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Communications

**COMPATIBILITY, INTEROPERABILITY, AND
INTEGRATION OF COMMAND, CONTROL,
COMMUNICATIONS, AND COMPUTER (C4)
SYSTEMS**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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OPR: HQ AFC4A/TNA (Mr Wayne Wilson)

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(Lt General Carl G. O'Berry)

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This instruction implements Air Force Policy Directive (AFPD) 33-1, *Command, Control, Communications, and Computer (C4) Systems*, and portions of Department of Defense Directive (DoDD) 4630.5, *Compatibility, Interoperability, and Integration of Command, Control, Communications, and Intelligence (C3I) Systems*, November 12, 1992; Department of Defense Instruction (DoDI) 4630.8, *Procedures for Compatibility, Interoperability, and Integration of Command, Control, Communications, and Intelligence (C3I) Systems*, November 18, 1992; DoDD 8120.1 *Life-Cycle Management (LCM) of Automated Information Systems (AISs)*, January 14, 1993; Chairman, Joint Chiefs of Staff Instruction (CJCSI) 6212.01, *Compatibility, Interoperability, and Integration of Command, Control, Communications, Computer, and Intelligence (C4I) Systems*, 30 July 1993; and Joint Tactical Command, Control, and Communications Agency (JTC3A) (Joint Interoperability Engineering Organization [JIEO]) Circular 9002, *Requirements Assessment and Interoperability Certification of C4 Information and Automated Information Systems and Equipment*. It establishes Air Force guidance and responsibilities to ensure compatibility, interoperability, and integration for new and modified command, control, communications, computer and intelligence (C4I) systems, including automated information systems (AIS). Refer technical questions to Headquarters Air Force Command, Control, Communications, and Computer (C4) Agency, Interoperability and Technology Division, C4 Systems Standards and Validation Branch (HQ AFC4A/TNA), 203 W. Losey St., Room 1020, Scott AFB IL 62225-5233. Send an information copy to Headquarters United States Air Force, DCS/Command, Control, Communications, & Computers, Interoperability and Integration Division (HQ USAF/SCTI), 1250 Air Force Pentagon, Washington DC 20330-1250. Refer recommended changes and conflicts between this and other instructions to HQ AFC4A, Plans and Analysis Division, Policy and Procedures Branch (HQ AFC4A/XPPX), 203 West Losey St., Room 1065, Scott AFB IL 62225-5224 using AF Form 847, **Recommendation for Change of Publication**, with an information copy to HQ USAF/SC, Plans and Policy Division (HQ USAF/SCXX), 1250 Air Force Pentagon, Washington DC 20330-1250. See [Attachment 1](#) for references, abbreviations, acronyms, and terms used in this instruction.

Report Documentation Page

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SUMMARY OF REVISIONS

This is the initial publication of Air Force Instruction (AFI) 33-108, revising Air Force Regulation (AFR) 700-52.

1. Objectives:

- Ensure Air Force C4I system works with other Air Force, DoD, and Allied systems without creating interference or interface problems.
- Supply fighting forces with flexible C4 systems that support worldwide operations.
- Enable Air Force customers to use the DoD C4 system at any time or place, and for any mission.
- Get C4I and AIS acquisition programs certified to interoperate in the joint arena (JTC3A [JIEO] Circular 9002).
- Provide guidance for bringing new C4I technology into the Air Force (technology insertion) and for getting C4 systems without an acquisition program.

2. Managing at the Air Force Level.

2.1. HQ USAF/SC:

2.1.1. Guides Air Force issues by:

- Developing and approving C4I systems policy, standards, and architecture with the goal of making all elements compatible, interoperable, and integrated.
- Overseeing the Air Force program for all C4I and AIS systems.
- Creating long-term plans.
- Chairing the C4I Interoperability Steering Group (ISG) and providing a forum to discuss issues and share information (see [Attachment 2](#)).

