DEFENSE INFORMATION SYSTEMS AGENCY
P. O. BOX 549
FORT MEADE, MARYLAND 20755-0549

IN REPLY
REFER TO: Joint Interoperability Test Command (JTE)

MEMORANDUM FOR DISTRIBUTION **6 Jul 11**

SUBJECT: Special Interoperability Test Certification of the Cisco Unity Connection Software Release 8.0(2) with T1 Internet Protocol Media Gateway (TIMG) Interface

References: (a) DoD Directive 4630.05, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004
(b) CJCSI 6212.01E, "Interoperability and Supportability of Information Technology and National Security Systems," 15 December 2008
(c) through (e), see Enclosure 1

1. References (a) and (b) establish the Defense Information Systems Agency (DISA), Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification.

2. The Cisco Unity Connection Software Release 8.0(2) with TIMG interface is hereinafter referred to as the System Under Test (SUT). The SUT meets all of its critical interoperability requirements and is certified as interoperable for joint use within the Defense Information System Network (DISN) as a Customer Premise Equipment (CPE) voicemail system. The SUT met the critical interoperability requirements set forth in Reference (c) using test procedures derived from Reference (d). The SUT was tested with the Siemens Elektronisches Wählsystem Digital (EWSD), Avaya Communication Server (CS)2100, Avaya CS1000M, Avaya S8710 and Alcatel-Lucent Class 5 Electronic Switching System (5ESS) switching systems specifically with the Digital Transmission Link Level 1 (T1) and serial Simple Message Desk Interface (SMDI) interfaces and respective signaling, identified in Table 1. Additionally, JITC analysis determined that the SUT is also certified for joint use with any version of the Alcatel-Lucent Compact Digital Exchange (CDX), Alcatel-Lucent Very Compact Digital Exchange (VCDX), and Avaya Meridian Switching Load (MSL)-100 switching systems listed on the Unified Capabilities (UC) Approved Products list (APL) that have the same T1 and serial SMDI interfaces with specified signaling depicted in Table 1. The SUT offers facsimile (fax) and e-mail capabilities; however these capabilities were not tested and are not covered under this certification. No other configurations, features, or functions, except those cited within this report, are certified by the JITC. This certification expires upon changes that could affect interoperability, but no later than three years from the date the DISA Certification and Accreditation (CA) provided a positive Recommendation.

3. This finding is based on interoperability testing, review of the vendor's Letters of Compliance (LoC), and DSAWG accreditation. Interoperability testing was conducted at JITC's Global Information Grid Network Test Facility, Fort Huachuca, Arizona from 17 through 21 January 2011. Review of the vendor's LOC was completed on 24 January 2011. The DISA CA provided a

positive Recommendation on 16 June 2011 based on the security testing completed by DISA-led IA test teams and published in a separate report, Reference (e). Enclosure 2 documents the test results and describes the tested network and system configurations. Enclosure 2 documents the test results and describes the tested network and system configurations.

4. The Functional Requirements used to evaluate the interoperability of the SUT and the interoperability statuses are indicated in Table 1. This interoperability test status is based on the SUT's ability to meet CPE voicemail system requirements specified in section 5 of Reference (c) verified through JITC testing and/or vendor submission of LoC.

Table 1. SUT Functional Requirements and Interoperability Status

Interface	Critical	Certified	Functional Requirements	Met	UCR Paragraph
EIA-232 Serial[1] (SMDI)	No[2]	Yes	ANSI/TIA/EIA-232-F (C)	Met	5.2.1.2
T1 ISDN PRI [3]	No[2]	Yes	PCM-24 (R)	Met	5.2.1.2.5
			FCC Part15/Part 68 (R)	Met	5.2.3.2
			DISR compliance as applicable (C)	Met	5.2.3.2
			CPE devices that support MLPP shall meet the requirements of UCR, Section 5 and shall not affect DSN interface features and functions associated with line supervision and control (C)	Met	5.2.1.2.5
			ROUTINE precedence only in accordance with UCR, Section 5.2 (R)	Met	5.2.1.2
T1 CAS (DTMF) E&M (Wink Start) [4]	No[2]	Yes	PCM-24 (R)	Met	5.2.1.2.5
			FCC Part15/Part 68 (R)	Met	5.2.3.2
			DISR compliance as applicable (C)	Met	5.2.3.2
			CPE devices that support MLPP shall meet the requirements of UCR, Section 5 and shall not affect DSN interface features and functions associated with line supervision and control (C)	Met	5.2.1.2.5
			ROUTINE precedence only in accordance with UCR, Section 5.2 (R)	Met	5.2.1.2
T1 CAS (DTMF) (Ground Start) [5]	No[2]	Yes	PCM-24 (R)	Met	5.2.1.2.5
			FCC Part15/Part 68 (R)	Met	5.2.3.2
			DISR compliance as applicable (R)	Met	5.2.3.2
			CPE devices that support MLPP shall meet the requirements of UCR, Section 5 and shall not affect DSN interface features and functions associated with line supervision and control (C)	Met	5.2.1.2.5
			ROUTINE precedence only in accordance with UCR, Section 3.3 (R)	Met	5.2.1.2
IP 100BaseT (IEEE 802.3-2005)	No[2]	Yes	Differentiated Service Code Point (R)	Partially Met[6]	5.2.12.8.2
			IEEE 802.3u (C)	Met	5.3.3.12.4.2
			DISR compliance as applicable (C)	Met	5.2.3.2
Security	Yes	See note 7.	Security (R)	See note 7.	3.2.3, 3.2.5

Table 1. SUT Functional Requirements and Interoperability Status (continued)

NOTES:

