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## **Validated Products List 1993 No. 1**

**Programming Languages  
Database Language SQL  
Graphics  
GOSIP  
POSIX  
Computer Security**

**Judy B. Kailey  
Editor**

U.S. DEPARTMENT OF COMMERCE  
Technology Administration  
National Institute of Standards  
and Technology  
Computer Systems Laboratory  
Software Standards Validation Group  
Gaithersburg, MD 20899

January 1993

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(Supersedes October 1992 issue)



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**NATIONAL INSTITUTE OF STANDARDS  
AND TECHNOLOGY  
John W. Lyons, Director**





## **FOREWORD**

The Validated Products List is a collection of registers describing implementations of Federal Information Processing Standards (FIPS) that have been validated for conformance to FIPS. The Validated Products List also contains information about the organizations, test methods and procedures that support the validation programs for the FIPS identified in this document.

The Validated Products List is updated quarterly.



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# 1. INTRODUCTION

## 1.1 Purpose

The testing of Information Technology (IT) Products to determine the degree to which they conform to specific Federal Information Processing Standards (FIPS) may be required by Government agencies as specified by the FIPS, Federal Information Resources Management Regulation (FIRMR) Parts 201-20.303, 201-20.304, and 201-39.1002, and the associated Federal ADP and Telecommunications Standards Index. Products having a current validation certificate or test report may be offered or delivered by vendors in response to requirements as set forth in solicitations by Federal agencies. The Validated Products List (VPL) contains conformance testing information for the following IT Standards:

Programming Languages COBOL, Fortran, Ada, Pascal, C, and MUMPS  
Database Language SQL  
Graphics  
GOSIP  
POSIX  
Computer Security

This List is updated and published quarterly. The information contained herein is supplied by the contributors listed in Section 2.6 and Appendix A, and is current as of the tenth of the month preceding the publication date. Copies of the VPL may be obtained from:

National Technical Information Service  
U.S. Department of Commerce  
5285 Port Royal Road  
Springfield, VA 22151.

Subscriptions: (703) 487-4630  
Individual Copies: (703) 487-4650

Ordering Number: PB92-937300

The entries in the printed VPL are contained in WordPerfect Version 5.1 files and may be accessed on the Internet using the instructions listed below.

Type: ftp speckle.ncsl.nist.gov (internet address is 129.6.59.2)  
Login as user ftp  
Type your e-mail address as the password  
Type: cd pub/vpl

Questions or comments concerning the VPL should be directed to:

National Institute of Standards and Technology (NIST)  
Computer Systems Laboratory  
Software Standards Validation Group  
Building 225, Room A266  
Gaithersburg, MD 20899  
Telephone (301) 975-3274

## **1.2 Document Organization**

### **1.2.1 Programming Languages**

Section 2 identifies those COBOL, Fortran, Pascal, C, and Ada programming language processors that have a current validation certificate referencing the applicable FIPS as of the date of this publication.

### **1.2.2 Database Language SQL**

Section 3 identifies those SQL language processors that have a registered test report for FIPS PUB 127-1 as of the date of this publication.

### **1.2.3 Graphics**

Section 4 lists those Graphical Kernel System (GKS) implementations and Computer Graphics Metafiles (CGMs) that have a current validation certificate for FIPS PUB 120-1 or FIPS PUB 128, respectively.

### **1.2.4 GOSIP**

Section 5 contains information regarding FIPS PUB 146-1, GOSIP, conformance testing registers.

### **1.2.5 POSIX**

Section 6 identifies POSIX products that have a current validation certificate for FIPS PUB 151-1.

### **1.2.6 Computer Security**

Section 7 contains information regarding validated products for FIPS PUB 46-1, DES, and FIPS PUB 113, MAC, ANSI X9.17.

### **1.2.7 FIPS Conformance Testing Products**

Appendix A lists FIPS conformance testing products and services available to the public. Information for these products and services may be obtained by contacting the appropriate person listed.



## 2. PROGRAMMING LANGUAGES

### 2.1 FIPS Programming Language Standards

As specified by the FIPS, FIRMR and the associated Federal ADP and Telecommunications Standards Index, Federal agencies when acquiring language processors, are responsible for assuring that processors are in accordance with the following FIPS for programming languages:

- a. COBOL processors must satisfy the provisions of FIPS PUB 21-3, COBOL, and must be identified as implementing all of the language elements of at least one of the subsets of FIPS COBOL as specified in FIPS PUB 21-3.
- b. BASIC processors must satisfy the provisions of FIPS PUB 68-2, BASIC.
- c. Fortran processors must satisfy the provision of FIPS PUB 69-1, Fortran, and must be identified as implementing all of the language elements of the subset or full levels of FIPS Fortran as specified in FIPS PUB 69-1.
- d. Pascal processors must satisfy the provisions of FIPS PUB 109, Pascal.
- e. Ada processors must satisfy the provisions of FIPS PUB 119, Ada.
- f. MUMPS processors must satisfy the provisions of FIPS PUB 125, MUMPS.
- g. C processors must satisfy the provisions of FIPS PUB 160, C.
- h. VHDL processors must satisfy the provisions of FIPS PUB 172, VHDL.

Copies of the above publications are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Conformance testing programs are currently available for all above FIPS except for the programming language BASIC and VHDL. A test suite for BASIC is being developed.

### 2.2 Organization of Programming Language Processor Entries

The entries in the VPL for programming language processors are presented as follows:

- The **VENDOR ID** column contains the name of the Vendor of the processor.
- The **PROCESSOR ID** column contains the Processor identification and the Validation Summary Report (VSR) or certificate number. This number refers to the VSR that was produced as a result of the testing. The VSR describes the testing environment and details any processor nonconformity that was detected as a result of the testing. Information for obtaining a VSR is listed in section 2.6.
- Derived processors in the **VENDOR & COMPILER** column are Ada processors that have been derived from the processor/hardware/operating system environment used during the testing. In order for derived processors to be listed here, they must be properly registered with the Department of Defense, Ada Joint Program Office (AJPO) by the vendor of the processor.

- The **HARDWARE & OPERATING SYSTEM** column presents the hardware and operating system environment (including pertinent supporting system software) used during the validation. In the case of Ada processors, those environments for derived processors will appear in this column.
- The **EXPIRY DATE** column lists the expiration date of the Certificate of Validation. A processor may be included in the List after the certificate has expired if the validation is in process. Notification must be received by NIST at least 30 days prior to publication of the List in order for such a processor to be included. In this case the expiration date will be followed by "(pending)".
- For COBOL processors, the **SUBSET** column cites the applicable Federal Subset. For Fortran processors, the **LEVEL** column specifies the applicable Federal level. For Pascal processors, the ISO 7185 Pascal Standard Level (ISO 7185 Level 0 is equivalent to FIPS 109). This designation is presented in the **PROCESSOR ID** column.
- The entries in the **OTHER ENVIR** column are other hardware and operating system environments in which the processor operates. The vendor of the processor has certified that the identified processor, when operating under the environments included in this column, produces the same test results as those obtained from the hardware and operating system environment used during the validation. Test results and other information from these environments may be required as evidence for entries to be included in this column.
- The word "Yes" in the **NONCONFORMITIES** column indicates that the processor did not conform to the applicable FIPS in one or more cases as evidenced by the validation. The Validation Procedures allow for certain processors to be validated with nonconformities, with the stipulation that the nonconformities are corrected and the processor is revalidated within one year. The VSR should be reviewed for details of the nonconformities.

## **2.3 Validation of Processors**

### **2.3.1 Validation Requirements**

In accordance with the requirements referenced in Section 1.1, language processors offered to the Government for purchase, lease, or use in connection with ADP services shall be validated for conformance to FIPS for programming languages. To confirm that the specifications of the designated FIPS have been met:

- a. the processor shall be tested with the Compiler Validation System (CVS) approved by NIST,
- b. the processor validations shall be conducted in accordance with NIST validation procedures,
- c. a Validation Summary Report (VSR) shall be produced summarizing the test results of the CVS on the designated processor for that FIPS,
- d. all nonconformities noted in the VSR shall be corrected within twelve months,
- e. a Certificate of Validation shall be issued if validation results warrant. In order for an Ada processor to receive a Certificate of Validation the processor must successfully pass all applicable tests of the Ada Compiler Validation Capability (ACVC) without exception.



The Federal ADP and Telecommunications Standards Index supplies standard terminology which may allow for delayed validation. When delayed validation is allowed, the offeror may meet this requirement by showing evidence of having submitted the processor for validation. Proof of submission is in the form of a letter from NIST scheduling the validation.

Programming language processors offered to the Federal Government must comply with the applicable Government requirements. Failure to comply with these requirements shall be deemed sufficient cause to declare a bidder non-responsive or to declare a vendor in default for failure to deliver required software.

### **2.3.2 Placement in the List**

For a processor to be placed in the List it must:

- a. have been officially validated within the past twelve calendar months, and
- b. have no errors remaining that were identified during a previous test.

### **2.3.3 Removal from the List**

A processor is removed from the List when:

- a. the processor is not officially tested within twelve calendar months, or
- b. testing indicates that the processor still contains errors identified during a previous validation.

### **2.3.4 Validation Procedures**

Validation procedures are published in the following documents:

Compiler Validation Procedures, dated February 1, 1990  
Ada Compiler Validation Procedures and Guidelines, Version 2.1, August, 1990  
Pascal Validation Policy and Procedures, Version 5.3, February 20, 1991  
MUMPS Validation Procedures, Version 1.0, dated August 13, 1992

## **2.4 Certificate of Validation**

A Certificate of Validation is issued for those programming language processors that have been tested and are considered to be in compliance with the FIPS as specified by the FIPS, FIRMR and the associated Federal ADP and Telecommunications Index.

The requirement for retesting may be waived and the certificate of validation extended at the option of NIST if:

- a. no errors were identified during the previous testing of the processor,
- b. the vendor certifies, in writing, to NIST that no changes have been made to either the processor or the supporting system software, and
- c. no new version of the validation system has been officially released during the interim period.

## 2.5 Language Processor Validation Suites

Following are the validation suites and ordering information for testing programming language processors for conformance to FIPS.

- a. Copies of the COBOL, Fortran, MUMPS, and Ada Compiler Validation Suites may be purchased from:

National Technical Information Service (NTIS)  
5285 Port Royal Road  
Springfield, VA 22161  
Telephone (703) 487-4650 (Voice)  
(703) 321-8547 (FAX)

COMPILER VALIDATION SYSTEM [MEDIUM/FORMAT]	VERSION	NTIS ACCESSION NUMBER
COBOL 85 (CCVS85)	3.1	PB91-508002
Fortran (FCVS78)	2.0	PB85-226736
Ada [Tape/Backup]	1.11	ADA212551
Ada [Tape/Tar]	1.11	ADA212437
Ada [Tape ANSI Standard]	1.11	ADA212548
Ada [Disk (MS/DOS)]	1.11	ADA212549
MUMPS [Tape/Backup]	7.61	PB91-507699
MUMPS [Tape/ANSI]	7.61	PB91-507715
MUMPS [Tape/Tar]	7.61	PB91-507723
MUMPS [Disk (MS-DOS)]	7.61	PB91-507707

- b. The current version of the Pascal Validation System (PVS) is Version 5.4 and is available from:

British Standards Institution (BSI)  
Software Engineering Department  
BSI Quality Assurance  
P. O. Box 375  
Milton Keynes  
MK14 6LL  
ENGLAND  
Telephone (011) +44-908-220908 (Voice)  
(011) +44-908-220671 (FAX)

- c. The current version of the ANSI C Validation Suite (ACVS<sup>™</sup>) is Version 3.0 and is available from:

Perennial, Inc.  
4699 Old Ironsides Drive  
Suite 210  
Santa Clara, CA 95054  
Telephone (408) 748-2900 (Voice)

## 2.6 Testing Laboratories and Supporting Organizations

The organizations listed below have performed validations, supplied information, or are sources for Validation Summary Reports (VSR) for programming languages. These organizations may be contacted for validation information and for copies of VSR(s). COBOL and Fortran VSR(s) may be obtained from NIST. Pascal VSR(s) whose VSR numbers begin with "NIST" or end in "US" may also be obtained from NIST. Pascal VSR(s) whose VSR numbers end in "UK" are available from BSI. Ada VSR(s) may be obtained from the Ada Information Clearinghouse, the National Technical Information Service, or from the Ada Validation Facility (AVF) that produced the VSR. To obtain a copy of a VSR from an AVF, locate the upper case letter in the certificate number (e.g., 870608W1. . .). That letter corresponds to the letter in the CODE column to the left of the organizations listed below.

<u>CODE</u>	<u>ORGANIZATION</u>	<u>CONTACTS</u>	<u>LANGUAGE</u>
S	National Institute of Standards and Technology Software Standards Validation Group Building 225, Room A266 Gaithersburg, MD 20899 (301) 975-3274 Telex: 197674 NBS UT Telecopier: (301) 590-0932	L. Arnold Johnson Judy Kailey Woody Schneider Kathryn Miles William Dashiell Carmelo Montanez	All COBOL, Fortran BASIC, C Pascal, C Ada, MUMPS, SQL Ada, MUMPS, C
N	National Computing Centre Limited (NCC) Oxford Road Manchester M1 7ED ENGLAND (011) +44 (61) 228 6333 +44 (61) 236 4715 (FAX) Telex 668962	Jane Pink Jon Leigh David Bamber	COBOL Fortran Ada
	German National Research Center for Computer Science (GMD) Department Scientific Visualization Supercomputer Center (HLRZ) P. O. 1316, Schloss Birlinghoven D-W-5205 Sankt Augustin 1 Germany (011) +49-2241-14-2706 (voice) (011) +49-2241-14-2618 (FAX) kirsch@gmdzi.gmd.de	Berthold Kirsch	Fortran
	Bureau Inter Administration de Documentation Informatique (BIADI) 21 Rue Bara 92132 Issy France	E. Bialot	COBOL Fortran
	Instituto Italiano del Marchio di Qualita (IMQ) Via Quintiliano, 43 20138 Milano Italy +39-2-5073266	Angelo Belloni	COBOL Fortran

	JMI Institute 21-25, Kinuta 1-Chome Setagaya-Ku, Tokyo 157 Japan +81 3 3416 9600	Y. Fukui	COBOL Fortran
	British Standards Institution (BSI) P.O. Box 375 Milton Keynes MK14 6LL ENGLAND (011) +44 0908-220908 Telex: 827682 BSIQAS G	John Souter	Pascal
W	Ada Validation Facility Language Control Facility ASD/SCEL Wright-Patterson AFB, OH 45433-6503 (513) 255-4472	Bobby Evans	Ada
B or A	BNI-AVF AFNOR Direction Certification Tour Europe, Cedex 7 92080 Paris La Defense FRANCE (011) 33-142915960 Telefac: (011) 33-142915656 Telex: AFNOR 611 974 F	M. Alphonse Philippe	Ada
I	IABG-AVF Industrieanlagen-Betriebsgesellschaft Dept. ITE Einsteinstrasse 20 D-8012 Ottobrunn Federal Republic of Germany +49-89-6088-2477 e-mail: tonndorf@ajpo.sei.cmu.edu	Michael Tonndorf	Ada
	Ada Information Clearinghouse 3D139 1211 S. Fern, C-107 The Pentagon Washington, D.C. 20301-3081 (703) 685-1477		Ada VSR(s)
	National Technical Information Service U.S. Department of Commerce 5285 Port Royal Road Springfield, VA 22161 (703) 487-4650		Ada VSR(s)