2.1.2. Cooperates within the joint arena by:

- Being the Air Force focal point for systems affecting joint technical interfaces.
- Checking and coordinating joint C4 architectures along with HQ USAF, DCS, Plans and Operations (HQ USAF/XO)

2.1.3. Represents the Air Force to other government organizations by:

- Serving as the Air Force point of contact to the Defense Information Systems Agency (DISA/JIEO).
- Working with the Military Communications-Electronics Board (MCEB) according to CJCSI 6212.01 and sitting on MCEB panels and working groups, including the Interoperability Improvement Program (IIP) and the Interoperability Test Panel (ITP), according to MCEB Publication (PUB) 1, *MCEB Organization, Mission, and Functions Manual*.

2.1.4. Manages the Five-Year Interoperability Assurance Plan (FYIAP) by:

- Developing the FYIAP according to JTC3A (JIEO) Circular 9002.

- Identifying and scheduling security requirements for C4 systems in the FYIAP.

2.2. HQ USAF/XO:

2.2.1. Manages mission need statements (MNS) and operational requirements documents (ORD) by:

- Ensuring MNSs and ORDs include C4I requirements. (AFI 10-601, *Mission Needs and Operational Requirements Guidance and Procedures* [formerly AFR 57-1])
- Staffing MNSs and ORDs within the Air Force, throughout the other services, the Joint Staff, DISA and the Office of the Secretary of Defense (OSD).

2.2.2. Works joint issues by:

- Directing Air Force efforts to develop and implement joint standards and joint procedures for managing system configurations (JTC3A [JIEO] Circulars 9000, *Tactical C3I Configuration Management*, and 9001, *Tactical C3I Configuration Management Documents List*).
- Serving as the focal point for the Air Force Joint Interoperability of Tactical Command and Control Systems (JINTACCS) Program.
- Supplying inputs from the Air Force operations functional area to joint configurations. **EXCEPTION:** While HQ USAF/XO is the Air Force approval authority, major commands (MAJCOM) may provide inputs to joint architectural documents and coordinate these documents within the Air Force.

2.3. Assistant Secretary of the Air Force for Acquisition (SAF/AQ):

- Ensures implementation of interoperability requirements defined in MNSs and ORDs in Air Force acquisitions. (DoDD 5000.1, *Defense Acquisition*, February 23, 1991, and the Air Force supplement to DoDI 5000.2, *Defense Acquisition Management Policies and Procedures*, February 23, 1991, with Change 1.)
- Ensures implementation of policy, standards, and architectures in Air Force acquisitions.

2.4. HQ USAF Director of Test and Evaluation (HQ USAF/TE):

- Ensures interoperability requirements defined in MNSs and ORDs for Air Force acquisition are evaluated. (AFPD 99-1, *Test and Evaluation Process*; AFI 99-101, *Developmental Test and Evaluation* [formerly AFRs 80-14 and 80-19]; AFI 99-102, *Operational Test and Evaluation* [formerly AFRs 55-43 and 80-14]; AFI 99-103, *The Air Force Test and Evaluation Process*; and Air Force Manual (AFMAN) 99-111, *Command, Control, Communications, Computers, and Intelligence Test and Evaluation Process*.)
- Ensures test and evaluation master plans, developmental test and evaluation (DT&E), and operational test and evaluation (OT&E) plans and reports are forwarded to the DISA/Joint Interoperability Test Center (JITC) to support joint interoperability certification. (JTC3A [JIEO] 9002).
- Tests according to JTC3A (JIEO) Circular 9002. JITC will use service DT&E and OT&E reports for joint interoperability certification. If the Air Force cannot accommodate JITC needs, HQ USAF/TE asks JITC to conduct a separate interoperability test.

- Ensures systems program offices, Air Force Materiel Command, responsible test organizations, and the Air Force Operational Test and Evaluation Center (AFOTEC) perform interoperability testing.
- Serves as the Air Force point of contact for all OSD & DISA test and evaluation policies and issues.