1 The SUT serial EIA-232 SMDI interface provides messaging interaction between the digital switching systems and the SUT (e.g. turn on and off the message waiting lamps and stutter dial tone etc.) and is required with the T1 interfaces.
2 The UCR requirements for a CPE voicemail device do not stipulate a minimum interface requirement.
3 The SUT T1 ISDN PRI interface is certified specifically with the following switching systems listed on the UC APL: Siemens EWSD, Alcatel-Lucent 5ESS, Alcatel-Lucent CDX, and Alcatel-Lucent VCDX.
4 The SUT T1 CAS (DTMF) interface with E&M signaling is certified specifically with the following switching systems listed on the UC APL: Alcatel-Lucent 5ESS, Alcatel-Lucent CDX, and Alcatel-Lucent VCDX.
5 The SUT T1 CAS (DTMF) interface with ground-start signaling is certified specifically with the following switching systems listed on the UC APL: Siemens EWSD, and Avaya CS2100, and Avaya MSL-100.
6 The SUT met all the critical interoperability differentiated service code point requirements in accordance with UCR section 5.2.12.8.2 with the following exceptions: All Session Initiation Protocol (SIP) signaling packets from the Unity Connection Server were marked with a DSCP value of 24 decimal. The expected DSCP value is 40 Decimal. Additionally, the Unity Connection Server can not assign a signaling packet a DSCP value of 0-63. DISA has adjudicated this discrepancy as having a minor operational impact.
7 Security is tested by DISA-led Information Assurance test teams and published in a separate report.

LEGEND:

5ESS	Class 5 Electronic Switching System	E&M	Ear and Mouth
100baseT	100 Mbps (Baseband Operation, Twisted Pair) Ethernet	EIA	Electronic Industries Alliance
802.3-2005	Local Area Network/metropolitan Area Network Carrier Sense Multiple Access/Collision Detection Access Method	EIA-232-F	Standard for defining the mechanical and electrical characteristics for connecting Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) data communications devices
802.3u	Standard for carrier sense multiple access with collision detection at 100 Mbps	EWSD	Elektronisches Wählsystem Digital
A	Appendix	FCC	Federal Communications Commission
ANSI	American National Standards Institute	UCR	Unified Capabilities Requirements
APL	Approved Products List	IEEE	Institute of Electrical and Electronics Engineers, Inc.
C	Conditional	IP	Internet Protocol
CAS	Channel Associated Signaling	ISDN	Integrated Services Digital Network
CDX	Compact Digital Exchange	Mbps	Megabits per second
CPE	Customer Premise Equipment	MSL	Meridian Switching Load
CS	Communication Server	PCM-24	Pulse Code Modulation - 24 Channels
DISA	Defense Information Systems Agency	PCM-30	Pulse Code Modulation - 30 Channels
DISR	Department of Defense Information Technology Standards Registry	PRI	Primary Rate Interface
		R	Required
		SMDI	Simple Message Desk Interface
DSN	Defense Switched Network	SUT	System Under Test
DSCP	Differentiated Service Code Point	T1	Digital Transmission Link Level 1 (1.544 Mbps)
DTMF	Dual Tone Multi-Frequency	TIA	Telecommunications Industry Association
		VCDX	Very Compact Digital Exchange

5. No detailed test report was developed in accordance with the Program Manager's request. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/gov users on the NIPRNet at https://stp.fhu.disa.mil. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at https://jit.fhu.disa.mil (NIPRNet), or http://199.208.204.226 (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at http://jitc.fhu.disa.mil/tssi. Due to the sensitivity of the information, the Information Assurance Accreditation Package (IAAP) that contains the approved configuration and deployment guide must be requested directly through government civilian or uniformed military personnel from the Unified Capabilities Certification Office (UCCO), e-mail: ucco@disa.mil.

6. The JITC point of contact is Mr. Edward Mellon, DSN 879-5159, commercial (520) 538-5159, FAX DSN 879-4347, or e-mail to edward.mellon@disa.mil. The JITC's mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The Unified Capabilities Connection Office tracking number is 1027702.

FOR THE COMMANDER:

2 Enclosures a/s

for BRADLEY A. CLARK
Chief
Battlespace Communications Portfolio

Distribution (electronic mail):
Joint Staff J-6
Joint Interoperability Test Command, Liaison, TE3/JT1
Office of Chief of Naval Operations, CNO N6F2
Headquarters U.S. Air Force, Office of Warfighting Integration & CIO, AF/XCIN (A6N)
Department of the Army, Office of the Secretary of the Army, DA-OSA CIO/G-6 ASA (ALT), SAIS-IOQ
U.S. Marine Corps MARCORSYSCOM, SIAT, MJI Division I
DOT&E, Net-Centric Systems and Naval Warfare
U.S. Coast Guard, CG-64
Defense Intelligence Agency
National Security Agency, DT
Defense Information Systems Agency, TEMC
Office of Assistant Secretary of Defense (NII)/DOD CIO
U.S. Joint Forces Command, Net-Centric Integration, Communication, and Capabilities Division, J68
Defense Information Systems Agency, GS23

ADDITIONAL REFERENCES

(c) Office of the Assistant Secretary of Defense, "Department of Defense Unified Capabilities Requirements 2008 Change 1," 22 January 2010.
(d) Joint Interoperability Test Command, "Defense Switched Network Generic Switch Test Plan (GSTP), Change 2," 2 October 2006
(e) Joint Interoperability Test Command, "Information Assurance (IA) Assessment of Cisco Unity Unified Messaging System Software Release 8.0(2) with T1 Internet Protocol Media Gateway (TIMG) Interface (Tracking Number 1027702)," 21 June 2011

CERTIFICATION TESTING SUMMARY

1. SYSTEM TITLE. Cisco Unity Connection Software Release 8.0(2) with T1 Internet Protocol Media Gateway (TIMG) interface is hereinafter referred to as the System Under Test (SUT).

