



Department of Defense INSTRUCTION

NUMBER 8100.3

January 16, 2004

ASD(NII)/DoD CIO

SUBJECT: Department of Defense (DoD) Voice Networks

- References:
- (a) Section 353 of Public Law 107-314, "Bob Stump National Defense Authorization Act for Fiscal Year 2003" December 2, 2002
 - (b) [DoD Directive 8100.1](#), "Global Information Grid (GIG) Overarching Policy," September 19, 2002
 - (c) [DoD Directive 4630.5](#), "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," January 11, 2002
 - (d) [DoD Instruction 4630.8](#), "Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," May 2, 2002
 - (e) through (j), see enclosure 1

1. PURPOSE

This Instruction:

- 1.1. Implements references (a) and (b).
- 1.2. Provides policy, procedures, and assigns responsibilities for test, certification, accreditation, lease or procurement, installation, connection, and operation of telecommunications switches, switched data, and services on DoD voice networks, specifically the Defense Switched Network (DSN) and Defense RED Switch Network (DRSN).

2. APPLICABILITY AND SCOPE

This Instruction applies to:

2.1. The Office of the Secretary of Defense, the Military Services, the Chairman of the Joint Chiefs of Staff, the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies (see paragraph E2.1.8., below) the DoD Field Activities, and all other organizational entities in the Department of Defense (referred to collectively as "the DoD Components").

2.2. All telecommunication switches leased, procured (whether systems or services), or operated by any Component of the Department of Defense or by authorized non-DoD users (e.g., Combined or Coalition partners (upon ratification) and U.S. Government Departments and Agencies designated as Special Command and Control (C2) or C2 users) that are, or shall be, installed or connected to the DSN, DRSN or Public Switched Telecommunications Network (PSTN) to include:

2.2.1. The hardware or software for sending and receiving voice, data, or video signals across a network that provides customer voice, data, or video equipment access to the DSN, DRSN or PSTN. For authorized non-DoD DSN users, only the telecommunications switch interfaces to the DSN are subject to this Instruction.

2.2.2. End-to-end (e.g., phone-to-phone, video-to-video unit, fax-to-fax; Secure Terminal Equipment (STE)-to-STE) and tactical applications.

2.2.3. All technologies (e.g., circuit switch, Voice over Asynchronous Transfer Mode (VoATM) and Voice over Internet Protocol (VoIP)) that use DSN or DRSN phone numbers and provide dial tone for origination and reception of voice, dial-up video and dial-up data for routine and precedence subscribers; or that are otherwise incorporated into the DSN or DRSN numbering and routing plan by means of area code, access code, address resolution scheme for origination and reception of voice, dial-up video, and dial-up data for routine and precedence subscribers.

2.2.4. The DoD Component's planning, investment, development, operations, and management of telecommunications switches connected to the DSN or DRSN for processing and transport of voice, dial-up video, and dial-up data.

2.3. All authorized non-DoD or non-C2 users (e.g., combined or coalition partners and U.S. Government Departments and Agencies) that are or shall be connected to the DSN or DRSN.

2.4. Requests for waivers to the provisions of this Instruction shall be forwarded via chain of command, through the Chairman of the Joint Chiefs of Staff, to Assistant Secretary of Defense for Networks and Information Integration (ASD(NII))/DoD Chief Information Officer (CIO), stating the reason compliance is not possible. Only the

ASD(NII)/DoD CIO is authorized to approve waivers to DSN policy and Interim Certification to Operate (ICTO) requests. ICTO requests shall be submitted via the Global Information Grid (GIG) waiver process for consideration. Specific procedures for requesting waivers to policy and ICTOs are contained in paragraph 6.4. of this Instruction.

3. DEFINITIONS

Terms used in this Instruction are defined in enclosure 2.

4. POLICY

It is DoD policy that:

4.1. Telecommunications switches (and associated software releases) leased, procured (whether systems or services), or operated by the DoD Components, and connected or planned for connection to the DSN, shall be joint interoperability certified by the Defense Information Systems Agency (DISA), Joint Interoperability Test Command (JITC) and granted information assurance certification and accreditation by the Defense Information System Network (DISN) Designated Approval Authorities (DAAs).

4.2. Telecommunications switches (and associated software releases) procured or leased by the DoD Components, and connected or planned for connection to the DRSN, shall consist of a homogeneous set of DRSN-specified equipment and/or functional features and capabilities (i.e., single vendor and/or transparency of features and capabilities) providing for full interoperability, Military Unique Features (MUF) functionality, security, conferencing, and call processing. DRSN telecommunications switches (and associated software releases) shall be joint interoperability tested by the DISA (JITC) in accordance with test plans, performance requirements, and procedures established by the DRSN Single System Manager (SSM); and Information Assurance (IA) certified and accredited by the DISN DAAs or Defense Intelligence Agency (DIA) Principal Accrediting Authority (PAA), based on classification level of service provided.

4.3. Additional requirements for DoD Voice Networks are provided at enclosure 4.

5. RESPONSIBILITIES

5.1. The Assistant Secretary of Defense for Networks and Information Integration/Department of Defense Chief Information Officer, shall:

5.1.1. Maintain this Instruction, with the other DoD Components, to establish policy, procedures, and responsibilities for test, certification, accreditation, lease or procurement, installation, connection, and operation of telecommunications switches and services on the DSN and DRSN.

5.1.2. Enforce policy and provide oversight, with the DoD Components, for telecommunications switches and services operating on the DSN and the DRSN.

5.1.2.1. Establish policy, processes, and responsibilities to enforce DSN and DRSN telecommunications switch compliance with DoD Directive 4630.5 and DoD Instruction 4630.8, (references (c) and (d)) requirements for interoperability and supportability.

5.1.2.2. Establish policy, processes, and responsibilities to enforce DSN and DRSN telecommunications switch compliance with DoD Directive 8500.1, DoD Instructions 8500.2, and 5200.40 (references (e), (f), and (g)) requirements for IA certification and accreditation.

5.1.2.3. Serve as the approval authority for all waivers to policy contained in this Instruction and ICTO requests.

5.1.3. Approve DSN and DRSN access by non-DoD agencies, organizations, activities, or entities.

5.1.4. Develop a process, with the DoD Components, to annually evaluate DoD compliance with this Instruction.

5.1.5. Develop a process, with the Chairman of the Joint Chiefs of Staff, the DISA, and other DoD Components, to conduct annual risk assessments (technical, IA, and mission) and develop associated mitigation plans for non-certified telecommunications switches connected or planned for connection to the DSN and DRSN.

5.1.6. Approve technical requirements documentation for certification of telecommunications switches to ensure consistent and uniform application of certification policy.

5.1.7. Approve the biennial DSN and DRSN program plans in consultation with the Chairman of the Joint Chiefs of Staff.

5.2. The Heads of the DoD Components shall:

5.2.1. Ensure the requirements of this Instruction are implemented. Establish Component policy and procedures and responsibilities for the test, certification, accreditation, lease or procurement, installation, connection, and operation of telecommunications switches and services on the DSN and DRSN.

5.2.2. Coordinate all DSN and DRSN, non-secure or secure voice transport and processing initiatives with the DSN SSM or DRSN SSM, as appropriate.

5.2.3. Define, validate, coordinate, and approve mission and traffic requirements for DSN and DRSN services. DRSN service requests shall be forwarded via the requesting agency's chain of command through the appropriate Combatant Commander or Service, to the Chairman of the Joint Chiefs of Staff for validation and approval.

5.2.4. Validate requests for waiver to DSN and DRSN policy and requests for ICTO and forward such requests to the Chairman of the Joint Chiefs of Staff for consideration.

5.2.5. Validate DSN and DRSN minimum-essential circuits.

5.2.6. Forward approved DSN and DRSN requirements and priorities to the DISA for coordination or implementation. Provide planning requirements to the DISA for incorporation into the DSN and DRSN program plans.

5.2.7. Plan, program, and budget for telecommunications services provided by DSN and DRSN.

5.2.8. Comply with references (c) and (d) requirements for interoperability and supportability. Ensure telecommunication switches connected to, or planned for connection to the DSN and DRSN are tested for joint interoperability certification by the DISA (JITC).

5.2.9. Comply with references (e), (f), and (g) requirements for IA certification and accreditation for all telecommunications switches.

5.2.9.1. Ensure telecommunication switches connected to, or planned for connection to the DSN are tested by the DISA, and certified and accredited for IA by the DISN DAAs (reference (f)). Conduct certification and accreditation of telecommunication switches operating at installed location per reference (g) and the DSN Security Technical Implementation Guide (STIG), and report status to the DSN SSM annually.

5.2.9.2. In coordination with the DISA DRSN SSM, ensure that telecommunication switches connected to or planned for connection to the DRSN are evaluated by the National Security Agency (NSA) for security vulnerabilities, and accredited for IA by the DISN DAAs, per reference (f), for collateral telecommunications switches or the DIA PAA for Top Secret (TS)/Secure Compartmented Information (SCI) telecommunications switches.

5.2.9.3. Comply with Joint Staff-defined DISN DAA processes for connection to the DSN or DRSN per reference (f).

5.2.10. Ensure both interoperability and security test and evaluation plans are prepared for all telecommunication switches (acquired or procured) intended to operate on the DSN and DRSN.

5.2.11. Use only telecommunications switches listed on the DSN telecommunications switch Approved Products List (APL), published by the DSN SSM, for connection to the DSN. If a waiver will be requested to use a switch that is not on the APL, justification shall be provided to the DSN SSM for coordination, prior to submission to the ASD(NII)/DoD CIO for approval. An unapproved switch may not be leased or procured unless and until a waiver is approved. The DSN telecommunications switch APL may be found at the following web site: <http://jtc.fhu.disa.mil/>.

5.2.12. Approve users with Immediate, Priority and Routine precedence origination capability.

5.2.13. Provide annual inventory to the DISA on switches connected to, or planned for connection to the DSN or DRSN.

5.2.14. Collect and maintain installation Configuration Management (CM) data (e.g., telecommunication switches, phones, video units, fax, and STEs) to meet end-to-end requirements. Provide CM data to the DISA upon request.

5.2.15. Provide Plan of Action and Milestones (PoA&M) for certifying or transitioning uncertified or unaccredited switches connected to the DSN.

5.2.16. Provide PoA&M for mitigating any identified security vulnerabilities resulting from the DISA Security Test and Evaluation (ST&E) on behalf of the DISN DAAs.

5.2.17. Ensure standards-based Integrated Services Digital Network (ISDN) capabilities are provided in the DSN telecommunication switches at the installations for all DoD organizations that require the use of STE or other ISDN interfaces.

5.2.18. Monitor and manage responsibility for connections and usage charges accruing for access to public networks. Ensure this capability does not allow automatic on- or off-netting of long distance DSN or commercial calls, except for DISA managed/approved interfaces.

5.2.19. Maintain the DISA's intra- and inter-switch dialing plans for end users and implement DSN access codes to ensure standardization and interoperability across the network.

5.2.20. Report to the DSN SSM any user locations where Grade of Service (GoS) objectives cannot be achieved to the end instrument due to economic or operational limitations.

5.2.21. Participate in the DSN and DRSN Configuration Control Boards (CCBs).

5.3. The Chairman of the Joint Chiefs of Staff shall:

5.3.1. Ensure the requirements of this Instruction are implemented. Establish policy, procedures and responsibilities for the test, certification, accreditation, lease or procurement, installation, connection, and operation of telecommunications switches and services on the DSN and DRSN.

5.3.2. Ensure DSN and DRSN telecommunications switch compliance with references (c) and (d) requirements for interoperability and supportability.