2.5. Air Force C4I ISG: See [Attachment 2](#).

3. Managing at the Major Command and Field Operating Agency (FOA) Level.

3.1. All MAJCOMs and FOAs:

- 3.1.1. Define interoperability needs in their MNSs, ORDs and C4 systems requirements documents.
- 3.1.2. Advise HQ USAF/SCTI of their points of contact for actions covered in this instruction.
- 3.1.3. Prevent duplicate and nonstandard C4 system development by identifying those mission needs having similar C4 requirements or which existing C4 systems can meet. Consider:
 - Mission deficiencies.
 - Required functionality.
 - Security requirements.
 - Need for electromagnetic compatible, interoperable, and integrated Air Force, DoD, and Allied C4 systems.
- 3.1.4. Identify mission deficiencies, user needs, and security requirements so C4I systems can fully operate across all Air Force, DoD and Allied mission environments.
- 3.1.5. Prepare documents to manage system configurations (standards, specifications, and interface control documents) when acquisition activities request them.
- 3.1.6. Document interfaces to intelligence systems in the configuration management process.
- 3.1.7. Identify technical requirements to properly interface systems including:
 - C4 systems and facilities that need or can support interoperability testing for inclusion in the FYIAP.
 - Interoperability issues affecting the MAJCOM's ability to meet mission requirements. Include joint or combined environments. Send these issues to the IIP.
 - Data pertinent to joint architecture documents and other joint architectural efforts.
- 3.1.8. Help HQ USAF/XO in configurations' management by proposing, implementing, and evaluating changes to JINTACCS procedural interface standards, including the interface for intelligence systems.
- 3.1.9. Identify requirements to create procedures that assure proper interfaces for C4 systems employing joint tactical data links. Send these requirements to HQ Air Combat Command (ACC)/DRI for inclusion in the FYIAP.

3.2. HQ ACC:

- 3.2.1. Represents the Air Force in the Joint Chiefs of Staff (JCS)-managed JINTACCS program.

3.2.2. Develops and maintains message text format (MTF), tactical digital information links (TADIL), and other data link architectures and standards.

3.2.3. Manages the Air Force Participating Test Unit (AF PTU) by:

- Testing and participating in Air Force joint and combined compatibility and interoperability (C&I) testing of C4I systems that use MTFs and TADILs according to DoDD 4630.5 and DoDI 4630.8.
- Programming, planning, and budgeting for operations and maintenance resources to support U.S. MTFs and TADILs combat data link standards configuration management and testing.

3.3. HQ AFC4A:

3.3.1. Programs resources and provides personnel to operate and maintain the Air Force C4 interoperability facility.

3.3.2. Serves as executive agent for the Air Force C4I ISG.

3.3.3. Develops and executes plans and procedures to evaluate Air Force C4 systems.

3.3.4. Identifies, assesses, applies, and validates (collectively known as technology insertion) new and emerging technologies, products, and services that have the potential to satisfy Air Force requirements.

3.3.5. Advises the Air Staff and MAJCOMs on applicability of these technologies, products, and services.

3.3.6. Coordinates appropriate activities with the USAF Technology Transition Office and other applicable USAF, DoD, and U.S. Government entities.

3.4. Air Intelligence Agency (AIA): Acts as the Air Force Service Cryptologic Element and interface with the National Security Agency.

3.5. Air Force Cryptologic Support Center: Identifies and programs C4 system security requirements to ensure C&I of C4 systems, with the support of the operating commands and acquisition activities.

3.6. Air National Guard and United States Air Force Reserve:

- Identify and solve C4 system C&I issues through their gaining MAJCOMs.
- Work reserve issues through HQ Air Force Reserves.

4. Managing Acquisition.

4.1. Acquisition Activities:

- Follow the guidance in DoDI 5000.2 and the Air Force supplement; AFI 33-103, *Requirements Development and Processing* (formerly AFR 700-3); and AFI 33-104, *Base Level Planning and Implementation* (formerly AFR 700-4, Volumes 1 and 2) to promote C4 systems C&I throughout the life cycle of each system by identifying requirements and testing interoperability.
- Ensure that C4, C4I, and AIS systems acquired following DoDD 5000.1 are certified by DISA/JITC (JTC3A [JIEO] Circular 9002).

