



DEFENSE INFORMATION SYSTEMS AGENCY

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

18 Oct 11

MEMORANDUM FOR DISTRIBUTION

SUBJECT: Special Interoperability Test Certification of the OpenText RightFax Version V9.4 SR2

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 OpenText RightFax Version V9.4 SR2 is hereinafter referred to as the System Under Test (SUT). The SUT supports analog, digital transmission link level 1 (T1), Integrated Services Digital Network Primary Rate Interface and T1 Channel Associated Signaling interfaces. The SUT met all of the critical interface and functional interoperability requirements for a Customer Premise Equipment facsimile device and is certified for joint use within the Defense Information Systems Network with any switching systems listed on the Unified Capabilities Approved Products List certified with any of these same interfaces. The SUT meets the critical interoperability requirements set forth in Reference (c) using test procedures derived from Reference (d). No other configurations, features, or functions, except those cited within this report, are certified by the JITC. This certification expires upon changes that affect interoperability, but no later than three years from the date the DISA Certifying Authority (CA) provided a positive recommendation.

3. This finding is based on interoperability testing, review of the vendor's Letters of Compliance (LoC), and DISA CA accreditation. Interoperability testing was conducted by the Telecommunication Systems Security Assessment Program (TSSAP), 346th Test Squadron, 318th Information Operations Group, San Antonio, Texas, from 1 through 4 February 2011. Review of the LoC was completed on 4 February 2011. DISA CA granted accreditation on 12 March 2011 based on the security testing completed by Department of Defense Component lab IA test teams

and published in a separate report, Reference (f). The Certification Testing Summary (Enclosure 2) documents the test results and describes the test configuration.

4. The Functional Requirements used to evaluate the interoperability of the SUT and the interoperability statuses are indicated in Table 1.

Table 1. SUT FRs and Interoperability Status

Interface	Critical	Certified	Requirements Required or Conditional	Status	UCR Reference
ISDN PRI T1 NI2 (ANSI T1.607)	No	Yes	All DSN CPE, as a minimum, must meet the requirements of Part 15 and Part 68 of the FCC Rules and Regulations, and the ACTA. (R)	Met	5.2.3.2
			Modems and facsimile machines shall be compatible with ITU and Telcordia standards, as applicable. (C)	Met	5.2.3.2
			Facsimile devices, as a minimum, shall meet the requirements in accordance with applicable DISR standards. (C)	Met	5.2.3.2
T1 CAS (DTMF)	No	Yes	All DSN CPE, as a minimum, must meet the requirements of Part 15 and Part 68 of the FCC Rules and Regulations, and the ACTA. (R)	Met	5.2.3.2
			A device(s) that can “out dial” DTMF digits (automatic and/or manual) shall comply with the requirements as specified in Telcordia Technologies GR-506-CORE. (C)	Met	5.2.3.2
			Modems and facsimile machines shall be compatible with ITU and Telcordia standards, as applicable. (C)	Met	5.2.3.2
			Facsimile devices, as a minimum, shall meet the requirements in accordance with applicable DISR standards. (C)	Met	5.2.3.2
2-Wire Analog	No	Yes	All DSN CPE, as a minimum, must meet the requirements of Part 15 and Part 68 of the FCC Rules and Regulations, and the ACTA. (R)	Met	5.2.3.2
			Devices that are required to support precedence calls above ROUTINE precedence shall respond properly to an incoming alerting (ringing) precedence call cadence as described in Section 5.3.2.6.1.1.1.(C)	Met	5.2.3.2
			A device(s) that supports autoanswer shall be set to a “time” more than the equivalency of four ROUTING precedence ring intervals in accordance with Section 5.2.2.3, Multilevel Precedence and Preemption. (C)	Met	5.2.3.2
			A device(s) that can “out dial” DTMF digits (automatic and/or manual) shall comply with the requirements as specified in Telcordia Technologies GR-506-CORE. (C)	Met	5.2.3.2
			Modems and facsimile machines shall be compatible with ITU and Telcordia standards, as applicable. (C)	Met	5.2.3.2
			Facsimile devices, as a minimum, shall meet the requirements in accordance with applicable DISR standards. (C)	Met	5.2.3.2
			All 2-wire analog devices shall conform to the requirements of TIA/EIA-470-B. (R)	Met	5.2.3.2
IEEE 802.3u TCP/IP	No	Yes	Ethernet interfaces shall be in accordance with IEEE 802.3u (C)	Met	5.2.3.2
Security					
	Yes	Certified	GR-815, STIGs, and DoDI 8510.bb (DIACAP) (R)	Met ^(See note.)	3.5.4.6.1

