



## DEFENSE INFORMATION SYSTEMS AGENCY

JOINT INTEROPERABILITY TEST COMMAND

P.O. BOX 12798

FORT HUACHUCA, ARIZONA 85670-2798

IN REPLY  
REFER TO: Networks and Transport Division (JTE)

### MEMORANDUM FOR DISTRIBUTION

**SUBJECT:** Special Interoperability Test Certification of the Amcom Software Inc. Smart Speech™ Version 3.8 with Morale Call Manager, Event Notification and Response (e.Notify), and Automated Directory Attendant System (ADAS) Applications

**References:** (a) DOD Directive 4630.5, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," 5 May 2004  
(b) CJCSI 6212.01C, "Interoperability and Supportability of Information Technology and National Security Systems," 20 November 2003

1. References (a) and (b) establish the Defense Information Systems Agency, Joint Interoperability Test Command (JITC), as the responsible organization for interoperability test certification. Additional references are provided in enclosure 1.
2. The Amcom Software Inc. Smart Speech™ Version 3.8 with Morale Call Manager, e.Notify, and ADAS Applications, hereinafter referred to as the system under test (SUT), meets its sole interface requirement and all required functional capabilities. The SUT is certified for joint use within the Defense Switched Network (DSN). The SUT met the interface and functional requirements for automated receiving devices set forth in appendix 7 of reference (c). Testing was conducted using test procedures derived from reference (d). This certification expires upon changes that affect interoperability, but no later than three years from the date of this memorandum.
3. This certification is based on interoperability testing conducted by JITC at the Global Information Grid Network Test Facility, Fort Huachuca, AZ, from 2 through 12 February 2004, analysis of GSCR appendix 7 requirements, which were approved on 1 July 2004, and review of vendor Letters of Compliance, which were approved on 12 August 2004. The Certification Testing Summary (enclosure 2) documents the test results and describes the test configuration. Users should verify interoperability before deploying the SUT in an environment that varies significantly from that described.
4. The Functional Requirements used to evaluate the interoperability of the SUT and the interoperability statuses are indicated in table 1.

JITC Memo, JTE, Special Interoperability Test Certification of the Amcom Software Inc. Smart Speech Version 3.8 with Morale Call Manager, Event Notification and Response (e.Notify), and Automated Directory Attendant System (ADAS) Applications