- Inform operating commands of incompatibilities and scheduled corrective actions.
- Provide C&I throughout the life-cycle of each centrally managed C4I system using configuration management procedures (DoDI 5000.2/AF Sup 1).
- Inform HQ USAF/SC of test schedules for programmed (FYIAP) C4 systems.
- Use C4 architectures and standards to design or modify C4 systems.

5. Managing Other Activities.

5.1. All Air Force Activities, Planners, and Managers that Procure, Plan, or Operate C4I Systems:

- 5.1.1. Ensure existing and planned C4I systems conform to DoD and Joint Staff C4I interoperability guidelines by:
- Verifying system conformance using Joint Staff and other services' planning and requirements documents.
 - Coordinating with the Joint Staff and lead service to integrate Air Force requirements if another service's existing or planned system will satisfy Air Force needs.
 - Working with other services, MCEB, and JITC to develop or modify programs to include joint compatibility, interoperability, flexibility, and integration according to DoDD 4630.5, DoDI 4630.8, CJCSI 6212.01, JTC3A (JIEO) Circular 9002, and AFPD 10-6, *Mission Needs and Operational Requirements* (formerly AFR 57-1).
- 5.1.2. Ensure that C4 systems embedded within weapon systems and stand-alone C4 systems receive the same considerations.
- 5.1.3. Implement joint standards and configuration management procedures.
- 5.1.4. Coordinate recommended changes to existing standards and requirements for new standards through MAJCOM headquarters to HQ AFC4A/TNAB. Coordinate follow-up actions with the appropriate standardization and interoperability organizations.
- 5.1.5. Comply with international or alliance standardization and interoperability agreements per AFI 60-103, *International Military Standardization Programs*(formerly AFR 73-6) for Air Force C4 programs/systems supporting Allied operations.
- 5.1.6. Evaluate all C4 systems throughout their program life cycle (to include system development and, or modification phases).
- 5.1.7. For developmental and C4I AIS systems acquisitions:
- Identify C&I and logistical support requirements in mission area plans (MAP), functional area plans (FAP), MNSs, ORDs, program management directives, systems engineering master plans, and TEMPs, when appropriate, and coordinate these documents through appropriate channels.
 - Identify and schedule technical feasibility, functionality, and operational testing.
 - Schedule testing for procedural interface certification with the AF PTU and a technical interface assessment with AFC4A, if needed.
 - Verify interoperability by testing, and get JITC certification before making a purchase decision (Milestone III decision).

5.1.8. For commercial off-the-shelf C&I systems procurements:

- Identify C&I and logistics support requirements during the requirements definition phase. Address these requirements during the solution development and implementation phases.
- Verify C&I before deciding to purchase.

5.1.9. Request service from the Air Force interoperability facility by sending a message request to HQ AFC4A/TNA, Scott AFB IL or mailing to HQ AFC4A/TNA, 301 Pierce St., Room 301, Scott AFB IL 62225-5421. HQ AFC4A will contact the requester and evaluate the proposed tasking.

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DCS/Command, Control, Communications, and Computers