5.3.2.1. Develop processes, procedures, and implementing instructions for Joint Interoperability Certification (JIC) of DSN and DRSN telecommunications switches.

5.3.2.2. Serve as the JIC validation authority for DSN and DRSN telecommunications switches.

5.3.3. Ensure DSN and DRSN telecommunications switch compliance with references (e), (f), and (g) requirements for IA certification and accreditation.

5.3.3.1. Validate, with the ASD(NII)/DoD CIO, IA requirements for DSN and DRSN telecommunication switches supporting joint and combined operations.

5.3.3.2. Develop, in collaboration with the DISA, processes, procedures and implementing instructions for IA certification and accreditation of DSN and DRSN telecommunications switches.

5.3.4. Validate requirements for telecommunications switches planned for connection to the DSN or DRSN.

5.3.5. Review and approve all requests for network access to the DRSN and connections between DRSN and non-DRSN secure voice equipment.

5.3.6. Validate DSN and DRSN access by non-DoD agencies, organizations, activities, or entities.

5.3.7. Approve:

5.3.7.1. DSN Flash and Flash Override precedence origination requests.

5.3.7.2. DRSN Flash, Flash Override, and Flash Override Override precedence origination requests.

5.3.8. Process JIC ICTO requests for all uncertified telecommunications switches connected or being considered for connection to the DSN. Forward recommendation for approval of JIC ICTO requests to the ASD(NII)/DoD CIO for decision, via the GIG Waiver Panel.

5.3.9. Define DISN DAA processes and procedures for telecommunications switch accreditation and connection to the DSN and DRSN.

5.3.10. Direct implementation of traffic controls (e.g., selected blocking, directionalization) and usage or availability control (e.g., minimize) to ensure assured service for critical users during times of surge due to war or crisis.

5.3.11. Review and approve DISA-recommended, DoD Component-coordinated performance objectives and interface criteria for the DSN and DRSN to satisfy system requirements.

5.3.12. Review and approve DISA recommendations for modifications to the DSN and DRSN integrated architectures.

5.3.13. Review the operational effectiveness and assess the mission risks associated with the connection of telecommunication switches to the DSN, DRSN, and the PSTN. Report to the ASD(NII)/DoD CIO those matters having a major effect on the network.

5.3.14. Review and approve, with technical evaluation by the DISA, proposed concepts for automatic interconnection to the DSN from public switched networks.

5.3.15. Validate theater GoS objective waivers every 2 years.

5.3.16. Validate the biennial DSN and DRSN program plans and submit to the ASD(NII)/DoD CIO for approval.

5.3.17. Resolve requests for service identified by the DISA as having the potential to harm the DSN or DRSN.

5.3.18. Participate in, and serve as final arbiter, for DSN and DRSN CCBs.

5.4. The Director, Defense Information Systems Agency shall:

5.4.1. Ensure the requirements of this Instruction are implemented. Establish procedures and technical requirements for the test, certification, accreditation, lease or procurement, installation, connection, and operation of telecommunications switches and services on the DSN and DRSN.

5.4.2. Serve as, or designate a SSM for the DSN and DRSN.

5.4.2.1. Provide operational direction, management control, and technical guidance for the DSN and DRSN.

5.4.2.2. Provide an annual assessment to the Chairman of the Joint Chiefs of Staff and the DSN and DRSN CCBs, respectively, on the impact of emerging voice processing and transport technologies for global end-to-end voice performance and C2 services.

5.4.2.3. Ensure end-to-end interoperability, by providing all DoD dialing and numbering plans for telephony services for the Department of Defense.

5.4.2.4. Initiate and provide technical analysis of network survivability, including risk analysis, when proposing major changes in the DSN or DRSN network technology or architecture. The DISA shall forward the results of the analysis to the Chairman of the Joint Chiefs of Staff for review.

5.4.3. Review, approve, and implement the DoD Components' requests for DSN service. If any request for service has a potential to harm the networks, the DISA shall forward the request to the Chairman of the Joint Chiefs of Staff for resolution.

5.4.4. Review and forward, with recommendation, to the Chairman of the Joint Chiefs of Staff for approval, all requests for network access to the DRSN and connections between DRSN and non-DRSN secure voice equipment.

5.4.5. Ensure DSN and DRSN telecommunications switch compliance with references (c) and (d) requirements for interoperability and supportability.

5.4.5.1. Develop processes, procedures, and technical standards for JIC of DSN and DRSN telecommunications switches.

5.4.5.2. Serve as the JIC authority for DSN and DRSN telecommunications switches.

5.4.6. Ensure telecommunications switch compliance with references (e), (f), and (g) requirements and Chairman of the Joint Chiefs of Staff defined DISN DAA processes and procedures for IA certification and accreditation and connection to the DSN and DRSN.

5.4.7. Establish DSN and DRSN security requirements in the development of STIGs.

5.4.8. Ensure compliance with existing DSN and DRSN STIGs globally, by conducting DSN and DRSN Security Compliance Validations (SCVs).

5.4.9. Ensure security Connection Approval Process (CAP) requirements are identified and enforced.

5.4.10. Approve the DoD Components' requests for installing and connecting telecommunications switches to the DSN. Serve as issuer of DSN and DRSN Authority to Connect (ATCs).

5.4.11. Process JIC ICTO requests for all uncertified telecommunications switches connected to or planned for connection to the DSN. Provide recommendation to the Military Communications-Electronics Board (MCEB) for approval of JIC ICTO requests.

5.4.12. Develop and maintain the APL of certified and accredited DSN telecommunications switches for use by the DoD Components in lease or procurement of switch or switch services. The DSN telecommunications switch APL may be found at the following web site: <http://jits.fhu.disa.mil/>.

5.4.13. Conduct, with the DoD Components, an annual inventory of DSN and DRSN telecommunications switches. Consolidate the DoD Components' input into a single comprehensive DoD inventory of telecommunications switches connected to the DSN and DRSN and submit this inventory to the ASD(NII)/DoD CIO and the Chairman of the Joint Chiefs of Staff.

5.4.14. Conduct technical and security risk assessments and mitigation plans for uncertified telecommunications switches connected to the DSN. Submit risk assessments and mitigation plans for uncertified telecommunications switches to the ASD(NII)/DoD CIO and the Chairman of the Joint Chiefs of Staff for review.

5.4.15. Provide end-to-end CM reports for the DSN and DRSN derived from the DoD Component's installation CM data.

5.4.15.1. Maintain a database of all switch configurations (Continental United States (CONUS) and Outside Continental United States (OCONUS)) and provide access to authorized DoD Components.

5.4.15.2. Chair and manage the DSN and DRSN CCBs. Implement approved and funded DSN and DRSN CCB actions. The DSN and DRSN CCBs shall ensure that configuration management information is collected and maintained, to include:

5.4.15.2.1. Network connectivity (switches and trunking), performance specification, and excess capacity data.

5.4.15.2.2. Network routing, dialing, and numbering scheme.

5.4.15.2.3. Switch databases.

5.4.15.2.4. Interface and control criteria.

5.4.15.2.5. Interoperability certification data and security certification and accreditation data on software and hardware of all telecommunications switches connecting to the DSN and DRSN.

5.4.16. Recommend, in coordination with the DoD Components, performance objectives for providing DSN services to satisfy the system requirements and reduce costs. Submit proposed performance objectives to the Chairman of the Joint Chiefs of Staff for approval.

5.4.17. Design, engineer, develop, publish, and annually update the DSN architecture based on the mission and traffic requirements provided by the DoD Components.

5.4.18. Provide technical interface standards for equipment and telecommunications switches connected to the DSN and DRSN.

5.4.19. Approve, in coordination with the Chairman of the Joint Chiefs of Staff, use of network interfaces not conforming to the DSN interface criteria. Establish a method for controlling and monitoring the flow of traffic across the non-conforming network interfaces.

5.4.20. Manage, in coordination with the DoD Components, controlled interfaces between the DSN and the PSTN for fulfilling communications requirements between the DoD and non-DoD facilities to provide alternative communications in the event of DSN disruptions.

5.4.21. Maintain standards for Standardized Tactical Entry Point (STEP)/Teleport facilities and manage the configuration and provisioning of STEP/Teleport sites for interfacing with deployed networks, including those of the Joint Task Force backbone and components.

5.4.22. Provide system designs, configurations, and equipment required for the interconnection of End Offices (EOs) to implement ISDN services across the DSN.

5.4.23. Provide monthly reports to the Chairman of the Joint Chiefs of Staff on GoS performance across the DSN.

5.4.24. The DISA shall establish, in conjunction with the DoD Components, DSN management systems and procedures to ensure responsive, secure, interoperable, survivable, and cost-effective service. The DISA shall be granted:

5.4.24.1. Both read- and write-access capabilities to the telecommunications switches as defined by the Combatant Command mission needs.

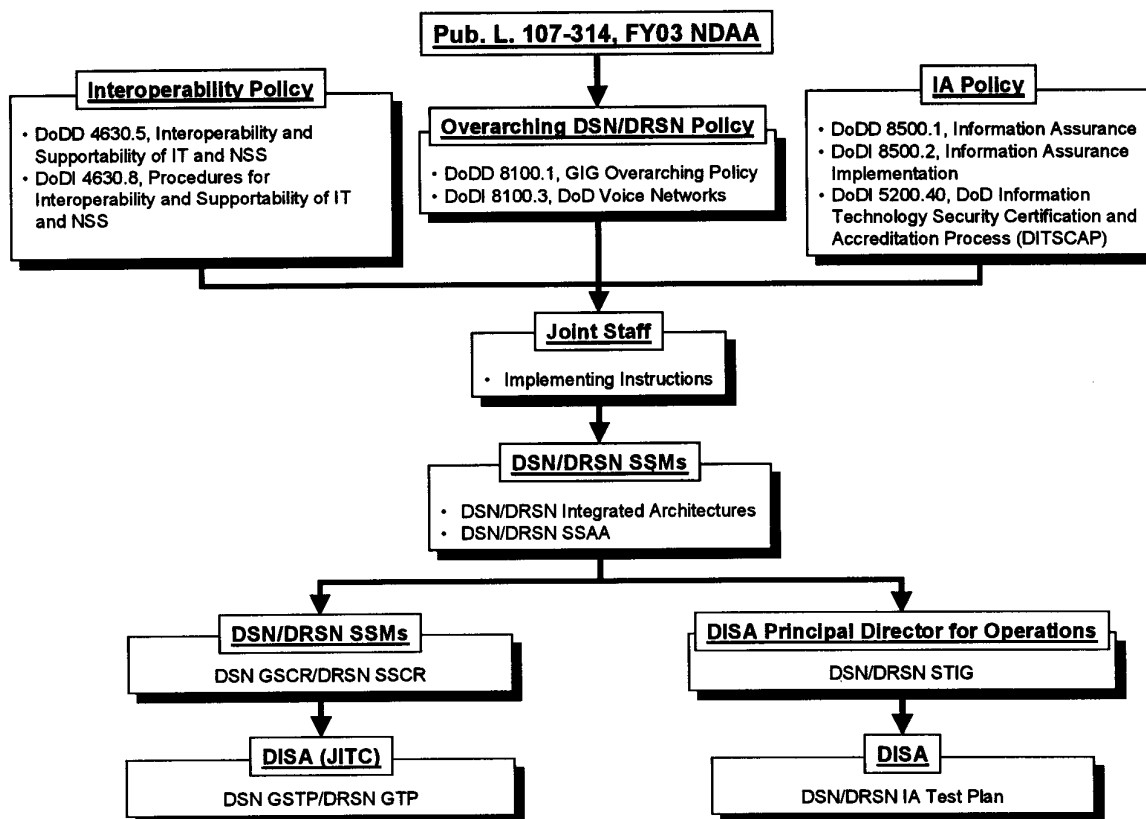
5.4.24.2. Ability to implement network control commands consistent with the mission needs of the Combatant Commands for all DSN switches.

