

# Appendix C

# Characterization of Customer Community Networks

---

- Table C-1. Public/Commercial Networks (Satellites)
- Table C-2. Public/Commercial Networks
- Table C-3. DoD Networks
- Table C-4. Networking Technologies

**UNCLASSIFIED**

Appendix C  
IATF Release 3.1—September 2002

**Table C-1. Public/Commercial Networks (Satellites)**

<b>Acronym</b>	<b>Full Name</b>	<b>Used By</b>	<b>Purpose</b>	<b>User Bandwidth</b>	<b>Multiple Access Methods</b>
Globalstar	Globalstar Partnership	International long-haul communication, vehicle op., traveling national and international	LEO satellite; digital; wireless telecom; extend terrestrial cellular	Digital voice and data; 2400–9600 bps	CDMA/FDMA
Iridium	Iridium	Enhanced mobile satellite systems market focus	66 LEO satellites; provide use of portable satellite phones	2.4 kbps–4.8 kbps	TDMA/FDMA
AMSC	American Mobile Satellite Corp.	United States, Puerto Rico, Virgin Islands, 200 miles of coastal waters; land mobile, fixed site, and aeronautical users	Mobile communications for voice, data, digital broadcast dispatch	1.2 kbps–4.8 kbps	FDMA
Ellipso	Ellipsat	Global mobile communication market	LEO; global voice and data services for access to unserved and remote areas	300–9600 bps	CDMA
Inmarsat	International Maritime Satellite Org.	Global personal mobile satellite communication	MEO; satellite communication for commercial emergency and safety app.	Primary modes Mode “A” - 2.4 kbps–9.6 kbps Mode “B” - Digital 0 to 4.8 kbps Mode “M4” - ISDN, 0 to 128 kbps	Mode “A” – SCPC uplink TDM, downlink TDMA
ORBCOMM	Orbital Communications Corp.	Real-time mobile two-way data and messaging services worldwide for U.S. Armed Forces, transportation, utility, oil, and gas	LEO; provides wireless e-mail, fax, and GPS; small fleet and high value asset location and alarm monitoring use	Uplink 2.4 kbps; downlink 4.8 kbps	TBS
Odyssey	Odyssey Worldwide Services	Global coverage	MEO; wireless personal communication	4.8 kbps	CDMA

**Table C-2. Public/Commercial Networks**

<b>Acronym</b>	<b>Full Name</b>	<b>Protocol Authority</b>	<b>Used By</b>	<b>Purpose</b>	<b>Security</b>	<b>User Bandwidth</b>
Internet	Internet	Internet Engineering Steering Group (IESG)	Worldwide	Voice, video, and data applications	N/A	300 bps–1.544Mbps
ATM	Asynchronous Transfer Mode	ATM Forum	Data carriers	Wide area networking	data privacy	2.4 Gbps typical
SONET/SDH	Synchronous Optical Network Synchronous Digital Hierarchy	Bellcore/CCITT; ANSI T1.105, T1.107; ANSI T1.106 and ANSI T1.117, ITU-T	United States, Europe, Japan	Transport of many digital signals with different capacities	N/A	51.48 Mbps up to 2405.376 Mbps
PSTN	Public Switched Telephone Network	ITU-14 pending	Worldwide	Provides a wide variety of voice and data services	N/A	9.6 kbps–155 Mbps

**UNCLASSIFIED**

Appendix C  
IATF Release 3.1—September 2002

**Table C-3. DoD Networks**

<b>Acronym</b>	<b>Full Name</b>	<b>Managed By</b>	<b>Used By</b>	<b>Purpose</b>	<b>Security</b>	<b>Bandwidth (for User Services)</b>	<b>Nature of User Access to Network</b>
SIPRNet	Secret Internet Protocol Router Network	DISA	U.S. DoD	Transport of classified and mission-critical data for DoD users	Network operates system high Secret; links encrypted	64 kbps–1.544 Mbps	Direct network access
ATDNet	Advanced Technology Demonstration Network	DISA	TBS	Research network with various nodes	TBS	TBS	TBS
NIPRNet	Nonclassified Internet Protocol Router Network	DISA	U.S. DoD	Transport of official data for DoD users	Network operates FOUO. Direct connected to the Internet	Up to T-3 rates	Direct network access and mobile dialin support
DISN	Defense Information System Network (Superset of SIPRNet and NIPRNet)	DISA	Global DoD community	Primarily data transport system for DII, including some voice and video	Multiple networks running system high with cryptographic separation via trunk encryptors	Currently as high as DS3 with pressure to increase capacity	Direct and remote dial-in
S-ATM (DAS-C)	DISN ATM Wide Area Network	DISA	DoD community	Secret ATM network; transport of high-speed/bandwidth mission-critical info.	Encryption	T1 up to OC-3 rates	Via agency network(s)
U-ATM (DAWN; DAS-U)	DISN ATM Wide Area Network	DISA	DoD community		N/A	T1 up to OC-3 rates	Via agency network(s)
JWICS	Joint Worldwide Intelligence Communications System	DIA	DoD community and civilian government agencies	Data and video transport; video teleconferencing at SCI level	Link encryption	56 kbps up to T1 rates	Through agency network or fixed facility