Attachment 1

GLOSSARY OF REFERENCES, ABBREVIATIONS, ACRONYMS, AND TERMS

References

- DoD Directive 3222.3/AF Supplement 1, *AF Electromagnetic Compatibility Program (EMCP)*
- DoD Directive 4630.5, *Compatibility, Interoperability, and Integration of Command, Control, Communications, and Intelligence (C3I) Systems*, November 12, 1992
- DoD Directive 5000.1, *Defense Acquisition*, February 23, 1991
- DoD Directive 8120.1, *Life-Cycle Management (LCM) of Automated Information Systems (AISs)*, January 14, 1993
- DoD Instruction 4630.8, *Procedures for Compatibility, Interoperability, and Integration of Command, Control, Communications, and Intelligence (C3I) Systems*, November 18, 1992
- DoD Instruction 5000.2/AF SUP 1, *Defense Acquisition Management Policies and Procedures*, February 23, 1991, with Change 1
- Joint Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms*
- CJCSI 6212.01, *Compatibility, Interoperability, and Integration of Command, Control, Communications, Computers and Intelligence (C4I) Systems*, 30 July 1993.
- JTC3A (JIEO) Circular 3101, *Tactical C3I Interoperability Improvement Program*
- JTC3A (JIEO) Circular 9000, *Tactical C3I Configuration Management*
- JTC3A (JIEO) Circular 9001, *Tactical C3I Configuration Management Documents List*
- JTC3A (JIEO) Circular 9002, *Requirements Assessment and Interoperability Certification of C4 Information and Automated Information Systems and Equipment*
- JTC3A (JIEO) Circular 9005, *Preparation of Technical Interface Specifications*
- MCEB PUB 1, *MCEB Organization, Mission, and Functions Manual*
- MCEB PUB 2, *MCEB Administrative Procedures Manual*
- AFDD 100, *Air Force Glossary of Standard Terms* (formerly AFM 11-1)
- AFPD 10-6, *Mission Needs and Operational Requirements* (formerly AFR 57-1)
- AFPD 33-1, *Command, Control, Communications, and Computer (C4) Systems*
- AFPD 63-1, *Acquisition System*
- AFPD 99-1, *Test and Evaluation Process*
- AFI 10-601, *Mission Needs and Operational Requirements Guidance and Procedures* (formerly AFR 57-1)
- AFI 33-102, *C4I Capabilities Planning Process* (formerly AFR 700-2)
- AFI 33-103, *Requirements Development and Processing* (formerly AFR 700-3)
- AFI 33-104, *Base Level Planning and Implementation* (formerly AFR 700-4, Volumes 1 and 2)

AFI 33-112, *Automatic Data Processing Equipment (ADPE) Management* (formerly AFRs 700-6 and 700-26)

AFI 60-103, *International Military Standardization Programs* (formerly AFR 73-6)

AFI 62-201, *Systems Survivability* (formerly AFR 80-38)

AFI 99-101, *Developmental Test and Evaluation* (formerly AFRs 80-14 and 80-19)

AFI 99-102, *Operational Test and Evaluation* (formerly AFRs 55-43 and 80-14)

AFI 99-103, *The Air Force Test and Evaluation Process*

AFMAN 99-111, *Command, Control, Communications, Computers, and Intelligence Test and Evaluation Process*

Abbreviations and Acronyms

ACC—Air Combat Command

AFC4A —Air Force Command, Control, Communications, and Computer Agency

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFOTEC—Air Force Operational Test and Evaluation Center

AFPD—Air Force Policy Directive

AF PTU—Air Force Participating Test Unit

AFR—Air Force Regulation

AIA—Air Intelligence Agency

AIS—Automated Information System

C&I—Compatibility and Interoperability

CJCSI—Chairman, Joint Chiefs of Staff Instruction

COTS—Commercial-Off-The-Shelf

C3I—Command, Control, Communications, and Intelligence

C4—Command, Control, Communications, and Computer

C4I —Command, Control, Communications, Computer, and Intelligence

C4I ISG—Command, Control, Communications, Computer and Intelligence Interoperability Steering Group

DISA—Defense Information Systems Agency

DoD—Department of Defense

DoDD—Department of Defense Directive

DoDI—Department of Defense Instruction

DT&E—Developmental Test and Evaluation

EMC—Electromagnetic Compatibility
FAP—Functional Area Plan
FOA—Field Operating Agency
FYIAP—Five-Year Interoperability Assurance Plan
IIP—Interoperability Improvement Program
ITP—Interoperability Test Panel
JCS—Joint Chiefs of Staff
JIEO—Joint Interoperability Engineering Organization
JINTACCS —Joint Interoperability of Tactical Command and Control Systems
JITC—Joint Interoperability Test Center
JTC3A —Joint Tactical Command, Control, and Communications Agency
MAJCOM—Major Command
MAP—Mission Area Plan
MCEB—Military Communications-Electronics Board
MTF—Message Text Format
MNS—Mission Need Statement
ORD—Operational Requirements Document
OSD—Office of the Secretary of Defense
OT&E—Operational Test and Evaluation
TADIL—Tactical Digital Information Link
TEMP—Test and Evaluation Master Plan