5.4.24.3. Authority, during emergencies, for implementing switch database revisions required for operation and management of the DSN.

6. PROCEDURES

6.1. DoD DSN and DRSN Policy, Procedures, and Technical Reference Documentation. Reference (a) establishes statutory requirements for installation and connection policy and procedures regarding DSN. The "GIG Overarching Policy" (reference (b)) establishes the basis for a common, or enterprise level, communications and computing architecture to provide a full range of information services for the Department of Defense. This Instruction is subordinate to reference (b) and provides policy, procedures, and assigns responsibilities for test, certification, accreditation, lease or procurement, installation, connection, and operation of DSN and DRSN telecommunications switches and services on DoD voice networks. Figure F1. depicts the relationship between statutory requirements, DoD Directives and Instructions, implementing instructions of the Chairman of the Joint Chiefs of Staff and technical reference documents issued by the DISA for the DSN and DRSN.

Figure F1. DSN and DRSN Policy, Procedures, and Technical Reference Documentation



6.1.1. Interoperability Policy. Requirements for IT and NSS interoperability and supportability are contained in references (c) and (d). The Chairman of the Joint Chiefs of Staff shall ensure DSN and DRSN telecommunications switch compliance with requirements for interoperability; develop processes, procedures, and implementing instructions for JIC; and serve as the JIC validation authority. The DISA shall develop processes, procedures, and technical standards for JIC; and serve as the JIC authority for DSN and DRSN telecommunications switches.

6.1.2. Information Assurance Policy. Requirements for IA certification and accreditation are contained in references (e), (f), and (g). The Chairman of the Joint Chiefs of Staff shall ensure DSN and DRSN telecommunications switch compliance with requirements for IA certification and accreditation; validate IA requirements for DSN and DRSN telecommunication switches supporting joint and combined operations; and develop processes, procedures, and implementing instructions for IA certification and accreditation of DSN and DRSN telecommunications switches. Chairman of the Joint Chiefs of Staff implementing instructions shall define the DISN DAA processes and procedures for IA accreditation and connection of telecommunications switches to the DSN and DRSN. The DISA shall develop processes, procedures, and technical standards for IA certification and accreditation.

6.1.3. DSN and DRSN Technical Reference Documents. The DSN and DRSN SSMs shall develop and maintain the following DSN and DRSN telecommunications switch technical reference documents. These documents shall apply to all switches procured or leased and operated by the DoD Components for installation and connection on the DSN and DRSN.

6.1.3.1. DSN and DRSN Integrated Architectures. The DSN and DRSN integrated architectures shall provide operational, systems, and technical views for the DSN and DRSN consistent with the "Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Architecture Framework," Version 2.0, (reference (h)) architecture requirements. These architectures shall depict Government-owned, DISA leased systems, and other DoD Component elements providing long-haul communications and end-to-end voice, data, and video services. These architecture products shall also include individual theater architectures, inter-theater connectivities, and intra-network interface specifications and end-to-end performance objectives, such as GoS. The systems and technical view products shall describe network topologies, subsystems, interfaces and configurations, such as principal switch nodes, backbone and access transmission, network management systems, signaling systems, gateways to interfacing networks (including, tactical, North Atlantic Treaty Organization (NATO), and Canadian and Pacific allies). The objective DSN and DRSN architectures and associated migration paths shall also be addressed in the DSN and DRSN integrated architectures.

6.1.3.2. DSN and DRSN System Security Authorization Agreements (SSAAs). The SSAAs shall document the operating agreements between the DISN DAAs, Certification Authority (CA), acquiring activity, and users of the DSN and DRSN. The SSAAs shall contain a record of any changes made to the architecture, configuration, or security of the DSN and DRSN that may affect the accreditation status

of the system. The SSAAs shall be used to verify the DSN and DRSN mission, environment, and architecture. It shall identify threats to the DSN and DRSN, and document compliance with certification and accreditation security requirements.

6.1.3.3. DSN Generic Switching Center Requirements (GSCR) and DRSN Secure Switching Center Requirements (SSCR). The GSCR/SSCR shall specify the technical requirements for a telecommunications switch and shall be used to support lease or procurement, and testing of DSN and DRSN telecommunications switches. The GSCR/SSCR shall identify the minimum switch requirements and features applicable to the overall DoD community for the respective networks. The GSCR/SSCR shall also define and document interoperability requirements among telecommunications switches that are part of the DSN and DRSN. The Chairman of the Joint Chiefs of Staff shall validate and the ASD(NII)/DoD CIO shall approve the DSN GSCR. The DSN Generic Switch Test Plan (GSTP) and DRSN Generic Test Plan (GTP) shall be based on the requirements of the GSCR/SSCR.

6.1.3.4. DSN Generic Switching Test Plan (GSTP) and DRSN Secure Switching Test Plan (SSTP). The GSTP/SSTP shall specify interoperability test criteria for DSN and DRSN telecommunications switches connected or planned for connection to the DSN or DRSN. The GSTP/SSTP shall address interoperability requirements between new technologies; new technologies, and the existing network; and the performance impact of these new technologies on MUF.

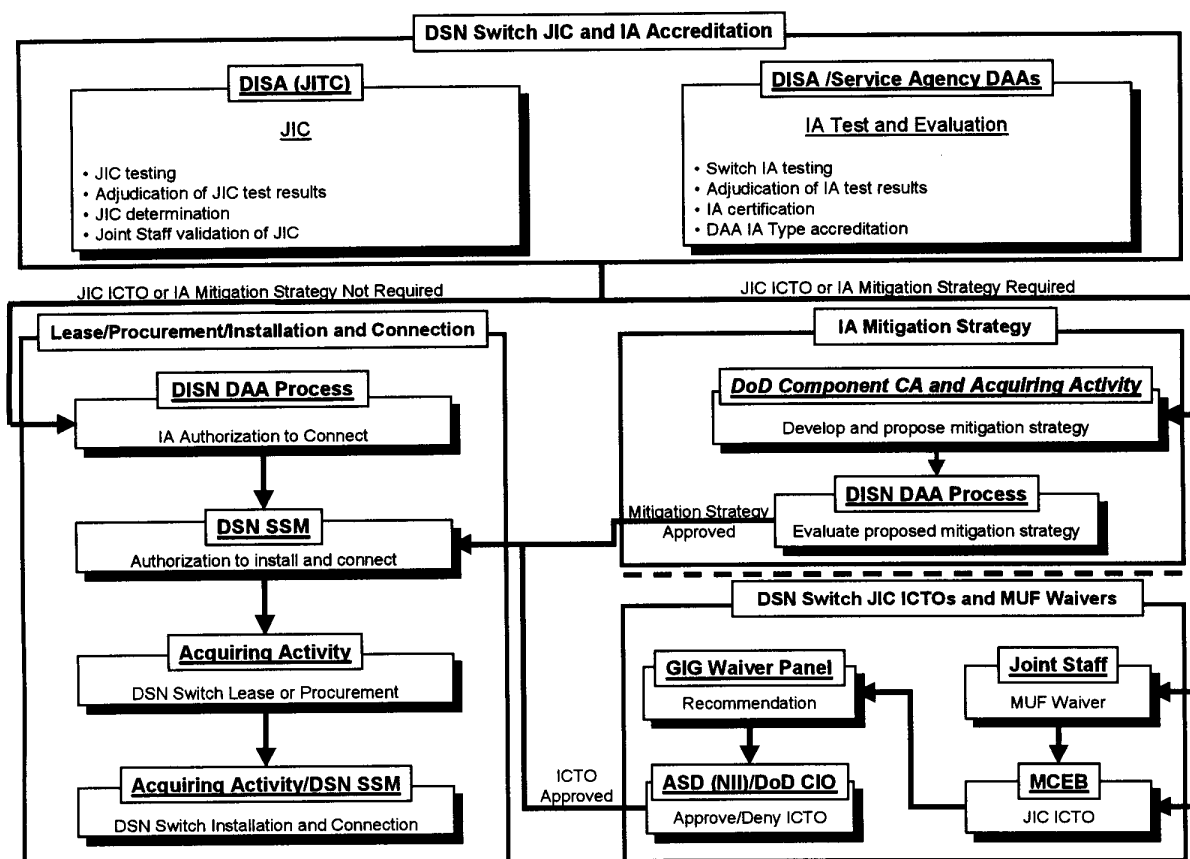
6.1.3.5. DSN and DRSN Security Technical Implementation Guides (STIGs). The DSN and DRSN STIGs shall provide the technical security policies, requirements, and implementation details for both the security features required for telecommunications switches, as well as the implementation guides for operating telecommunications switches by the DoD Components. The STIGs shall support lease or procurement, testing and operational implementation procedures, and assist DSN and DRSN sites in meeting the minimum requirements, standards, controls, and options for protecting telecommunications switch operations. The DSN and DRSN STIGs are used as guidance in ensuring that systems are configured to an acceptable level of security once deployed in the field. They also serve as one of the several sources for security requirements for the DSN and DRSN.

6.1.3.6. DSN and DRSN Information Assurance Test Plans (IATPs). The IATPs shall provide security features test criteria for telecommunications switches connected or planned for connection to the DSN or DRSN. The IATPs shall evaluate security features within the existing network and critical areas involving MUF and new telecommunications technology. The IATPs shall also address security features between new technologies; new technologies and the existing network; and the

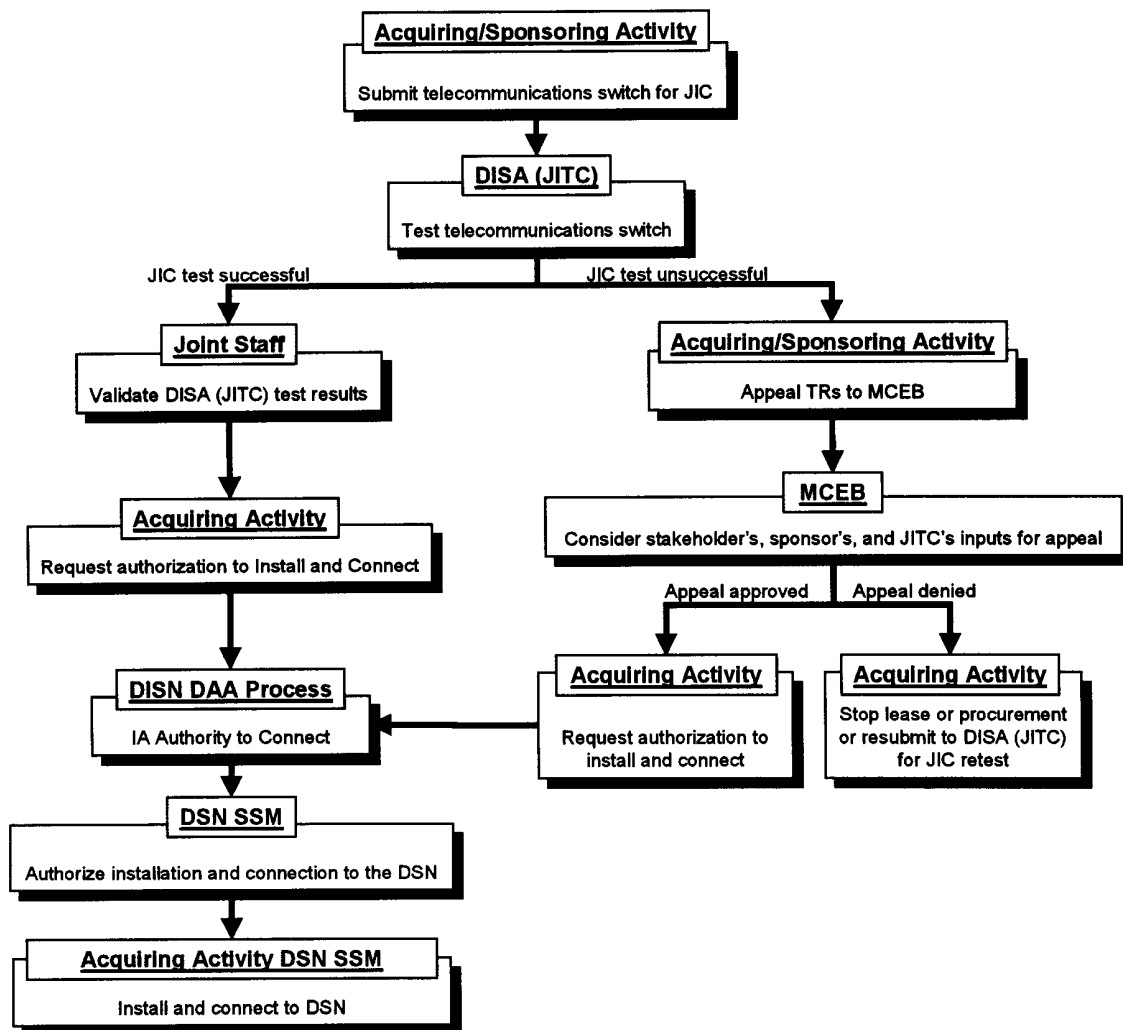
performance impact of these new technologies on MUF. The IA testing shall be conducted, in accordance with the STIGs, prior to connecting the telecommunications switch to the DSN or DRSN. The IATP is equivalent to the ST&E Plan required by reference (g).