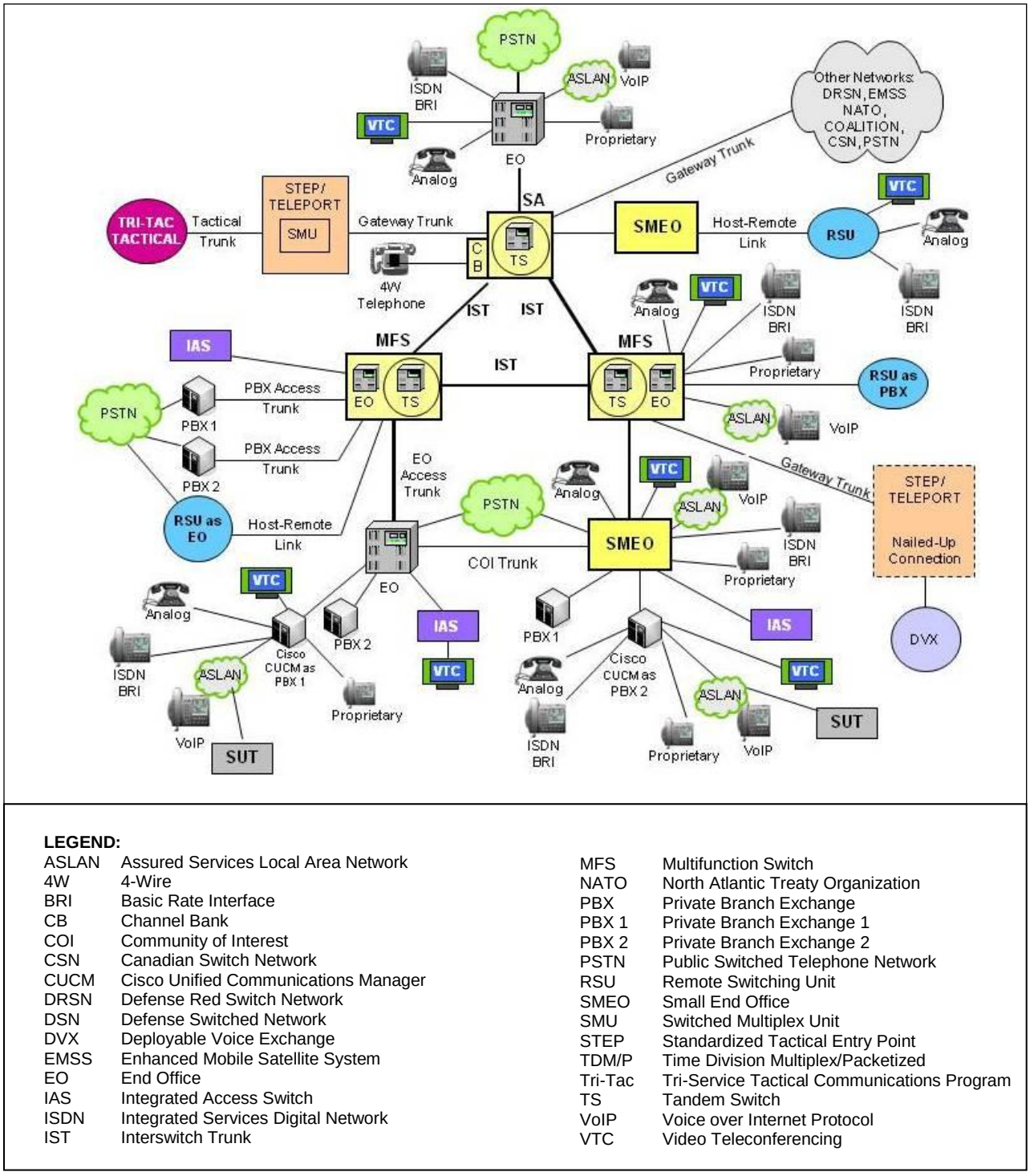
2. PROPONENT. Missile Defense Agency (MDA)

3. PROGRAM MANAGER. Mr. Stuart Strong, MDA/DXCA, 730 Irwin Avenue, Schriever Air Force Base, Colorado 80912, e-mail: stuart.strong@mda.mil.

4. TESTER. Joint Interoperability Test Command (JITC), Fort Huachuca, Arizona.

5. SYSTEM UNDER TEST DESCRIPTION. The SUT is for use with the switching systems within this certification over the tested interfaces using the Cisco Unity Connection software version 8.0(2). The SUT is a Voice Messaging System that offers Unified Communications capabilities through integration with Microsoft Outlook, and Cisco ViewMail to interface and provide Voice Message services. The SUT is capable of using a Digital Transmission Link Level 1 (T1) Channel Associated Signaling (CAS), Primary Rate Interface (PRI), ground start/loop start, or wink start interface using the TIMG when providing these services. Survivability features included in the server platforms may include Redundant Array of Independent Disks (RAID) hard-drives which support hot-swapping of drives, dual power supplies, and Network Interface Card (NIC) teaming depending on model. Cisco Unity Connection may be integrated into an existing Microsoft Exchange infrastructure for Unified Messaging. The SUT utilizes a web-based interface to maintain the necessary information needed to provide messaging services to authorized mailbox owners as well as system maintenance. The information includes mailbox associations, system and messaging service settings, maintenance and diagnostics. The SUT offers facsimile (fax) and e-mail capabilities; however, these capabilities were not tested and are not covered under this certification. Management of the SUT is through a site-provided, Secure Technical Implementation Guide (STIG)-compliant workstation, with Windows Experience (XP) Service Pack (SP)3 and Windows Vista (SP)2 installed.