**Table 1. SUT Functional Requirements and Interoperability Status**

Interface	Critical	Certified	Functional Requirements	Met	GSCR Paragraph																																								
2-Wire Analog (GR-506-CORE)	No <sup>1</sup>	Yes	MLPP IAW GSCR Section 3 (C)	Met	A7.5																																								
			MLPP Precedence call alerting (C)	Not Tested	A7.5																																								
			FCC Part15/Part 68 (R)	Met	A7.5																																								
			Auto answer ring interval (C)	Not Tested	A7.5																																								
			DTMF outpulsing (C)	Met	A7.5, 5.4.1, 5.4.2																																								
			JTA compliance as applicable (R)	Met	A7.5																																								
			Network Management (C)	Not Tested	A7.5																																								
			Routine precedence only IAW GSCR 3.3 (R)	Met	A7.5																																								
			TIA/EIA-470-B (R)	Met	A7.5.1																																								
Security IAW DITSCAP (R) <sup>2</sup>	Met	A7.6.5																																											
<b>Legend:</b>																																													
<table border="0"> <tr> <td>C</td> <td>- Conditional</td> <td>IAW</td> <td>- In accordance with</td> </tr> <tr> <td>DISA</td> <td>- Defense Information Systems Agency</td> <td>IT</td> <td>- Information Technology</td> </tr> <tr> <td>DITSCAP</td> <td>- DOD IT Security Certification &amp; Accreditation Process</td> <td>JTA</td> <td>- Joint Technical Architecture</td> </tr> <tr> <td>DOD</td> <td>- Department of Defense</td> <td>MLPP</td> <td>- Multi-Level Precedence and Preemption</td> </tr> <tr> <td>DTMF</td> <td>- Dual Tone Multi-Frequency</td> <td>PCM-24</td> <td>- Pulse Code Modulation - 24 Channels</td> </tr> <tr> <td>EIA</td> <td>- Electronic Industries Alliance</td> <td>PCM-30</td> <td>- Pulse Code Modulation - 30 Channels</td> </tr> <tr> <td>FCC</td> <td>- Federal Communications Commission</td> <td>R</td> <td>- Required</td> </tr> <tr> <td>GR</td> <td>- Generic Requirement</td> <td>SUT</td> <td>- System Under Test</td> </tr> <tr> <td>GSCR</td> <td>- Generic Switching Center Requirements</td> <td>TIA</td> <td>- Telecommunications Industry Association</td> </tr> <tr> <td>IA</td> <td>- Information Assurance</td> <td></td> <td></td> </tr> </table>						C	- Conditional	IAW	- In accordance with	DISA	- Defense Information Systems Agency	IT	- Information Technology	DITSCAP	- DOD IT Security Certification & Accreditation Process	JTA	- Joint Technical Architecture	DOD	- Department of Defense	MLPP	- Multi-Level Precedence and Preemption	DTMF	- Dual Tone Multi-Frequency	PCM-24	- Pulse Code Modulation - 24 Channels	EIA	- Electronic Industries Alliance	PCM-30	- Pulse Code Modulation - 30 Channels	FCC	- Federal Communications Commission	R	- Required	GR	- Generic Requirement	SUT	- System Under Test	GSCR	- Generic Switching Center Requirements	TIA	- Telecommunications Industry Association	IA	- Information Assurance		
C	- Conditional	IAW	- In accordance with																																										
DISA	- Defense Information Systems Agency	IT	- Information Technology																																										
DITSCAP	- DOD IT Security Certification & Accreditation Process	JTA	- Joint Technical Architecture																																										
DOD	- Department of Defense	MLPP	- Multi-Level Precedence and Preemption																																										
DTMF	- Dual Tone Multi-Frequency	PCM-24	- Pulse Code Modulation - 24 Channels																																										
EIA	- Electronic Industries Alliance	PCM-30	- Pulse Code Modulation - 30 Channels																																										
FCC	- Federal Communications Commission	R	- Required																																										
GR	- Generic Requirement	SUT	- System Under Test																																										
GSCR	- Generic Switching Center Requirements	TIA	- Telecommunications Industry Association																																										
IA	- Information Assurance																																												
<b>Notes:</b>																																													
1 The Automated Receiving Device requirements can be met via one of the following interfaces: 2-Wire Analog, 4-Wire Digital, PCM-24, or PCM-30.																																													
2 DITSCAP information assurance testing is accomplished via DISA-led IA test teams.																																													

5. 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>.

JITC Memo, JTE, Special Interoperability Test Certification of the Amcom Software Inc. Smart Speech Version 3.8 with Morale Call Manager, Event Notification and Response (e.Notify), and Automated Directory Attendant System (ADAS) Applications

6. The JITC point of contact is Mr. Michael Napier, DSN 879-6787, commercial (520) 538-6787, FAX DSN 879-4347, or e-mail to [napierm@fhu.disa.mil](mailto:napierm@fhu.disa.mil).

FOR THE COMMANDER:

2 Enclosures a/s

LESLIE CLAUDIO  
Chief  
Networks and Transport Division

Distribution:

Joint Staff J6I, Room-1E565, Pentagon, Washington, DC 20318-6000

Joint Interoperability Test Command, Washington Operations Division, NSWC, ATTN: JT1,  
Building 900, 101 Strauss Avenue, Indian Head, MD 20640-5035

Defense Information Systems Agency, GIG Enterprise Services Engineering Directorate,  
NETCENTRICITY, REQUIREMENTS, ANALYSIS & ASSESSMENTS BRANCH, ATTN:  
GE333, Rm. 244, 5600 Columbia Pike, Falls Church, VA 22041-2770

Defense Information Systems Agency, GIG-Combat Support Directorate, DSN SYSTEMS  
MANAGEMENT BRANCH, ATTN: GS235, Rm. 5W248A, 5275 Leesburg Pike, Falls  
Church, VA 22041

Office of Chief of Naval Operations (N61C22), CNON6/7, 2000 Navy Pentagon, Washington,  
DC 20350

Headquarters US Air Force, AF/XICC, 1250 Pentagon, Washington, DC 20330-1250

Department of the Army, Office of the Secretary of the Army, G-6/ASA (ALT), ATTN:  
ASAALT (SAAL-SSI), 103 Army Pentagon, Washington, DC 20310-0103