6.2. DSN Switch Certification and Accreditation Processes. Telecommunications switches (and associated software releases) procured or leased by the DoD Components, and connected or planned for connection to the DSN, shall be both joint interoperability certified by the DISA (JITC) and IA accredited by the DISN DAAs. The DISA (JITC) shall conduct JIC testing, adjudicate JIC test results, and provide JIC determination to the Chairman of the Joint Chiefs of Staff. The DISA shall conduct IA testing, evaluate IA test results for the security features of the telecommunications switch, and develop the CA's report. The DISN DAAs may then issue an IA accreditation based upon the CA's report. Once a telecommunications switch has received both JIC and IA accreditation, the acquiring activity may request authorization from the DSN SSM to install and connect to the DSN. The telecommunications switch must be operated and maintained in accordance with the DSN STIG and the DISA (JITC)-certified configuration once installed and connected. Telecommunications switch operation must be certified and accredited, on a site-specific basis, by the DoD Component in compliance with the DoD Information Technology Security Certification and Accreditation Process (DITSCAP) per reference (g). This status shall be reported in the annual telecommunications switch inventory to the DSN SSM. If a telecommunications switch has not received a JIC and/or IA accreditation, and there is an urgent operational requirement for installation and connection, the acquiring activity may request a JIC ICTO or develop and submit an IA mitigation strategy through the DISN DAA process for consideration, as appropriate. JIC ICTO requests shall be routed through the chain of command via the Chairman of the Joint Chiefs of Staff. The MCEB shall provide a recommendation to the ASD(NII)/DoD CIO for approval of a JIC ICTO via the GIG waiver process. Only the ASD(NII)/DoD CIO may approve JIC ICTO requests. The DISN DAAs shall be the approval authority for the proposed IA mitigation strategy. Figure F2. depicts an overview of the DSN switch JIC and IA certification and accreditation process.

Figure F2. DSN Switch JIC and IA Certification and Accreditation Process Overview



6.2.1. DSN Joint Interoperability Certification Process. The acquiring or sponsoring activity shall submit telecommunications switches to the DISA (JITC) for JIC. The DISA (JITC) shall test the switch, with acquiring or sponsoring activity sponsorship and involvement. Figure F3. depicts the DSN JIC process.

Figure F3. DSN Joint Interoperability Certification Process

6.2.1.1. If the JIC test is successful, then the acquiring activity may request authorization to install and connect the switch to the DSN. The DSN SSM may issue an ATC provided the switch has also received IA accreditation. The acquiring activity may then install and connect the switch to the DSN. Once the telecommunications switch is installed and connected, the DoD Component must ensure that the telecommunications switch is operated in the same configuration that was certified to preserve the integrity of the interoperability certification.

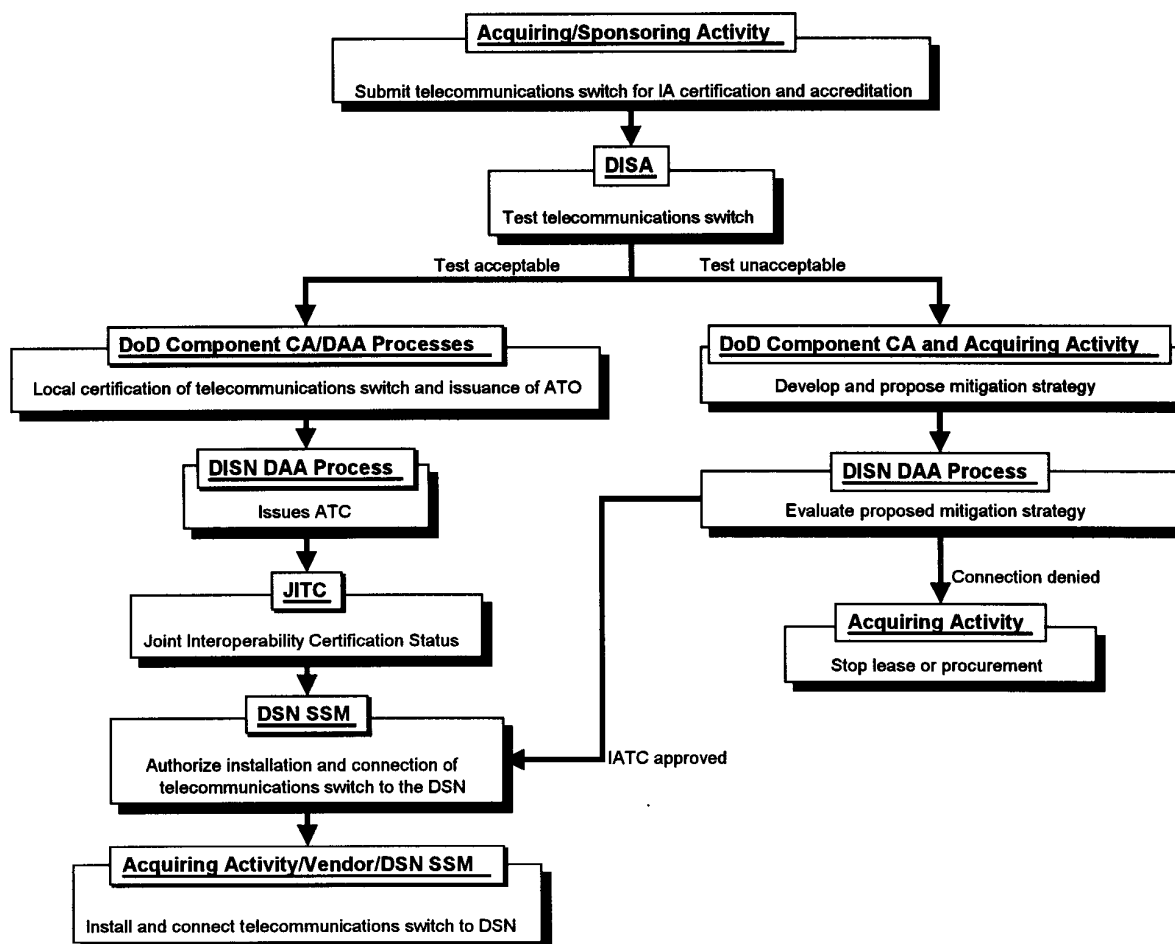
6.2.1.2. If the JIC test is unsuccessful, then the acquiring or sponsoring activity may appeal the Test Results (TRs) to the MCEB. Provided the JIC test results

are resolved during the appeal process and the telecommunications switch is IA accredited, the acquiring activity may request authorization to install and connect the switch to the DSN.

6.2.2. DSN Information Assurance Certification and Accreditation Process.

The acquiring or sponsoring activity shall submit the telecommunications switch to the DISA (JITC) for IA testing by the DISA. The DISA shall test the switch. Figure F4. depicts the DSN IA certification and accreditation process.

Figure F4. DSN Information Assurance Certification and Accreditation Process



6.2.2.1. The test results shall be provided to the CA. If IA certification test is acceptable, the DISN DAAs may accredit the switch. The acquiring activity may then request authorization to install and connect the switch to the DSN. Provided the

switch has also received JIC, the DISA DSN SSM may issue an ATC. The acquiring activity may then install and connect the switch to the DSN.

6.2.2.2. If the IA certification test is unacceptable, the acquiring or sponsoring activity may develop mitigation strategy for consideration by the DISN DAAs. Only if the IA mitigation strategy is accepted, may the acquiring activity request authorization to install and connect the switch to the DSN and the DISA DSN SSM may then issue an ATC.

6.3. DRSN Switch Certification and Accreditation Processes. DRSN telecommunications switches (and associated software releases) procured, leased, or operated by the DoD Components, and connected or planned for connection to the DRSN, shall be both joint interoperability certified by the DISA (JITC) and IA accredited by the DISN DAAs or DIA PAA, as appropriate, based on classification level of service provided by the switch. Only DISA-specified and approved (single vendor) DRSN telecommunications switches, authorized on a site-specific basis shall be installed and connected to the DRSN.

6.3.1. In coordination with the DRSN SSM, the DISA (JITC) shall conduct JIC testing and provide JIC determination to the DRSN SSM for review and forwarding to the Chairman of the Joint Chiefs of Staff.

6.3.2. The DRSN SSM shall ensure IA testing is accomplished and IA test results for the security features of these DISA-specified DRSN telecommunications switches are provided to appropriate accrediting authority. The DISN DAAs or DIA PAA may then issue an IA accreditation, as appropriate.