Table 1. SUT FRs and Interoperability Status (continued)

NOTE: Security is tested by Department of Defense Component lab Information Assurance test teams and published in a separate report, Reference (e).		
LEGEND:		
802.3u	Standard for carrier sense multiple access with collision detection at 100 Mbps	GR 815 Generic Requirements for Network Element/Network System Security
ACTA	Administrative Council for Terminal Attachments	IEEE Institute of Electrical and Electronics Engineers
ANSI	American National Standards Institute	IP Internet Protocol
C	Conditional	ISDN Integrated Services Digital Network
CAS	Channel Associated Signaling	ITU International Telecommunication Union
CPE	Customer Premise Equipment	LSSGR Local Access and Transport Area Switching Systems Generic Requirements
DIACAP	Department of Defense Information Assurance Certification and Accreditation Process	Mbps Megabits per second
DISR	Department of Defense Information Technology Standards Registry	N12 National ISDN 2
DoDI	Department of Defense Instruction	PRI Primary Rate Interface
DSN	Defense Switched Network	R Required
DTMF	Dual Tone Multi Frequency	STIGs Security Technical Implementation Guides
EIA	Electronic Industries Alliance	T1 Digital Transmission Link Level 1 (1.544 Mbps)
FCC	Federal Communications Commission	TCP Transmission Control Protocol
GR	Generic Requirement	TIA Telecommunications Industry Association
GR 506	LSSGR: Signaling for Analog Interfaces	UCR Unified Capabilities Requirements

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 <http://jit.fhu.disa.mil> (NIPRNet), or <http://199.208.204.125> (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. Cary Hogan, DSN 879-2589, commercial (520) 538-2589, FAX DSN 879-4347, or e-mail to cary.hogan@disa.mil. The JITC's mailing address is P.O. Box 12798, Fort Huachuca, AZ 85670-2798. The tracking number for the SUT is 1028601.

FOR THE COMMANDER:



for BRADLEY A. CLARK
Chief
Battlespace Communications Portfolio

2 Enclosures a/s

Distribution (electronic mail):

Joint Staff J-6

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DOT&E, Net-Centric Systems and Naval Warfare

U.S. Coast Guard, CG-64

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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) Defense Information Systems Agency, "Department of Defense Networks Unified Capabilities Requirements 2008 Change 1," January 2010
- (d) Joint Interoperability Test Command, "Defense Switched Network Generic Switch Test Plan (GSTP), Change 2," 2 October 2006
- (e) Air Force Test Facility, "Information Assurance (IA) Assessment of OpenText RightFax V9.4 SR2 (TN 1028601)," 20 May 2011