US Marine Corp (C4ISR), MARCORSSYSCOM, 2200 Lester Street, Quantico, VA 22134

DOT&E, Strategic and C3I Systems, 1700 Defense Pentagon, Washington, DC 20301-1700

US Coast Guard, COMDT/G-SCE (C4), 2100 2nd Street SW, Washington, DC 20593

Office of Assistant Secretary of Defense, OASD(NII)/DoD CIO, Crystal Mall 3, 7<sup>th</sup> Floor, Suite  
700, 1931 Jefferson-Davis Hwy, Arlington, VA 22202

Office of Under Secretary of Defense, OUSD(AT&L), Room 3E144, 3070 Defense Pentagon,  
Washington, DC 20301

US Joint Forces Command, J6I, C4 Plans and Policy, 1562 Mitscher Ave, Norfolk, VA 23551-  
2488

Defense Intelligence Agency, ATTN: DS-CIO, Bldg 6000, Bolling AFB, Washington, DC  
20340-3342

National Security Agency, ATTN: DT, Suite 6496, 9800 Savage Road, Fort Meade, MD  
20755-6496

Commander, Defense Information Systems Agency (DISA), ATTN: GS23 (Mr. Osman), Room  
5w23, 5275 Leesburg Pike (RTE 7), Falls Church, VA 22041

## **ADDITIONAL REFERENCES**

- (c) Defense Information Systems Agency, "Department of Defense Voice Networks Generic Switching Center Requirements (GSCR)," 8 September 2003
- (d) Joint Interoperability Test Command, "Defense Switched Network Generic Switch Test Plan (GSTP)," 23 April 2004

## CERTIFICATION TESTING SUMMARY

**1. SYSTEM TITLE.** The Amcom Software Inc. Smart Speech™ Version 3.8 with Morale Call Manager, Event Notification and Response (e.Notify), and Automated Directory Attendant System (ADAS) Applications, hereinafter referred to as the system under test (SUT).

**2. PROPONENT.** Defense Information Systems Agency (DISA).

**3. PROGRAM MANAGER.** Mr. Howard Osman, GS23, Room 5W23, 5275 Leesburg Pike, Falls Church, VA 22041, e-mail: Osmanh@ncr.disa.mil.