6. OPERATIONAL ARCHITECTURE. The Unified Capabilities Requirements (UCR) DSN architecture in Figure 2-1 depicts the relationship of the SUT to the DSN switches.



LEGEND:

ASLAN	Assured Services Local Area Network
4W	4-Wire
BRI	Basic Rate Interface
CB	Channel Bank
COI	Community of Interest
CSN	Canadian Switch Network
CUCM	Cisco Unified Communications Manager
DRSN	Defense Red Switch Network
DSN	Defense Switched Network
DVX	Deployable Voice Exchange
EMSS	Enhanced Mobile Satellite System
EO	End Office
IAS	Integrated Access Switch
ISDN	Integrated Services Digital Network
IST	Interswitch Trunk
MFS	Multifunction Switch
NATO	North Atlantic Treaty Organization
PBX	Private Branch Exchange
PBX 1	Private Branch Exchange 1
PBX 2	Private Branch Exchange 2
PSTN	Public Switched Telephone Network
RSU	Remote Switching Unit
SMEO	Small End Office
SMU	Switched Multiplex Unit
STEP	Standardized Tactical Entry Point
TDM/P	Time Division Multiplex/Packetized
Tri-Tac	Tri-Service Tactical Communications Program
TS	Tandem Switch
VoIP	Voice over Internet Protocol
VTC	Video Teleconferencing

Figure 2-1. DSN Architecture

7. REQUIRED SYSTEM INTERFACES. Requirements specific to the SUT and interoperability results are listed in Table 2-1. These requirements are derived from the UCR Interface and Functional Requirements and were verified through JITC testing. The specific SUT applications certified on each interface are depicted in Table 2-1.

Table 2-1. SUT Functional Requirements and Interoperability Status

Interface	Critical	Certified	Functional Requirements	Met	UCR Paragraph
EIA-232 Serial[1] (SMDI)	No[2]	Yes	ANSI/TIA/EIA-232-F (C)	Met	5.2.1.2
T1 ISDN PRI [3]	No[2]	Yes	PCM-24 (R)	Met	5.2.1.2.5
			FCC Part15/Part 68 (R)	Met	5.2.3.2
			DISR compliance as applicable (C)	Met	5.2.3.2
			CPE devices that support MLPP shall meet the requirements of UCR, Section 5 and shall not affect DSN interface features and functions associated with line supervision and control (C)	Met	5.2.1.2.5
			ROUTINE precedence only in accordance with UCR, Section 5.2 (R)	Met	5.2.1.2
T1 CAS (DTMF) E&M (Wink Start) [4]	No[2]	Yes	PCM-24 (R)	Met	5.2.1.2.5
			FCC Part15/Part 68 (R)	Met	5.2.3.2
			DISR compliance as applicable (C)	Met	5.2.3.2
			CPE devices that support MLPP shall meet the requirements of UCR, Section 5 and shall not affect DSN interface features and functions associated with line supervision and control (C)	Met	5.2.1.2.5
			ROUTINE precedence only in accordance with UCR, Section 5.2 (R)	Met	5.2.1.2
T1 CAS (DTMF) (Ground Start) [5]	No[2]	Yes	PCM-24 (R)	Met	5.2.1.2.5
			FCC Part15/Part 68 (R)	Met	5.2.3.2
			DISR compliance as applicable (R)	Met	5.2.3.2
			CPE devices that support MLPP shall meet the requirements of UCR, Section 5 and shall not affect DSN interface features and functions associated with line supervision and control (C)	Met	5.2.1.2.5
			ROUTINE precedence only in accordance with UCR, Section 3.3 (R)	Met	5.2.1.2
IP 100BaseT (IEEE 802.3-2005)	No[2]	Yes	Differentiated Service Code Point (R)	Partially Met[6]	5.2.12.8.2
			IEEE 802.3u (C)	Met	5.3.3.12.4.2
			DISR compliance as applicable (C)	Met	5.2.3.2
Security	Yes	See note 7.	Security (R)	See note 7.	3.2.3, 3.2.5

NOTES:

1 The SUT serial EIA-232 SMDI interface provides messaging interaction between the digital switching systems and the SUT (e.g. turn on and off the message waiting lamps and stutter dial tone etc.) and is required with the T1 interfaces.

2 The UCR requirements for a CPE voicemail device do not stipulate a minimum interface requirement.

3 The SUT T1 ISDN PRI interface is certified specifically with the following switching systems listed on the UC APL: Siemens EWSD, Alcatel-Lucent 5ESS, Alcatel-Lucent CDX, and Alcatel-Lucent VCDX.

4 The SUT T1 CAS (DTMF) interface with E&M signaling is certified specifically with the following switching systems listed on the UC APL: Alcatel-Lucent 5ESS, Alcatel-Lucent CDX, and Alcatel-Lucent VCDX.

5 The SUT T1 CAS (DTMF) interface with ground-start signaling is certified specifically with the following switching systems listed on the UC APL: Siemens EWSD, and Avaya CS2100, and Avaya MSL-100.