CERTIFICATION TESTING SUMMARY

1. SYSTEM TITLE. OpenText RightFax Version V9.4 SR2; hereinafter referred to as the System Under Test (SUT).

2. SPONSOR. Defense Finance and Accounting Service (DFAS).

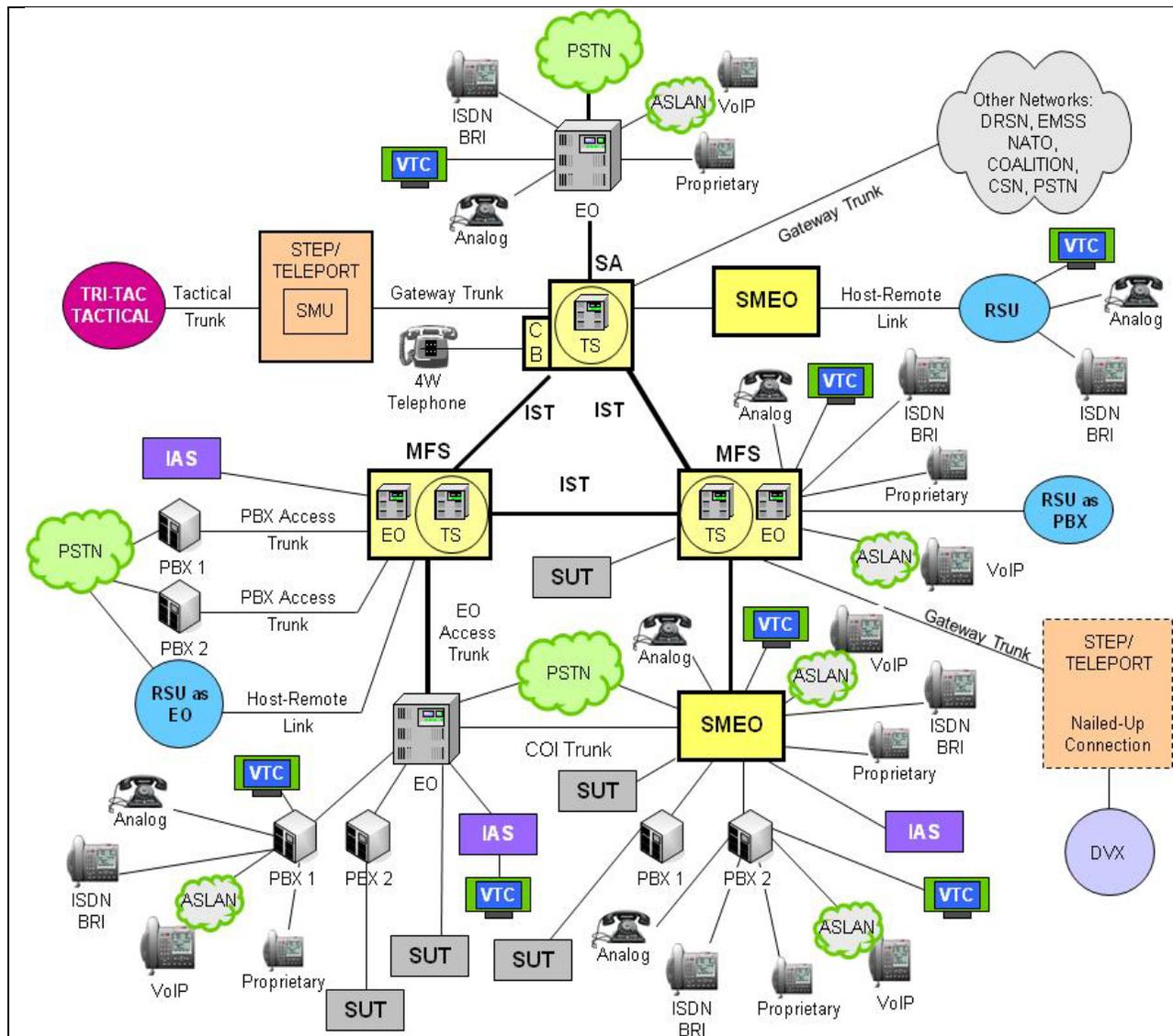
3. SYSTEM POC. Ms. Angie Fimreite, DFAS, 8899 East 56th Street, Indianapolis, Indiana, 46249, Email: angie.fimreite@dfas.mil.