**UNCLASSIFIED**

<b>Acronym</b>	<b>Full Name</b>	<b>Managed By</b>	<b>Used By</b>	<b>Purpose</b>	<b>Security</b>	<b>Bandwidth (for User Services)</b>	<b>Nature of User Access to Network</b>
ATMAIL	TBS	TBS	TBS	TBS	TBS	TBS	TBS
DSINet	Defense Simulation Internet	TBS	TBS	TBS	TBS	TBS	TBS
DREN	Defense Research and Engineering Network	DARPA and DISA	TBS	TBS	TBS	155–622 Mbps	TBS
DRSN	Defense Red Switch Network	DISA	Global DoD community	Primarily classified voice system	Trunk encryption	TBS	Phone set
Red IDNX	Red Integrated Digital Network Exchange	USAF	DISN	Data aggregation to achieve bandwidth efficiencies	Trunk encryption	T1 and below	Integrated into transport system
Black IDNX	TBS	TBS	TBS	TBS	TBS	TBS	TBS
MILSTAR	Military Strategic Tactical Relay System	Operated by Air Force Space Command; owned by U.S. Space Command	U.S. military	Emergency action message dissemination; provides tactical survivable communication, including MSE range ext.	Encryption	75 bps–2.4 kbps; medium data rate capability 4.8 kbps–1.544 Mbps	MILSTAR terminal

**UNCLASSIFIED**

**Table C-4. Networking Technologies**

<b>Acronym</b>	<b>Full Name</b>	<b>Protocol Authority</b>	<b>Used By</b>	<b>Purpose</b>	<b>Security</b>	<b>Bandwidth (for User Services)</b>	<b>Multiple Access Method</b>
ISDN	Integrated Services Digital Network	ITU-T, Q.921, Q.931 ANSI T1.601, T1.408; and Bellcore SR 3875	Worldwide	Network browsing, transferring data, remote access	N/A	64000 bps– 1.544 Mbps	N/A
SONET/SDH	Synchronous Optical Network/ Synchronous Digital Hierarchy	Bellcore/CCITT; ANSI T1.105, ANSI T1.106 and ANSI T1.117, ITU-T	United States Europe Japan	TBS	TBS	51.48 Mbps up to 2405.376 Mbps	N/A
ATM	Asynchronous Transfer Mode	ATM Forum	Data carriers	Wide area networking; multimedia and video applications	Data privacy	2.4 Gbps typical	N/A
AMPS	Advanced Mobile Phone Service	EIA/TIA-553 U.S.	United States	Analog voice	N/A	Up to 13 kbps actual data throughput using CDMA tech.	FDMA
PCS	Personal Communications Service	TIA IS- 136A/137A/138A; J- Stds-009/010/011 ETSI PCS 1900, (PCN) DCS 1800	United States Europe	Voice and data services; paging- type services; mobile communications	Authentication and Privacy	7.95 kbps–13 kbps	TDMA FDMA
GSM	Global System for Mobile Communication	European Telecommunications Standardization Institute (ETSI)	Europe	Digital voice, data, SMS	Authentication and Privacy	9,600 bps	TDMA FDMA
DCS	Digital Cellular System	TIA IS-95; IS-136A (D-Amps)	United States	Digital voice, data	Authentication	7.9 kbps	TDMA FDMA
Frame Relay	Frame Relay	Frame Relay Forum (NNI std)-future	United States; corporations	Data communications; some voice and video	N/A	56 kbps– 1.544 Mbps	TBS

UNCLASSIFIED

Acronym	Full Name	Protocol Authority	Used By	Purpose	Security	Bandwidth (for User Services)	Multiple Access Method
SMDS	Switched Multi-megabit Data Service	Compatible with IEEE 802.6 MAN and B-ISDN	Local exchange carrier customers requiring large communications pipeline	Large data transfers; video, graphics, CAD/CAM, x-rays	N/A	1.544 Mbps–45 Mbps	TBS

**UNCLASSIFIED**

Appendix C  
IATF Release 3.1—September 2002

**This page intentionally left blank.**