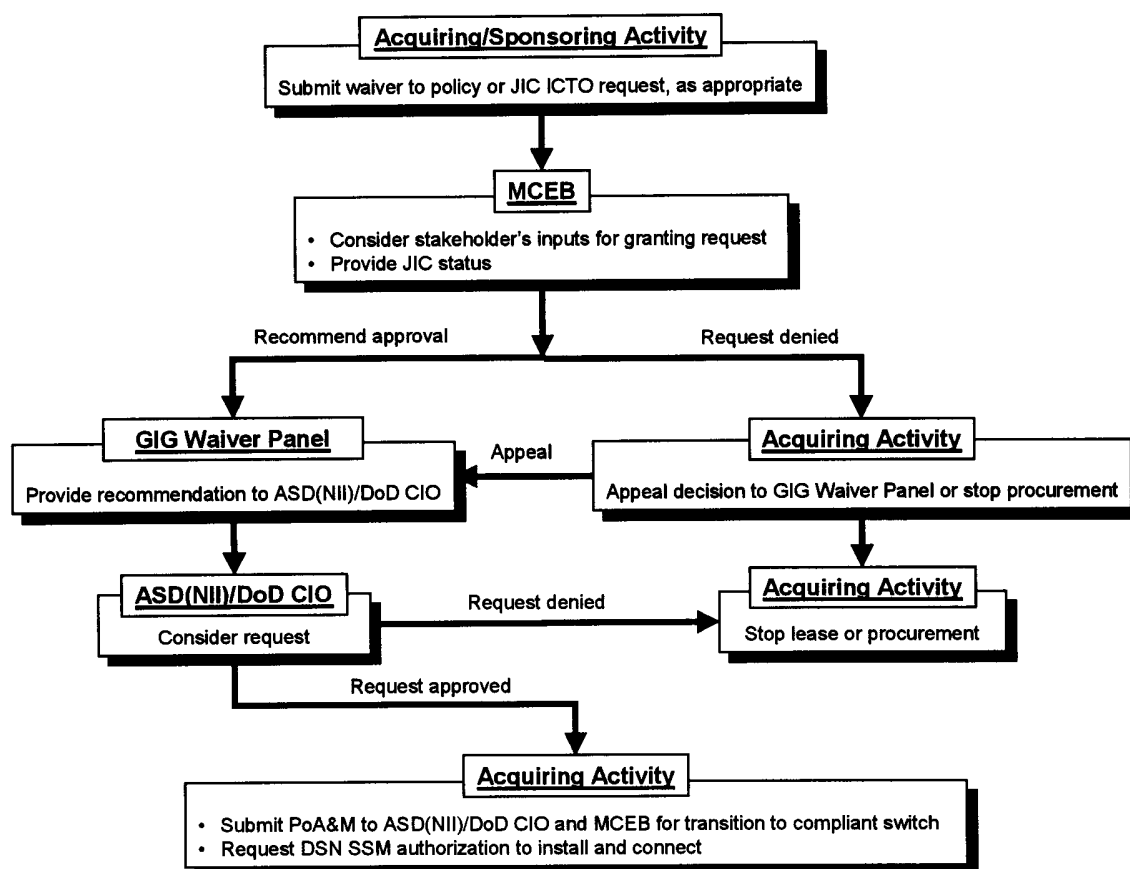
6.3.3. Once a telecommunications switch has received both JIC and IA accreditation, the acquiring activity may request authorization from the DRSN SSM to install and connect to the DRSN on a case-by-case basis. The telecommunications switch must be operated and maintained in accordance with the DRSN interface criteria and the DISA (JITC)-certified configuration once installed and connected. Telecommunications switch operation must be certified and accredited, on a site-specific basis, by the DoD Component as part of the overall DITSCAP certification and accreditation process per reference (g). This status shall be reported in the annual telecommunications switch inventory to the DRSN SSM.

6.3.4. If a telecommunications switch has not received a JIC and there is an urgent operational requirement for installation and connection, the acquiring activity may request a JIC ICTO. JIC ICTO requests shall be routed through the chain of

command to the DRSN SSM for forwarding to the Chairman of the Joint Chiefs of Staff for approval.

6.4. Waivers to Policy and ICTO Requests. It is DoD policy that all telecommunications switches (and associated software releases) procured or leased by the DoD Components, and connected or planned for connection to the DSN or DRSN, shall be joint interoperability certified by the DISA (JITC) and issued an IA accreditation by the DISN DAAs. If a telecommunications switch has not received a JIC and meets the conditions specified below, the acquiring activity may request a waiver to policy, or a JIC ICTO. Waivers to IA policy shall not normally be granted. Waivers to policy contained in this Instruction shall be submitted through chain of command to the ASD(NII)/DoD CIO for approval. ICTO requests shall be submitted through chain of command to the ASD(NII)/DoD CIO, via the GIG waiver process. Figure F5 depicts the waiver to policy, and JIC ICTO process.

Figure F5. Waivers to Policy and ICTO Request Process



6.4.1. Waivers to the provisions of this Instruction may be requested, in rare cases, under the following circumstances:

6.4.1.1. Urgent operational need, validated by the operational chain of command and the Chairman of the Joint Chiefs of Staff.

6.4.1.2. To accommodate introduction of new or emerging technology pilot programs previously coordinated with, and recommended by the DSN or DRSN SSMs, and validated by the Chairman of the Joint Chiefs of Staff. Pilot programs shall not be approved for a period longer than one year.

6.4.2. AJIC ICTO shall only be granted under the following conditions:

6.4.2.1. An urgent operational need, validated by the operational chain of command and the Chairman of the Joint Chiefs of Staff, requiring switch fielding prior to testing.

6.4.2.2. Telecommunications switches that are under test and the DISA (JITC) is unable to assess all required interfaces.

6.4.2.3. A waiver to policy has been granted by the ASD(NII)/DoD CIO.

6.4.3. To obtain a waiver to policy or ICTO, the acquiring activity must prepare and submit a switch, configuration (end-to-end), and location-specific request.

6.4.3.1. Interoperability-related requests shall be submitted to the MCEB for consideration and adjudication.

6.4.3.2. The MCEB may deny the acquiring activity's request, or forward a recommendation for approval to the ASD(NII)/DoD CIO for decision, via the GIG waiver process, as appropriate.

6.4.3.3. If the MCEB denies the acquiring activity's request, the acquiring activity may appeal the MCEB's decision to the ASD(NII)/DoD CIO, via the GIG waiver process.

6.4.3.4. An unapproved switch may not be leased or procured unless and until a waiver is approved.

6.4.4. Waivers to policy or ICTOs shall not be granted for a period of more than one year. Only in exceptional circumstances, and with ASD(NII)/DoD CIO

approval, shall extensions of waivers or ICTOs be granted. The DISA shall maintain a database to track status of granted waivers and ICTOs.

6.4.5. The acquiring activity shall provide, within 30 days of receipt, a PoA&M for certifying or transitioning uncertified switches connected to the DSN or DRSN when a waiver or ICTO has been granted. The DISA shall monitor acquiring activity's progress in achieving stated actions and milestones. Telecommunications switches that are not certified within the initial period of the waiver or ICTO, shall be considered for disconnection from the DSN or DRSN.

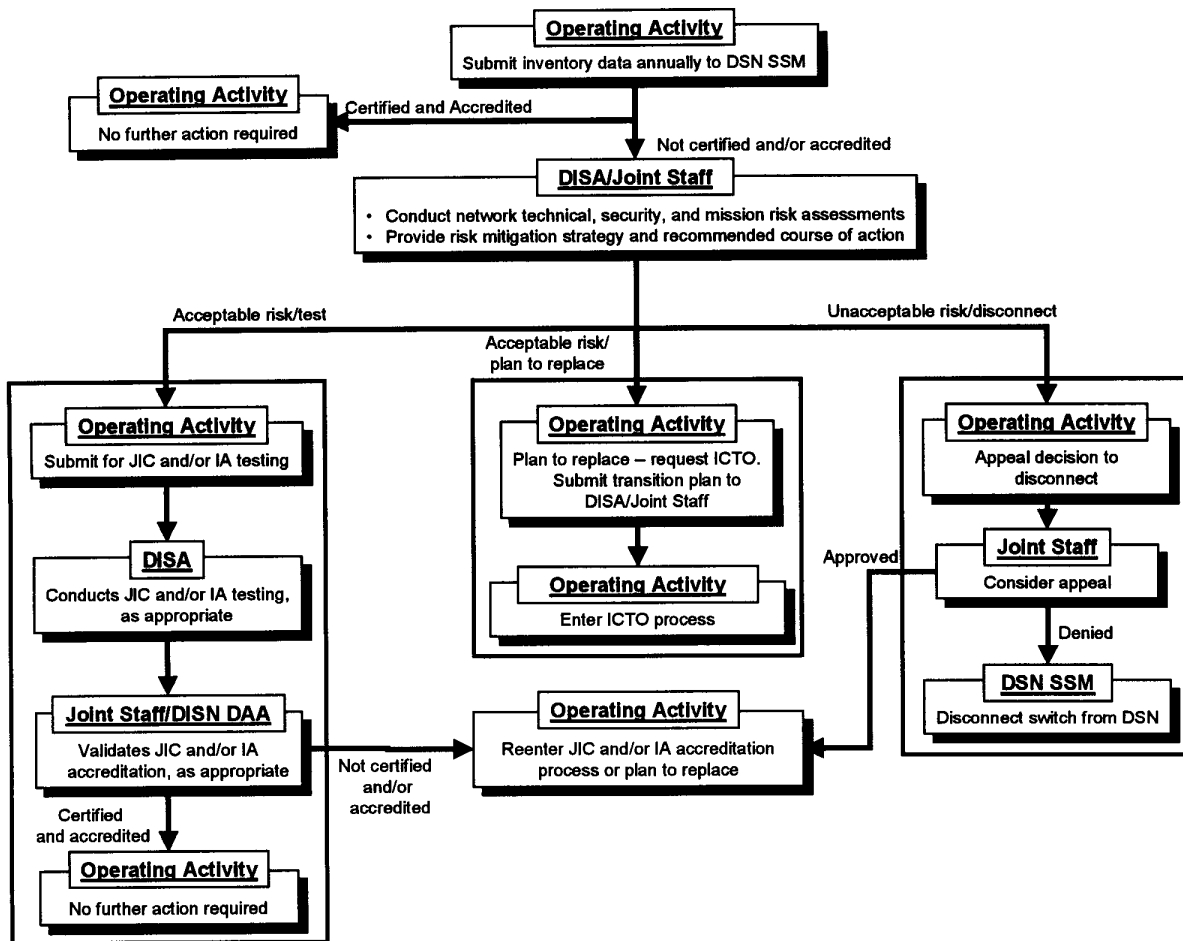
6.4.6. When a telecommunications switch does not meet DSN or DRSN MUF and/or other operational or functional requirements, a waiver must be first granted by the Chairman of the Joint Chiefs of Staff prior to requesting a JIC ICTO.

6.4.7. For non-DoD user installations, an ICTO may be granted based upon a satisfactory technical assessment of DSN or DRSN interface criteria performed by the respective SSM.

6.5. DSN and DRSN Configuration Management (CM). The DSN and DRSN SSMs shall maintain CM over the DSN and DRSN to ensure software and hardware remain joint interoperability certified, security certified and accredited; and are consistent with end-to-end performance requirements. To ensure CM of the DSN and DRSN is maintained, the DoD Components shall coordinate all DSN and DRSN voice transport and processing initiatives with the DSN or DRSN SSMs, as appropriate. The DSN and DRSN CCBs, chaired by the DSN and DRSN SSM, respectively, shall review and approve changes to the DSN and DRSN that affect joint interoperability certification, accreditation, and compliance with end-to-end performance requirements.

6.6. DSN Inventory, Risk Assessments and Mitigation Plans. To facilitate CM and risk management of the DSN, the DoD Components shall annually compile and submit to the DISA a complete inventory of all telecommunications switches that are connected, or planned for connection to the DSN (to include tactical switches) or public switched telecommunications networks. This inventory shall be used for assessing risks associated with uncertified switches connected to the DSN and for developing courses of action for mitigating these risks. The range of action, for uncertified or unaccredited switches operating on the DSN, may include submitting the switch for certification and/or accreditation to disconnecting the switch from the DSN. Figure F6. depicts the process for conducting DSN inventory, risk assessments, and developing associated mitigation plans.

Figure F6. DSN Inventory, Risk Assessments and Mitigation Plans



6.6.1. Inventory. The DISA shall consolidate the DoD Components' input into a single comprehensive DoD inventory of telecommunications switches connected to the DSN and submit this inventory to the ASD(NII)/DoD CIO and the Chairman of the Joint Chiefs of Staff.