4. TESTER. Telecommunication Systems Security Assessment Program (TSSAP) testing facility, 346th Test Squadron, 318th Information Operations Group (IOG), United States Air Force, San Antonio, Texas.

5. SYSTEM DESCRIPTION. The SUT provides a common operational, management, and distribution interface, centralizing all fax activities. The SUT may be configured with 2-wire analog or T1 24-channel Dual Tone Multifrequency (DTMF) Digital Transmission Link Level 1 (T1) with Channel Associated Signaling (CAS), or 24-channel Integrated Services Digital Network (ISDN) Primary Rate Interface (PRI) National ISDN 2 (NI2) interface cards. The SUT features include:

- Remote clients (on the same Local Area Network or across geographical boundaries) utilize either a thick client or a Microsoft Outlook plug-in to send and receive their fax messages.
- Fax images are stored locally or on windows-mapped drives on the fax server.
- Incoming/outgoing calls in tandem
- Fax-to-e-mail and e-mail-to-fax conversion is handled by a Microsoft Exchange connector
- Remote call-out activation/termination and simultaneous running of multiple callout scenarios
- The RightFax system connects to the Public Switched Telephone Network or Defense Information Systems Network (DISN) infrastructure over analog lines, T1 DTMF CAS or T1 ISDN PRI NI2 spans to provide bidirectional fax send and receive functionality.
- The SUT receives faxes and archives them in a common Structured Query Language (SQL) database. Information from the Direct Inward Dial is used to route the fax to the appropriate email address. The system utilizes group and private fax inboxes for inbound fax traffic.

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:

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

Figure 2-1. Relationship of the SUT to the 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 UCR Interface and Functional Requirements and are verified through TSSAP testing and review of the vendor’s Letter of Compliance (LoC).

Table 2-1. SUT FRs and Interoperability Status

Interface	Critical	Certified	Requirements Required or Conditional	Status	UCR Reference
ISDN PRI T1 NI2 (ANSI T1.607)	No	Yes	All DSN CPE, as a minimum, must meet the requirements of Part 15 and Part 68 of the FCC Rules and Regulations, and the ACTA. (R)	Met	5.2.3.2
			Modems and facsimile machines shall be compatible with ITU and Telcordia standards, as applicable. (C)	Met	5.2.3.2
			Facsimile devices, as a minimum, shall meet the requirements in accordance with applicable DISR standards. (C)	Met	5.2.3.2
T1 CAS (DTMF)	No	Yes	All DSN CPE, as a minimum, must meet the requirements of Part 15 and Part 68 of the FCC Rules and Regulations, and the ACTA. (R)	Met	5.2.3.2
			A device(s) that can “out dial” DTMF digits (automatic and/or manual) shall comply with the requirements as specified in Telcordia Technologies GR-506-CORE. (C)	Met	5.2.3.2
			Modems and facsimile machines shall be compatible with ITU and Telcordia standards, as applicable. (C)	Met	5.2.3.2
			Facsimile devices, as a minimum, shall meet the requirements in accordance with applicable DISR standards. (C)	Met	5.2.3.2
2-Wire Analog	No	Yes	All DSN CPE, as a minimum, must meet the requirements of Part 15 and Part 68 of the FCC Rules and Regulations, and the ACTA. (R)	Met	5.2.3.2
			Devices that are required to support precedence calls above ROUTINE precedence shall respond properly to an incoming alerting (ringing) precedence call cadence as described in Section 5.3.2.6.1.1.1.(C)	Met	5.2.3.2
			A device(s) that supports autoanswer shall be set to a “time” more than the equivalency of four ROUTING precedence ring intervals in accordance with Section 5.2.2.3, Multilevel Precedence and Preemption. (C)	Met	5.2.3.2
			A device(s) that can “out dial” DTMF digits (automatic and/or manual) shall comply with the requirements as specified in Telcordia Technologies GR-506-CORE. (C)	Met	5.2.3.2
			Modems and facsimile machines shall be compatible with ITU and Telcordia standards, as applicable. (C)	Met	5.2.3.2
			Facsimile devices, as a minimum, shall meet the requirements in accordance with applicable DISR standards. (C)	Met	5.2.3.2
			All 2-wire analog devices shall conform to the requirements of TIA/EIA-470-B. (R)	Met	5.2.3.2
			Ethernet interfaces shall be in accordance with IEEE 802.3u (C)	Met	5.2.3.2
Security					
	Yes	Certified	GR-815, STIGs, and DoDI 8510.bb (DIACAP) (R)	Met ^(See note)	3, 5.4.6.1