Terms

C4 Systems—Integrated systems of doctrine, procedures, organizational structures, personnel, equipment, facilities, and communications designed to support a commander’s exercise of command and control through all phases of the operational continuum. C4 systems include base visual information support systems. (Joint Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms*)

Compatibility—Capability of two or more items or components of equipment or material to exist or function in the same system or environment without mutual interference. (Joint Pub 1-02)

Configuration Management—A discipline applying technical and administrative direction and surveillance to: (a) identify and document the functional and physical characteristics of a system, (b) to control changes of those characteristics and, (c) record and report changes to processing and implementation status.

Electromagnetic Compatibility (EMC)—The ability of systems, equipment, and devices that utilize the electromagnetic spectrum to operate in their intended operational environments without suffering unacceptable degradation or causing unintentional degradation because of electromagnetic radiation or

response. It involves the application of sound electromagnetic spectrum management; system, equipment, and device design configuration that ensures interference-free operation; and clear concepts and doctrines that maximize operational effectiveness. Also called EMC. See also electromagnetic spectrum; electronic warfare; spectrum management.

Five-Year Interoperability Assurance Plan (FYIAP)—A Joint Chiefs of Staff (JCS) program managed by Joint Interoperability Test Center (JITC) that documents requirements for interoperability certification, recertification, requalification, and revalidation testing. The FYIAP, published annually in January, establishes the C4 interoperability testing and certification program:

- FYIAP preparation is tied to the planning, programming, and budgeting system cycle.
- DoD components identify requirements for testing.
- JITC consolidates and sends the requirements to the JCS for validation approval.
- The FYIAP identifies the resources required to support testing during the acquisition process and thereafter, as needed.

Flexibility—Modular C4I packages consisting of hardware, software, and data base modules and appliquéés for transportable and fixed use.

Functional Area Plan (FAP)—A Functional Area Plan outlines an investment strategy that influences the programming, requirements, laboratory, and independent research and development processes to support a specific functional area or necessary subset.

Interface—1. A boundary or point common to two or more similar or dissimilar communications systems, subsystems, or other entities against which or at which necessary information flow takes place. 2. A boundary or point common to two or more systems or other entities across which useful information exchange takes place. 3. A concept involving the definition of the interconnection between two systems or items of equipment. The definition includes type, quantity, and function of the interconnecting circuits and the type and form of signals to be interchanged via those circuits. Mechanical details of plugs, sockets, pin numbers, etc., may be included within the context of the definition. 4. The process of interrelating two or more dissimilar circuits or systems. 5. A connecting link between two or more systems. In the OSI reference model, it is the boundary between adjacent layers.

Interference—The effect of unwanted energy due to one or a combination of emissions, radiations, or inductions on reception in a radio communications system, manifested by any loss of information which could be extracted in the absence of such unwanted energy.

Interoperability—1. The ability of systems, units, or forces to provide services to and accept services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together. 2. The condition achieved among communications-electronics equipment when information or services can be exchanged directly and satisfactorily between them and/or their uses. The degree of interoperability should be defined when referring to specific cases. (Joint Pub 1-02)

C4I Interoperability Improvement Program (IIP)—A panel under the Military Communications-Electronics Board (MCEB). Panel promotes, enhances, and maintains compatibility and interoperability of C4I systems (to include interface between tactical and strategic C4I systems as appropriate) to meet mission-essential needs of the operational commanders. The panel seeks to accomplish these goals by identification and resolution of critical C4I interoperability issues brought forward by the participants. The panel consists of one member and alternate from each Joint Command/Service/Agency represented on the MCEB. The Joint Staff (J6I) will chair the panel. The Joint

Interoperability Engineering Organization (JIEO) acts as executive agent for the panel.