**4. TESTER.** Joint Interoperability Test Command (JITC), Ft. Huachuca, AZ.

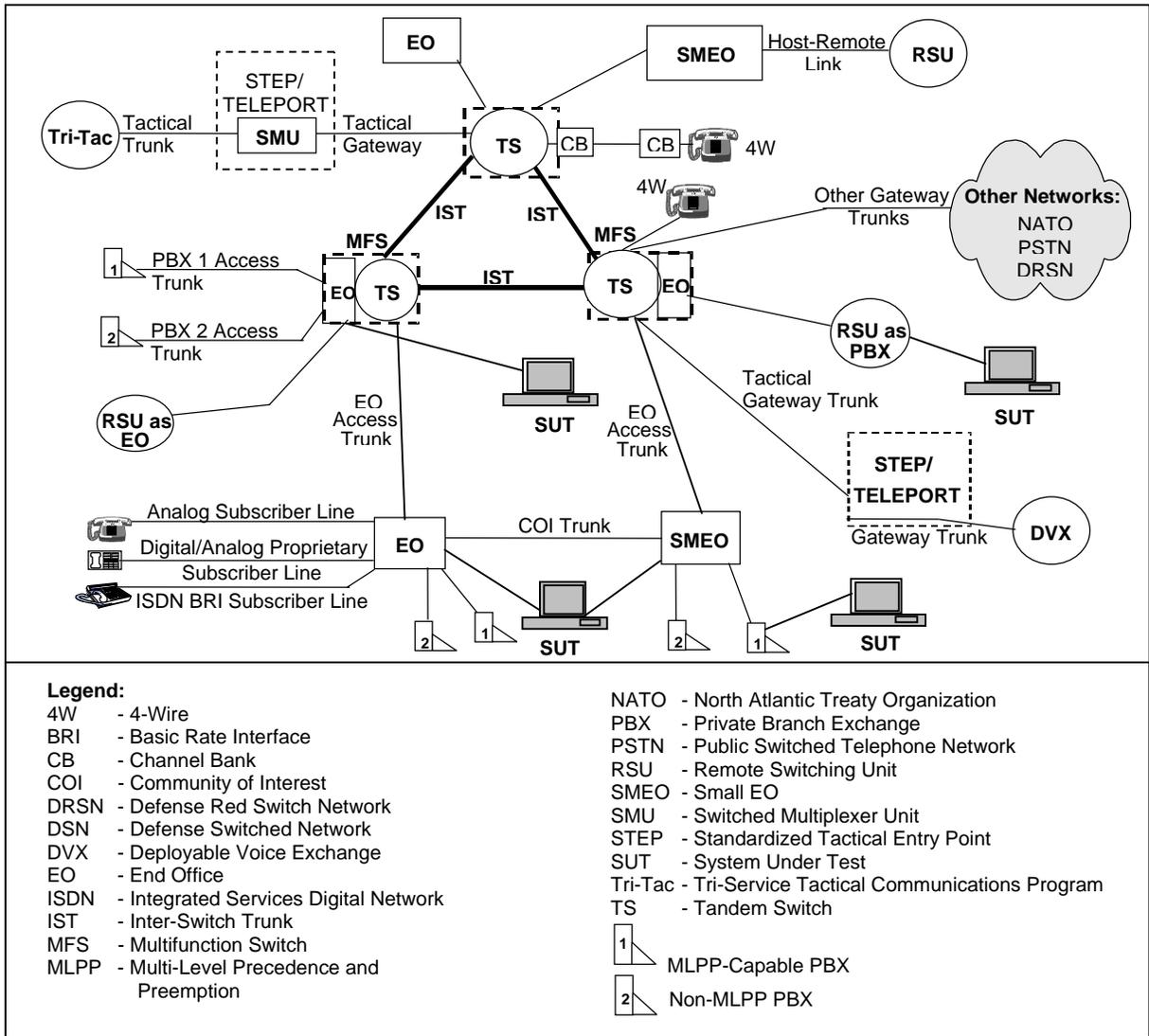
**5. SYSTEM UNDER TEST DESCRIPTION.** Amcom Smart Speech™ applications enable organizations to process a majority of routine phone requests including directory assistance, messaging, and paging independently of a live operator. Smart Speech™ applications are designed to handle high call volumes and directories with hundreds, thousands, or millions of records. They can be integrated with existing call center applications, using a single database for combined operator, web, and speech-enabled directory functions. The Smart Speech™ applications covered by this certification include:

**Morale Call Manager:** Developed at the request of the United States Army, this application eliminates the need for callers to have Dual Tone Multi-Frequency (touchtone) capability, which may not be available from field phones or in less developed parts of the world. Through natural dialog, callers can be connected to families anytime, from anywhere in the world. Smart Speech Morale Call Manager is currently installed at 29 U.S. Army bases and is being used by thousands of service members around the world. Callers speak as prompted; the system runs voice authentication, checks calling privileges, and allows the call to proceed within authorized guidelines.

**Event Notification and Response (e.Notify):** The e.Notify application enables information delivery to key personnel for any critical event by automatically delivering the messages and collecting the responses. The e.Notify application allows planning notifications in advance by creating lists of people, devices, and notification sequence for any number of anticipated scenarios.

**Automated Directory Attendant System:** Designed to replace traditional touch-tone automated attendant systems, this application plays an automated greeting and prompts callers to say their request. The system automatically performs the corresponding transfer or lookup function requested by the caller.

**6. OPERATIONAL ARCHITECTURE.** The Generic Switching Center Requirements (GSCR) Defense Switched Network (DSN) architecture in figure 2-1 depicts the relationship of the SUT to the DSN switches.



