(ASIC)
Air Standard
(AIR STD)**



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Types of Materiel ISAs: Operational Capability/Supportability

Interfaces for Interoperability

STANAG No.	TITLE
3456	AIRCRAFT ELECTRICAL POWER SYSTEM CHARACTERISTICS
3447	AERIAL REFUELLING EQUIPMENT - PROBE-DROGUE INTERFACE CHARACTERISTICS
7085	INTEROPERABLE DATA LINKS FOR IMAGING SYSTEMS

Characteristics for Interchangeability

STANAG No.	TITLE
1135	INTERCHANGEABILITY OF FUELS, LUBRICANTS AND ASSOCIATED PRODUCTS USED BY THE ARMED FORCES OF THE NORTH ATLANTIC TREATY NATIONS
3747	GUIDE SPECIFICATIONS (MINIMUM QUALITY STANDARDS) FOR AVIATION TURBINE FUELS (F-34, F-35, F-40 AND F-44)
3585	20 MM AMMUNITION AND LINKS FOR AIRCRAFT GUNS



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Types of Materiel ISAs: Sys Performance/Acq Management

Design Criteria for Systems/Equipment

Standard Practices For Program Management

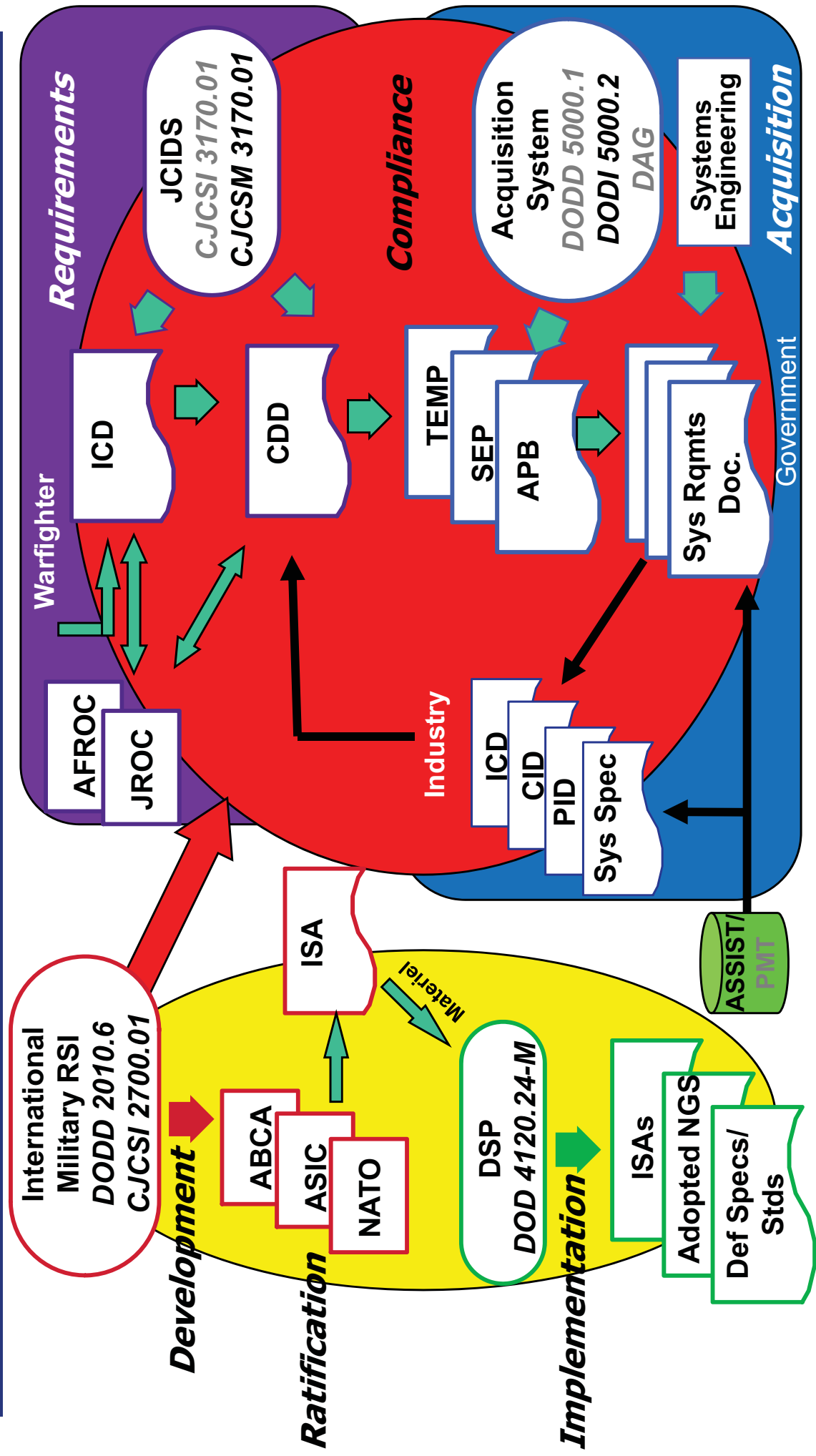
STANAG No.	TITLE
3705	HUMAN ENGINEERING DESIGN CRITERIA FOR CONTROLS AND DISPLAYS IN AIRCREW STATIONS
7119	GENERIC OPEN ARCHITECTURE FRAMEWORK
4187/ AOP-16	FUZING SYSTEMS: SAFETY DESIGN REQUIREMENTS