C4I Interoperability Test Panel (ITP)—A panel under the Military Communications-Electronics Board (MCEB). Panel reviews, develops, recommends, and coordinates studies, reports, and DoD positions for MCEB consideration in the areas of interoperability testing for all DoD information exchange systems destined for combined use. The panel consists of one member and alternate from each Service/Agency represented on the MCEB. Panel members are responsible for processing actions within their respective mission areas of expertise.

Mission Area Plan (MAP)—A Mission Area Plan outlines an investment strategy that influences the programming, requirements, laboratory, and independent research and development processes to support a specific mission area or necessary subset.

Mission Need Statement (MNS)—A document, prepared by the respective using command or HQ USAF, that identifies an operational deficiency that can't be satisfied through changes in tactics, strategies, doctrine, or training. A correction of the deficiency normally entails research and development, production, and procurement of a new system or modification of an existing system. (AFPD 10-6 and AFI 10-601)

Operational Testing—

Procedural Interface Standards—Specifications for exchanging information across an interface. The standards define format, language, syntax, vocabulary and interface operating procedures. Information exchanged among C4 systems using a TADIL, MTF, and other combat data links.

Requirements Document—As used in this instruction, a requirements document is normally one of the following:

- An MNS.
- An ORD.
- A joint-service operational requirement.
- An outline North American Treaty Organization (NATO) staff target document as discussed in AFPD 10-6 or AFI 10-601. (A C4 requirement covered by AFI 33-103.)

Technical Interface—The functional, electrical, and physical characteristics necessary for exchanging information across an interface between different C4I systems or equipment. Includes technical interface standards.

Technical Interface Standard—Specifications for functional, electrical, and physical characteristics necessary for exchanging information across an interface between different tactical C4 systems or equipment.

Attachment 2

COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS, AND INTELLIGENCE (C4I) INTEROPERABILITY STEERING GROUP

ORGANIZATIONAL CHARTER

March 1994

1. **PURPOSE:** This charter formally establishes the Air Force C4I Interoperability Steering Group. The Steering Group is assigned the following specific duties and responsibilities:

- a. Providing a forum for the coordination of member agencies' views on interoperability testing issues to facilitate staffing of Air Force positions.
- b. Clarifying, coordinating, and publicizing Air Force C4I systems testing missions among the member agencies.
- c. Serving as technical consultant to aid in establishing funding priorities for existing and new C4I test facilities requirements and advocating sharing of C4I testing capabilities.

2. **AUTHORITY:**

- a. HQ AFCC/DOV Message, 121400Z Jan 90, AFCC Testbeds.
- b. AFCC Testbeds Meeting, 7 Feb 90, at 1842d Electronics Engineering Group.
- c. Department of Defense Directive (DODD) 4630.5, 12 Nov 92, *Compatibility, Interoperability, and Integration of Command, Control, Communications, and Intelligence (C3I) Systems*.
- d. Department of Defense Instruction (DODI) 4630.8, 18 Nov 92, *Procedures for Compatibility, Interoperability, and Integration of Command, Control, Communications, and Intelligence (C3I) Systems*.
- e. Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 6212.01, 30 Jul 93, *Compatibility, Interoperability and Integration of Command, Control, Communications, Computers, and Intelligence Systems*.

3. **OBJECTIVES:**

- a. Develop an operational concept for coordinating resource sharing among all Air Force C4I interoperability testbeds.
- b. Promote effective and efficient use of C4I interoperability test resources.
- c. Create an Air Force C4I interoperability testing environment (excluding DT&E and OT&E) which supports interoperability policy, procedures, and certification.
- d. Assist the Air Staff in developing corporate Air Force positions on C4I interoperability testing issues.