**Figure 2-1. DSN Architecture**

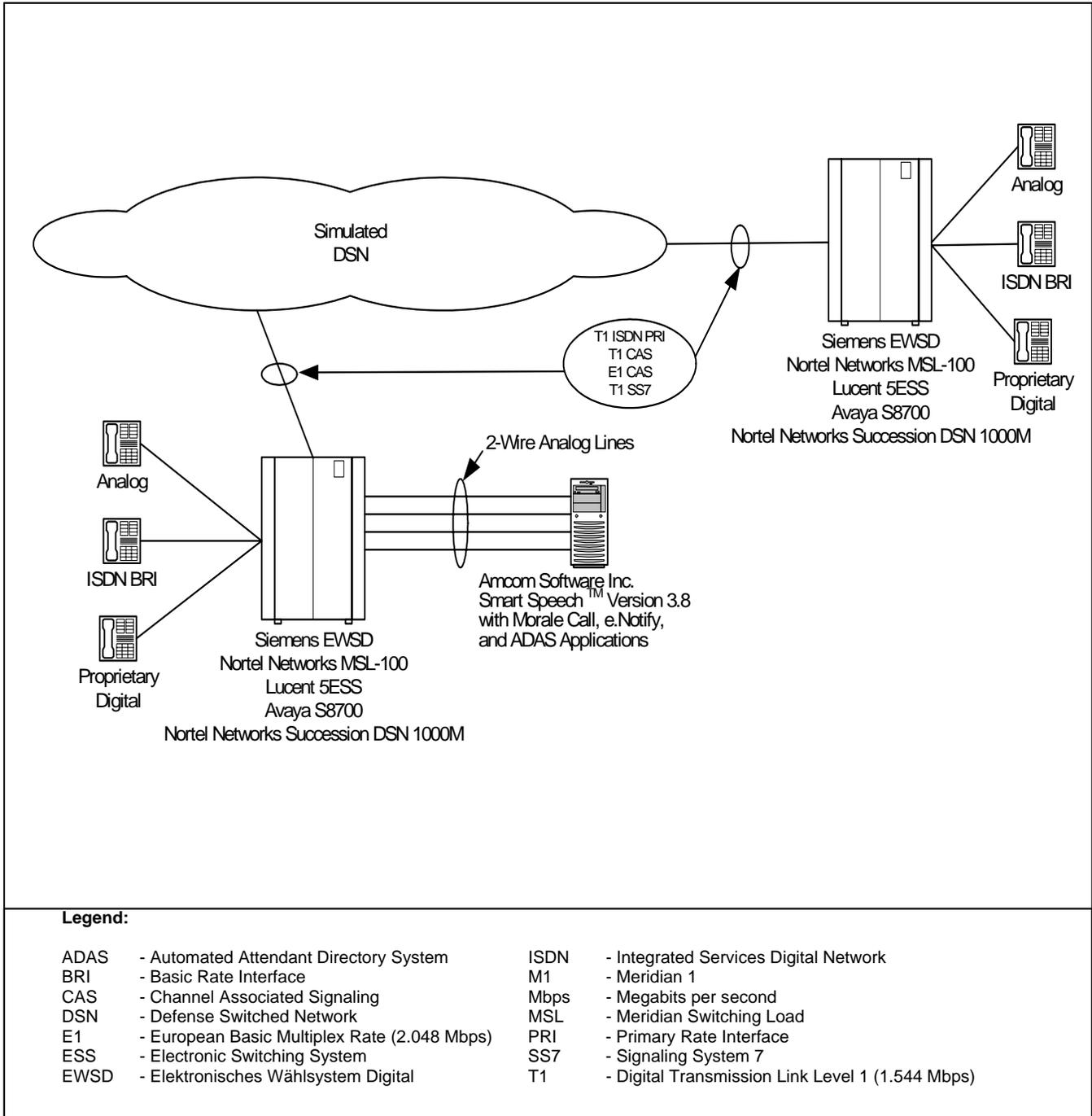
**7. REQUIRED SYSTEM INTERFACES.** Requirements specific to the SUT and interoperability results are listed in table 2-1. These requirements are derived from:

- a. GSCR (reference (c)) Interface and Functional Requirements (FRs).
- b. The test procedures listed in reference (d).