## 2.7 COBOL PROCESSORS

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	SUBSET	OTHER ENVIR HW/OS	NONCON- FORMITIES
Amdahl Corporation	Amdahl COBOL, Version 1 Release 3 <i>NIST-92/2081</i>	Amdahl 5990 <i>MSL Version 2 Release 1.4</i>	12/1/93	High	Amdahl 5995-1400, 5995M, 5890 <i>MSL Version 2, Release 1.4</i>	Yes
Bull HN	COBOLM Release 2.1 <i>NIST-92/1201</i>	DPS 6000 Model 634 <i>GCOS6 HVS Version 2.0</i>	2/1/93	High	DPS6/EMMU <i>GCOS6 Mod 400 Release 4.1</i> DPS6 PLUS <i>HVS6 PLUS Version 2.0</i> DPS 6000 <i>GCOS6 HVS Version 2.0</i>	Yes
	COBOL 85 Version 8C83.0 <i>NIST-92/1681</i>	DPS-90 <i>GCOS8 Version 4020 Release 3</i>	7/1/93	High	DPS-9000, DPS-8000 <i>GCOS8 Version 4020 Release 3</i>	
Computer Associates	CA-Realia COBOL Version 4.2 Release V <i>NIST-92/1261</i>	IBM PS/2 Model 80 <i>OS/2 Version 1.3</i>	2/1/93	Intermediate	IBM PS/2 Model 55SX, 60, 70, 90, 95 <i>OS/2 Version 1.3</i> IBM PS/2 Model 55SX, 60, 70, 80, 90, 95 <i>OS/2 Version 1.21</i>	
	CA-Realia COBOL Version 4.2 Release V <i>NIST-92/1262</i>	Compaq Deskpro 386 <i>MS-DOS Version 5.0</i>	2/1/93	Intermediate	Compaq Systempro, Deskpro 386, Portable 386, Portable III <i>MS-DOS Version 2.1 thru 5.0</i>	
Control Data Corporation	COBOL/VE Version 2.0 Release 91324 <i>NIST-92/1101</i>	CYBER 180-995 <i>NOS/VE Version 1.6.1 Level 780</i>	1/1/93	High	CYBER 180 Series; CYBER 2000 <i>NOS/VE Version 1.6.1 Level 780</i>	
	MicroFocus COBOL/2 Version 1.2 <i>NIST-92/1102</i>	Control Data 4680 MP <i>EP/IX Version 1.4.2</i>	1/1/93	High	Control Data 4000 Series <i>EP/IX Version 1.4.2</i>	Yes
Digital Equipment Corporation	VAX COBOL Version 5.1 <i>NIST-92/2244</i>	VAX 8800 <i>VAX/VMS Version 5.5</i>	12/1/93	High	VAX 4000 models 200, 300; VAX 6000 Mod 200, 300, 400, 500; VAX 8200, 8250, 8300, 8350, 85XX, 8600, 8650, 8700, 8800, 8810, 8820, 8830, 8840; VAX 9000 models 210, 400; VAXft 3000 model 310; VAX-11/730, /780, /785; MicroVAX II, 2000, 3100, 3300, 3400, 3500, 3600, 3800, 3900; VAXstation II, 2000, 3100, 3200, 3500, 3520, 3540; VAX-server 3100, 3300, 3400, 3500, 3600, 3602, 3800, 3900, 4000 models 200, 300; 6000 models 210/220, 310/320, 410/420, 510/520; <i>VAX/VMS Version 5.5</i>	

## COBOL PROCESSORS *Continued*

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	SUBSET	OTHER ENVIR HW/OS	NONCON- FORMITIES
Hewlett-Packard Company	COBOL/HP-UX Version B.07.00 <i>NIST-92/1661</i>	HP 9000 Series 370 <i>HP-UX Version 8.0</i>	5/1/93	High	HP 9000 Series 318, 319, 320, 330, 332, 340, 350, 360, 370, 375, 400, 425 <i>HP-UX Version 8.0</i>	Yes
	COBOL/HP-UX Version B.06.25 <i>NIST-92/1662</i>	HP 9000 Series 850 <i>HP-UX Version 8.0</i>	5/1/93	High	HP 9000 Series 815, 822, 825, 832, 807, 817, 827, 834, 835, 837, 842, 845, 847, 850, 852, 855, 857, 860, 865, 867, 870, 877, 635, 645, 870/200, 870/300, 870/400, 720, 730, 750, 705, 710 <i>HP-UX Version 8.0</i>	Yes
	COBOL/IX Version A.04.06 <i>NIST-92/1663</i>	HP3000 Series 930 <i>MPE XL Version A.40.00</i>	5/1/93	High	HP3000 Series 917, 920, 922, 925, 927, 932, 935, 937, 947, 948, 949, 950, 955, 957, 958, 960, 967, 980/100, 980/200 <i>MPE XL Version A.40.00</i>	
IBM Canada, Ltd.	COBOL/400 Version 2 Release 2 <i>NIST-92/2071</i>	AS/400 <i>OS/400 Version 2 Release 2</i>	9/1/93	Intermediate		
IBM Corporation	IBM SAA AD/CYCLE COBOL/370 Version 1 Release 1 <i>NIST-93/1021</i>	IBM 3090 <i>MVS/ESA Version 4.2.2</i>	12/1/93	High	IBM 390, 3000, 4381-T92, 9000 <i>MVS/ESA Version 3</i>	
	IBM SAA AD/CYCLE COBOL/370 Version 1 Release 1 <i>NIST-93/1022</i>	IBM 3090 <i>VM/ESA Version ESA Release 1.0</i>	12/1/93	High	IBM 390, 3000, 4381-T92, 9000 <i>VM/ESA Version ESA Release 1.0</i>	
	VS COBOL II Version 1 Release 3.2 <i>NIST-92/1361</i>	IBM 3090 Model 400E <i>MVS/ESA Version 4.2.2</i>	8/1/93	Intermediate	IBM 370, 390, 3000, 4300, 9000 <i>MVS/370, MVS/XA Version 1.2</i>	
	VS COBOL II Version 1 Release 3.2 <i>NIST-92/1362</i>	IBM 4381 Model R14 <i>VSE/ESA Version 1 Release 1</i>	8/1/93	Intermediate	IBM 370, 390, 3000, 4300, 9000 <i>VSE/ESA Version 1 Release 1</i>	
	VS COBOL II Version 1 Release 3.2 <i>NIST-92/1363</i>	IBM 3090 Model 600J <i>VM/ESA Version ESA Release 1.0</i>	8/1/93	Intermediate	IBM 370, 390, 3000, 4300, 9000 <i>VM Version SP Release 6</i>	
Micro Focus	Micro Focus COBOL Version 3.0 <i>NIST-92/1961</i>	IBM PS/2 Model 80 <i>OS/2 Version 1.3</i> IBM PS/2 Model 70 <i>IBM DOS Version 5.0</i> IBM PS/2 Model 90 <i>IBM OS/2, Version 2.0</i> Compaq Deskpro <i>Microsoft OS/2, Version 1.21</i>	8/1/93	High	IBM PS/2 80 <i>OS/2 Version 2.0</i> IBM PS/2 60, 65SX, 70 <i>OS/2 Version 1.3</i> IBM PS/2 60, 65SX, 80 <i>DOS Version 5.0</i> IBM PS/2 60, 65SX, 70, 80 <i>DOS Version 4.0</i> IBM PS/2 60, 65SX, 70, 80 <i>DOS Version 3.3</i>	

## COBOL PROCESSORS *Continued*

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	SUBSET	OTHER ENVIR HW/OS	NONCON- FORMITIES
	Micro Focus COBOL for AIX Version 3.0 (IBM RS/6000) <i>NIST-92/1963</i>	IBM RS/6000 Powerstation 320 <i>AIX Version 3.2</i>	8/1/93	High		
	Micro Focus COBOL for UNIX Version 3.0 (Intel 80386/80486 running UNIX) <i>NIST-92/1964</i>	Compaq Deskpro 386/25 <i>SCO UNIX Version v/386 Release 3.2</i>	8/1/93	High		
	Micro Focus COBOL/2 for Unix Version 1.2 (Digital DECStation) <i>NIST-92/1965</i>	Digital DECStation <i>Ulrix, Version 4.0</i>	8/1/93	High		Yes
	Micro Focus COBOL/2 for Unix Version 1.2 (Motorola 88000) <i>NIST-92/1966</i>	Motorola Delta 88000 <i>UNIX, Version v/88 Release R32v2</i>	8/1/93	High		Yes
	Micro Focus COBOL/2 for UNIX Version 1.3 (MIPS) <i>NIST-92/1967</i>	MIPS Magnum <i>MIPS/OS Version 4.52</i>	8/1/93	High		Yes
	Micro Focus COBOL/2 for UNIX Version 1.3 (Intel 80386/80486 running UNIX) <i>NIST-92/1968</i>	UNISYS 6000-50 <i>UNIX Version v/386 Release 4.0.2</i>	8/1/93	High		Yes
	Micro Focus COBOL/2 for UNIX Version 1.3 (Amdahl) <i>NIST-92/1969</i>	Amdahl 5880-P142 <i>UTS Version 2.1</i>	8/1/93	High		Yes
	Micro Focus COBOL/2 for UNIX Version 1.3 (Data General AViion) <i>NIST-92/196A</i>	Data General AViion <i>DG/UX Version 5.4</i>	8/1/93	High		Yes
	Micro Focus COBOL for AIX Version 1.3 (IBM AIX/370) <i>NIST-92/196B</i>	IBM 4381 <i>AIX Version 1.2</i>	8/1/93	High		Yes
	Micro Focus COBOL/2 for UNIX Ver 1.3 (NCR 3000 running UNIX SVR4) <i>NIST-92/196C</i>	NCR System 3000 <i>UNIX System, Version v/386, Release 4.0 Version 2</i>	8/1/93	High		Yes

## COBOL PROCESSORS *Continued*

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	SUBSET	OTHER ENVIR HW/OS	NONCON- FORMITIES
	Micro Focus COBOL for AIX Version 1.3 (IBM PS/2) <i>NIST-92/196D</i>	IBM PS/2 Model 80 <i>AIX, Version 1.2</i>	8/1/93	High		Yes
Microsoft Corporation	Microsoft COBOL Version 5.0 <i>NIST-92/1962</i>	IBM PS/2 Model 60 <i>IBM DOS Version 5.0</i>  Compaq Deskpro <i>Microsoft DOS, Version 4.01</i>	8/1/93	High	IBM PS/2 Model 80 <i>DOS Version 3.3</i>	
Pyramid Technologies, Corp.	COBOL85 Version 5.1 Release 92a030 <i>NIST-91/1861</i>	MIServer <i>OSx Version 5.1a</i> <i>Release 92a030</i>	3/1/93	High	Pyramid 9000; 98x <i>OSx Version 5.1a Release 92a030</i>	
Siemens Nixdorf Informations- systeme AG	COBOL85 Version 2.0A <i>NIST/NCC-92/958</i>	7.592I <i>BS2000 Version 10.0</i>	2/1/93	High		
Tandem Computers Inc.	COBOL85 Version D10 <i>NIST-92/1462</i>	Nonstop CLX <i>Guardian 90 Version D00</i>	5/1/93	High	NonStop Cyclone and Cyclone/R; NonStop VLX and CLX/R <i>Guardian 90 Version D00</i>	Yes
Unisys Corporation	A Series COBOL85, Mark 4.0.1.2 <i>NIST-92/2121</i>	Unisys A10 <i>MCP/AS MARK 4.0</i>	10/1/93	High	Unisys A Ser Micro A, A1, A2, A3, A4, A5, A6, A9, A10, A11, A12, A15, A16, A17, A19; <i>MCP/AS MARK 4.0</i>	
Wang Laboratories, Inc.	VS COBOL 85 Version 2.12.01 <i>NIST-92/2281</i>	WANG VS 300 <i>VS OS Version 7.40.00</i>	12/1/93	High	VS 5, 6, 15, 25, 45, 65, 85, 90, 100, 300; 5000, 7000, 8000, 10000 <i>VS OS Version 7.20.00 - 7.40.00</i> VS 300; 7000, 8000, 10000 <i>VS OS Version 7.30.00 - 7.40.00</i>	Yes



## 2.8 FORTRAN PROCESSORS

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	LEVEL	OTHER ENVIR HW/OS	NONCON- FORMITIES
Amdahl Corporation	Amdahl Fortran Version 1 <i>NIST-92/2082</i>	Amdahl 5990 <i>MLS Version 2 Release 1.4</i>	12/1/93	Full	Amdahl 5995-1400, 5995M, 5890 <i>MLS Version 2 Release 1.4</i>	
Bull HN	FORTRANA Release R3.1 <i>NIST-92/1202</i>	DPS 6000 Model 634 <i>GCOS6 HVS Version 2.0</i>	2/1/93	Full	DPS6/EMMU <i>GCOS6 MOD 400 Release 4.1</i> DPS6 PLUS <i>HVS6 PLUS Version 2.0</i> DPS 6000 <i>GCOS6 HVS Version 2.0</i>	
	Fortran 77-ESV Version 8FV4.1 <i>NIST-92/1682</i>	DPS-9000E <i>GCOS8 Version SR40203</i>	7/1/93	Full	DPS-90, DPS-8000 <i>GCOS8 Version SR40203</i>	
Concurrent Computer Corporation	SP-2450 (Fortran 77) Version 2 Release 1 <i>NIST-92/1501</i>	7100 <i>RTU 6.1</i>	6/1/93	Full	7400, 7500, 7200, 7502 <i>RTU Version 6.1</i> 6300, 6350, 6400, 6450, 6600, 6605, 6650, 6652, 6655, 6700, 6705, 6750, 6752 <i>RTU Version 6.0</i>	
	SP-2450 (Fortran 77) Version 2 Release 2 <i>NIST-92/1504</i>	8500/4 <i>RTU 6.0A</i>	6/1/93	Full	8450, 8550, 8400 <i>RTU Version 6.0A</i>	
	Fortran VII Z Version R06 Release 01 <i>NIST-92/1502</i>	3280 MPS <i>OS/32 Version R09 Release 01</i>	6/1/93	Full	3205, 3210, 3220, 3230, 3240, 3250, 3230XP, 3250XP, 3280XP, 3230MPS, 3260MPS, 3280E MPS; Micro 3200CS*, Micro 3200ES*, Micro 3200 MPS* <i>OS/32 Version R09 Release 01</i>	
	Fortran VII O Version R06 Release 01 <i>NIST-92/1503</i>	3280 MPS <i>OS/32 Version R09 Release 01</i>	6/1/93	Full	3205, 3210, 3220, 3230, 3240, 3250, 3230XP, 3250XP, 3280XP, 3230MPS, 3260MPS, 3280E MPS; Micro 3200CS*, Micro 3200ES*, Micro 3200 MPS* <i>OS/32 Version R09 Release 01</i>	
Control Data Corporation	Fortran/VE 1 Version 1.7 Level 780 <i>NIST-92/1421</i>	CYBER 180-995 <i>NOS/VE Version 1.6.1 Level 780</i>	4/1/93	Full	CYBER 180 Series; CYBER 2000 <i>NOS/VE Version 1.6.1 Level 780</i>	
	Fortran/VE 2 Version 2.6 Level 780 <i>NIST-92/1422</i>	CYBER 180-995 <i>NOS/VE Version 1.6.1 Level 780</i>	4/1/93	Full	CYBER 180 Series; CYBER 2000 <i>NOS/VE Version 1.6.1 Level 780</i>	
	Fortran 77 Version 2.2.0 <i>NIST-92/1103</i>	Control Data 4680 MP <i>EP/IX Version 1.4.2</i>	1/1/93	Full	Control Data 4000 Series <i>EP/IX Version 1.4.2</i>	
	Peak Fortran Version 1.1 <i>NIST-92/1104</i>	Control Data 4680 MP <i>EP/IX Version 1.4.2</i>	1/1/93	Full	Control Data 4000 Series <i>EP/IX Version 1.4.2</i>	

## FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	LEVEL	OTHER ENVIR HW/OS	NONCON- FORMITIES
Convex Computer Corporation	Convex Fortran Version 7.0 <i>NIST-92/1521</i>	Convex C3820 <i>Convex OS Version 10.0</i>	4/1/93	Full	Convex C38 Series <i>Convex OS Version 10.0</i>	
	Convex Fortran Version 7.0 <i>NIST-92/1522</i>	Convex C240 <i>Convex OS Version 10.0</i>	4/1/93	Full	Convex C1, C2, C32 Series <i>Convex OS Version 9.1</i>	
	Convex Fortran Version 7.0 <i>NIST-92/1523</i>	Convex C3420 <i>Convex OS Version 10.0</i>	4/1/93	Full	Convex C34, 31, 53 Series <i>Convex OS Version 10.0</i>	
Cray Research, Inc.	CF Compiling System Release 5.0.1 <i>NIST-92/1221</i>	Cray X-MP <i>UNICOS Release 6.1.5A</i>	3/1/93	Full	Cray X-MP EA & Y-MP Series In X-mode <i>UNICOS Release 6.1.5A</i>	
	CF77 Compiling System Release 5.0.1 <i>NIST-92/1222</i>	Cray Y-MP/832 <i>UNICOS Release 6.1.5A</i>	3/1/93	Full	Cray Y-MP Series; Cray X-MP EA Series <i>UNICOS Release 6.1.5A</i>	
	CF77 Compiling System Release 5.0.1 <i>NIST-92/1223</i>	Cray-2S 4/128 <i>UNICOS Release 6.1.5A</i>	3/1/93	Full	Cray-2S Series; Cray-2 Series <i>UNICOS Release 6.1.5A</i>	
Digital Equipment Corporation	DEC Fortran Version 3.2 <i>NIST-92/2241</i>	DECstation 5000, Mod 200 <i>Ultrix Version 4.2</i>	12/1/93	Full	Decstation 2100 3100 3100s; 5000-120/125, 200, 200CX, 200PX, 200PXG, 200PXG Turbo; DECsystem 3100, 5000 Mod 200, 5100, 5400, 5500, 5810, 5820, 5830, 5840 <i>Ultrix for RISC Version 4.2</i>	
	DEC Fortran Version 3.1 <i>NIST-92/2242</i>	DECstation 5000-125 <i>OSF Version 1.0</i>	12/1/93	Full	Decstation 2100 3100 3100s; 5000-120/125, 200, 200CX, 200PX, 200PXG, 200PXG Turbo; DECsystem 3100, 5000 Mod 200, 5100, 5400, 5500, 5810, 5820, 5830, 5840 <i>OSF Version 1.0</i>	
	VAX Fortran Version 5.8 <i>NIST-92/2243</i>	VAX 6000-420 <i>VAX/VMS Version 5.4</i>	12/1/93	Full	VAX 4000 Mod 200 300; 6000 Series 200 300 400 500; 8200 8250 8300 8350 85xx 8600 8650 8700 8800 8810 8820 8830 8840; 9000 Mod 210 Ser 400; VAXft 3000-310; VAX-11/730/750/780/785; MicroVAX II 2000 3100 3300 3400 3500 3600 3800 3900; VAXstation II 2000 3100 3200 3500 3520 3540; VAX-server 3100 3300 3400 3500 3600 3602 3800 3900 4000 Mod 200 300; 6000 Mod 210/220 310/320 410/420 510/520 <i>VMS Version 5.4</i>	

## FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	LEVEL	OTHER ENVIR HW/OS	NONCON- FORMITIES
	DEC Fortran for OpenVMS VAX, Version 6.0 <i>NIST-92/2244</i>	VAX 6000-420 <i>VMS Version 5.4</i>	12/1/93	Full	VAX 4000 Mod 200 300; 6000 Series 200 300 400 500; 8200 8250 8300 8350 85xx 8600 8650 8700 8800 8810 8820 8830 8840; 9000 Mod 210 Ser 400; VAXft 3000-310; VAX-11/730/750/780/785; MicroVAX II 2000 3100 3300 3400 3500 3600 3800 3900; VAXstation II 2000 3100 3200 3500 3520 3540; VAX-server 3100 3300 3400 3500 3600 3602 3800 3900 4000 Mod 200 300; 6000 Mod 210/220 310/320 410/420 510/520 <i>VMS Version 5.4</i>	
	DEC Fortran for OpenVMS AXP, Version 6.0 <i>NIST-92/2246</i>	DEC 3000-500 <i>Open VMS AXP Version 1.0</i>	12/1/93	Full	DEC/10000, /7000, /4000, /3000, 2000, 1000 <i>Open VMS AXP Version 1.0</i>	
	VAX Fortran Ultrix Version 5.1 <i>NIST-92/2245</i>	VAX 6320 <i>VMS Version 5.4</i>	12/1/93	Full	VAX 4000 Mod 200 300; 6000 Series 200 300 400 500; 8200 8250 8300 8350 85xx 8600 8650 8700 8800 8810 8820 8830 8840; 9000 Mod 210 Ser 400; VAXft 3000-310; VAX- 11/730/750/780/785; MicroVAX II 2000 3100 3300 3400 3500 3600 3800 3900; VAXstation II 2000 3100 3200 3500 3520 3540; VAX-server 3100 3300 3400 3500 3600 3602 3800 3900 4000 Mod 200 300; 6000 Mod 210/220 310/320 410/420 510/520 <i>Ultrix Version 4.2</i>	
Edinburgh Portable Compilers LTD	EPC Fortran 77 Version 2.6.4.1 <i>NIST/NCC-92/961</i>	ICL DRS 3000 <i>ICL DRS/NX SVR4 Version 5.0</i>	10/13/93	Full		
	EPC Fortran 77 Version 2.6.4.4 <i>NIST/NCC-92/962</i>	ICL DRS 6000 <i>ICL DRS/NX SVR4 Version 5.0</i>	10/13/93	Full		
Encore Computer Corporation	Parallel Fortran + Version 1.1 <i>NIST-92/1544</i>	Encore 93 <i>UMAX V Version 3.1</i>	4/1/93	Full	Encore 91 <i>UMAX V Version 3.0.6</i>	
	Parallel Fortran + Version 1.1 <i>NIST-92/1543</i>	Encore 91 <i>UMAX V Version 3.0.6</i>	4/1/93	Full	Encore 93 <i>UMAX V Version 3.1</i>	
	Fortran-77 + Version 5.1 <i>NIST-92/1541</i>	Concept 32/97 <i>MPX-32 Version 3.5u02</i>	4/1/93	Full	Concept 32/67, 32/20xx, Encore RSX <i>MPX-32 Version 3.5u02</i>	

## FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	LEVEL	OTHER ENVIR HW/OS	NONCON- FORMITIES
Fujitsu America, Inc.	Fortran 77-M Version 10 Level 31 <i>NBS/ICST-88/3561</i>	Amdahl 5860 <i>IBM MVS/SP Version 2.2.0</i>	12/1/93	Full	Amdahl 580; Amdahl Vector Processor <i>IBM MVS/SP Version 2</i>	
	Fortran 77/VP-M Version 10 Level 30 <i>NBS/ICST-88/3562</i>	Amdahl 1200E <i>IBM MVS/SP Version 2.2.0</i>	12/1/93	Full	Amdahl Vector Processor; Amdahl 580 <i>IBM MVS/SP Version 2</i>	
	Fortran 77 Version 10 Level 31 <i>NBS/ICST-88/3563</i>	Amdahl 1200E <i>VSP Version 10</i>	12/1/93	Full	FACOM M <i>FACOM OS IV/F4 MSP Edition 20</i> FACOM VP; Amdahl Vector Processor <i>VSP Version 10</i>	
	Fortran 77/VP Version 10 Level 30 <i>NBS/ICST-88/3564</i>	Amdahl 1200E, FACOM VP <i>VSP Version 10</i>	12/1/93	Full	FACOM M <i>FACOM OS IV/F4 MSP Edition 20</i> FACOM VP; Amdahl Vector Processor <i>VSP Version 10</i>	
	UTS Fortran 77 EX Version 10 Level 10 <i>NIST-91/1381</i>	Fujitsu M760 <i>UTS/M Version 22 Level 10</i>	2/1/93	Full	Fujitsu M780 <i>UTS/M Version 22 Level 10</i>	
	UTS Fortran 77 EX Version 10 Level 10 <i>NIST-91/1382</i>	Amdahl 5990 <i>UTS Version 2 Release 1</i>	2/1/93	Full	Amdahl 5990 <i>UTS Version 2.0</i>	
	OSIV/MSP Fortran 77 Version 11 Level 10 <i>NIST-91/1383</i>	Fujitsu VP100E <i>OSIV/F4 MSP Edition 20</i>	2/1/94	Full	Fujitsu M780; M760 <i>OSIV/F4 MSP Edition 20</i>	
	OSIV/MSP Fortran 77 Version 11 Level 10 <i>NIST-91/1384</i>	Amdahl 5990 <i>IBM MVS/SP Version 3 Release 1.3</i>	2/1/94	Full	IBM 3090/200E <i>IBM MVS/SP Version 2 Release 2.3</i>	
HNSX Supercomputers, Inc.	UXP/M Fortran77 EX/VP Version 12 Level 10 <i>NIST-91/1601</i>	Fujitsu VP2400/10 <i>UXP/M Version 10 Level 10</i>	2/1/94	Full	Fujitsu VP2000 Series <i>UXP/M Version 10 Level 10</i>	
	UXP/M Fortran77 EX Version 12 Level 10 <i>NIST-91/1602</i>	Fujitsu VP2400/10 <i>UXP/M Version 10 Level 10</i>	2/1/94	Full	Fujitsu VP2000 Series Fujitsu M Series <i>UXP/M Version 10 Level 10</i>	
Hewlett-Packard Company	Fortran77/SX (f77sx) Release 031 <i>NIST-93/1081</i>	NEC SX-3 Model 22 <i>SUPER-UX Release 2.2</i>	1/1/94	Full	NEC SX-3/11, /12, /14, /24, /42, /44; HNSX SX-3/11, /12, /14, /24, /42, /44 <i>SUPER-UX Release 2.2</i>	
	HP 9000 S800 Fortran 77 Version A.09.00 <i>NIST-93/1123</i>	HP9000 Model 835 <i>HP-UX Version 9.0</i>	1/1/94	Full	HP9000, mod 807, 817, 825, 827, 834, 835, 837, 840, 845, 847, 850, 857, 860, 867, 870 <i>HP-UX Version 9.0</i>	
	HP 9000 S700 Fortran 77 Version A.09.00 <i>NIST-93/1121</i>	HP9000 Model 720 <i>HP-UX Version 9.0</i>	1/1/94	Full	HP9000, mod 705, 710, 730, 750 <i>HP-UX Version 9.0</i>	



## FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	LEVEL	OTHER ENVIR HW/OS	NONCON- FORMITIES
	HP 9000 S300/S400 Fortran 77 Version A.09.00 <i>NIST-93/1122</i>	HP9000 Model 433T <i>HP-UX Version 9.0</i>	1/1/94	Full	HP9000, mod 400, 425, 332, 345, 350, 360, 370, 375, 380, 385 <i>HP-UX Version 9.0</i>	
	HP 3000 S900 Fortran 77 Version A.04.31 <i>NIST-93/1124</i>	HP3000 Model 947LX <i>MPE/iX Version 4.0</i>	1/1/93	Full	HP3000, mod 917, 922, 925, 927, 930, 932, 935, 937, 950, 955, 957, 960, 967, 980, 990 <i>MPE XL Version A.50.10</i>	
IBM Canada, LTD	IBM AIX XL Fortran Compiler/6000 Version 2 Release 2 <i>NIST-92/1341</i>	IBM RISC System/6000 Powerstation 530 <i>IBM AIX Version 3 Release 2</i>	3/1/93	Full	IBM RISC System/6000 Powerstation/Powerserver Mods 220, 320H, 340, 350, 520H, 530, 530E, 540, 550, 560, 560F, 730, 930, 950 <i>AIX for RISC System/6000 Version 3 Release 2</i>	
	IBM AIX XL Fortran Compiler/6000 Version 2 Release 3 <i>NIST-92/2031</i>	IBM RISC System/6000 POWERstation/ POWERserver 540 <i>AIX for RISC System/6000 Version 3 Release 2</i>	9/1/93	Full	RISC System/6000 Power- station/Powerserver 220, 320H, 340, 350, 520H, 530, 530E, 540, 550, 560, 560F, 730, RISC System/6000 Powerserver 930, 950, 970 <i>AIX for RISC System/6000 Version 3 Release 2</i>	
IBM Corporation	VS Fortran Version 2 Release 5 <i>NIST-91/1921</i>	IBM 4381 <i>VM/SP Version 1 Release 5</i>	8/1/93	Full	S/370 30xx, 43xx, 93xx, S/390, ES/9000 <i>VM/XA Version 1, Rel 1, 2 VM/ESA Version 1, Rel 1, 1.1</i>	
	VS Fortran Version 2 Release 5 <i>NIST-91/1922</i>	IBM S/370 3090 <i>MVS/ESA SP Version 4 Release 2</i>	8/1/93	Full	S/370 30xx, 43xx, 93xx, S/390, ES/9000 <i>MVS/SP Version 1, Release 3 MVS/SP Version 2, Release 2 MVS/SP Version 3, Release 1</i>	
	VS Fortran Version 2 Release 5 <i>NIST-90/1823</i>	IBM 3090 <i>AIX/370 Version 1 Release 2</i>	8/1/93	Full	S/370, 30xx, 43xx, 93xx <i>AIX/370 Version 1, Release 2</i>	
Intergraph Corporation	CLIPPER Advanced Optimizing Fortran, Version 1.57 <i>NIST-93/1041</i>	CLIPPER IS4000 <i>CLIX, Version 6.5</i>	12/1/93	Full	CLIPPER C300 and C400 <i>CLIX, Version 6.5</i>	
Liant Software Corporation	Fortran/400, Version 1 Release 3 <i>NIST-92/1181</i>	IBM AS/400 B4500 <i>IBM OS/400, Version 1</i>	1/1/94	Full		
	Fortran/400, Version 2 Release 1 <i>NIST-92/1182</i>	IBM AS/400 B4500 <i>IBM OS/400, Version 2</i>	1/1/94	Full		

## FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	LEVEL	OTHER ENVIR HW/OS	NONCON- FORMITIES
Microsoft Corporation	Microsoft Fortran Version 5.1 <i>NIST-91/1841</i>	IBM PS/2 Model 80/386, 80387 math co-processor <i>MS-DOS Version 5.0</i>	7/1/93	Full		
		COMPAQ DESKPRO 486/25 <i>OS/2 Version 1.2</i>				
		COMPAQ 286, 80287 math co-processor <i>DOS Version 3.31</i>				
		Everex 386, 80287 math co-processor <i>DOS Version 3.31</i>				
MIPS Computer Systems, Inc.	Mips Fortran Version 3.0 Release 3.0 <i>NIST-92/1121</i>	M/120 <i>RISC/os Version 5.0 Release 5.0</i>	1/1/93	Full	M/500, M/800, M/1000, M/2000, M/120, RC3260, RC3260G, RC3240, RC3330, RS3330, RC3350, RC3360, RC2030, RS2030, RC3230, RS3230, RC6260, RC6280, RC6280(scsi base) <i>RISC/os Version 5.0 Rel 5.0</i>	
Olivetti Systems & Networks s.r.l.	Green Hills Fortran 77 Release 1.1 <i>IMQ/FCVS-001/91</i>	Olivetti LSX 5010 <i>Unix System V R4.0 Version 2.0</i>	12/12/92 <i>(pending)</i>	Full	LSX 5000, M4xx, M3xx, M380/XP9 <i>Unix System V R4.0 Version 2</i>	
Prime Computer, Inc.	Fortran 77 Release T3.0-23.0 <i>NIST-91/1721</i>	Prime Model 9955 <i>Primos Revision 23.0</i>	5/1/93	Full	2350 2450 2355 4050 4150 4450 6150 6350 6550 2550 2655 2755 9650 9655 9750 9755 9950 9955-II 5310 5320 5330 5340 w/32IX-mode arch.; 2350 2450 2355 4050 4150 4450 6150 6350 6550 2250 2550 2655 2755 9650 9655 9750 9755 9950 9955-II 750 850 5310 5320 5330 5340 w/32I-mode arch. 2350 2450 2355 4050 4150 4450 6150 6350 6550 2250 2550 2655 2755 9650 9655 9750 9755 9950 9955-II 750 850 5310 5320 5330 5340 w/64V- mode arch. <i>PRIMOS Revision 23.0</i>	
Salford Software Limited	FTN77/386 Version 2.69 <i>NIST/NCC-92/963</i>	Vanilla 386-SX <i>MS-DOS Version 5.00</i>	10/13/93	Full		
	FTN77/386 Version 2.69 <i>NIST/NCC-92/964</i>	Tandon 486 SL <i>MS-DOS Version 5.00</i>	10/13/93	Full		

## FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	LEVEL	OTHER ENVIR HW/OS	NONCON- FORMITIES
	FTN77/lx Version 1.19 <i>NIST/NCC-92/965</i>	Elonex PC 386S-200 <i>SCO Unix Version 5.3.2</i>	10/13/93	Full		
Sequent Computer Systems, Inc.	ptx Fortran Version 2 Release 1P <i>NIST-92/2141</i>	S2000/250 <i>Dynix/ptx Version 2 Release 0</i>	10/1/93	Full	S2000/450, S2000/750 <i>Dynix/ptx Version 2 Release 0</i>	
Siemens Nixdorf Informations- systeme AG	FOR1 V2.2A <i>GMD/VAL-92-003</i>	Siemens 7.592-I <i>BS2000 V10.0A</i>	12/31/92	Full		
	Sinix Fortran 77 V1.2B <i>GMD/VAL-92-009</i>	RM600 <i>Sinix-P V5.4I</i>	12/31/92	Full		
	Sinix Fortran77 V1.2C <i>GMD/VAL-92-010</i>	Targon/31 (Motorola 68040) <i>Sinix-TOS-O V5.4I</i>	7/1/93	Full		
	Sinix Fortran 77 V1.1A/V1.2A/V1.2B <i>GMD/VAL-91-009</i>	MX500-F <i>Sinix-F V5.2I</i> MX300-H <i>Sinix-H V5.23</i> MX300-L <i>Sinix-L V5.4</i> WX200-K <i>Sinix-ODT V1.5</i>	2/1/93	Full		
Silicon Graphics Computer Systems Inc.	Fortran 4D77 Release S4-FTN 1-4.0 <i>NIST-91/1201</i>	IRIS 4D/25 <i>IRIX 4D1-4.0</i>	3/1/93	Full	IRIS 4D/20, 4D/25, 4D/35, 4D/70, Power Series <i>IRIX 4D1-4.0</i>	
Sun Microsystems, Inc.	Sun Fortran (FOR-1.4-4-3-5) Version 1 Release 4 <i>NIST-91/1301</i>	SUN-3/80 w/MC 68882 <i>SUNOS (SM3-07) Version 4 Release I</i>	3/1/93	Full	SUN-3/470, SUN-3/480; SUN-3/60, SUN-3/180, SUN 3/260 w/MC 68882 <i>SUNOS (SM3-07) Version 4 Release I</i>	
	Sun Fortran (FOR-1.4-4-4-5) Version 1 Release 4 <i>NIST-91/1302</i>	SPARCstation 2 (SUN- 4/75) w/FPU (TI TMS390C602A) <i>SUNOS (SS2-07) Version 4 Release I</i>	3/1/93	Full	SPARCserver 2 (SUN-4/75X) w/FPU (TI TMS390C602A) <i>SUNOS (SS2-07) Version 4 Release I</i>	
	Sun Fortran (FOR-1.4-4-4-5) Version 1 Release 4 <i>NIST-91/1303</i>	SPARCserver 330 (SUN- 4/330) w/FPU2 (TI 8847) <i>SUNOS (SS2-07) Version 4 Release I</i>	3/1/93	Full	SPARCserver 470 (SUN- 4/470) w/FPU2 (TI 8847) <i>SUNOS (SS2-07) Version 4 Release I</i>	
	Sun Fortran (FOR-1.4-4-4-5) Version 1 Release 4 <i>NIST-91/1304</i>	SPARCserver 490 (SUN- 4/490) w/FPU2 (TI 8847) <i>SUNOS (SS1-07) Version 4 Release I</i>	3/1/93	Full		