4. **DEFINITIONS:**

- a. Steering Group: An action group, composed of designees from concerned activities within the Air Force, tasked with developing strategy to implement the objectives stated in paragraph 3.
- b. Executive Member: Organization within the Air Force which has a C4I interoperability testing mission.
- c. POC Working Group: A working-level action group, established by the Steering Group to take primary responsibility for a project.
- d. Lead Activity: The organization recommended by the Steering Group to take primary responsibility for a project.
- e. Participating Activity: An organization represented on the Steering Group in an advisory capacity on issues pertaining to the participating organization.
- f. Host Activity: The organization tasked to host a scheduled Steering Group meeting.
- g. Chairman: HQ USAF/SC. The organization that officially endorses the Steering Group, provides representation on the Steering Group, and oversees the Steering Group's operations.
- h. Executive Agent for HQ USAF/SC: Air Force C4 Agency (AFC4A). The organization tasked to operate and maintain the Steering Group. This includes management and administrative tasks.

5. RELATIONSHIP: The relationship among executive members and participating activities is equal on matters of policy implementation recommended by the Steering Group.

6. RESPONSIBILITIES AND PROCEDURES:

a. The Air Force C4I Interoperability Steering Group is established with executive representation (executive members) from the following organizations:

- (1) HQ USAF Deputy Chief of Staff, Plans and Operations (USAF/XO).
- (2) Office of the Assistant Secretary of the Air Force, Acquisition (SAF/AQ).
- (3) HQ USAF Assistant Chief of Staff, Intelligence (USAF/IN).
- (4) HQ USAF Directorate of Test and Evaluation (USAF/TE).
- (5) Air Combat Command (ACC).
- (6) Air Mobility Command (AMC).
- (7) Air Force Space Command (AFSPC).
- (8) Air Force Special Operations Command (AFSOC).
- (9) Air Force Materiel Command (AFMC).
- (10) Air Force C4 Agency (AFC4A).
- (11) Air Force Operational Test and Evaluation Center (AFOTEC).
- (12) Air Intelligence Agency (AIA).
- (13) Electronic Systems Center (ESC).
- (14) Air Force Information Warfare Center (AFIWC).

(15) 1912th Computer Systems Group (1912 CSG).

(16) Standard Systems Center (SSC).

(17) Communications Systems Center (CSC).

b. The Steering Group will be chaired by HQ USAF/SC or his designee.

c. The Steering Group is responsible for:

(1) Developing an AF C4I interoperability testing environment (excluding DT&E and OT&E).

(2) Recommending C4I interoperability testing tasks (excluding DT&E and OT&E) to responsible lead activities.

(3) Reviewing C4I interoperability test facilities capabilities and utilization to avoid undue duplication of efforts and the wasting of critical resources.

(4) Advocating and defending requests for existing and new C4I test facility funds.

(5) Identifying needs and long-range plans for Air Force C4I interoperability testing facilities.

(6) Identifying new technologies and standards that could impact C4I interoperability testing.

(7) Identifying new test objectives, as appropriate, to integrate existing and future C4I systems as specified by Air Force architectures.

(8) Coordinating Air Force position on C4I interoperability test issues with the Joint Interoperability Test Center and the Department of Defense (excluding DT&E and OT&E).

(9) Resolve schedule conflicts for planned Air Force and Joint Service C4I interoperability testing projects (excluding DT&E and OT&E) with the Joint Interoperability Test Center and the Department of Defense.

(10) Coordinating the interchange of completed or planned testing information within the Air Force C4I test community.

7. GENERAL:

a. The Steering Group will meet at least triannually (once every four months), or as mutually agreed. A special meeting may be called by the Chairman at any time.

b. Each executive member will assign an organizational POC to serve on POC working groups as required.

c. The Executive Agent will prepare the agenda with inputs from all Steering Group members.

d. Formal minutes will be prepared and distributed by the Executive Agent. Action items recorded in the minutes will be staffed by the members of the Steering Group through their respective activities as required.

8. EFFECTIVE DATE AND REVIEW: Terms of this charter will become effective upon signature of the HQ USAF/SC and will remain in effect until rescinded or changed by mutual consent, provided such

changes are accomplished as written amendments hereto. Provisions of this charter will be reviewed annually, 60 days prior to the anniversary of signature.

Sponsor:

_____ DATE: 4 Mar 94

CARL G. O'BERRY, Lt General, USAF

DCS/Command, Control, Communications, and Computers

Headquarters United States Air Force