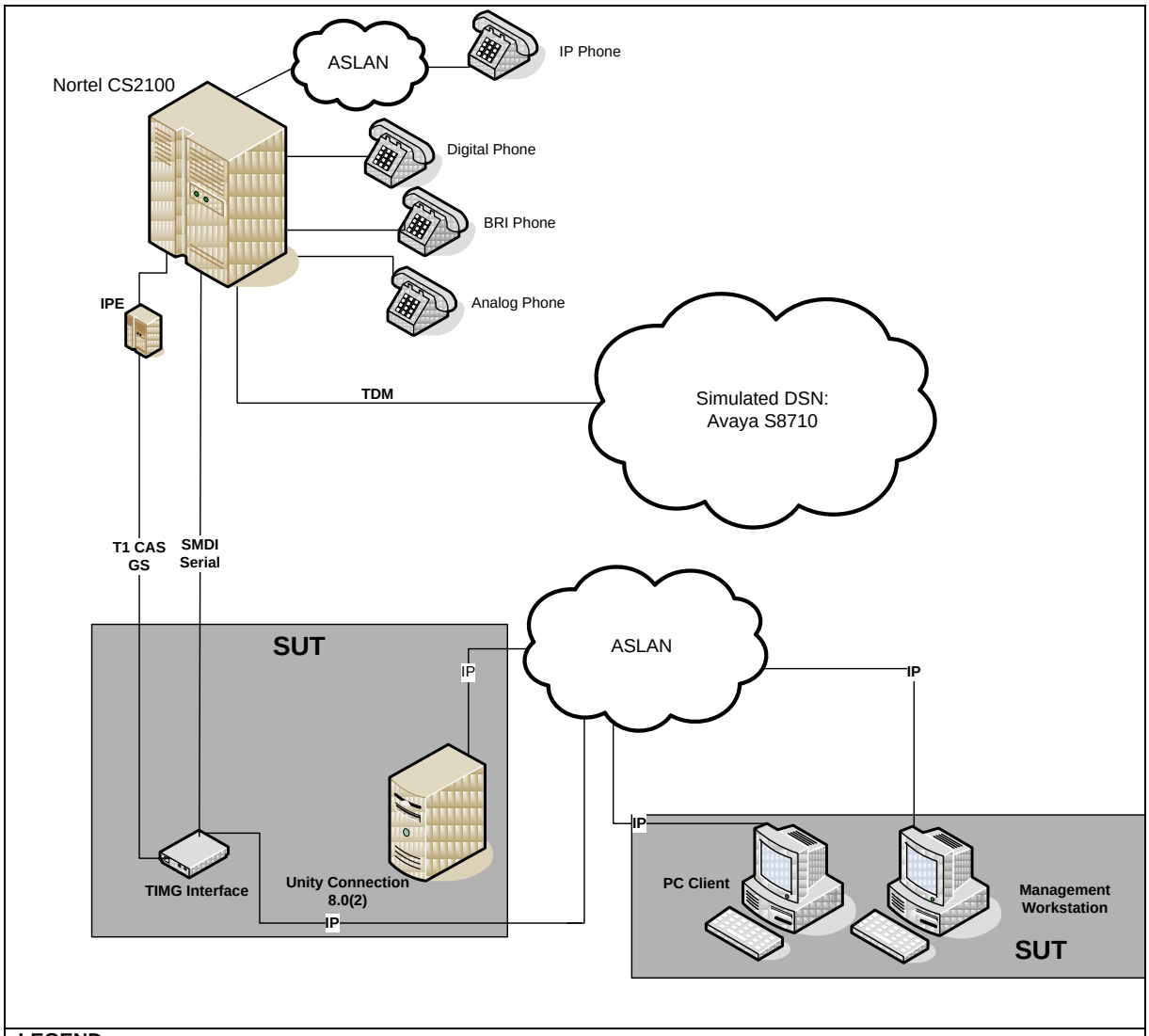
6 The SUT met all the critical interoperability differentiated service code point requirements in accordance with UCR section 5.2.12.8.2 with the following exceptions: All Session Initiation Protocol (SIP) signaling packets from the Unity Connection Server were marked with a DSCP value of 24 decimal. The expected DSCP value is 40 Decimal. Additionally, the Unity Connection Server can not assign a signaling packet a DSCP value of 0-63. DISA has adjudicated this discrepancy as having a minor operational impact.

7 Security is tested by DISA-led Information Assurance test teams and published in a separate report.

Table 2-1. SUT Functional Requirements and Interoperability Status (continued)

LEGEND:			
5ESS	Class 5 Electronic Switching System	E&M	Ear and Mouth
100baseT	100 Mbps (Baseband Operation, Twisted Pair) Ethernet	EIA	Electronic Industries Alliance
802.3-2005	Local Area Network/metropolitan Area Network Carrier Sense Multiple Access/Collision Detection Access Method	EIA-232-F	Standard for defining the mechanical and electrical characteristics for connecting Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE) data communications devices
802.3u	Standard for carrier sense multiple access with collision detection at 100 Mbps	EWSD	Elektronisches Wählsystem Digital
		FCC	Federal Communications Commission
A	Appendix	UCR	Unified Capabilities Requirements
ANSI	American National Standards Institute	IEEE	Institute of Electrical and Electronics Engineers, Inc.
APL	Approved Products List	IP	Internet Protocol
C	Conditional	ISDN	Integrated Services Digital Network
CAS	Channel Associated Signaling	Mbps	Megabits per second
CDX	Compact Digital Exchange	MSL	Meridian Switching Load
CPE	Customer Premise Equipment	PCM-24	Pulse Code Modulation - 24 Channels
CS	Communication Server	PCM-30	Pulse Code Modulation - 30 Channels
DISA	Defense Information Systems Agency	PRI	Primary Rate Interface
DISR	Department of Defense Information Technology Standards Registry	R	Required
		SMDI	Simple Message Desk Interface
DSN	Defense Switched Network	SUT	System Under Test
DSCP	Differentiated Service Code Point	T1	Digital Transmission Link Level 1 (1.544 Mbps)
DTMF	Dual Tone Multi-Frequency	TIA	Telecommunications Industry Association
		VCDX	Very Compact Digital Exchange