6.6.2. Risk Assessments. The DISA and the operating activities shall use the compiled inventory for conducting technical and security risk assessments and for developing associated risk mitigation plans for uncertified or unaccredited telecommunications switches connected to the DSN. The Chairman of the Joint Chiefs of Staff shall conduct a mission risk assessment; review the DISA's technical and security risk assessments and mitigation plans; and provide recommendations to the ASD(NII)/DoD CIO on the adequacy of these assessments and mitigation plans.

6.6.3. Mitigation Plans. For uncertified or unaccredited telecommunications switches operating on the DSN, DISA and the Chairman of the Joint Chiefs of Staff shall develop risk mitigation plans and provide recommended courses of action to address uncertified or unaccredited switches.

6.6.3.1. Telecommunication switches determined to be an acceptable technical, security, and mission risk may be submitted to the DISA for JIC or IA testing, as appropriate; or may be replaced with a certified and accredited switch from the APL. If the telecommunications switch has not been joint interoperability certified, the operating activity must obtain a JIC ICTO for the intervening period. If the telecommunications switch cannot be certified or accredited within the ICTO period, then the operating activity shall plan to replace the switch with a certified and accredited switch from the APL.

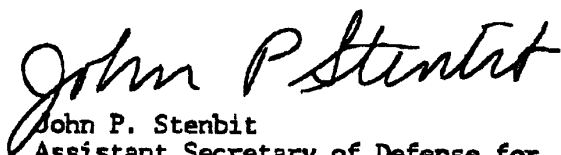
6.6.3.2. Telecommunication switches determined to be an unacceptable technical, IA or mission risk by the DISA or by the Chairman of the Joint Chiefs of Staff shall be considered for disconnection from the DSN. The operating activity may appeal the determination to disconnect to the Chairman of the Joint Chiefs of Staff. If the Chairman of the Joint Chiefs of Staff denies the operating activity's appeal, then the operating activity shall disconnect the telecommunications switch from the DSN.

7. INFORMATION REQUIREMENTS

Reporting requirements identified in this Instruction are exempt from licensing according to paragraph C4.4.2. of DoD 8910.1-M (reference (i)).

8. EFFECTIVE DATE

This Instruction is effective immediately.


John P. Stenbit
Assistant Secretary of Defense for
Networks and Information Integration

Enclosures - 4

- E1. References, continued
- E2. Definitions
- E3. Acronyms
- E4. Additional DoD Voice Networks Requirements

E1. ENCLOSURE 1

REFERENCES, continued

- (e) [DoD Directive 8500.1](#), "Information Assurance (IA)," October 24, 2002
- (f) [DoD Instruction 8500.2](#), "Information Assurance (IA) Implementation," February 6, 2003
- (g) [DoD Instruction 5200.40](#), "DoD Information Technology Security Certification and Accreditation Process (DITSCAP)," December 30, 1997
- (h) "Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Architecture Framework," Version 2.0, December 18, 1997¹
- (i) [DoD 8910.1-M](#), "DoD Procedures for Management of Information Requirements," June 30, 1998
- (j) Section 1452 of title 40, United States Code

¹ http://www.defenselink.mil/nii/org/cio/i3/AWG_Digital_Library/pdfdocs/fw.pdf

E2. ENCLOSURE 2

DEFINITIONS

E2.1.1. Accreditation. Formal declaration by the DAA that an IT system is approved to operate in a particular security mode using a prescribed set of safeguards at an acceptable level of risk.

E2.1.2. Assured Service or Connectivity. The ability of the DSN to optimize call completion rates for all C2 users in accordance with the guidelines in this Instruction, despite degradation due to network disruptions, natural disasters, or surges during crisis or war. Assured service capability ensures the connectivity from user-instrument-to-user-instrument across the DSN, including Government-controlled PBXs, EOs, the overseas DSN, and tactical networks that incorporate Multiple-Level Precedence and Preemption (MLPP) features.

E2.1.3. Backbone

E2.1.3.1. The high-traffic-density connectivity portion of any communications network.

E2.1.3.2. In packet-switched networks, a primary forward-direction path traced sequentially through two or more major relay or switching stations. In packet-switched networks, a backbone consists primarily of switches and inter-switch trunks.

E2.1.4. Certification. Comprehensive evaluation of the technical and non-technical security features of an IT system and other safeguards, made in support of the accreditation process, to establish the extent that a particular design and implementation meets specified security requirements.

E2.1.5. Certification Authority (CA). The official responsible for performing the comprehensive evaluation of the technical and non-technical security features of an IT system and other safeguards, made in support of the accreditation process, to establish the extent that a particular design and implementation meet specified security requirements.

E2.1.6. Configuration Management (CM)

E2.1.6.1. The management of security features and assurances through control of changes made to hardware, software, firmware, documentation, test, test fixtures, and test documentation of an automated information system, throughout the development and operational life of a system.

E2.1.6.2. The control of changes (including the recording thereof) that are made to the hardware, software, firmware, and documentation throughout the system lifecycle.

E2.1.7. Connection Approval. Formal authorization to interconnect information systems.

E2.1.8. Defense Agencies. All agencies and offices of the Department of Defense including the Ballistic Missile Defense Organization, Defense Advanced Research Projects Agency, Defense Commissary Agency, Defense Contract Audit Agency, Defense Finance and Accounting Service, Defense Information Systems Agency, Defense Intelligence Agency, Defense Legal Services Agency, Defense Logistics Agency, Defense Threat Reduction Agency, Defense Security Cooperation Agency, Defense Security Service, National Imagery and Mapping Agency, National Reconnaissance Office, and National Security Agency.

E2.1.9. Defense Information Systems Network (DISN). The DISN is an integrated network, centrally managed and configured, to provide telecommunications services for all DoD activities. This information transfer service is designed to provide dedicated point-to-point and switched voice, data, imagery, and video teleconferencing (VTC) services in support of national defense command, control, communications, and intelligence (C3I) decision support requirements.

E2.1.10. Defense RED Switch Network (DRSN). A secure C2 system that is a key component of DoD global secure voice services. The DRSN supports the secure voice and secure conferencing, requirements of the President, the DoD Components, and select Federal Agencies in peacetime, crisis situations, and wartime. The DRSN is a separate, secure switched network that is considered part of the DISN.

E2.1.11. Defense Switched Network (DSN). An inter-base, non-secure or secure C2 telecommunications system that provides end-to-end command use and dedicated telephone service, voice-band data, and dial-up VTC for C2 and non-C2 DoD authorized users in accordance with national security directives. Non-secure dial-up voice (telephone) service is the system's primary function.

E2.1.12. DSN and DRSN Users. A person, organization, or other entity (including a computer or computer system) that employs the services provided by a telecommunications system or an information processing system for transfer of information.

E2.1.12.1. Command and Control (C2) Users. Users who have a requirement for C2 communications, but do not meet the criteria for the class of "Special C2 user." C2 users include any person (regardless of the position in the chain-of-command) who issues or receives guidance or orders that direct, control, or coordinate any military forces regardless of the nature of the military mission (including combat support, administration, and logistics), whether said guidance or order is issued or effected during peacetime or wartime. There are two types of C2 users:

E2.1.12.1.1. Users approved by the Chairman of the Joint Chiefs of Staff, Combatant Commanders, Service, or Agency for the Priority and Routine precedence origination.

E2.1.12.1.2. DoD users having a military mission that might receive C2 calls for orders or direction at precedence above Routine, even though they do not have a C2 mission for issuing guidance or orders. Therefore, these users must be served by switching facilities that provide the MUFs of the DSN or DRSN.

E2.1.12.2. Special C2 Users. A special class of user who has access to the DSN or DRSN for essential communications for planning, directing, and controlling operations of assigned forces pursuant to assigned missions. This user requires capabilities that provide crises, pre-attack, and theater non-nuclear war telecommunications service for intelligence, alert, and strategic readiness. This user also requires communications among the President, Secretary of Defense, Chairman of the Joint Chiefs of Staff, and other members of the Joint Chiefs of Staff, Service Chiefs, and the Combatant Commanders. Specifically, these Special C2 users are identified through one or more Chairman of the Joint Chiefs of Staff, Combatant Commander, Service, or DoD Agency validation processes. The following are required capabilities of Special C2 users:

E2.1.12.2.1. Chairman of the Joint Chiefs of Staff-approved Flash, Flash Override, or Immediate precedence origination.

E2.1.12.2.2. Combatant Commander-validated minimum essential circuits.

E2.1.12.2.3. Combatant Commander or Service-approved Immediate and Priority precedence origination.

E2.1.12.3. Non-C2 Users. DoD, non-DoD, non-governmental, and foreign government users having no missions or communications requirements to ever originate or receive C2 communications under the definitions for C2 and Special C2 Users. During a crisis or contingency, they may be denied access to the DSN or DRSN. These users are provided access to the DSN for the economic benefits to the Department of Defense.

E2.1.13. Designated Approving Authority (DAA). Official with the authority to formally assume the responsibility for operating a system or network at an acceptable level of risk. In the case of the DISN, assigned to four individuals (reference (e)).

E2.1.14. Directionalization. The temporary conversion of a portion or all of a two-way trunk group to one-way trunks favoring traffic flowing away from a congested switch.

E2.1.15. End Office (EO). A central office at which user lines and trunks are interconnected. End offices are an integral part of the DSN. EO switches provide users with switched call connections and all DSN service features, including MLPP. The EO provides long-distance service by interconnecting with DSN nodal switches. The EO does not service as a tandem in the DSN, but may connect to other EOs where direct traffic volume requires, such as in a metropolitan calling area.

E2.1.16. Grade of Service (GoS)

E2.1.16.1. The probability of a call being blocked or delayed more than a specified interval, expressed as a decimal fraction. GoS may be applied to the busy hour or to some other specified period or set of traffic conditions. GoS may be viewed independently from the perspective of incoming versus outgoing calls and is not necessarily equal in each direction.

E2.1.16.2. In telephony, the quality of service for which a circuit is designed or conditioned to provide (e.g., voice grade or program grade). Criteria for different grades of service may include equalization for amplitude over a specified band of

frequencies, and in the case of digital data transported via analog circuits, equalization for phase.

E2.1.17. Global Information Grid (GIG). The globally interconnected, end-to-end set of information capabilities, associated processes, and personnel for collecting, processing, storing, disseminating and managing information on demand to warfighters, policy makers, and support personnel. The GIG includes all owned and leased communications and computing systems and services, software (including applications), data, security services, and other associated services necessary to achieve Information Superiority. It also includes National Security Systems (NSS), as defined in Section 1452 of title 40, U.S.C. (reference (j)). The GIG supports all DoD, National Security, and related Intelligence Community missions and functions (strategic, operational, tactical, and business), in war and in peace. The GIG provides capabilities from all operating locations (bases, posts, camps, stations, facilities, mobile platforms, and deployed sites). The GIG provides interfaces to coalition, allied, and non-DoD users and systems.

E2.1.17.1. Includes any system, equipment, software, or service that meets one or more of the following criteria:

E2.1.17.1.1. Transmits information to, receives information from, routes information among, or interchanges information among other equipment, software, and services.

E2.1.17.1.2. Provides retention, organization, visualization, information assurance, or disposition of data, information, and/or knowledge received from or transmitted to other equipment, software, and services.

E2.1.17.1.3. Processes data or information for use by other equipment, software, or services.

E2.1.17.2. Non-GIG IT. Stand-alone, self-contained, or embedded IT that is not and will not be connected to the enterprise network

E2.1.18. IA Certification and Accreditation (IA C&A). The standard DoD approach for identifying information security requirements, providing security solutions, and managing the security of DoD information systems.

E2.1.19. Information Assurance (IA). Measures that protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and non-repudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities.