STANAG No.	TITLE
4093	MUTUAL ACCEPTANCE BY NATO MEMBER COUNTRIES OF QUALIFICATION OF ELECTRONIC AND ELECTRICAL COMPONENTS FOR MILITARY USE
4174	ALLIED RELIABILITY AND MAINTAINABILITY PUBLICATIONS
4661	PRODUCT LIFE CYCLE SUPPORT



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Materiel ISA Processes and Applicable DOD/CJCS Policy





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Enabling Policy Language: CJCSI 2700.01C (8 Feb 08)

**INTERNATIONAL MILITARY AGREEMENTS FOR RATIONALIZATION,
STANDARDIZATION, AND INTEROPERABILITY BETWEEN THE
UNITED STATES, ITS ALLIES, AND OTHER FRIENDLY NATIONS**

3. Policy.
 - b. The desired degree of international military RSI is necessarily subject to financial, technical, legal, and policy considerations. An international military RSI standardization agreement will be written and negotiated in line with the following standardization principles:
 - (2) Essential where effective implementation of the Capstone Concept for Joint Operations, operational plans, or validated joint capabilities depends on it.
 - (5) If ratified without registering an appropriate reservation, will be fully implemented and complied with.



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Enabling Policy Language: DODI 2010.06 (29 Jul 09)

MATERIEL INTEROPERABILITY AND STANDARDIZATION WITH ALLIES AND COALITION PARTNERS

3. **POLICY.** It is DoD policy that:
 - b. Equipment procured for U.S. forces employed in North Atlantic Treaty Organization (NATO), other allied, and coalition operations be standardized or at least interoperable with the equipment of allies and coalition partners.
 - c. Materiel interoperability with allies and coalition partners shall adhere to the Defense Standardization Program (DoDI 4120.24 (Reference (f)) and DoD 4120.24-M (Reference (g))).
 - d. The Department of Defense shall comply, to the maximum extent feasible, with applicable materiel international standardization agreements ratified by the United States, subject to systems engineering tradeoffs under Reference (e).



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Enabling Policy Language: DODI 2010.06, Cont'd

RESPONSIBILITIES

1. UNDER SECRETARY OF DEFENSE FOR ACQUISITION, TECHNOLOGY, AND LOGISTICS (USD(AT&L)). The USD(AT&L) shall:
 - g. Ensure that Military Departments and Defense Agencies consider material interoperability and standardization throughout all phases of the Defense Acquisition Management System (Reference (e)), and that U.S.-ratified international standardization agreements (ISAs) are implemented to the maximum extent practical (Reference (h)).
5. SECRETARIES OF THE MILITARY DEPARTMENTS AND DIRECTORS OF THE DEFENSE AGENCIES. ...shall:
 - a. Advise the USD(AT&L) on U.S. interoperability with allies and coalition partners and ensure that materiel interoperability and standardization are considered in the basic conceptual approach in the development, production, and product improvement of all systems and equipment intended for use in coalition operations and that all applicable U.S.-ratified materiel international standardization agreements are complied with to the greatest extent feasible.