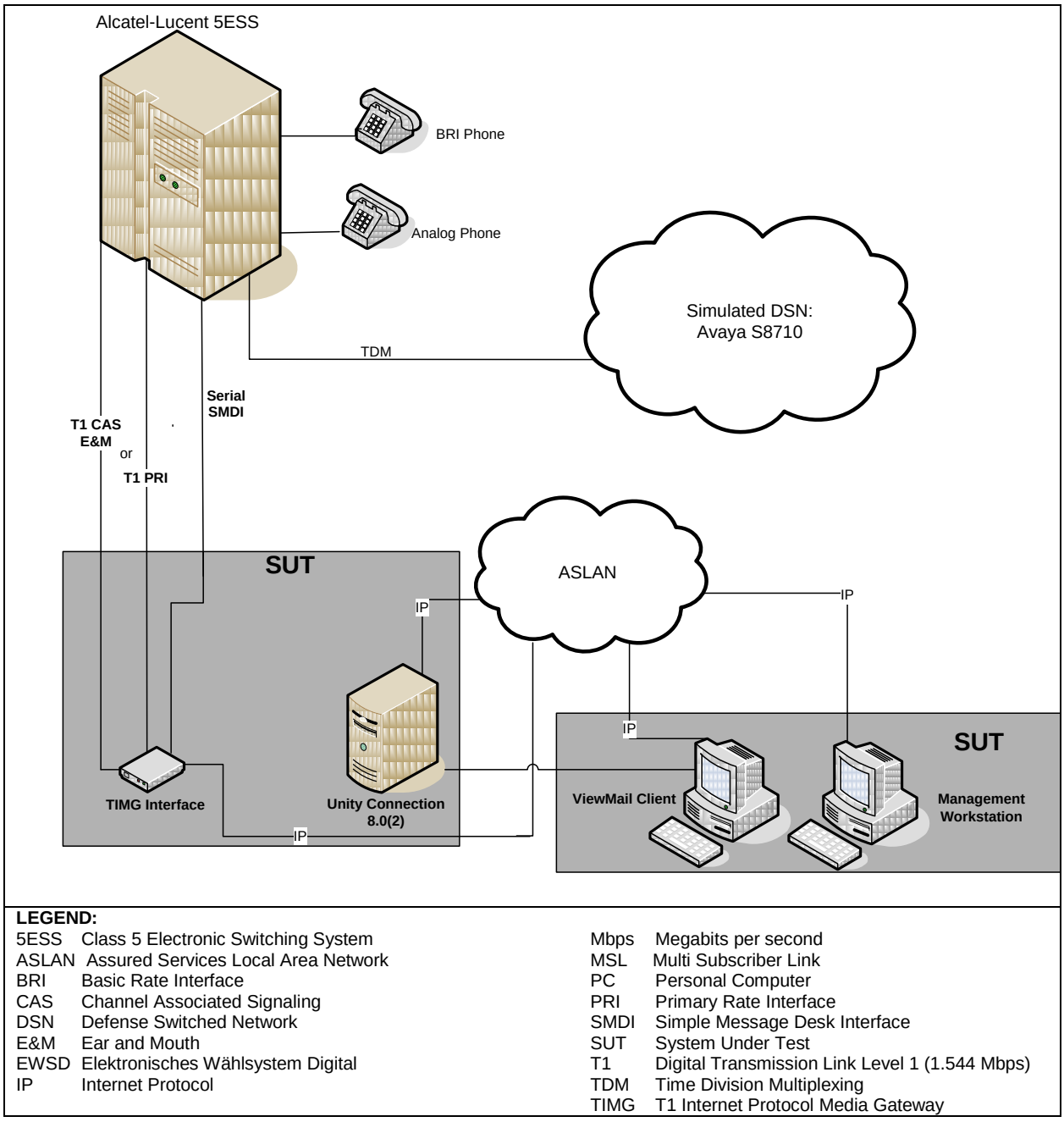
8. TEST NETWORK DESCRIPTION. The SUT was tested at JITC's Global Information Grid Network Test Facility in a manner and configuration similar to that of the DSN operational environment. Testing the system's required functions and features was conducted using the test configurations depicted in Figures 2-2 through 2-4.



LEGEND:

ASLAN	Assured Services Local Area Network	IPE	Intelligent Peripheral Equipment
BRI	Basic Rate Interface	PC	Personal Computer
CAS	Channel Associated Signaling	SMDI	Simple Message Desk Interface
CS	Communication Server	SUT	System Under Test
DSN	Defense Switched Network	T1	Digital Transmission Link Level 1 (1.544 Mbps)
GS	Ground Start	TDM	Time Division Multiplexing
IP	Internet Protocol	TIMG	T1 Internet Protocol Media Gateway