E2.1.20. Information Technology (IT). Any equipment, or interconnected system or subsystem of equipment, that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the Executive Agency. This includes equipment used by a DoD Component directly, or used by a contractor under a contract with the Component, which:

E2.1.20.1. Requires the use of such equipment; or

E2.1.20.2. Requires the use, to a significant extent, of such equipment in the performance of a service or the furnishing of a product.

E2.1.20.3. The term "IT" also includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources. Notwithstanding the above, the term "IT" does not include any equipment that is acquired by a Federal contractor incidental to a Federal contract. The term "IT" includes National Security Systems (NSS).

E2.1.21. Installation. An installation is a single site or a group of two or more sites for the purposes of inventory control. An installation can exist in three possible forms, as follows:

E2.1.21.1. A single site designed to be an installation (e.g., Pope Air Force Base). It will have no subordinate sites.

E2.1.21.2. Several sites grouped with one of the sites designated as the "Installation" (e.g., Fort Belvoir (installation) and Woodbridge Housing (a subordinate site)).

E2.1.21.3. Several sites grouped together under a single "Installation" number/code where all the sites have equal status (e.g., the sites included in the 90th Regional Support Center (RSC)). In this situation the 90th RSC is a Command and Control Headquarters organization, but does not exist as a site.

E2.1.22. Integrated Services Digital Network (ISDN). An integrated digital network in which the same time-division switches and digital transmission paths are used to establish connections for different services. ISDN services include telephone, data, electronic mail, and facsimile. The method used to accomplish a connection is often specified; for example, switched connection, non-switched connection, exchange connection, and ISDN connection.

E2.1.23. Military Communications-Electronics Board (MCEB). A decision-making body chaired by the Chairman of the Joint Chiefs of Staff, and composed of the Command, Control, Communications, and Computers (C4) heads of the Services, the DIA, the NSA, and the Director, DISA. This body deals with issues of interoperability and standardization between the Department of Defense and U.S. allies.

E2.1.24. Military Unique Features (MUFs). Those network and telecommunication switch features that are required to support C2 users and are above and beyond those supported by commercial carriers in telephony services to the general public. MUFs include:

E2.1.24.1. Survivable Service. The guarantee that service is provided globally in peace, crisis, and war.

E2.1.24.2. Assured Connectivity. The mission-critical calls are completed end-to-end, despite degradation due to network disruptions, natural disasters, or surges during crisis or war using MLPP capability, if necessary.

E2.1.24.3. Responsive Service. The guarantee that C2 and Special C2 users always receive dial tone, never receive a busy signal, and can interrupt a busy phone line to complete mission-critical calls.

E2.1.24.4. Surge Capacity. The guarantee that C2 and Special C2 users always receive dial tone, never receive a busy signal, and can interrupt a busy phone line to complete mission-critical calls in spite of major traffic overloads due to global military actions.

E2.1.24.5. Secure Service. The guarantee that DSN and DRSN are configured to minimize attacks from enemies of the United States on the system that could result in denial or disruption of service.

E2.1.24.6. Interoperable Service. The guarantee that DSN and DRSN are designed with the capability to permit interconnection and interoperation with similar DoD, tactical, Federal Government, allied, and commercial networks.

E2.1.25. Multilevel Precedence and Preemption (MLPP). In military communications, a priority scheme:

E2.1.25.1. For assigning one of several precedence levels to specific calls or messages so that the system handles them in a predetermined order and timeframe;

E2.1.25.2. For gaining controlled access to network resources in which calls and messages can be preempted only by higher priority calls and messages;

E2.1.25.3. That is recognized only within a predefined domain; and

E2.1.25.4. In which the precedence level of a call outside the predefined domain is usually not recognized.

E2.1.26. National Security or Emergency Preparedness (NS/EP) Telecommunications. Telecommunications services that are used to maintain a state of readiness or to respond to and manage any event or crisis (local, national, or international) that causes or could cause injury or harm to the population, damage to or loss of property, or degrade or threaten the national security or emergency preparedness posture of the United States.

E2.1.27. Nodal Switch. A tandem switch in the DSN that connects multiple EOs, provides access to a variety of transmission media, routes calls to other nodal switches, and provides network features, such as MLPP. Nodal switches are supervised by and inter-connected to the DSN Administration/Network Management (A/NM) subsystem. The two types of nodal switches in the DSN are:

E2.1.27.1. Stand-Alone (SA) Switch. The SA functions solely as a tandem switch in the DSN.

E2.1.27.2. Multi-function Switch (MFS). This switch incorporates the combined functions of an SA switch and an EO switch. No physical division exists between the EO and SA functions within the MFS, but a logical division exists.

E2.1.28. Precedence. In communications, a designation assigned to a message by the originator to indicate to communications personnel the relative order of handling and to the addressee the order in which the message is to be noted. The ascending order of precedence for military messages is Routine, Priority, Immediate, and Flash.

E2.1.28.1. Routine. Precedence designation applied to those official Government communications that require rapid transmission by telephonic means, but do not require preferential handling.

E2.1.28.2. Priority. Precedence reserved generally for telephone calls requiring expeditious action by called parties and/or furnishing essential information for the conduct of Government operations.

E2.1.28.3. Immediate. Precedence reserved generally for telephone calls pertaining to:

E2.1.28.3.1. Situations that gravely affect the security of national and allied forces.

E2.1.28.3.2. Reconstitution of forces in a post-attack period.

E2.1.28.3.3. Intelligence essential to national security.

E2.1.28.3.4. Conduct of diplomatic negotiations to reduce or limit the threat of war.

E2.1.28.3.5. Implementation of Federal Government actions essential to national survival.

E2.1.28.3.6. Situations that gravely affect the internal security of the United States.

E2.1.28.3.7. Civil defense actions concerning the U.S. population.

E2.1.28.3.8. Disasters or events of extensive seriousness having an immediate and detrimental effect on the welfare of the U.S. population.

E2.1.28.3.9. Vital information having an immediate effect on aircraft, spacecraft, or missile operations.

E2.1.28.4. FLASH. Precedence reserved generally for telephone calls pertaining to:

E2.1.28.4.1. Command and control of military forces essential to defense and retaliation.

E2.1.28.4.2. Critical intelligence essential to national survival.

E2.1.28.4.3. Conduct of diplomatic negotiations critical to the arresting or limiting of hostilities.

E2.1.28.4.4. Dissemination of critical civil alert information essential to national survival.

E2.1.28.4.5. Continuity of Federal Government functions essential to national survival.

E2.1.28.4.6. Fulfillment of critical U.S. internal security functions essential to national survival.

E2.1.28.4.7. Catastrophic events of national or international significance.

E2.1.28.5. FLASH OVERRIDE. A capability available to:

E2.1.28.5.1. The President of the United States, Secretary of Defense, and Joint Chiefs of Staff.

E2.1.28.5.2. Commanders of the Combatant Commands when declaring Defense Condition One or Defense Emergency.

E2.1.28.5.3. Commander, U.S. Space Command, when declaring either Defense Condition One or Air Defense Emergency and other national authorities the President may authorize. Flash Override cannot be preempted in the DSN.

E2.1.28.6. FLASH OVERRIDE OVERRIDE. A DRSN capability available to:

E2.1.28.6.1. The President of the United States, Secretary of Defense, and Joint Chiefs of Staff.

E2.1.28.6.2. Commanders of the Combatant Commands when declaring Defense Condition One or Defense Emergency.

E2.1.28.6.3. Commander, U.S. Space Command, when declaring either Defense Condition One or Air Defense Emergency and other national authorities that the President may authorize in conjunction with Worldwide Secure Voice Conferencing System conferences. Flash Override cannot be preempted.

E2.1.29. Private Branch Exchange (PBX)

E2.1.29.1. A subscriber-owned telecommunications exchange that usually includes access to the public switched network.

E2.1.29.2. A switch that serves a selected group of users and is subordinate to a switch at a higher-level military establishment.

E2.1.29.3. A private telephone switchboard that provides on-premises dial service and may provide connections to local and trunked communications networks. A PBX operates with only a manual switchboard. A Private Automatic Exchange (PAX) does not have a switchboard. A Private Automatic Branch Exchange (PABX) may or may not have a switchboard. Use of the term "PBX" is far more common than "PABX," regardless of automation.

E2.1.30. Public Switched Telecommunications Network (PSTN). Any common-carrier network that provides circuit switching among public users. The term is usually applied to public switched telephone networks, but it could be applied more generally to other switched networks, such as packet-switched public data networks.

E2.1.31. Risk. A combination of the likelihood that a threat will occur, the likelihood that a threat occurrence will result in an adverse impact, and the severity of the resulting impact.

E2.1.32. Risk Assessment. Process of analyzing threats to, and vulnerabilities of, an IT system, and the potential impact that the loss of information or capabilities of a system would have on national security. The resulting analysis is used as a basis for identifying appropriate and effective measures.

E2.1.33. Risk Management. Process concerned with the identification, measurement, control, and minimization of security risks in IT systems to a level commensurate with the value of the assets protected.

E2.1.34. Secure Terminal Equipment (STE). Telecommunications equipment providing a secure voice capability over the non-secure switched voice network. Secure voice terminals are managed as Customer Premise Equipment (CPE); similar to the non-secure telephone instruments, but in accordance with national, Combatant Commander, and Service or Agency procedures.

E2.1.35. Security. Measures and controls that ensure confidentiality, integrity, availability, and accountability of the information processed and stored by a computer.

E2.1.36. Site. A site is a contiguous geographical area owned or leased by a Military Department (Army, Navy, Air Force) or Washington Headquarters Services. A site may exist in one of the following three forms:

E2.1.36.1. Land and all the facilities (buildings, utilities, structures) thereon.

E2.1.36.2. Land only, when there are no facilities (buildings, utilities, structures) present.

E2.1.36.3. Facilities only (buildings, utilities, structures), when the underlying land is neither owned by, leased, licensed, nor permitted to the Government (e.g., a leased office building without the underlying land).

E2.1.37. System Security Authorization Agreement (SSAA). A formal agreement among the DAA(s), the CA, the IT system user representative, and the acquiring activity. It is used throughout the entire DITSCAP to guide actions, document decisions, specify IT Security (ITSEC) requirements, document certification tailoring and level-of-effort, identify potential solutions, and maintain operational systems security.

E2.1.38. Telecommunications Service Priority (TSP) Service. A regulated service provided by a telecommunications provider, such as an operating telephone company or a carrier, for NS/EP telecommunications.

E2.1.39. Telecommunications Switch. Hardware or software designed to send and receive voice, data or video signals across a network that provides customer voice, data or video equipment access to the DSN or PSTN.

E2.1.40. Validation. Determination of the correct implementation in the completed IT system with the security requirements and approach agreed on by the users, acquisition authority, and the DAA.

E2.1.41. Verification. The process of determining compliance of the evolving IT system specification, design, or code with the security requirements and approach agreed on by the users, acquisition authority, and the DAA.