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

NOTE: Security is tested by Department of Defense Component lab Information Assurance test teams and published in a separate report, Reference (e).		
LEGEND:		
802.3u	Standard for carrier sense multiple access with collision detection at 100 Mbps	GR 815 Generic Requirements for Network Element/Network System Security
ACTA	Administrative Council for Terminal Attachments	IEEE Institute of Electrical and Electronics Engineers
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CAS	Channel Associated Signaling	ITU International Telecommunication Union
CPE	Customer Premise Equipment	LSSGR Local Access and Transport Area Switching Systems Generic Requirements
DIACAP	Department of Defense Information Assurance Certification and Accreditation Process	Mbps Megabits per second
DISR	Department of Defense Information Technology Standards Registry	NI2 National ISDN 2
DoDI	Department of Defense Instruction	PRI Primary Rate Interface
DSN	Defense Switched Network	R Required
DTMF	Dual Tone Multi Frequency	STIGs Security Technical Implementation Guides
EIA	Electronic Industries Alliance	T1 Digital Transmission Link Level 1 (1.544 Mbps)
FCC	Federal Communications Commission	TCP Transmission Control Protocol
GR	Generic Requirement	TIA Telecommunications Industry Association
GR 506	LSSGR: Signaling for Analog Interfaces	UCR Unified Capabilities Requirements

8. Test Network Description. The SUT was tested at the TSSAP in a manner and configuration similar to that of the DISN operational environment. Testing the system's required functions and features was conducted using the test configuration depicted in Figure 2-2.