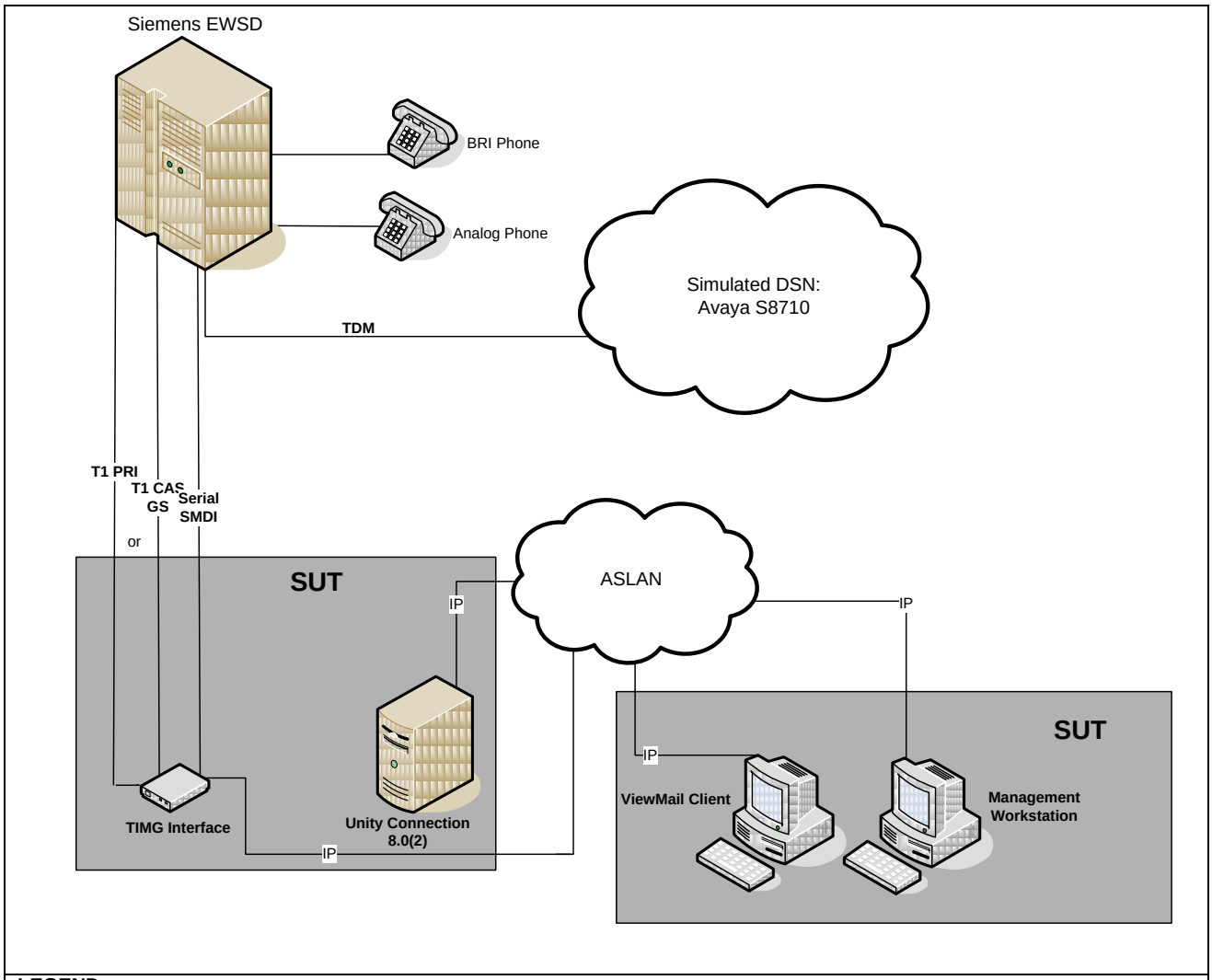
Figure 2-2. SUT to Avaya CS2100/MSL100 Test Configuration



LEGEND:

5ESS	Class 5 Electronic Switching System
ASLAN	Assured Services Local Area Network
BRI	Basic Rate Interface
CAS	Channel Associated Signaling
DSN	Defense Switched Network
E&M	Ear and Mouth
EWSD	Elektronisches Wählsystem Digital
IP	Internet Protocol
Mbps	Megabits per second
MSL	Multi Subscriber Link
PC	Personal Computer
PRI	Primary Rate Interface
SMDI	Simple Message Desk Interface
SUT	System Under Test
T1	Digital Transmission Link Level 1 (1.544 Mbps)
TDM	Time Division Multiplexing
TIMG	T1 Internet Protocol Media Gateway

Figure 2-3. SUT to Alcatel-Lucent Test Configuration



LEGEND:

ASLAN	Assured Services Local Area Network	Mbps	Megabits per second
BRI	Basic Rate Interface	PC	Personal Computer
CAS	Channel Associated Signaling	PRI	Primary Rate Interface
DSN	Defense Switched Network	SUT	System Under Test
EWSD	Elektronisches Wählsystem Digital	T1	Digital Transmission Link Level 1 (1.544 Mbps)
GS	Ground Start	TDM	Time Division Multiplex
IP	Internet Protocol	TIMG	T1 Internet Protocol Media Gateway

Figure 2-4. SUT to Siemens EWSD Test Configuration

9. SYSTEM CONFIGURATIONS. Table 2-2 provides the system configurations, hardware and software components tested with the SUT. The SUT was tested in an operationally realistic environment to determine interoperability with a complement of DSN switches noted in Table 2-2. The DSN switches listed in Table 2-2 only depict the tested configuration. Table 2-2 is not intended to identify the only switch software releases that are certified with the SUT. The SUT is certified specifically with the following switching systems and respective interfaces that are on the UC Approved Products List (APL): the Siemens Elektronisches Wählsystem Digital (EWSD), Avaya Communication Server (CS)2100, Avaya Meridian Switching Load (MSL)-100, Alcatel-Lucent Class 5 Electronic Switching System (5ESS), Alcatel-Lucent Compact Digital Exchange (CDX), and Alcatel-Lucent Very Compact Digital Exchange (VCDX) switching systems specifically with the Digital Transmission Link Level 1 (T1) interfaces and respective signaling identified in Table 2-1.