E3. ENCLOSURE 3ACRONYMS

E3.1.1.	A/NM	Administration/Network Management
E3.1.2.	APL	Approved Products List
E3.1.3.	ASD(NII)	Assistant Secretary of Defense for Networks and Information Integration
E3.1.4.	ATC	Authority To Connect
E3.1.5.	C2	Command and Control
E3.1.6.	C3I	Command, Control, Communications, and Intelligence
E3.1.7.	C4	Command, Control, Communications, and Computers
E3.1.8.	C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance
E3.1.9.	CA	Certification Authority
E3.1.10.	CAP	Connection Approval Process
E3.1.11.	CCB	Configuration Control Board
E3.1.12.	CIO	Chief Information Officer
E3.1.13.	CM	Configuration Management
E3.1.14.	CONUS	Continental United States
E3.1.15.	CPE	Customer Premise Equipment
E3.1.16.	DAA	Designated Approval Authority
E3.1.17.	DIA	Defense Intelligence Agency
E3.1.18.	DISA	Defense Information Systems Agency
E3.1.19.	DISN	Defense Information System Network
E3.1.20.	DITSCAP	Department of Defense Information Technology Security Certification and Accreditation Process
E3.1.21.	DoD	Department of Defense
E3.1.22.	DRSN	Defense RED Switch Network
E3.1.23.	DRSN GTP	Defense RED Switch Network Generic Test Plan
E3.1.24.	DSN	Defense Switch Network
E3.1.25.	EO	End Office
E3.1.26.	GIG	Global Information Grid
E3.1.27.	GoS	Grade of Service
E3.1.28.	GSCR	Generic Switching Center Requirements
E3.1.29.	GSTP	Generic Switching Test Plan
E3.1.30.	IA	Information Assurance
E3.1.31.	IATP	Information Assurance Test Plan
E3.1.32.	ICTO	Interim Certification To Operate
E3.1.33.	ISDN	Integrated Services Digital Network

E3.1.34.	IT	Information Technology
E3.1.35.	ITSEC	Information Technology Security
E3.1.36.	JIC	Joint Interoperability Certification
E3.1.37.	JITC	Joint Interoperability Test Command
E3.1.38.	LAN	Local Area Network
E3.1.39.	MCEB	Military Communications Electronics Board
E3.1.40.	MFS	Multi-function Switch
E3.1.41.	MLPP	Multi-Level Precedence and Preemption
E3.1.42.	MUF	Military Unique Features
E3.1.43.	NATO	North Atlantic Treaty Organization
E3.1.44.	NII	Networks and Information Integration
E3.1.45.	NMCS	National Military Command System
E3.1.46.	NS/EP	National Security and Emergency Preparedness
E3.1.47.	NSA	National Security Agency
E3.1.48.	NSS	National Security System
E3.1.49.	OCONUS	Outside Continental United States
E3.1.50.	O&M	Operations and Maintenance
E3.1.51.	PAA	Principal Accrediting Authority
E3.1.52.	PABX	Private Automatic Branch Exchange
E3.1.53.	PAX	Private Automatic Exchange
E3.1.54.	PBX	Private Branch Exchange
E3.1.55.	PoA&M	Plan of Action and Milestones
E3.1.56.	PSTN	Public Switched Telecommunications Network
E3.1.57.	PTT	Public Telephone and Telegraph
E3.1.58.	Pub. L.	Public Law
E3.1.59.	RSC	Regional Support Center
E3.1.60.	SA	Stand-Alone
E3.1.61.	SCV	Secure Compliance Validation
E3.1.62.	SIPRNet	Secure Internet Protocol Router Network
E3.1.63.	SSAA	System Security Authorization Agreement
E3.1.64.	SSCR	Secure Switching Center Requirements
E3.1.65.	SSM	Single System Manager
E3.1.66.	ST&E	Security Test and Evaluation
E3.1.67.	STE	Secure Terminal Equipment
E3.1.68.	STEP	Standardized Tactical Entry Point
E3.1.69.	STIG	Security Technical Implementation Guide

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E3.1.70.	STU	Secure Telephone Unit
E3.1.71.	TDM	Time Division Multiplex
E3.1.72.	TR	Test Results
E3.1.73.	TS/SCI	Top Secret/Secure Compartmented Information
E3.1.74.	TSP	Telecommunications Service Priority
E3.1.75.	VoATM	Voice over Asynchronous Transfer Mode
E3.1.76.	VoIP	Voice over Internet Protocol
E3.1.77.	VTC	Video Teleconferencing

E4. ENCLOSURE 4

ADDITIONAL DoD VOICE NETWORKS REQUIREMENTS

E4.1.1. Additional requirements for DoD Voice Networks:

E4.1.1.1. The DSN is the first-choice non-secure DoD inter-installation telephony service (i.e., voice, dial-up data, and dial-up video) network and shall be the primary communications means for Special C2, C2, and non-C2 users. It shall be the primary means of secure (i.e., point-to-point dial-up, to include the Secure Telephone Unit (STU)-III/STE family of secure voice terminal devices) communications for non-tactical C2 users.

E4.1.1.2. The DRSN is the DoD secure telephony service network and shall be the primary secure voice communications means for Special C2 and C2 users in peacetime, crisis situations, and wartime. The DRSN shall be the primary secure command and control communications system supporting the secure voice and secure conferencing requirements of the President, the Office of the Secretary of Defense, the Chairman of the Joint Chiefs of Staff, the National Military Command System (NMCS), the DoD Components and subordinate organizations, the Combatant Commanders, and specially approved Government Departments and Agencies, and U.S. allies.

E4.1.1.3. The DSN and DRSN shall be used for official business only, or as authorized in the best interest of the Government, and is the first choice for all switched non-secure and secure voice and dial-up data, video telecommunications between installations serving authorized users.

E4.1.1.4. The DSN shall provide non-secure, end-to-end command and control capability and dedicated telephone service, voice-band data, and dial-up Video Teleconferencing (VTC). The DSN includes the end instruments, the switches on the installations, the backbone and tandem switches, the transmission connectivity between and among the installations, the network management system and the signaling system. Processing or transport technologies (to include VoIP and VoATM systems) shall also be considered as elements of the DSN.

E4.1.1.5. The DRSN shall provide secure, end-to-end (e.g., phone-to-phone) C2 capability and dedicated telephone service. Processing or transport technologies used in a secure enclave environment (e.g., classified Local Area Network (LAN), Secret Internet Protocol Router Network (SIPRNet), etc.) and connected to the DRSN to support voice service shall be considered as elements of the DRSN.

E4.1.1.6. Telecommunications switches and services connected to or intended to connect to the DSN or DRSN shall comply with MUF requirements (e.g., MLPP, routing, special alternative routing, survivability, and security) unless granted a waiver by the Chairman of the Joint Chiefs of Staff.

E4.1.1.7. The DSN and DRSN shall support C2 user traffic during peacetime, crisis, conflict, natural disaster, and network disruptions and provide a surge capability when needed. Survivability objectives for the DSN and DRSN shall be specified by the Chairman of the Joint Chiefs of Staff.

E4.1.1.8. The DSN and DRSN shall provide assured service or connectivity as follows:

E4.1.1.8.1. Assured voice communications to Special C2 and C2 users. Assured service or connectivity is the ability of the DSN and DRSN to optimize call completion rates for all C2 users, despite degradation due to network disruptions, natural disasters, or surges during crisis or war. To meet MUF requirements, the DSN and DRSN shall employ an MLPP capability, which permits higher precedence users to preempt lower precedence calls. Special C2 users (Flash and Flash Override within the current DSN and DRSN MLPP framework) shall be provided with non-blocking service.

E4.1.1.8.2. Assured service capability from user-instrument-to-user-instrument across the global DSN and DRSN, including Government-controlled PBXs, EOs, and tactical networks incorporating MLPP features.

E4.1.1.8.3. Assured long-haul capability (long distance terminations on telecommunications switches at initiating installations to long distance terminations on telecommunications switches at distant installations) for supporting a regional crisis in one theater, while retaining the surge capacity to respond to a regional crisis occurring nearly simultaneously in another theater.

E4.1.1.9. The Department of Defense may grant non-DoD activities access to the DSN and DRSN when necessary for national security; when not in conflict with local Public Telephone and Telegraph (PTT) ordinances; when those activities and individuals have critical NS/EP needs; or when access is in the best interest of the U.S. Government. Access may only be provided to non-DoD activities or agencies on a not-to-interfere basis. Requests for access by non-DoD or non-governmental activities or agencies shall be forwarded to the Chairman of the Joint Chiefs of Staff for validation and the ASD(NII)/DoD CIO for approval.

E4.1.1.10. Non-DoD or non-C2 users (e.g., combined or coalition partners and U.S. Government Departments and Agencies) that are or shall be connected to the DSN or DRSN shall:

E4.1.1.10.1. Comply with DSN system interface criteria at DSN controlled gateways.

E4.1.1.10.2. Comply with DRSN interface criteria at controlled gateways or derive DRSN long-local service from a DRSN network switch.

E4.1.1.11. The DISA shall designate a DSN SSM and a DRSN SSM and shall be responsible for operational direction and management control of the end-to-end performance of the DSN and DRSN. The DSN and DRSN SSMs shall:

E4.1.1.11.1. Serve, respectively, as the non-secure and secure telephony standards, processing, and transport technology migration coordinators to ensure end-to-end global voice quality, interoperability, and visibility for all non-secure and secure C2 voice services. The Combatant Commands, the Military Services, the Defense Agencies, bases, camps, posts, and stations shall coordinate voice transport and processing initiatives with the DSN or DRSN SSM, as appropriate.

E4.1.1.11.2. Provide an annual risk assessment of emerging voice processing and transport technology's impact on global, end-to-end voice performance and non-secure and secure C2 services to the Chairman of the Joint Chiefs of Staff and the DSN and DRSN CCBs, respectively. Voice, video, data processing end instruments (e.g., STU, fax, STE, Video Codecs, and Modems), and transport technologies (e.g., Circuit Switched, Time Division Multiplex (TDM) and Packet technologies) shall be included in the risk assessment.

E4.1.1.11.3. Be responsible for DoD DSN and DRSN dialing and numbering plans for telephony services to ensure end-to-end interoperability.

E4.1.1.11.4. Respectively initiate and provide technical analysis of network survivability, including risk analysis, when proposing major changes in the network technology or architecture (geographic location of communications systems of the DSN or DRSN). The DISA shall forward the results of the analysis to the Chairman of the Joint Chiefs of Staff for review.

E4.1.1.12. The DSN and DRSN shall comply with the NS/EP TSP system for service restoration.

E4.1.1.13. The DSN may use commercial leased transmission facilities when cost-effective or mission-essential requirements dictate. Commercial leased transmission facilities in overseas areas are negotiated country-by-country by the DISA, in coordination with the appropriate Combatant Commanders and Operations and Maintenance (O&M) Commanders.

E4.1.1.14. Interfaces to the DSN and DRSN shall comply with interface criteria established, respectively, by the DSN or DRSN SSMs, and approved by appropriate accrediting authorities. Network interfaces not conforming to DSN or DRSN interface criteria, shall be permitted only after SSM technical review and approval, on a site-specific basis, by the Chairman of the Joint Chiefs of Staff. A method for controlling the flow of traffic across the interface must be established and monitored by the DISA.

E4.1.1.14.1. All interfaces to the DRSN shall be approved, on a site-specific basis, by the DISA DRSN SSM. DISA DRSN SSM's approval options for interfaces are permanent, conditional, or temporary. Connectivity from a DRSN switch to users outside the RED enclave (i.e., to another building, facility, location, or system) shall be provided through an approved interface.

E4.1.1.14.2. All interfaces to the DRSN must be through an encrypted inter-switch link/trunk, point-to-point cryptographically secured wireline or wireless path, protected wireline distribution system or other access/gateway configuration as prescribed and approved by the DRSN SSM. The Chairman of the Joint Chiefs of Staff shall authorize such connection after all security and interoperability concerns are resolved.

E4.1.1.15. The DISA shall promulgate and maintain (based on risk assessment results) operation and maintenance, security, performance, interface and interoperability, and joint logistic support planning guidance for the DRSN. All DoD Components and Federal Agencies supporting, using, or interfacing with the DRSN must comply with DISA-promulgated guidance.