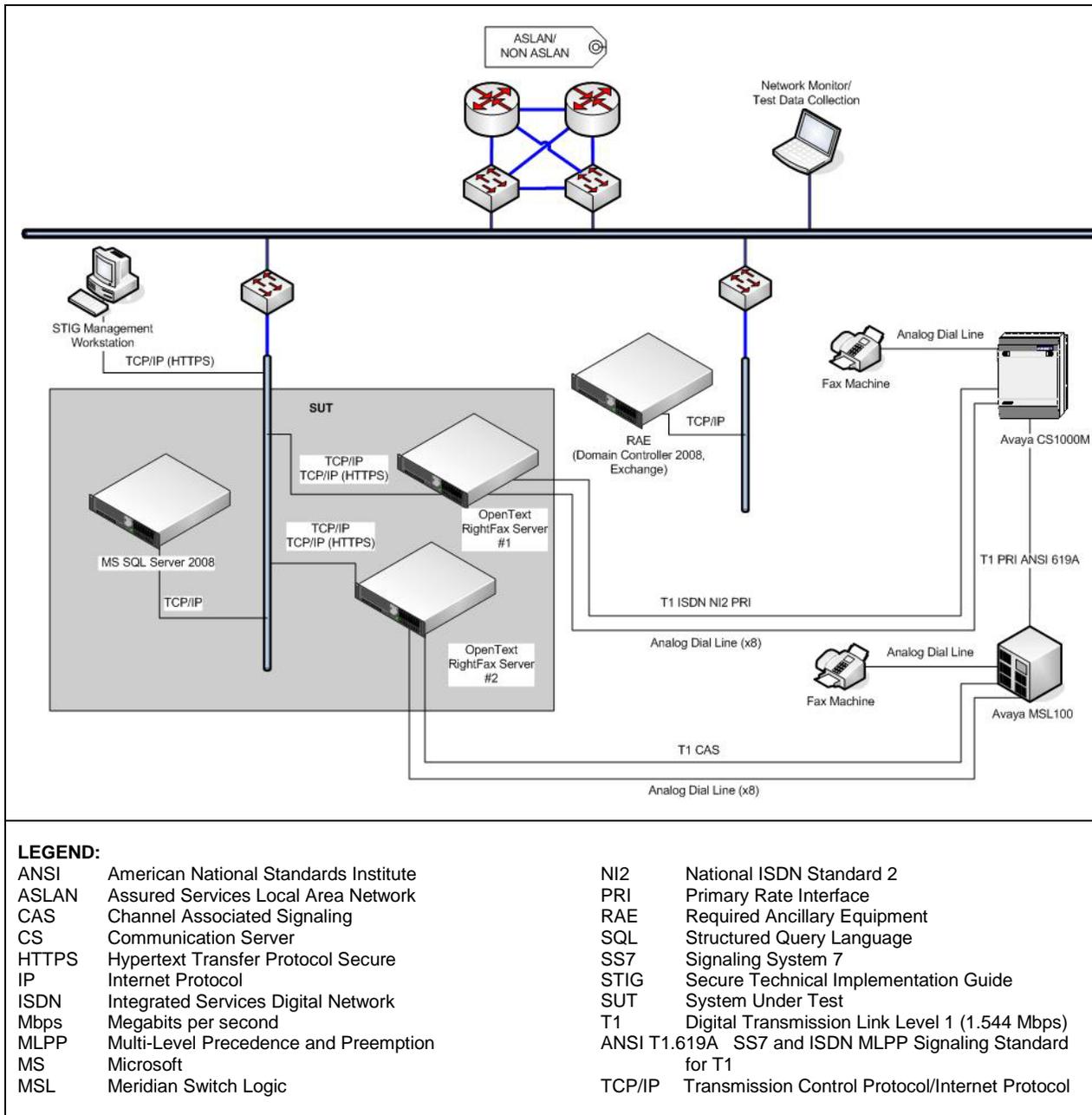


Figure 2-2. SUT Test Configuration

9. SYSTEMS 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. Table 2-2 lists the DSN switches which depict the tested configuration and is not intended to identify the only switches that are certified with the SUT. The SUT is certified with switching systems listed on the Unified Capabilities (UC) Approved Products List (APL) that offer the same certified interfaces.

Table 2-2. SUT Test Configuration

System Name	Software Release	
Avaya MSL-100	MSL-17	
Avaya CS1000M	4.5	
RAE Domain Controller	Windows 2008 Server	
STIGed Management Work Station	Windows XP, 2007, Vista	
System Under Test	Hardware	Software
OpenText RightFax V9.4 SR2		
OpenText RightFax Fax Server #1	HP Proliant DL380 G5	Windows 2008 Server R2
	Dialogic Brooktrout Facsimilie Card T1 Card: TR1034+E24H-T1-1N	Driver Version 6.1 Firmware v6.1 SDK 6.1
	Dialogic Brooktrout Facsimilie Card Analog Card: TR1034+E8-8L	Driver Version 6.1 Firmware v6.1 SDK 6.1
OpenText RightFax Fax Server #2	HP Proliant DL380 G5	Windows 2008 Server R2
	Dialogic Brooktrout Facsimilie Card T1 Card: TR1034+P24H-T1-1N-R	Driver Version 6.1 Firmware v6.1 SDK 6.1
	Dialogic Brooktrout Facsimilie Card Analog Card: TR1034+P8-8L-R	Driver Version 6.1 Firmware v6.1 SDK 6.1
SQL Database Server	HP Proliant DL380 G5	Windows 2008 Server R2 Microsoft SQL Server 2008 R2
LEGEND:		
CS	Communication Server	
HP	Hewlett Packard	
MSL	Meridian Switch Logic	
	RAE	Remote Ancillary Equipment
	SQL	Structured Query Language
	STIG	Security Technical Implementation Guide