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Enabling Policy Language: DOD 4120.24-M (Mar 09 Draft)

DEFENSE STANDARDIZATION PROGRAM (DSP) POLICIES AND PROCEDURES

C3. STANDARDIZATION IN THE ACQUISITION PROCESS

C3.2. MANDATORY STANDARDIZATION CONSIDERATIONS

C3.2.4. Compliance with US-ratified ISAs. To achieve interoperability with NATO and coalition forces as required by Section 2457 of reference (h), program offices and procuring activities shall, to the maximum extent feasible when needed to meet required capabilities, comply with US-ratified materiel ISAs applicable to their acquisitions by citing their implementing documents in solicitations and contracts.



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Enabling Policy Language: CJCSM 3170.01 (31 Jul 09)

MANUAL FOR THE OPERATION OF THE JOINT CAPABILITIES INTEGRATION AND DEVELOPMENT SYSTEM

CAPABILITY DEVELOPMENT DOCUMENT

3. CDD Development and Documentation
- c. The CDD sponsor, in coordination and collaboration with the appropriate DOD components... will prepare the CDD. ...The CDD will include a description of ...links to the DOD Enterprise Architecture and solution architectures; US-ratified materiel international standardization agreements (reference II); required capabilities; ...

CAPABILITY DEVELOPMENT DOCUMENT FORMAT

15. Other System Attributes.
 - a. Describe the non-IT/NSS capabilities required for allied and coalition operations, identify the potentially applicable US-ratified international standardization agreements, and provide an initial indication of which ones will be incorporated in the system requirements (references z and II).
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Enabling Policy Language: DODI 5000.02 (8 Dec 08)

OPERATION OF THE DEFENSE ACQUISITION SYSTEM

PROCEDURES

6. ENGINEERING AND MANUFACTURING DEVELOPMENT (EMD) PHASE.

c. Phase Description

- (2) Prior to beginning EMD, users shall identify and the requirements authority shall approve a minimum set of key performance parameters (KPPs), included in the CDD, that shall guide the efforts of this phase. ... To maximize program trade space and focus test and evaluation, the MDA, PEO, and PM shall work closely with the requirements authority to minimize KPPs and limit total identified program requirements. Performance requirements that do not support the achievement of KPP thresholds shall be limited and considered a part of the engineering trade space during development.



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Enabling Policy Language: DODI 5000.02, Cont'd

ENCLOSURE 10, PROGRAM MANAGEMENT

5. INTERNATIONAL COOPERATIVE PROGRAM MANAGEMENT
 - a. P Ms shall pursue opportunities throughout the acquisition life cycle that enhance international cooperation and improve interoperability (DoD Directive 2010.6 (Reference (bs))).
 - b. An international cooperative program is any acquisition program or technology project that includes participation by one or more foreign nations, through an international agreement, during any phase of a system's life cycle. All AT&L-related international agreements may use the streamlined procedures in Reference (f) for review and approval rather than the procedures in DoD Directive 5530.3 (Reference (bt)). All international cooperative programs shall consider applicable U.S.-ratified international standardization agreements (Reference (h)), and fully comply with foreign disclosure and program protection requirements. ...



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Summary: Materiel ISA Compliance

- **Link ISA development to correct process/policy**
 - **Interoperability/supportability – JCIDS**
 - **Design Criteria/Standard Practice – International Armaments Cooperation**
- **Ratification needs effective DSP implementation and ASSIST support**
- **Compliance conditions**
 - **JCIDS and Acquisition identification of applicable ratified ISAs**
 - **Viable DSP implementing documents**
 - **Supporting DOD acquisition policy**



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QUESTIONS