Table 2-2. Tested System Configurations

System Name		Software Release		
Avaya S8710		Communication Manager (CM) 4.0 (R014x.00.2.731.7: Super Patch 14419)		
Siemens EWSD		19d with Patch Set 46		
Avaya CS2100		Succession Enterprise (SE) 09.1		
Alcatel-Lucent 5ESS		5E16.2 Broadcast Warning Message (BWM) 09-0002		
AvayaCS1000M		5.0		
SUT		**Application**	**Hardware**	**Software/Firmware**
	Cisco Unity Connection	8.0(2)	Unified Computing System C210-M1	Cisco Unity Connection 8.0(2)
	TIMG	Not Applicable	T1 Internet Protocol Media Gateway	6.0 SU3.2
Peripheral Components Telephones			Client Workstation	Microsoft Outlook with Cisco ViewMail 8.0(2) on Windows XP SP3, Windows Vista SP2
			Management Workstation	Windows XP Workstation SP3, Windows Vista SP2
			Panasonic KX-TS15-W (Analog)	Not Applicable
			Panasonic KX-T2355 (Analog)	Not Applicable
			Siemens Optiset ISDN BRI	Not Applicable
			Avaya M5317T	5.0 1999

LEGEND:

5ESS	Class 5 Electronic Switching System	ISDN	Integrated Services Digital Network
APL	Approved Products List	Mbps	Megabits per second
BRI	Basic Rate Interface	MCS	Media Convergence Server
CCM	Cisco Communication Manager	SP2	Service Pack 2
CS	Communication Server	SUT	System Under Test
DSN	Defense Switched Network	T1	Digital Transmission Link Level 1 (1.544 Mbps)
EWSD	Elektronisches Wählsystem Digital	TIMG	T1 Internet Protocol Media Gateway

NOTE: The SUT is certified with all MCS7800 series servers listed with the CCM switching systems listed on the UC APL.

10. TEST LIMITATIONS. None.

11. TEST RESULTS

a. Discussion

(1) Voice mail interaction with Multi-Level Precedence and Preemption (MLPP). The SUT was tested to insure that it properly interacted with MLPP as required in the UCR section 5. Intra-switch and inter-switch calls at different precedence levels were placed over the network test configuration to subscribers configured on the Cisco Unity Connection and assigned voice mail at with the following results:

(a) All ROUTINE calls placed to a voice mail subscriber that was busy or did not answer, were properly routed to voice mail as required by UCR, section 5.

(b) All calls above ROUTINE placed to a voice mail subscriber that was busy or did not answer were not routed to voice mail, but instead were properly diverted to the global default diversion as required by the UCR, section 5.

(c) It was discovered the COM 1 port settings for the Dialogic TIMG Interface must be set to the following: Baud 9600, Parity None, Data Bits 8 and Stop Bits 1. This will ensure all caller ID and voice mailbox signaling information is correctly interpreted by the 5ESS via the SMDI link of a T1 interface.

(2) Differentiated Services Code Point. UCR 2008, Change 2 paragraph 5.3.3.3.2, states that the product shall support the plain text DSCP plan, as shown in Table 5.3.3-1, DSCP Assignments, and the DSCP assignment shall be software configurable for the full range (0-63) to support Deployable deployments that may use a different DSCP plan.

(a) DSCP Tagging. Captures were taken between the SUT TIMG and the Unity Connection server. Voice media was sent as International Telecommunication Union - Telecommunication Standardization Sector (ITU-T) G.711 packets to and from the TIMG. All ITU-T G.711 packets were 20 milliseconds in size and were correctly tagged with a DSCP value of 46. Voice signaling packets from the TIMG device were properly tagged with a DSCP value of 40, however the voice signaling packets from the Unity Connection server were incorrectly tagged with a DSCP value of 24. The TIMG device can assign any value 0-63 for both signaling and media, however the Unity Connection server is not configurable to assign a DSCP value to signaling packets. DISA has adjudicated this discrepancy as having a minor operational impact. The SUT provides the ability to convert a voicemail message recorded by a user in the SUT to Internet Message Access Protocol (IMAP) IP packets transmitted to a PC client in the form of WAV file in an email. Cisco ViewMail for Outlook (VMO) add-in client software allows the PC user to send, listen to, and manage messages directly from their Outlook Inbox. This functionality was tested and the IMAP packets transmitted by the SUT to the PC client were correctly tagged with a DSCP value of 0. The Management Workstation has the ability to assign any value 0-63 and correctly tagged DSCP at 16 for operational network management traffic.

b. Test Summary. The SUT met all the critical interoperability requirements for a Customer Premise Equipment voicemail device and is certified for joint use within the

DSN. The SUT offers facsimile (fax) and e-mail capabilities; however these capabilities were not tested and are not covered under this certification. The SUT was tested with the Siemens Elektronisches Wählsystem Digital (EWSD), Avaya Communication Server (CS)2100, Avaya CS1000M, Avaya S8710 and Alcatel-Lucent Class 5 Electronic Switching System (5ESS) switching systems specifically with the Digital Transmission Link Level 1 (T1) interfaces and respective signaling identified in Table 2-1. Additionally, JITC analysis determined that the SUT is also certified for joint use with any version of the Alcatel-Lucent Compact Digital Exchange (CDX), Alcatel-Lucent Very Compact Digital Exchange (VCDX), and Avaya Meridian Switching Load (MSL)-100 switching systems listed on the Unified Capabilities (UC) that are certified with the same interfaces depicted in Table 2-1. The SUT meets the critical interoperability requirements set forth in Reference (c).

12. TEST AND ANALYSIS REPORT. No detailed test report was developed in accordance with the Program Manager's request. JITC distributes interoperability information via the JITC Electronic Report Distribution (ERD) system, which uses Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNet) e-mail. More comprehensive interoperability status information is available via the JITC System Tracking Program (STP). The STP is accessible by .mil/gov users on the NIPRNet at https://stp.fhu.disa.mil. Test reports, lessons learned, and related testing documents and references are on the JITC Joint Interoperability Tool (JIT) at http://jit.fhu.disa.mil (NIPRNet), or http://199.208.204.226 (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at http://jitc.fhu.disa.mil/tssi. Due to the sensitivity of the information, the Information Assurance Accreditation Package (IAAP) that contains the approved configuration and deployment guide must be requested directly through government civilian or uniformed military personnel from the Unified Capabilities Certification Office (UCCO), e-mail: ucco@disa.mil.