**c. Table 2-1. SUT Functional Requirements and Interoperability Status**

Interface	Critical	Certified	Functional Requirements	Met	GSCR Paragraph
2-Wire Analog (GR-506-CORE)	No <sup>1</sup>	Yes	MLPP IAW GSCR Section 3 (C)	Met	A7.5
			MLPP Precedence call alerting (C)	Not Tested	A7.5
			FCC Part15/Part 68 (R)	Met	A7.5
			Auto answer ring interval (C)	Not Tested	A7.5
			DTMF outpulsing (C)	Met	A7.5, 5.4.1, 5.4.2
			JTA compliance as applicable (R)	Met	A7.5
			Network Management (C)	Not Tested	A7.5
			Routine precedence only IAW GSCR 3.3 (R)	Met	A7.5
			TIA/EIA-470-B (R)	Met	A7.5.1
			Security IAW DITSCAP (R) <sup>2</sup>	Met	A7.6.5
<b>Legend:</b> C - Conditional DISA - Defense Information Systems Agency DITSCAP - DOD IT Security Certification & Accreditation Process DOD - Department of Defense DTMF - Dual Tone Multi-Frequency EIA - Electronic Industries Alliance FCC - Federal Communications Commission GR - Generic Requirement GSCR - Generic Switching Center Requirements IA - Information Assurance IAW - In accordance with IT - Information Technology JTA - Joint Technical Architecture MLPP - Multi-Level Precedence and Preemption PCM-24 - Pulse Code Modulation - 24 Channels PCM-30 - Pulse Code Modulation - 30 Channels R - Required SUT - System Under Test TIA - Telecommunications Industry Association					
<b>Notes:</b> 1 The Automated Receiving Device requirements can be met via one of the following interfaces: 2-Wire Analog, 4-Wire Digital, PCM-24, or PCM-30. 2 DITSCAP information assurance testing is accomplished via DISA-led IA test teams.					

**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 configuration depicted in figure 2-2. The tested system configurations are shown in table 2-2.



**Figure 2-2. Test Configuration**

**Table 2-2. Tested System Configurations**

System Name		Hardware/Software Release	
Siemens EWSD		19d with Patch Set 43	
Nortel Networks MSL-100		SE06	
Nortel Networks DSN 1000M		Succession 3.0	
Avaya S8700		CM 2.01 (R012x.00.1.221.1)	
Lucent 5ESS		5E16.2 SU 9	
SUT	Version 3.8	Hardware	Firmware
		PC	Compact Proliant ML 370 G3 Server Pentium 4 Processor 2.8 Gigahertz XEON, 1 Gigabyte RAM, MS Windows 2000 Server, version 5.00.2195, SP4
		2-W Analog Loop Start: Intel-Dialogic 12-Port Card (D/120JCT-LS)	SR5.1.1, Version DNA5, Build 30 Feature Pack 1
		2-W Analog Loop Start: Intel-Dialogic 4-Port Card (D/41JCT-LS)	
<b>Legend:</b> 2W - Two Wire CM - Communication Manager DSN - Defense Switched Network ESS - Electronic Switching System EWSD - Elektronisches Wählsystem Digital LS - Loop Start MS - Microsoft MSL - Meridian Switching Load RAM - Random Access Memory PC - Personal Computer SE - Succession Enterprise SP - Software Patch SR - Software Release SU - Software Update SUT - System Under Test			

**9. TEST LIMITATIONS.** None.

**10 TEST RESULTS**

**a. Discussion.** The SUT applications (Morale Call Manager, e.Notify, and ADAS) were tested by placing multiple ROUTINE precedence calls via the test configuration as shown in figure 2-2. In accordance with the GSCR, switching systems are required to route only ROUTINE calls to automated receiving devices such as the SUT. After calls were completed to the SUT, simulated morale, welfare, and recreation calls and automated directory assistance and event notification calls were extended and completed to verify interoperability between various switching systems (also shown in figure 2-2). Testing with the Nortel Networks MSL-100 switch showed that upon terminating a call (partial or complete), the SUT did not immediately hang-up the call-until it reached its 60,000-millisecond timeout. This caused the MSL-100 to change its line status from call process busy to permanent lockout rather than back to an idle state until the timeout timer expired. To resolve this anomaly, the cutoff disconnect (COD) option had to be applied in Service Order to the line. This anomaly was applicable only to the MSL-100 switch. In addition, completed calls to the SUT were preempted within the simulated DSN (as shown in figure 2-2) to insure that the proper preemption action occurred as required by the GSCR, section 3. All preempted calls received the proper preemption notification tone, and were released and returned to an idle state ready for the subsequent caller.

**b. Test Summary.** The SUT met the critical interoperability requirements for an automated receiving device with two-wire analog interfaces as set forth in reference (c) and is certified for joint use within the DSN.

**11. 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://jitc.fhu.disa.mil/tssi>.