10. TEST LIMITATIONS. None

11. TEST RESULTS

a. Discussion. The UCR, Section 5.2.3, covers the requirements for a Customer Premise Equipment (CPE) that are connected to the DISN. The SUT is certified for joint use within the DISN with the following interfaces: 2-wire analog, 24-channel DTMF T1 with CAS, or 24-channel ISDN PRI NI2. The SUT minimum critical interoperability interface and functional requirements were met through both interoperability certification testing conducted at the TSSAP and review of the vendor's LoC.

(1) Test Conduct. Inter and Intra-switch facsimile calls were placed over analog, T1 DTMF CAS, and T1 ISDN PRI NI2 circuits using the test configurations shown in Figure 2-2. Incoming calls were successful and, when complete, properly disconnected. The SUT software applications that reside on the host server collected the caller information entered during the caller's session. The call was then routed to an email address based on their specific role as established by local management via a client application that resides on the agent's desktop or was properly transferred to a designated directory number within the DISN. The UCR Change 1, Section 5.2.3.2 requirements state:

(a) All DISN CPE, as a minimum, must meet the requirements of Part 15 and Part 68 of the Federal Communications Commission Rules and Regulations, and the Administrative Council for Terminal Attachments. This requirement was met by the SUT with a vendor LoC.

(b) A device(s) that supports auto-answer shall have an "auto-answer" mode feature allowing the auto-answer mode to be set to a "time" more than the equivalency of four ROUTINE precedence ring intervals in accordance with UCR 2008 Change 1, Section 5.2.2.3, Precedence Call Diversion, before "answer" supervision is provided. Handling of the precedence calls will be in accordance with UCR 2008 Change 1, paragraph 5.2.2.4.2, Precedence Calls to Non-MLPP Networks. This requirement is required for 2-wire analog interfaces and was met by the SUT.

(c) Devices that are required to support precedence calls above ROUTINE precedence shall respond properly to an incoming alerting (ringing) precedence call cadence as described in UCR 2008 Change 1, paragraph 5.2.4.5.1, Ringing. This requirement is required for 2-wire analog interfaces and was met by the SUT.

(d) A device(s) that can "out dial" DTMF and/or Dial Pulse (DP) digits (automatic and/or manual) shall comply with the requirements in UCR 2008 Change 1, Section 5.2.4.4.1, DP Signals, and Section 5.2.4.4.2, DTMF Signaling, respectively, for its address digit-generating capabilities and shall be capable of outputting DTMF digits specified in Telcordia Technologies GR-506-CORE. This requirement was met by the SUT with a vendor LoC.

(e) Modems and facsimile machines shall be compatible with International Telecommunication Union and Telcordia standards, as applicable. This requirement was met by the SUT with a vendor LoC and testing.

(f) Facsimile devices, as a minimum, shall meet the requirements in accordance with applicable Department of Defense Information Technology Standards Registry. This requirement was met by the SUT with a vendor LoC.

(g) All 2-wire analog devices shall conform to the requirements of Telecommunications Industry Association (TIA) and Electronic Industries Alliance (EIA) TIA/EIA-470-B. This requirement was met by the SUT with a vendor LoC and testing.

(h) The UCR Change 1, Section 5.4 states the Information Assurance (IA) requirements for the SUT. These requirements are tested by Department of Defense Component lab IA test teams and results are published under a separate report, Reference (e).

b. Test Summary. The SUT met the critical interface and functional requirements as set forth in Reference (c) for a CPE facsimile device for the interfaces depicted in Table 2-1, and is certified for joint use within the DISN with any switching system on the UC APL that offers these same interfaces.

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://199.208.204.125> (SIPRNet). Information related to DSN testing is on the Telecom Switched Services Interoperability (TSSI) website at <http://jitic.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.