## FORTRAN PROCESSORS, *Continued*

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	LEVEL	OTHER ENVIR HW/OS	NONCON- FORMITIES
	Sun Fortran (FOR-1.4-4-4-5) Version 1 Release 4 <i>NIST-91/1305</i>	SPARCstation IPC (SUN- 4/40) w/FPU (WEITEK 3172) <i>SUNOS (SS2-07) Version 4 Release 1</i>	3/1/93	Full	SPARCstation SLC (SUN- 4/20); SPARCstation 1+ (SUN-4/65) w/FPU (WEITEK 3172) <i>SUNOS (SS2-07) Version 4 Release 1</i>	
Tandem Computers, Inc.	Fortran Version D10 <i>NIST-92/1461</i>	NonStop CLX <i>Guardian 90 Version D00</i>	5/1/93	Full	NonStop Cyclone, Cyclone/R; VLX, CLX/R <i>Guardian 90 Version D00</i>	
Unisys Corporation	A Series Fortran77 Mark 4.0 <i>NIST-91/2212</i>	Unisys A10 <i>MCP/AS Mark 4.0</i>	10/1/93	Full	Unisys A Series, Micro A, A1, A2, A3, A4, A5, A6, A9, A10, A12, A15, A16, A17, A19 <i>MCP/AS, Mark 4.0</i>	



## 2.9 Ada PROCESSORS

The following are Ada compilers that have been validated by the Ada Joint Program Office (AJPO). Compilers are listed in order of vendor. The list is updated monthly, and presently includes 259 base compilers and 198 compilers derived from base implementations. For the most current information on validated Ada compilers, please contact the Ada Information Clearinghouse at (703) 685-1477.

For background information, please see "An Introduction to the Validation Process".

(Key: \* = Validated through Registration, base system above)

#YYMMDDFX.XXNNN = Certificate Number:

YYMMDD = date on-site testing was completed;

F = Ada Validation Facility;

X.XX = ACVC Version;

NNN = sequence number assigned by AVO

The extension of ACVC 1.11 certificates is to "at least" 1 March 1993. The current Ada 9X Transition plan calls for ACVC 1.11 to expire 1 June 1992, with certificates expiring 12 months later (1 June 1993).

On April 14, 1992, the AJPO announced it was "freezing" the Ada Compiler Validation Capability (ACVC) on version 1.11. Current ACVC 1.11 certificates will expire two years after Ada 9X has been adopted by ANSI. The ACVC version 1.11 will expire one year before certificates (i.e., 12 months after ANSI Ada 9X adoption) as has been the practice. This extended life for ACVC 1.11 means that there will be an overlap period between ACVC 1.11 (for ANSI/MIL-STD-1815A validations) and ACVC 2.0 (for ANSI/MIL-STD-1815B validations).

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
AETECH, Inc. IntegrAda 386 5.1.0 (#901120W1.11087)	Northgate 386/25 (under Phar Lap/DOS 3.3)	Northgate 386/25 (under MS DOS 3.3)	Aitech Defense Systems, Inc. AI-ADA/88K, Version 3.0 (#911012W1.11224)	VAXstation 3100 Cluster (under VMS 5.3)	DSP98002 ADS board (bare machine)
*Validated by Registration					
AETECH, Inc. IntegrAda 386 5.1.0 (BASE #901120W1.11087)	Any Computer System Comprising: cpu: Intel 80386, fpu: optional, memory: 4 MByte RAM, disk: 40 MByte hard drive (under Phar Lap/DOS 3.3)	Any Computer System Comprising: cpu: Intel 80386, fpu: optional, memory: 4 MByte RAM, disk: 40 MByte hard drive (under MS DOS 3.3)	Aitech Defense Systems, Inc. AI-ADA/88K, Version 3.0 (#911012W1.11225)	Sun-4/330 (under SunOS 4.1.1)	DSP98002 ADS board (bare machine)
AETECH, Inc. IntegrAda 5.1.0 POSIX (#901129W1.11088)	Unisys PW/2 386 (under SCO Unix 3.2)	Same as Host	Alenia Aeritalia & Selenia S.p.A DACs VAX/VMS to 80x86 PM MARA Ada Cross Compiler, Version 4.8 (#920508S1.11256)	MicroVAX 4000/200 (under VMS Version 5.4)	Alenia MARA (80286-based) (under Alenia Operating System, Version 8.6 System)
*Validated by Registration					
AETECH, Inc. IntegrAda Posix 5.1.0 (BASE #901129W1.11088)	Any Computer System Comprising: cpu: Intel 80386, fpu: optional, memory: 4 MByte RAM, disk: 60 MByte hard drive (under SCO Unix 3.2)	Same as Host	*Validated by Registration Alenia Aeritalia & Selenia S.p.A DACs 80x86PM, Version 4.80 (BASE #920506S1.11256)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 4000, VAX 6000, VAX 8000, & VAX 9000 Series of computers (under VMS 5.4)	Alenia MARA 80386- & 80486-based computers (under Alenia Operating System 8.6)
*Validated by Registration					
AETECH, Inc. AETECH POSIX Compiler, Version 5.1.0 (BASE #901129W1.11088)	Any Computer System Comprising: cpu: Intel 80386 & 80486, fpu: optional, memory: 4 MByte RAM, disk: 60 MByte hard drive (under Interactive Unix System V, Release 3.2)	Same as Host	Alliant Computer Systems Corporation Alliant FX/Ada-2800 Compiler, Version 1.0 (#901218W1.11105)	Alliant FX/2800 (under Concentrix Release 2.0)	Same as Host
Aitech Defense Systems, Inc. AI-ADA/88K Version 2.4 (#900830W1.11030)	VAXstation 3100 Cluster (under VMS 5.3)	Tadpole TP880V (88100-based VME board) (bare machine)	Alliant Computer Systems Corporation Alliant FX/Ada Compiler, Version 2.3 (#901218W1.11106)	Alliant FX/80 (under Concentrix Release 5.7)	Same as Host
*Validated by Registration					
Aitech Defense Systems, Inc. AI-ADA/88K, Version 2.4 (BASE #900830W1.11030)	All DEC MicroVAX, VAXstation, VAXserver, VAX-11, VAX 8000 & VAX 9000 series (under VMS versions 5.0, 5.1, 5.2 & 5.3, as supported)	Tadpole TP880V (88100-based VME board) & Motorola MVME181 (88100-based VME board) (bare machines)	Aisy AisyCOMP_053, Version 1.82 (#900506H1.11008)	VAX 8530 (under VMS, Version 5.1)	Same as Host

## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Alsys AlsyCOMP_042, Version 5.3 (#800627N1.11013)	IBM 8370 Model 90 (under AIX/370 Version 1.2)	Same as Host	*Validated by Registration Alsys AlsyCOMP_035, Version 5.3 (BASE #901022A1.11048)	Unigraph 1000/325, 2000/50, 2000/250, 2000/325, 3000/325-333, 6000/325-333, 7000/325, 8000/325 & 9000 (under Unigraph/X 3.1 & 3.1.1)	Any Host
Alsys AlsyCOMP_026, Version 1.82 (#90081411.11040)	Sun-3/80 (under SunOS, Version 4.0.3)	Same as Host	Alsys AlsyCOMP_016 Version 5.1 (#901102W1.11055)	Compaq Deskpro 386 (under MS-DOS 3.30, Phar Lap 2.0)	Same as Host
Alsys AlsyCOMP_025, Version 1.83 (#90081411.11041)	MIPS M/120-5 (under RISC/os, Version 4.0)	Same as Host	*Validated by Registration Alsys AlsyCOMP_016 Version 5.1.1 (BASE #901102W1.11055)	Any Computer System that executes the Intel 80386 or 80486 instruction set (under MS/DOS 5.0 & Phar Lap 4.0)	Any Host
Alsys AlsyCOMP_046, Version 5.3 (#901022A1.11043)	Sony NEWS NWS-1850 (under NEWS-OS 3.3)	Same as Host	Alsys AlsyCOMP_016 Version 5.1 (#901102W1.11056)	CompuAdd 320 (under MS-DOS 3.30, Phar Lap 2.0)	Same as Host
*Validated by Registration Alsys AlsyCOMP_046, Version 5.3 (BASE #901022A1.11043)	Sony NEWS series 1250, 150x, 170x, 180x & 190x (under NEWS-OS versions 3.3 & 3.4)	Any Host	*Validated by Registration Alsys AlsyCOMP_016, Version 5.1 (BASE #901102W1.11056)	HP Vectra RS/20, RS/20C, RS/25 & RS/25C; AST Premium 386; and Unisys 386 & Desktop III (under MS-DOS 3.30, Phar Lap 2.0)	Any Host
Alsys AlsyCOMP_004, Version 5.3 (#901022A1.11044)	Apollo DN4000 (under Domain/OS SR10.2)	Same as Host	*Validated by Registration Alsys AlsyCOMP_016 Version 5.1 (BASE #901102W1.11056)	Any Computer System Comprising: cpu: Intel 80386; fpu: optional; memory: 5 MByte RAM; disk 10 MByte (under MS-DOS 3.30, Phar Lap 2.0)	Same as Host
*Validated by Registration Alsys AlsyCOMP_004, Version 5.3 (BASE #901022A1.11044)	Apollo DN3000, DN3500, DN4000 & DN4500 (under Domain/OS SR10.2 & SR10.3)	Any Host	Alsys AlsyCOMP_016 Version 5.1 (#901102W1.11057)	ALR Power Velsa 486 (under MS-DOS 3.30, Phar Lap 2.0)	Same as Host
Alsys AlsyCOMP_050, Version 5.3 (#901022A1.11045)	Bull DFX/2 320 (under B.O.S. 02.00.05)	Same as Host	*Validated by Registration Alsys AlsyCOMP_003 Version 5.1 (#901102W1.11058)	HP Vectra RS/25C (under MS-DOS 3.30)	Same as Host
*Validated by Registration Alsys AlsyCOMP_050, Version 5.3 (BASE #901022A1.11045)	Bull DFX 2/210, /220, /320, /340 & /360 (under BOS 02.00.05 & 2.00.10)	Any Host	*Validated by Registration Alsys AlsyCOMP_003, Version 5.1 (BASE #901102W1.11058)	Unisys Desktop III (under MS-DOS 3.30)	Same as Host
Alsys AlsyCOMP_002, Version 5.3 (#901022A1.11046)	HP 9000a350 (under HP-UX 6.5)	Same as Host	*Validated by Registration Alsys AlsyCOMP_003 Version 5.1 (BASE #901102W1.11058)	Any Computer System that executes the Intel 80286, 80386, or 80486 instruction set (under MS/DOS 5.0)	Any Host
*Validated by Registration Alsys AlsyCOMP_002, Version 5.3 (BASE #901022A1.11046)	HP 9000 Series 300, all models (under HP-UX 6.5 & 7.0)	Any Host	Alsys AlsyCOMP_003 Version 5.1 (#901102W1.11059)	Zenith Z-248 Model 50 (under MS-DOS 3.30)	Same as Host
Alsys AlsyCOMP_005, Version 5.3 (#901022A1.11047)	Sun-3/280 (under SunOS 3.2)	Same as Host	*Validated by Registration Alsys AlsyCOMP_003, Version 5.1 (BASE #901102W1.11059)	ICS SB286SC/12 (under MS-DOS 3.30)	Same as Host
*Validated by Registration Alsys AlsyCOMP_005, Version 5.3 (BASE #901022A1.11047)	Sun 3/50, /60, /75, /80, /160, /260, /280, /470 & /480 (under SunOS 3.2, 3.5, 4.0 & 4.1)	Any Host	Alsys AlsyCOMP_035, Version 5.3 (#901022A1.11046)		
Alsys AlsyCOMP_035, Version 5.3 (#901022A1.11046)	CETIA Unigraph 6000 (under Unigraph/X 3.1)	Same as Host			



# Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration			*Validated by Registration		
Alsys AlsysCOMP_003, Version 5.1 (BASE #901102W1.11058)	HP Vectra ES/12; and IBM PC/AT (all models) (under MS-DOS 3.30)	Any Host	Alsys AlsysCOMP_015, Version 5.3 (BASE #901118A1.11068)	Sun 3/50, /60, /75, /80, /160, /280, /280, /470 & /480 (under SunOS 3.2, 3.5, 4.0 & 4.1)	Motorola MVME101 (88000), MVME121 (88010), MVME135-1 (88020/88881) & MVME147-1 (88030/88882) (bare machines, using ARTK 5.3)
Alsys AlsysCOMP_037, Version 5.2 (#901114N1.11065)	INMOS T800 transputer on a B405 TRAM (bare) with an INMOS B008 Communications link running INMOS Iserver 1.3 PC/AT (under MS-DOS 3.1 and INMOS Iserver V1.3)	INMOS T800 transputer on a B405 TRAM (bare) using an IBM PC/AT under MS-DOS 3.1 implemented in an IBM for file-server support via an INMOS B008 board link	Alsys AlsysCOMP_017, Version 5.2 (#901118N1.11064)	MicroVAX II (under VMS V5.3)	INMOS T425 transputer on a B403 TRAM (bare) using the Host running INMOS Iserver 1.3 for file-server support via a CAPLIN QTO board link
*Validated by Registration			*Validated by Registration		
Alsys AlsysCOMP_037, V5.3 (BASE #901114N1.11065)	INMOS T800 transputer on a B403 TRAM (bare) with an INMOS B008 Communications link implemented in an IBM PC/AT (under MS-DOS 3.1 and INMOS Iserver V1.3)	INMOS T800 transputer on a B405 TRAM (bare) using an IBM PC/AT under MS-DOS 3.1 running INMOS Iserver 1.3 for file-server support via an INMOS B008 board link; INMOS T425 transputer on a B403 TRAM (bare) using an IBM PC/AT under MS-DOS 3.1 running INMOS Iserver 1.3 for file-server support via an INMOS B008 board link	Alsys AlsysCOMP_017, V5.3 (BASE #901118N1.11064)	MicroVAX II (under VMS V5.3)	INMOS T425 transputer on a B403 TRAM (bare) using the Host running INMOS Iserver 1.3 for file-server support via a CAPLIN QTO board link; INMOS T800 transputer on a B405 TRAM (bare) using the Host running INMOS Iserver 1.3 for file-server support via a CAPLIN QTO board link
*Validated by Registration			*Validated by Registration		
Alsys AlsysCOMP_037 Version 5.4.2 (BASE #901114N1.11065)	INMOS T800 transputer on a B405 TRAM board (bare), with an INMOS B008 Communications link implemented in an IBM PC/AT (under MS-DOS 3.1 and INMOS Iserver V1.42h)	INMOS T800 transputer on a B405 TRAM (bare), using an IBM PC/AT under MS-DOS 3.1 running INMOS Iserver V1.42h for file-server support via an INMOS B008 board link and INMOS T425 transputer on a B403 TRAM (bare), using an IBM PC/AT under MS-DOS 3.1 running INMOS Iserver V1.42h for file-server support via an INMOS B008 board link	Alsys AlsysCOMP_017 Version 5.4.3 (BASE #901118N1.11064)	MicroVAX II (under VMS V5.3)	INMOS T425 transputer on a B403 TRAM (bare), using the Host running INMOS Iserver V1.42i for file-server support via a CAPLIN QTO board link and INMOS T800 transputer on a B405 TRAM (bare), using the Host running INMOS Iserver V1.42i for file-server support via a CAPLIN QTO board link
Alsys AlsysCOMP_012, Version 5.3 (#901118A1.11068)	HP 9000s350 (under HP-UX 6.5)	Motorola MVME101 (88000) (bare machine, using ARTK Version 5.3)	Alsys AlsysCOMP_018 Version 5.2 (#901120A1.11070)	MicroVAX 3100 (under VMS 5.3)	Same as Host
*Validated by Registration			*Validated by Registration		
Alsys AlsysCOMP_012, Version 5.3 (BASE #901118A1.11068)	HP 9000 Series 300, Models 340, 345, 360, 370 & 375 (under HP-UX 6.5 & 7.0)	Motorola MVME101 (88000), MVME121 (88010), MVME135-1 (88020/88881) & MVME147-1 (88030/88882) (bare machines, using ARTK 5.3)	Alsys AlsysCOMP_018, Version 5.2 (BASE #901120A1.11070)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 4000, VAX 8000, VAX 8000 & VAX 9000 Series of computers (as supported) (under VMS 5.2 & 5.4)	Any Host
*Validated by Registration			*Validated by Registration		
Alsys AlsysCOMP_012, Version 5.3 (BASE #901118A1.11068)	HP 9000 Series 300 (all models) (under HP-UX 6.5 & 7.0)	Motorola M68332EVS Evaluation System Customers (CPU32) (bare machine, using ARTK 5.3)	Alsys AlsysCOMP_006, Version 5.3 (#901125N1.11071)	IBM 8370 Model 80 (under VM/IS CMS release 5.1)	Same as Host
Alsys AlsysCOMP_036, Version 5.3 (#901118A1.11067)	Apollo DN4000 (under Domain/OS SR10.2)	Motorola MVME147-1 (88030/88882) (bare machine, using ARTK Version 5.3)	Alsys AlsysCOMP_023, Version 5.3 (#901125N1.11072)	IBM 370 3084Q (under MVS/XA release 3.2)	Same as Host
*Validated by Registration			*Validated by Registration		
Alsys AlsysCOMP_036, Version 5.3 (BASE #901118A1.11067)	Apollo DN 3000, 3500, 4000 & 4500 (under Domain/OS SR10.2 & SR10.3)	Motorola MVME101 (88000), MVME121 (88010), MVME135-1 (88020/88881) & MVME147-1 (88030/88882) (bare machines, using ARTK 5.3)	Alsys AlsysCOMP_011, Version 5.3 (#901127A1.11069)	VAX 8210 (under VMS 5.2)	Motorola MVME135-1 (88020/88881) (bare machine, using ARTK Version 5.3)
*Validated by Registration			*Validated by Registration		
Alsys AlsysCOMP_015, Version 5.3 (#901118A1.11068)	Sun 3/280 (under SunOS 3.2)	Motorola MVME121 (88010) (bare machine, using ARTK Version 5.3)	Alsys AlsysCOMP_034, Version 5.1 (#901221W1.11103)	Multitech 1100 (under SCO Unix 3.2)	Same as Host

## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Alsys AlsyCOMP_034, Version 5.1 (BASE #901221W1.11103)	Everex AGI 3000D, Compaq Deskpro 386 & SAI Technologies Army Lightweight Computer Unit (LCU V2) (under Interactive Unix 3.2)	Each Host, self-targetted	Alsys AlsyCOMP_049, Version 1.83 (#91040711.11144)	VAX 8530 (under VMS Version 5.3-1)	Integrated Device Technology IDT7RS301 System (R3000/R3010) (bare machine)
*Validated by Registration Alsys AlsyCOMP_034, Version 5.1 (BASE #901221W1.J1103)	Prime MBX (under Prime Unix V.4)	Same as Host	*Validated by Registration Alsys AlsyCOMP_049, Version 1.83-01 (BASE #91040711.11144)	VAX 8530 (under VMS 5.3-1)	Lockheed Sanders STAR MVP (R3000/R3010) (bare machine)
*Validated by Registration Alsys AlsyCOMP_034, Version 5.1 (BASE #901221W1.11103)	Any Computer System comprising: cpu: Intel 80386 or 80486; fpu: optional (under a Unix 3.2-based OS)	Each Host, self-targetted	Alsys AlsyCOMP_057, Version 1.83 (#91082511.11193)	DECstation 3100 (under ULTRIX Version 4.0)	Same as Host
*Validated by Registration Alsys AlsyCOMP_034 Version 5.1 (BASE #901221W1.11103)	Any Computer System that executes the Intel 80386 or 80486 instruction set (under SCO Open Desktop 1.1 & SCO Unix 3.2, SCO Open Desktop 2.0 & SCO Unix 3.2.4, Interactive Unix 3.2.2, and AT&T Unix System V Release 4.0)	Any Host	Alsys AlsyCOMP_024, Version 5.3 (#910809W1.11195)	IBM RISC System 6000, model 520 (under AIX v3.1)	Same as Host
Alsys AlsyCOMP_043, Version 5.3 (#901221W1.11104)	Apple Macintosh IIfx (under Macintosh System Software 6.0.5)	Same as Host	*Validated by Registration Alsys AlsyCOMP_024 V5.4 (BASE #910809W1.11195)	IBM RISC System 6000 (all models) (under AIX 3.2)	Any Host
Alsys AlsyCOMP_034 Version 5.1 (#910129W1.11113)	IBM PS/2 Model 80 (under LynxOS Version 2.0 + Threads Release 11)	Same as Host	Alsys AlsyCOMP_058, Version 5.3 (#910809W1.11196)	Unisys B39 (under BTOS II, v3.2.0)	Same as Host
*Validated by Registration Alsys AlsyCOMP_034, Version 5.1 (BASE #910129W1.11113)	IBM PS/2 Models 70-xxx & 80-xxx (under LynxOS Version 2.0 Release 15)	Any Host	Alsys AlsyCOMP_040, Version 5.3 (#910809W1.11197)	HP Vectra RS/25C (under DOS 3.30)	Unisys B39 (under BTOS II, v3.2.0)
Alsys AlsyCOMP_056, Version 1.82 (#91013111.11127)	Sun 3/80 (under SunOS, Version 4.0.3)	KWS EB68020 (under OS-9/68020, Version 2.3)	Alsys AlsyCOMP_062, Version 5.35 (#911107W1.11227)	HP 9000 Series 700 Model 720 (under HP-UX, Version A.B8.05 (release 8.05))	Same as Host
Alsys AlsyCOMP_055, Version 1.82 (#91020111.11128)	VAX 8530 (under VMS, Version 5.3-1)	KWS EB68020 (under OS-9/68020, Version 2.3)	*Validated by Registration Alsys AlsyCOMP_062 Version 5.35 (BASE #911107W1.11227)	HP 9000 Series 700, all models (under HP-UX, Version A.B8.05 (release 8.05)); HP 9000 Series 800, all models (under HP-UX, Version A.B8.00 (release 8.00))	HP 9000 Series 700, all models (under HP-UX, Version A.B8.05 (release 8.05))
Alsys AlsyCOMP_029, Version 5.3 (#910323W1.11131)	CompuAdd 325 (under DOS 3.31)	Intel ISBC 386/118 (bare machine, using ARTK 5.3)	Alsys AlsyCOMP_062, Version 5.35 (#911107W1.11228)	HP 9000 Series 800 Model 835 (under HP-UX, Version A.B8.00 (release 8.00))	Same as Host
Alsys AlsyCOMP_030, Version 5.3 (#910323W1.11132)	MicroVAX II (under VMS 5.2)	Intel ISBC 386/31 (bare machine, using ARTK 5.3)	*Validated by Registration Alsys AlsyCOMP_062 Version 5.35 (BASE #911107W1.11228)	HP 9000 Series 800 Models 807, 817, 847, & 867 (under HP-UX B-Level Security Operating System, Version A.08.08)	HP 9000 Series 800, all models (under HP-UX, Version A.B8.00 (release 8.00))
Alsys AlsyCOMP_033, Version 5.3 (#910323W1.11133)	Sun 3/140 (under SunOS 4.1)	Intel ISBC 386/12 (bare machine, using ARTK 5.3)	Alsys AlsyCOMP_047 Version 5.37 (#911119A1.11231)	Sun SPARCstation 2 (under SunOS 4.1.1)	Same as Host
*Validated by Registration Alsys AlsyCOMP_052, Version 5.3.1 (BASE #910323W1.11133)	Sun Microsystems Sun-4, SPARCserver, & SPARCstation computer families (under SunOS 4.1)	Intel ISBC 386/31, ISBC 386/10x, ISBC 486/10x (bare machines, using ARTK 5.3)			



## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Alsys AlsyCOMP_047, Version 5.37 (BASE #911119A1.11231)	Sun SPARCstation ELC, IPC & IPX; SPARCserver 330, 370, 390, 470, 490, 630MP, 670MP & 690MP (under SunOS 4.1.1)	Any Host	Concurrent Computer Corporation C3Ada, Version 0.5 (#90042711.11008)	Concurrent Computer Corporation 8400 (MIPS R3000/3010) (under RTU Version 5.1)	Same as Host
*Validated by Registration Alsys AlsyCOMP_047, Version 5.37 (BASE #911119A1.11231)	Solbourne Series 5/500, /530, /600, /670, /800 & 5E/900; and S4000 (under OS/MP 4.1)	Any Host	*Validated by Registration Concurrent Computer Corporation C3Ada, Version 0.5 (BASE #90042711.11008)	Concurrent Computer Corporation 8500 (MIPS R3000/R3010) (under RTU Version 5.1)	Same as Host
Alsys AlsyCOMP_061, Version 1.83 (#9204291.11251)	DECstation 3100 (under ULTRIX Version 4.2)	Lockheed Sanders STAR MVP board (R3000/3010) (bare machine)	Concurrent Computer Corporation C3 Ada Version 1.1v (#901130W1.11107)	Concurrent Computer Corporation 8650 with Super Lightning Floating Point (under RTU Version 5.0C)	Same as Host
Alsys AlsyCOMP_069, Version 1.83 (#92073011.11262)	Control Data 4338 (under TC/IX 1.0.2)	Same as Host	*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.1v (BASE #901130W1.11107)	Concurrent Computer Corporation Series 8000 with Super Lightning Floating Point, and Series 5000 with Lightning Floating Point (all models) (under RTU Version 5.0A, 5.0B & 5.0C)	Any Host
Alsys AlsyCOMP_082 Version 5.35 (#921118N1.11298)	HP 9000 Series 800 Model 827 (under HP-UX Version 8.02)	Same as Host	*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.1 (BASE #901130W1.11107)	Concurrent Computer Corporation Series 8000 with Super Lightning Floating Point, and Series 5000 with Lightning Floating Point (all models) (under RTU Version 5.0A, 5.0B & 5.0C)	Any Host
Alsys AlsyCOMP_073, Version 5.3 (#921128N1.11300)	IBM ES/9000 Model 610 (under AIX/ESA Version 2)	Same as Host	*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.1 (BASE #901130W1.11107)	Concurrent Computer Corporation Series 8000 (MC88030, with Super Lightning Floating Point) & Series 5000 (MC88020, with Lightning Floating Point) (under RTU Versions 5.0A, 5.0B, 5.0C & 6.0)	Same as Host
Alsys / German MoD NATO SWG on APSE Compiler for Sun3/SunOS, Version S3C1.82-02 (#91110181.11233)	Sun-3/80 (under SunOS Version 4.0.3, with CAIS Version 5.5D)	Sun-3/80 (under SunOS Version 4.0.3)	Concurrent Computer Corporation C3 Ada Version R03-00V (#901130W1.11108)	Concurrent Computer Corporation 3280MPS (under OS/32 Version R08-03.2)	Same as Host
Alsys / German MoD NATO SWG on APSE Compiler for VAX/VMS, Version VC1.82-02 (#91111811.11236)	VAX 8350 (under VMS Version 5.4-1, with CAIS Version 5.5E)	VAX 8350 (under VMS Version 5.4-1)	*Validated by Registration Concurrent Computer Corporation C3 Ada, Version R03-00V (BASE #901130W1.11108)	Concurrent Computer Corporation Series 3200: 3200 MPS, 3203, 3205, 3210, 3220, 3230, 3250, 3230XP, 3250XP, 3230MPS, 3260MPS, Micro4, and Micro5 (under OS/32 Versions R08-03, R08-03.1 & R08-03.2)	Any Host
Alsys / German MoD NATO SWG on APSE Compiler for Sun3/SunOS to MC88020, Version VCM1.82-02 (#92030611.11248)	VAX 8350 (under VMS Version 5.4-1, with CAIS Version 5.5E)	Motorola MVME133XT (MC88020) (bare machine)	Concurrent Computer Corporation C3 Ada Version 1.0v (#901130W1.11108)	Concurrent Computer Corporation 8400 (MIPS R3000/3010) (under RTU Version 5.1)	Same as Host
Alsys / German MoD NATO SWG on APSE Compiler for Sun3/SunOS to MC88020, Version S3CM1.82 (#92072811.11261)	Sun-3/80 (under SunOS Version 4.0.3, with CAIS Version 5.5E)	Motorola MVME133XT (MC88020) (bare machine)	*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.0v (BASE #901130W1.11108)	Concurrent Computer Corporation Series 8000 (all models) (under RTU Versions 5.1, 5.1A & 5.1B)	Any Host
ATLAS ELEKTRONIK GmbH ATLAS ELEKTRONIK Ada Compiler VVME 1.82 (#91032411.11136)	VAX 8000-410 (under VMS Version 5.2)	ATLAS ELEKTRONIK GmbH MPR 2300 (under MOS 2300, Version 2.1)			

## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.0 (BASE #901130W1.11109)	Concurrent Computer Corporation Series 8000 (MIPS R3000/3010) (under RTU Versions 5.1A, 5.1B & 6.0)	Same as Host	*Validated by Registration CONVEX Computer Corporation CONVEX Ada, Version 2.0 (BASE #900910W1.11027)	CONVEX C120, C201, C202, C210, C220, C230, C240, C210i, C220i & C230i (under ConvexOS, Versions 8.1 and 9.0)	Any Host
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 2.0p (BASE #901130W1.11109)	Concurrent Computer Corporation Series 8000 (R3000/3010), all models (under RTU Versions 5.1A, 5.1B & 6.0)	Same as Host	*Validated by Registration CONVEX Computer Corporation CONVEX Ada, Version 2.0 (BASE #900910W1.11027)	CONVEX C120, C201, C202, C210, C210i, C220, C220i, C230, C230i, C240, C3210, C3220, C3230, C3240, C3410, C3420, C3430, C3440, C3450, C3480, C3470, C3480, C3810, C3820, C3830, C3840, C3850, C3890, C3870, C3880 (under ConvexOS versions 8.1, 9.0, 9.1 & 10.0)	Each Host, self-targetted
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 2.0b (BASE #901130W1.11109)	Concurrent Computer Corporation Series 6000 (MIPS R3000/3010) (under RTU Version 6.0)	Any Host	*Validated by Registration CONVEX Computer Corporation CONVEX Ada, Version 2.1 (BASE #900910W1.11027)	CONVEX C120, and C20x, C320x, C340x, & C380x computer series (under ConvexOS, Versions 8.1, 9.0, 9.1, 10.0, & 10.1; and ConvexOS/Secure Versions 9.5 & 10.0)	Same as Host
Concurrent Computer Corporation C3 Ada Version 1.1v (#901130W1.11110)	Concurrent Computer Corporation 6650 with MC68882 Floating Point (under RTU Version 5.0C)	Same as Host	Cray Research, Inc. Cray Ada Compiler Release 2.0 (#901112W1.11116)	Cray X-MP/EA (under UNICOS Release 5.0)	Same as Host
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.1v (BASE #901130W1.11110)	Concurrent Computer Corporation Series 6000 with an MC68882 fpu, and Series 5000 with an MC68881 fpu (all models) (under RTU Versions 5.0A, 5.0B & 5.0C)	Any Host	*Validated by Registration Cray Research, Inc. Cray Ada Compiler Release 2.0 (BASE #901112W1.11116)	CRAY X-MP & X-MP/EA, all models (under UNICOS Releases 5.1, 6.0 & 6.1)	Each Host, self-targetted
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.1 (BASE #901130W1.11110)	Concurrent Computer Corporation Series 6000 (MC68030/MC68882) & Series 5000 (MC68020/MC68881) (under RTU Versions 5.0A, 5.0B, 5.0C & 6.0)	Same as Host	*Validated by Registration Cray Research, Inc. Cray Ada Compiler 3.0 (BASE #901112W1.11116)	X-MP/EA (all models) (under UNICOS Release 6.1)	Same as Host
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 1.2 & 2.0b (BASE #901130W1.11110)	Concurrent Computer Corporation Series 7000 (MC68040) (under RTU Version 6.1)	Any Host	Cray Research, Inc. Cray Ada Compiler Release 2.0 (#901112W1.11117)	Cray Y-MP (under UNICOS Release 5.0)	Same as Host
*Validated by Registration Concurrent Computer Corporation C3 Ada, Version 2.0b (BASE #901130W1.11110)	Concurrent Computer Corporation Series 7000 (MC68040) (under RTU Version 6.1)	Any Host	*Validated by Registration Cray Research, Inc. Cray Ada Compiler Release 2.0 (BASE #901112W1.11117)	Cray Y-MP, all models (under UNICOS Releases 5.1, 6.0 & 6.1)	Each Host, self-targetted
CONVEX Computer Corporation CONVEX Ada, Version 2.0 (#900910W1.11027)	CONVEX C220 (under ConvexOS 8.1)	Same as Host	*Validated by Registration Cray Research, Inc. Cray Ada Compiler Release 2.0 (BASE #901112W1.11117)	CRAY Y-MP EL (under UNICOS Releases 6.0 & 6.1)	Same as Host
			*Validated by Registration Cray Research, Inc. Cray Ada Compiler 3.0 (BASE #901112W1.11117)	CRAY Y-MP & Y-MP EL (all models) (under UNICOS Releases 6.1)	Each Host, self-targetted

# Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Cray Research, Inc. Cray Ada Compiler Release 2.0 (#911006W1.11223)	CRAY-2/4-128 (under UNICOS Release 6.1)	Same as Host	*Validated by Registration DDC International A/S DACS VAX/VMS to 8086 Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.8 (BASE #901129S1.11077)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 8000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel ISBC 86/35 (bare machine)
*Validated by Registration Cray Research, Inc. Cray Ada Compiler Release 2.0 (BASE #911006W1.11223)	CRAY-2 (all models) (under UNICOS Release 6.1)	Each Host, self-targeted	*Validated by Registration DDC International A/S DACS VAX/VMS to 80286 Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.8 (BASE #901129S1.11077)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 8000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel ISBC 286/12 (bare machine)
*Validated by Registration Cray Research, Inc. Cray Ada Compiler 3.0 (BASE #911006W1.11223)	CRAY-2/4-128 (all models) (under UNICOS Release 6.1)	Each Host, self-targeted	*Validated by Registration DDC International A/S DACS VAX/VMS to 80286 PM Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.8 (BASE #901129S1.11077)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 8000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel ISBC 286/12 In Protected Mode (bare machine)
DDC International A/S DACS VAX/VMS Native Ada Compiler System, Version 4.8 (#901129S1.11050)	VAX 8530 (under VMS Version 5.3)	Same as Host	*Validated by Registration DDC International A/S DACS VAX/VMS to 80386 Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.8 (BASE #901129S1.11077)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 8000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel ISBC 386/21 (bare machine)
DDC International A/S DACS VAX/VMS to 88020 Bare Cross Compiler System, Version 4.8 (#901129S1.11051)	MicroVAX 3100 (under VMS Version 5.3)	Motorola MVME133 board (88020/68881) (bare machine)	DDC International A/S DACS VAX/VMS to 80386 Bare Ada Cross Compiler System, Version 4.8 (#901129S1.11074)	VAX 8530 (under VMS Version 5.3)	Intel ISBC 386/21 (bare machine)
DDC International A/S DACS VAX/VMS to 80386 PM Bare Ada Cross Compiler System, Version 4.8 (#901129S1.11074)	VAX 8530 (under VMS Version 5.3)	Intel ISBC 386/21 (bare machine)	DDC International A/S DACS 80386 UNIX V Ada Compiler System, Version 4.8 (#901129S1.11075)	Sun-3/60 (under SunOS, Version 4.0_Export)	Same as Host
DDC International A/S DACS 80386 UNIX V Ada Compiler System, Version 4.8 (#901129S1.11075)	ICL DRS300 (under DRS/NX, Version 3.2 (UNIX System V/386 release 3.2))	Same as Host	DDC International A/S DACS Sun3/SunOS Native Ada Compiler System, Version 4.8 (#901129S1.11076)	VAX 8530 (under VMS Version 5.3)	Intel ISBC 186/03 (bare machine)
DDC International A/S DACS Sun3/SunOS Native Ada Compiler System, Version 4.8 (#901129S1.11076)	Sun-3/60 (under SunOS, Version 4.0_Export)	Same as Host	*Validated by Registration DDC International A/S DACS VAX/VMS to 80186 Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.8 (BASE #901129S1.11077)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 8000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel ISBC 186/03 (bare machine)
DDC International A/S DACS VAX/VMS to 80186 Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.8 (#901129S1.11077)	VAX 8530 (under VMS Version 5.3)	Intel ISBC 186/03 (bare machine)	*Validated by Registration DDC International A/S DACS VAX/VMS to 8086 Bare Ada Cross Compiler System, Version 4.8 (BASE #901129S1.11079)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 8000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel ISBC 86/35 (bare machine)
*Validated by Registration DDC International A/S DACS VAX/VMS to 80186 Bare Ada Cross Compiler System with Rate Monotonic Scheduling, Version 4.8 (BASE #901129S1.11077)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 8000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel ISBC 186/03 (bare machine)	*Validated by Registration DDC International A/S DACS VAX/VMS to 8086 Bare Ada Cross Compiler System, Version 4.8 (BASE #901129S1.11079)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 8000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 860 (under VMS Version 5.3)	Intel ISBC 86/35 (bare machine)



## Ada PROCESSORS, *Continued*

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration DDC International A/S DACS VAX/VMS to 80288 Bare Ada Cross Compiler System, Version 4.6 (BASE) #901129S1.11079	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 8000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 880 (under VMS Version 5.3)	Intel ISBC 286/12 (bare machine)	DDC-I, Inc. DACS Sun SPARC/SunOS Native Ada Compiler System, Version 4.6.1 #920805S1.11295	SPARCstation 2 (under SunOS, Version 4.1.1)	Same as Host
*Validated by Registration DDC International A/S DACS VAX/VMS to 80288 PM Bare Ada Cross Compiler System, Version 4.6 (BASE) #901129S1.11079	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 8000, VAX 8000 & VAX 9000 Series of computers, including Raytheon Military VAX computer model 880 (under VMS Version 5.3)	Intel ISBC 286/12 in Protected Mode (bare machine)	DDC-Inter, Inc. InterACT Ada 1750A Compiler System, Release 3.5 #910705S1.11191	MicroVAX 3100 Cluster (under VMS 5.2)	InterACT MIL-STD-1750A Instruction Set Architecture Simulator Release 2.3 (bare machine simulation)
DDC International A/S DACS 80386 DMS/OS Ada Compiler System, Version 4.6 #901129S1.11112	IBM PS/2 Model 80-311 (under LynxOS 386/PS2, Version 2.0A)	Same as Host	DDC-Inter, Inc. InterACT Ada MIPS Cross-Compiler System, Release 2.1 (BASE) #910705S1.11192	MicroVAX 3100 Cluster (under VMS 5.2)	Lockheed Sanders STAR MVP R3000/R3010 Board (bare machine)
DDC International A/S DACS VAX/VMS to 80880 Bare Ada Cross Compiler System, Version 4.6.1 #910502S1.11158	VAX 8530 (under VMS Version 5.3)	Tadpole Technology plc TP880M (bare machine)	Digital Equipment Corporation VAX Ada, Version 2.2 #901109S1.11053	VAX 8800 (under VMS Version 5.4)	Same as Host
DDC International A/S DACS Sun-3/SunOS to 68030 Bare Ada Cross Compiler System, Version 4.6.4, MFI IEEE 695 (BASIC_MODE) #910502S1.11159	Sun-3/50 (under SunOS Release 4.0_Export)	Motorola MVME143 board (68030/68882) (bare machine)	*Validated by Registration Digital Equipment Corporation VAX Ada Version 2.2 (BASE) #901109S1.11053	DEC VAX-11, VAXserver, VAXstation, VAXr, MicroVAX, VAX 4000, VAX 6000, VAX 8000 & VAX 9000 Series of computers (as supported); Raytheon Military VAX Computer Model 880; and Norden MIVAX Computer Model MIVAX II (under VMS Version 5.4)	Any Host
DDC International A/S DACS Sun-3/SunOS to 68030 Bare Ada Cross Compiler System, Version 4.6.4, MFI IEEE 695 (SECURE_MODE) #910502S1.11160	Sun-3/50 (under SunOS Release 4.0_Export)	Motorola MVME143 board (68030/68882) (bare machine)	Digital Equipment Corporation VAX Ada, Version 2.2 #901109S1.11054	VAX 8800 (under VMS Version 5.4)	MicroVAX II (under VAXELN Version 4.1, using VAXELN Ada Version 2.2)
*Validated by Registration DDC-I, Inc. DACS VAX/VMS to 80488 PM Bare Ada Cross Compiler System, Version 4.6 (BASE) #901129S1.11074	VAX 8530 (under VMS Version 5.3)	Intel ISBC 486/125 (bare machine)	*Validated by Registration Digital Equipment Corporation VAX Ada Version 2.2 (BASE) #901109S1.11054	DEC VAX-11, VAXserver, VAXstation, VAXr, MicroVAX, VAX 4000, VAX 6000, VAX 8000 & VAX 9000 Series of computers (as supported); Raytheon Military VAX Computer Model 880; and Norden MIVAX Computer Model MIVAX II (under VMS Version 5.4)	VAX 4000 Models 200 & 300; VAX 6000 Series 200, 300 & 400; VAX 8200, 8250, 8500, 8530, 8550, 8700, 8800 & 8810; VAX-11/730 & /750; MicroVAX II, 2000, 3100, 3300, 3400, 3500, 3600, 3800 & 3900; VAXstation 2000, 3100, 3150, 3200, 3500 & II/GPX; VAXserver 3100, 3300, 3400, 3500, 3600, 3800, 3900; VAXserver 4000-300; VAXserver 6000 Models 210, 220, 310, 320, 410 & 420; Raytheon Military VAX Computer Models 810 & 880; Norden MIVAX Computer Model MIVAX II, IVAX 620 & 630; VAX RFA; KA820-BA & KA800-M; rVAX 300, 1000, 3200, 3300, 3305, 3400, 3500, 3600, 3800, 4000 Model 300, 8550, 8700, rVAX 8000 Models 200, 300 & 400 Series and rVAXstation 3100 Models 30 & 38 (under VAXELN Version 4.2, using VAXELN Ada Version 2.2)
DDC-I, Inc. DACS DECstation/ULTRIX to MIPS R3000 Bare Ada Cross Compiler System, Release 2.1-18 #920805S1.11283	MIPS M/120-5 (under RISC/os Version 4.50)	Lockheed Sanders STAR MVP R3000/R3010 Board (bare machine)			
DDC-I, Inc. DACS DECstation/ULTRIX to MIPS R3000 Bare Ada Cross Compiler System, Release 2.1-18 #920805S1.11284	DECstation 3100 (under ULTRIX Version 4.0)	Integrated Device Technology IDT7RS301 R3000/R3010 Board (bare machine)			



# Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Digital Equipment Corporation VAX Ada Version 2.2 (BASE #901106S1.11054)	VAX 6000 Model 200, 300 & 400 Series; VAX 8200, 8250, 8300, 8350, 8500, 8530, 8550, 8600, 8650, 8700, 8800, 8810, 8820, 8830, 8840, 8842, 8974 & 8978; VAX-11/730, /750, /780, /785; MicroVAX II, 2000, 3100, 3300, 3400, 3500, 3600, 3800 & 3900; VAXstation II, 2000, 3100 series, 3200, 3500, 3520, 3540 & 8000; VAXserver 3100, 3300, 3400, 3800, 3900, 3902, 3900, 3900; VAXserver 6000-310, 6000-410 & 6000-420; Ratheon Military VAX Computer Model 880 (under VMS Version 5.4)	VAX 6000 Model 200, 300 & 400 Series; VAX 8200, 8250, 8500, 8530, 8550, 8700, 8800 & 8810; VAX-11/730 & /750; MicroVAX II, 2000, 3100, 3300, 3400, 3500, 3600, 3800, 3900; VAXserver 6000 Models 210 220, 310, 320, 410 & 420; Ratheon Military VAX Computer Models 810 & 880; Norden Systems: Mill Vax II, IVAX 620 & 630; VAX RTA; KA820-BA, rtVAX 300, 1000, 3200, 3300, 3305, 3400, 3500, 3600, 3800, 8550, 8700, rtVAX 6000 Model 200, 300 & 400 Series & rtVAXstation 3100 Models 30 & 38 (under VAXELN Version 4.1 using VAXELN Ada Version 2.2)	*Validated by Registration Encore Computer Corporation Parallel Ada Development System, Revision 2.0 (BASE #910130W1.11114)	Encore 91, 93, & 94 Series, all models (under UMAX 3.0)	Any Host
			Encore Computer Corporation Parallel Ada Development System, Revision 1.0 (#910130W1.11115)	Encore 91 Series Model 91-0340 (under UMAX 3.0)	Encore 91 Series Model 91-0430 (under uMPX 1.0)
			*Validated by Registration Encore Computer Corporation Parallel Ada Development System, Revision 1.0 (BASE #910130W1.11115)	Encore 91 Series, all models (under UMAX 3.0)	Encore 91 Series, all models (under microMPX 1.0)
Digital Equipment Corporation DEC Ada, Version 1.0 (#911025S1.11226)	DECstation 5000 Model 200 (under ULTRIX 4.2)	Same as Host	*Validated by Registration Encore Computer Corporation Parallel Ada Development System, Revision 2.0 (BASE #910130W1.11115)	Encore 91 Series, all models (under UMAX 3.0)	Encore 91 Series, all models (under microMPX 1.0 & microARTE 1.0)
*Validated by Registration Digital Equipment Corporation DEC Ada, Version 1.0 (BASE #911025S1.11226)	DECstation 2100, 3100, 3100s, 5000 Models 120/125, 120/125CX, 120/125PXG, 120/125PXG TURBO, 200, 200CX, 200PX, 200PXG, 200PXG TURBO; and DECsystem 3100, 5000 Model 200, 5100, 5400, 5500, 5810, 5820, 5830 & 5840 (under ULTRIX Versions 4.0, 4.1 & 4.2)	Any Host	GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11180)	MIPS M/120 RISC Computer (under UMIPS 4.51)	Same as Host
*Validated by Registration Digital Equipment Corporation DEC Ada, Version 1.0 (BASE #911025S1.11226)	DEC DECstation 2100, 3100, & 5000, and DECsystem 5000, 5100, 5400, 5500, 5800, & 5900 series of computers (under ULTRIX Versions 4.0, 4.1, 4.2, & 4.2A)	Any Host	GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11182)	IBM RISC System 6000/520 (under AX Version 3)	Same as Host
E-Systems/ECI Division Tolerant Ada Development System, Version 6.0 (#901003W1.11036)	Tolerant Eternity (under TX, 5.4.0)	Same as Host	GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11184)	HP 9000 Series 400 Model 400T (under HP-LUX 7.03)	Same as Host
EDS-Scicon Defence Limited XD Ada MC88040/ARTX Version 1.2 (#921112N1.11267)	Local Area VAX Cluster (comprising VAXserver 3800, MicroVAX 2000 (2), & MicroVAX II machines) (under VMS 5.5)	Motorola MVME167 (68040) (bare machine)	GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11186)	Concurrent Computer Corporation M8000 Model 6450 (under RTU 5.0C)	Same as Host
Encore Computer Corporation Parallel Ada Development System, Revision 1.0 (#910130W1.11114)	Encore 91 Series Model 91-0340 (under UMAX 3.0)	Same as Host	GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11187)	Concurrent Computer Corporation M8000 Model 8500 (under RTU 5.1A)	Same as Host
*Validated by Registration Encore Computer Corporation Parallel Ada Development System, Revision 1.0 (BASE #910130W1.11114)	Encore 91 Series, all models (under UMAX 3.0)	Any Host	GSE Gesellschaft fur Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11188)	Data General AVIION 400 Model 402 (under DG/LUX 4.31)	Same as Host

## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
GSE Gesellschaft für Software-Engineering mbH Meridian Ada, Version 4.1 (#910711W1.11190)	HP 9000 Series 700 Model 720 (under HP-UX 8.01)	Same as Host	*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada Compiler, Version 5.1 (BASE #900918W1.11029)	NH-1200, NH-3400 & NH-3800 (under CX/UX 5.2, CX/RT 5.2 & CX/SX 5.2)	Same as Host
Harris Corporation, Computer Systems Division Harris Ada 5.1 (#900918W1.11028)	Harris NH-4400 (under CX/UX 5.1)	Same as Host	*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada 5.1.1 (BASE #900918W1.11029)	Harris NH-1200, NH-3400 & NH-3800 (under CX/UX 5.3, CX/RT 5.3 & CX/SX 5.3)	Any Host
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada 5.1 (BASE #900918W1.11028)	Harris NH-4400 (under CX/UX 5.1, CX/RT 5.1, OR CX/SX 5.1)	Any Host	*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada Compiler 5.1.1 (BASE #900918W1.11029)	Harris NH-1200, NH-3400, & NH-3800 (under CX/UX 6.1, CX/RT 6.1, & CX/SX 6.1)	Any Host
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada Compiler, Version 5.1 (BASE #900918W1.11028)	Harris NH-4400 (under CX/UX 5.2, CX/RT 5.2 & CX/SX 5.2)	Same as Host	Hewlett-Packard Co./Apollo Systems Division Domain Ada V8.0m (#910411W1.11137)	DN4500 (under Domain/OS SR10.3)	Same as Host
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada 5.1.1 (BASE #900918W1.11028)	Harris NH-4400 & NH-4800 (under CX/UX 5.3, CX/RT 5.3 & CX/SX 5.3)	Any Host (using either Harris Ada Run-time System or ARMS Run-time System)	Hewlett-Packard Co./Apollo Systems Division Domain Ada V8.0p (#910411W1.11138)	DN10000 (under Domain/OS SR10.3.p)	Same as Host
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada Compiler 5.1.1 (BASE #900918W1.11028)	NH-4400 & NH-4800 (under CX/UX 6.1, CX/RT 6.1, & CX/SX 6.1)	Any Host (using either Harris Ada Run-time System or ARMS Run-time System)	Hewlett-Packard Company HP 9000 Series 300 Ada Compiler, Version 5.35 (#901022W1.11049)	HP 9000 Series 300 Model 370 (under HP-UX, Version A.07.00)	Same as Host
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada Compiler 5.1.1 (BASE #900918W1.11028)	NH-4400, NH-4800, & NH-5800 (under CX/UX 6.2, CX/RT 6.2, & CX/SX 6.2)	Any Host (using either Harris Ada Run-time System or ARMS Run-time System)	*Validated by Registration Hewlett-Packard Company HP 9000 Series 300 Ada Compiler, Version 5.35 (BASE #901022W1.11049)	HP 9000 Series 300 & 400, all models (under HP-UX, Version A.B7.03)	Any Host
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada Compiler 5.1.1 (BASE #900918W1.11028)	Harris NH-3800 (under CX/UX 5.1)	Same as Host	*Validated by Registration Hewlett-Packard Company HP 9000 Series 300 & 400, all Models (under HP-UX, Versions A.B7.00 (release 7.0), A.B7.03 (release 7.3), A.B7.05 (release 7.5) & A.B8.00 (release 8.0), as supported)	HP 9000 Series 300 & 400, all Models (under HP-UX, Versions A.B7.00 (release 7.0), A.B7.03 (release 7.3), A.B7.05 (release 7.5) & A.B8.00 (release 8.0), as supported)	Any Host from the same Series, under the same OS version
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada 5.1 (#900918W1.11029)	Harris NH-1200, NH-3400 & NH-3800 (under CX/UX 5.1, CX/RT 5.1, OR CX/SX 5.1)	Any Host	IBM Canada, Ltd. AIX Ada/8000 Release 2, Preliminary Version (#901127W1.11085)	RISC System/8000 model 7013-530 (under AIX 3.1)	Same as Host
*Validated by Registration Harris Corporation, Computer Systems Division Harris Ada 5.1 (BASE #900918W1.11029)	Harris NH-1200, NH-3400 & NH-3800 (under CX/UX 5.1, CX/RT 5.1, OR CX/SX 5.1)	Any Host	*Validated by Registration IBM Canada, Ltd. AIX Ada/8000 Release 2.0 (BASE #901127W1.11085)	RISC System/8000 models 7013-320, -520, -530, -540, -550, -730 & -830 (under AIX 3.1)	Any Host

## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration IBM Canada, Ltd. ADX Ada/8000 Release 2.2 (BASE #901127W1.11065)	RISC System/6000 models 7013-320, -520, -530, -540, -550, -730, & -930 (under ADX 3.1 & 3.2)	Any Host, running same ADX version as Host	*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.1.0 (BASE #901128W1.11091)	IBM 3090 (under VM/SP Release 6.0 HPO 60)	Same as Host
IBM Canada, Ltd. ADX Ada/8000 Internal Development Version (#920121W1.11234)	RISC System/6000 model 7012-320 (under ADX 3.2)	Same as Host	International Business Machines Corporation IBM Ada/370, Version 1.1.0 (#901128W1.11092)	IBM 4381 (under MVS/XA Release 3.8)	Same as Host
*Validated by Registration IBM Canada, Ltd. ADX Ada/8000 Release 3.0 (BASE #920121W1.11234)	RISC System/6000, all models (under ADX 3.2)	Any Host	*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.1.0 (BASE #901128W1.11092)	IBM 3090 (under MVS/ESA Release 4.1)	Same as Host
IBM Canada, Ltd. XL Ada/8000 Internal Development Version (#921119W1.11299)	RISC System/6000, model 7013-520 (under ADX 3.2)	Same as Host	International Business Machines Corporation IBM Ada/370, Version 1.2.0 (optimized) (#910612W1.11166)	IBM 3083 (under VM/SP HPO Release 5.0)	Same as Host
Intel Corporation IPSC/880 Ada Release 6.1.0(E) Unix System V/880 Release 4 Version 3, 312425-0001 (#920513W1.11255)	Intel i860 Station (under Unix System V/880, Version 4)	Intel IPSC/880 (under Ada-NX, Release 3.3.1)	International Business Machines Corporation IBM Ada/370, Version 1.2.0 (unoptimized) (#910612W1.11167)	IBM 4381 (under MVS/ESA Release 3.1)	Same as Host
Intermetrics, Inc. UTS Ada Compiler, Version 302.03 (#910425W1.11141)	IBM 3083 (under UTS 580 Release 1.2.3)	Same as Host	International Business Machines Corporation IBM Ada/370, Version 1.2.0 (unoptimized) (#910612W1.11168)	IBM 3090 (under VM/SP HPO Release 6.0)	IBM 837x, 430x, 308x, 3090 & ES/9000 processors (under VM/SP HPO 6.0)
Intermetrics, Inc. Intermetrics MVS Ada Compiler, Version 7.0 (#910622W1.11170)	Amdahl 5890/180E (under MVS/XA Release 2.2)	Same as Host	*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE #901128W1.11091)	IBM 3090 (under VM/ESA Release 1.0 ESA Feature)	Same as Host
International Business Machines Corporation IBM Ada/370, Version 1.1.0 (#901128W1.11091)	IBM 3083 (under VM/SP HPO Release 5.0)	Same as Host	*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE #901128W1.11091)	IBM 3084 (under VM/ESA Release 1.0 370 Feature)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.1.0 (BASE #901128W1.11091)	IBM 3090 (under VM/ESA Release 1.0 ESA Feature)	Same as Host	*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE #910612W1.11168)	IBM 3090 (under VM/XA 2.1)	IBM 837x, 430x, 308x, 3090 & ES/9000 processors (under VM/XA 2.1)
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.1.0 (BASE #901128W1.11091)	IBM 3090 (under VM/XA Release 2.1)	Same as Host	*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE #910612W1.11168)	IBM 3084 (under VM/ESA 1.1.0 (370 Feature))	IBM 837x, 430x, 308x, 3090 & ES/9000 processors (under VM/ESA 1.1.0 (370 Feature))



## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE) #910812W1.11168	IBM 3090 (under VM/ESA 1.1.0 (ESA Feature))	IBM 837x, 43xx, 308x, 3090 & ES/9000 processors (under VM/ESA 1.1.0 (ESA Feature))	Irvine Compiler Corporation ICC Ada v7.0.0 (#910510W1.11145)	HP 9000 Model 720 (under HP-UX Release 8.01)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE) #910812W1.11168	IBM 3090 (under VM/ESA 1.1.1)	IBM 837x, 43xx, 308x, 3090 & ES/9000 processors (under VM/ESA 1.1.1)	Irvine Compiler Corporation ICC Ada v7.0.0 (#910510W1.11146)	Sun 3/50 (under SunOS V4.0)	Same as Host
International Business Machines Corporation IBM Ada/370, Version 1.2.0 (unoptimized) (#910812W1.11169)	IBM 4381 (under MVS/ESA Release 3.1)	Same as Host	Irvine Compiler Corporation ICC Ada v7.0.0 (#910510W1.11148)	VAXstation 3100 Model M38 (under VMS 5.3-1)	Intel i8080MC (bare machine)
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 & 1.3.0 (BASE) #910812W1.11169	IBM 3090 (under MVS/SP XA 2.2)	IBM 837x, 43xx, 308x, 3090 & ES/9000 processors (under MVS/SP XA 2.2)	Irvine Compiler Corporation ICC Ada v7.4.0 (#920520I1.11260)	VAXstation 3100 Model M38 (under VMS Version 5.3-1)	Intel i8080MX in Hughes DMV running in tagged mode (bare machine, using CHIKSYS kernel version 104)
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE) #910812W1.11169	IBM 3090 (under MVS/ESA Release 4.1.0)	IBM 837x, 43xx, 308x, 3090 & ES/9000 processors (MVS/ESA Release 4.1.0)	Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11031)	Sun-3/280 (under SunOS, Version 4.1)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.2.0 (BASE) #910812W1.11169	IBM 3090 (under MVS/ESA Release 4.2.0)	IBM 837x, 43xx, 308x, 3090 & ES/9000 processors (MVS/ESA Release 4.2.0)	Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11032)	Sun-4/110 (under SunOS, Version 4.1)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.3.0 (BASE) #910812W1.11169	IBM 3090 (under MVS/ESA 4.1.0 & 4.2.0)	IBM 837x, 43xx, 308x, 3090, & ES/9000 computers (under same OS as Host)	*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE) #900909W1.11032	Sun Microsystems Sun-4, SPARCserver & SPARCstation computer families (under SunOS Versions 4.1 & 4.1.1)	Any Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.3.0 (BASE) #910812W1.11169	IBM 3090 (under MVS/ESA 3.1.0)	IBM 837x, 43xx, 308x, 3090, & ES/9000 computers (under same OS as Host)	Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11033)	DECstation 3100 (under Ultrix, Version 3.0)	Same as Host
*Validated by Registration International Business Machines Corporation IBM Ada/370, Version 1.3.0 (BASE) #910812W1.11169	IBM 4381 (under MVS/ESA 3.1.0)	IBM 837x, 43xx, 308x, 3090, & ES/9000 computers (under same OS as Host)	*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE) #900909W1.11033	DECstation 2100, 3100 & 5000 (under Ultrix 3.0)	Any Host
International Computers Limited VME Ada Compiler VA3.00 (#911003N1.11222)	ICL Series 38 Level 80 (under VME with VMEB Environment Option Version SV291)	Same as Host	Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE) #900909W1.11034	IBM PS/2 Model 60 (with Floating-Point Co-Processor) (under IBM PC-DOS 3.30)	Same as Host
International Computers Limited VME Ada Compiler VA3.10 (#921008N1.11293)	ICL Series 38 Level 80 (under VME with VMEB Environment Option Version SV292)	Same as Host	*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE) #900909W1.11034	Any Computer System comprising: cpu: any that executes the Intel 80286, 80386, or 80486 instruction set, fpu: intel 80287, 80387, or equivalent, as appropriate, memory: 640 KByte RAM minimum, disk: 20 MByte hard drive, OS: IBM PC-DOS 3.30	Any Host

# Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1.1 (BASE #900909W1.11034)	Any Computer System Comprising: Cpu: any that executes the Intel 80286, 80386, or 80486 instruction set; Fpu: Intel 80287, 80387, or equivalent, as appropriate; Memory: 640 or greater KByte RAM; Disc: 20 MByte hard drive (under IBM PC-DOS 3.30)	Any Host	*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11037)	Any Computer System comprising: cpu: any that executes the Intel 80386 or 80486 instruction set, fpu: optional Intel 80387 or equivalent, for 80386 cpu, memory: 2 MByte RAM minimum, disc: 40 MByte hard drive, OS: SCO Unix 3.2 or Interactive 386/bx 1.0.6	Any Host machine running the same OS
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11035)	IBM PS/2 Model 30 (with Floating-Point Co-Processor) (under IBM PC-DOS 3.30)	Same as Host	*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11037)	Sequent Symmetry 2000/40, /200, /400 & /700 (under DYNIX/ptx V1.2.0)	Any Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11035)	Any Computer System comprising: cpu: any that executes the Intel 8086 instruction set, fpu: Intel 8087 or equivalent, as appropriate, memory: 640 KByte RAM minimum, disc: 20 MByte hard drive, OS: IBM PC-DOS 3.30	Any Host	*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1.1 (BASE #900909W1.11037)	Any Computer System Comprising: Cpu: any that executes the Intel 80386 or 80486 instruction set; Fpu: Intel 80387 or equivalent, for 80386 cpu; Memory: 2 or greater MByte RAM; Disc: 40 MByte hard drive (under SCO Unix 3.2 or INTERACTIVE UNIX System V/386 Release 3.2)	Any Host with the same OS
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1.1 (BASE #900909W1.11035)	Any Computer System Comprising: Cpu: any that executes the Intel 8086 instruction set; Fpu: Intel 8087 or equivalent, as appropriate; Memory: 640 or greater KByte RAM; Disc: 20 MByte hard drive (under IBM PC-DOS 3.30)	Any Host	Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11038)	Apple Macintosh II (under System 6.0.3)	Same as Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11036)	ITT XTRA/286 (with Floating-Point Co-Processor) (under MS-DOS 3.20/OS286)	Same as Host	*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11038)	Apple Macintosh SE 30 (under System 6.0.3)	Same as Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #900909W1.11036)	Any Computer System comprising: cpu: any that executes the Intel 80286, 80386, or 80486 instruction set, fpu: Intel 80287, 80387, or equivalent, as appropriate, memory: 1.5 MByte RAM minimum, disc: 20 MByte hard drive, OS: MS-DOS 3.20/OS286	Any Host	Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#901108W1.11080)	Apple Macintosh II (under A/LUX 2.0)	Same as Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1.1 (BASE #900909W1.11036)	Any Computer System Comprising: Cpu: any that executes the Intel 80286, 80386, or 80486 instruction set; Fpu: Intel 80287, 80387, or equivalent, as appropriate; Memory: 1.5 or greater MByte RAM; Disc: 20 MByte hard drive (under MS-DOS 3.30/OS286)	Any Host	Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#901108W1.11081)	Stardent Titan P3 (under Stardent/Unix 3.0)	Same as Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#900909W1.11037)	80 Data 386/25 (under 386/bx 1.0.6)	Same as Host	Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#901108W1.11082)	MicroVAX 3100 (under Ultrix 3.1)	Same as Host
			Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#901108W1.11083)	MicroVAX II (under VMS 5.2)	Same as Host
			Meridian Software Systems, Inc. Meridian Ada, Version 4.1.1 (#911002W1.11218)	IBM PS/2 Model 80 (with Floating Point Co-Processor) (under IBM PC-DOS 3.30/OS386)	Same as Host



## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#911002W1.11219)	NeXTstation (under System Release 2.0)	Same as Host	MIPS Computer Systems MIPS Ada 3.0 (#900619W1.11011)	MIPS M/2000 (under RISC/os 4.50)	Same as Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#911002W1.11220)	SGI PowerSeries 4D/310S (under IRIX Sys V 3.3.2)	Mercury MC860 VM (under MC/OS, Version 2.0)	NEC Corporation NEC Ada Compiler System for EWS-UX/V (Release 4.0), Version Release 2.1(4.6) (#910918S1.11216)	NEC EWS4800/220 (under EWS-UX/V (Release 4.0) R2.1)	Same as Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #911002W1.11220)	SGI PowerSeries 4D/310S (under IRIX Sys V 3.3.2)	Mercury MC860VB & MC860VM (under MC/OS, Version 2.0)	NEC Corporation NEC Ada Compiler System for EWS-UX/V to V70/RX-UX832, Version 1.0 (#910918S1.11217)	NEC EWS4800/60 (under EWS-UX/V R8.1)	NEC MV4000 (under RX-UX832 V1.6)
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #911002W1.11220)	SGI PowerSeries 4D/310S (under IRIX Sys V 3.3.2)	Mercury MC860VS (under MC/OS, Version 2.VS)	*Validated by Registration NEC Corporation NEC Ada Compiler System for EWS-UX/V (Rel 4.0) to V70/RX-UX832, Version 1.0 (BASE #910918S1.11217)	All RISC (MIPS R3000- & R4000-based) models of the EWS4800 series (under EWS-UX/V (4.0) R2.1)	NEC MV4000 (under RX-UX832 V1.6)
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#911002W1.11221)	Sun-4/110 (under SunOS, Version 4.1)	Mercury MC860 VM (under MC/OS, Version 2.0)	North China Institute of Computing Technology C_Ada, Version 1.0 (#910902N1.11198)	MicroVAX II (under ULTRIX 3.0)	Same as Host
*Validated by Registration Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (BASE #911002W1.11221)	Sun Microsystems Sun-4/110, /150, /260 & /280; SPARCserver 330, 370, 390, 470 & 490; and SPARCstation 2, IPC & IPX (under SunOS Versions 4.1 & 4.1.1) and SPARCengine 1E (under SunOS Version 4.1e)	Mercury MC860VB & MC860VM (under MC/OS, Version 2.0) and Mercury MC860VS (under MC/OS, Version 2.VS)	Proprietary Software Systems, Inc. PSS VAX/ZR34325 Compiler Version XB-01.000 (#8204231.11250)	VAX 8350 (under VMS Version 5.4)	PSS Zoran ZR34325 Digital Signal Processor AdaRAID Version XK-01.000 (bare machine simulation, executing on the Host)
Meridian Software Systems, Inc. Meridian Ada, Version 4.1 (#911216W1.11232)	Sequoia Series 400 (under Topix, Version 6.5)	Same as Host	R.R. Software, Inc. Janus/Ada 2.2.0 Phar Lap/DOS (#901120W1.11068)	IBM PS/2 Model 80 (under Phar Lap/DOS 3.3)	IBM PS/2 Model 80 (under MS DOS 3.3)
Meridian Software Systems, Inc. Meridian Ada, Version 4.1.3 (#920915W1.11266)	Intergraph Interpro 2400 (under CLIX System 5, Release 3.1)	Same as Host	*Validated by Registration R.R. Software, Inc. Janus/Ada 2.2.0 Phar Lap/DOS (BASE #901120W1.11068)	Any Computer System Comprising: cpu: Intel 80386, fpu: optional, memory: 4 MByte RAM, disk 40 MByte hard drive (under Phar Lap/DOS 3.3)	Any Computer System Comprising: cpu: Intel 80386, fpu: optional, memory: 4 MByte RAM, disk 40 MByte hard drive (under MS DOS 3.3)
Meridian Software Systems, Inc. Meridian Ada, Version 4.1.3 (#920915W1.11267)	Essence 636 (under DOS 5.0, running Microsoft Windows 3.0)	Same as Host	*Validated by Registration R.R. Software, Inc. Janus/Ada 2.2.1 DOS (BASE #901120W1.11068)	Any Computer System Comprising: cpu: any that executes Intel 8086/8088 instructions; fpu: optional; memory: 640 KByte RAM; disk 20 MByte hard drive (under MS DOS 3.3)	Same as Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1.3 (#920915W1.11268)	BBN TC2000 (under nX 3.0.1)	Same as Host	*Validated by Registration R.R. Software, Inc. Janus/Ada 2.2.2 DOS (BASE #901120W1.11068)	Any Computer System Comprising: cpu: any that executes the Intel 8086/8088 instruction set; fpu: optional; memory: 640 KByte RAM; disk 20 MByte hard drive (under MS-DOS 3.3)	Any Host
Meridian Software Systems, Inc. Meridian Ada, Version 4.1.3 (#920915W1.11269)	BBN TC2000 (under nX 3.0.1)	BBN TC2000 (under pSOS+/88k)			
MIPS Computer Systems MIPS ASAPP 3.0 (#900619W1.11010)	MIPS M/2000 (under RISC/os 4.50)	R3200-6 CPU board (bare machine)			

# Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration R.R. Software, Inc. Janus/Ada 2.2.2 386 to DOS (BASE #901120W1.11088)	Any Computer System Comprising: cpu: any that executes the Intel 80386 instruction set; fpu: optional; memory: 2 MByte RAM; dialc 40 MByte hard drive (under Phar Lap / MS-DOS 3.3)	Any Host (under MS-DOS 3.3)	Rockwell International Corporation DDC-Based Ada/CAPS Compiler, Version 6.0 (#910306W1.11130)	VAXstation 3100 Model 30 (under VMS 5.4)	CAPS/AAMP2 (bare machine)
R.R. Software, Inc. Janus/Ada 2.2.0 Unix (#901129W1.11089)	Northgate 386/25 (under SCO Unix 3.2)	Same as Host	*Validated by Registration Rockwell International Corporation DDC-Based Ada/CAPS Compiler, Version 6.1 (BASE #910306W1.11130)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS Versions 5.3-1 & 5.4)	CAPS/AAMP2 (bare machine)
*Validated by Registration R.R. Software, Inc. Janus/Ada 2.2.0 UNIX (BASE #901129W1.11089)	Any Computer System Comprising: cpu: Intel 80386, fpu: optional, memory: 4 MByte RAM, dialc 60 MByte hard drive (under SCO Unix 3.2)	Same as Host	SD-Scicon UK Ltd XD Ada MC88020, Version 1.2 (#901007N1.11042)	VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS Version 5.3)	Motorola MVME133XT board (MC88020) (bare machine)
*Validated by Registration R.R. Software, Inc. Janus/Ada 2.2.2 UNIX (BASE #901129W1.11089)	Any Computer System Comprising: cpu: any that executes the Intel 80386 instruction set; fpu: optional; memory: 4 MByte RAM; dialc 40 MByte hard drive (under SCO Unix 3.2)	Any Host	*Validated by Registration SD-Scicon UK Ltd XD Ada MC88020 Version 1.2 (BASE #901007N1.11042)	VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.3)	Motorola MVME135-1 board (MC88020) and Motorola MVME147S-1 board (MC88030) (bare machines)
Rational M88020/OS-2000 Cross-Development Facility, Version 7 (#901116W1.11081)	R1000 Series 300 (under Rational Environment Version D_12_24_0)	Phillips PG2100 (OS-2000 Release 2.0)	*Validated by Registration SD-Scicon UK Ltd XD Ada MC88020, Version 1.2A (BASE #901007N1.11042)	VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MVME133XT board (MC88020) (bare machine)
Rational M88020/Unix Cross-Development Facility, Version 7 (#901116W1.11082)	R1000 Series 300 (under Rational Environment Version D_12_24_0)	HP 9000 Model 370MH (under HP-UX Version 7.0)	*Validated by Registration SD-Scicon UK Ltd XD Ada MC88020 MVME135 & MVME147, Version 1.2A (BASE #901007N1.11042)	VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MVME135-1 (MC88020) & MVME147S-1 (MC88030) boards (bare machines)
Rational M88020/Bare Cross-Development Facility, Version 7 (#901116W1.11083)	R1000 Series 300 (under Rational Environment Version D_12_24_0)	Motorola MVME135 (88020) (bare machine)	*Validated by Registration SD-Scicon UK Ltd XD Ada MC88020/EFA, Version 1.2A (BASE #901007N1.11042)	VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MVME135-1 board (MC88020) (bare machine)
Rational Rational Environment, D_12_24_0 (#901116W1.11084)	R1000 Series 300 (under Rational Environment Version D_12_24_0)	Same as Host	*Validated by Registration SD-Scicon UK Ltd XD Ada CPU32 Version 1.2 (BASE #901007N1.11042)	VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2), & MicroVAX II machines) (under VMS 5.4)	Motorola M68340EVS Evaluation System CPU32 (bare machine)
Rockwell International Corporation DDC-Based Ada/CAPS Compiler, Version 6.0 (#910306W1.11129)	VAX 8850 (under VMS, Version 5.3-1)	CAPS/AAMP1 (bare machine)	*Validated by Registration SD-Scicon UK Ltd XD Ada CPU32/MC88332 Version 1.2 (BASE #901007N1.11042)	VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2), & MicroVAX II machines) (under VMS 5.4)	Motorola M68332EVS Evaluation System CPU32 (bare machine)
*Validated by Registration Rockwell International Corporation DDC-Based Ada/CAPS Compiler, Version 6.1 (BASE #910306W1.11129)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS Versions 5.3-1 & 5.4)	CAPS/AAMP1 (bare machine)	SD-Scicon UK Ltd XD Ada MIL-STD-1750A, Version 1.2 (#901214N1.11080)	Local Area VAX Cluster (comprising VAXserver 3600, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.3)	Fairchild F9450 on a SBC-50 board (MIL-STD-1750A) (bare machine)



## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
SD-Scicon UK Ltd XD Ada MC88000, Version 1.2 (#910314N1.11134)	Local Area VAX Cluster (comprising VAXserver 3800, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MC88000 on an MVME117-3FP board (bare machine)	*Validated by Registration Siemens Nixdorf Informationssysteme AG Ada (SINX) V4.1 (BASE #92032511.11249)	Siemens Nixdorf WX200 & MX300i (under SINX Version 5.41)	Each Host, self targeted
*Validated by Registration SD-Scicon UK Ltd XD Ada MC88000/EFA, Version 1.2 (BASE #910314N1.11134)	Local Area VAX Cluster (comprising VAXserver 3800, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MC88000 on an MVME117-3FP board (bare machine)	Siemens Nixdorf Informationssysteme AG Ada (SINX) V4.1 (#92092211.11276)	Siemens Nixdorf RM800 (under SINX Version V5.41)	Same as Host
SD-Scicon UK Ltd XD Ada MC88020/ARTX, Version T1.2 (#910911N1.11199)	Local Area VAX Cluster (comprising VAXserver 3800, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MVME147S-1 (MC88030) (bare machine)	Silicon Graphics Computer Systems 4D ADA 3.0 (#900703W1.11014)	Iris-4D/380 (under IRIX Release 4D-3.3)	Same as Host
SD-Scicon UK Ltd XD Ada MC88040, Version 1.2 (#911128N1.11230)	Local Area VAX Cluster (comprising VAXserver 3800, MicroVAX 2000 (2) & MicroVAX II machines) (under VMS 5.4)	Motorola MVME185 (MC88040) (bare machine)	Silicon Graphics Computer Systems 4D ADA 3.0 (#900703W1.11015)	Iris-4D/220S (under IRIX Release 4D-3.3)	Same as Host
*Validated by Registration SD-Scicon UK Ltd XD Ada MC88040/FORCE CPU-40, Version 1.2 (BASE #911128N1.11230)	Local Area VAX Cluster (comprising VAXserver 3800, MicroVAX 2000 (2), & MicroVAX II machines) (under VMS 5.5)	FORCE CPU-40 (MC88040) (bare machine)	Silicon Graphics Computer Systems 4D ADA 3.0 (#900703W1.11016)	Iris-4D/25 (under IRIX Release 4D-3.3)	Same as Host
*Validated by Registration SD-Scicon UK Ltd XD Ada MC88040, Version 1.2 (BASE #911128N1.11230)	Local Area VAX Cluster (comprising VAXserver 3800, MicroVAX 2000 (2), & MicroVAX II machines) (under VMS 5.5)	Motorola MVME187 (88040) (bare machine)	Silicon Graphics, Inc. VADS SGI-Irix, SC4-ADA-4.0, Version 6.1 (#910820W1.11203)	SGI Indigo (under Irix V4.0)	Same as Host
Siemens Nixdorf Informationssysteme AG SIEMENS NIXDORF BS2000 Ada Compiler V2.1 (#90111911.11111)	SIEMENS NIXDORF 7.560G (under BS2000 V9.5)	Same as Host	*Validated by Registration Siemens Nixdorf, Inc. VADS SGI-Irix, SC4-ADA-4.0, Version 6.1 (BASE #910820W1.11203)	IRIS Indigo, Personal IRIS 4D, IRIS 4D series of computers (under Irix V4.0)	Any Host
*Validated by Registration Siemens Nixdorf Informationssysteme AG SIEMENS NIXDORF BS2000 Ada Compiler V2.1 (BASE #90111911.11111)	SIEMENS NIXDORF 7.530, 7.536, 7.541, 7.550, 7.551, 7.560, 7.561, 7.570, 7.571, 7.580 & 7.590; 7.500-C30, -C40, -H60, -H90 & -H120 (under BS2000 V9.5 & V10.0)	Same as Host	Silicon Graphics, Inc. VADS SGI-Irix, SC4-ADA-4.0, Version 6.1 (#910920W1.11204)	SGI 4D/440 (under Irix V3.3)	Same as Host
Siemens Nixdorf Informationssysteme AG Ada (SINX) V4.1 (#910711W1.11181)	Siemens Nixdorf WX200 (SINX-ODT) (under SINX-ODT V1.0)	Same as Host	SKY Computers, Inc. Meridian Ada, Version 4.1 (#910711W1.11183)	SGI Personal Iris W-4D25 (under Irix System V 3.3)	SKYbolt 8116-V (under SKYbolt kernel version 2.33)
*Validated by Registration Siemens Nixdorf Informationssysteme AG Ada (SINX) V4.1 (BASE #910711W1.11181)	Siemens Nixdorf WX200 (SINX-ODT) (under SINX-ODT V1.5)	Same as Host	SKY Computers, Inc. Meridian Ada, Version 4.1 (#910711W1.11185)	SPARCstation 1 (under SunOS release 4.1)	SKYstation 8117-P (under SKYstation kernel version 2.33)
Siemens Nixdorf Informationssysteme AG Ada (SINX) V4.1 (#92032511.11249)	Siemens Nixdorf MX300i (under SINX Version V5.41)	Same as Host	SKY Computers, Inc. Meridian Ada, Version 6.1 (#921015W1.11294)	SGI Personal Iris W-4D25 (under Irix System V 3.3)	Same as Host
			Stratus Computer, Inc. Stratus Ada, Version 6.1 (#921015W1.11294)	Stratus XA/R20 (under FTX, 2.0.1)	Same as Host

## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration Sun Microsystems Sun Microsystems Sun Ada, SunOS, ADE-1.0-4-4-21, Version 1.0 (BASE #900510W1.11008)	Sun Microsystems Sun-4, SPARCserver, & SPARCstation computer families; SPARCserver 600MP Series; & 4800MP-64 (under SunOS Version 4.2 releases 4.1 & 4.1.2, as supported)	Any Host	*Validated by Registration Tartan, Inc. Tartan Ada Sun/Sun, Version 4.2 (BASE #90121111.11118)	Sun 3/60 (under SunOS Version 4.0.3)	Same as Host
*Validated by Registration Sun Microsystems Sun Microsystems Sun Ada, SunOS, ADE-1.1-4-4-21, Version 1.1 (BASE #900510W1.11008)	Sun Microsystems Sun-4, SPARCserver, SPARCstation, & SPARCengine computer families; SPARCserver 600MP Series; & 4800MP-64 (under SunOS Version 4.2 release 4.1.2)	Any Host	Tartan, Inc. Tartan Ada VMS/680MC, Version 4.0 (#90121211.11120)	VAXstation 3100 (under VMS 5.2)	Intel ICE980/25 on an Intel EXV80980MC board (bare machine)
*Validated by Registration Sun Microsystems Sun Microsystems Sun Ada, SunOS, ADE-1.1-4-4-21, Versions 1.0 & 1.1 (BASE #900510W1.11008)	Sun Microsystems Sun-4, SPARCserver, & SPARCstation computer families (under SunOS 4.1.3)	Any Host	*Validated by Registration Tartan, Inc. Tartan Ada VMS/680MC, Version 4.1 (BASE #90121211.11120)	VAXstation 3100 (under VMS 5.2)	Intel EXV80980MC board, & Intel ICE980/25 on an Intel EXV80980MC board (bare machines)
Tartan, Inc. Tartan Ada VMS/C30, Version 4.0 (#90121011.11121)	VAXstation 3100 (under VMS 5.2)	Texas Instruments TMS320C30 Application Board (bare machine)	*Validated by Registration Tartan, Inc. Tartan Ada VMS/680MC, Version 4.2.1 (BASE #90121211.11120)	VAXstation 3100 (under VMS 5.2)	Intel ICE980/25 on an Intel EXV80980MC board (bare machine)
*Validated by Registration Tartan, Inc. Tartan Ada VMS/C30, Version 4.1 (BASE #90121011.11121)	VAXstation 3100 (under VMS 5.2)	Texas Instruments TMS320C30 Application Board (bare machine)	*Validated by Registration Tartan, Inc. Tartan Ada VMS/680MC, Version 4.2.1 (BASE #90121211.11120)	VAXstation 3100 (under VMS 5.2)	Intel EXV80980MC board (bare machine)
*Validated by Registration Tartan, Inc. Tartan Ada VMS/C30, Version 4.1.1 (BASE #90121011.11121)	VAXstation 3100 (under VMS 5.2)	Texas Instruments TMS320C30 Application Board, NAVY SEM-D Key Code ADSP (bare machines)	Tartan, Inc. Tartan Ada Sun/C30 Version 4.0 (#90121211.11123)	Sun 3/50 (under SunOS Version 4.0.3)	Texas Instruments TMS320C30 Application Board (bare machine)
*Validated by Registration Tartan, Inc. Tartan Ada VMS/C30/IPS, Version 4.1.2 (BASE #90121011.11121)	VAXstation 3100 (under VMS 5.2)	Texas Instruments TMS320C30 (bare machine)	*Validated by Registration Tartan, Inc. Tartan Ada Sun/C30, Version 4.1.1 (BASE #90121211.11123)	Sun 3/50 (under SunOS Version 4.0.3)	Texas Instruments TMS320C30 Application Board (bare machine)
Tartan, Inc. Tartan Ada Sun/680MC, Version 4.0 (#90121011.11122)	Sun 3/60 (under SunOS Version 4.0.3)	Intel ICE980/25 on an Intel EXV80980MC board (bare machine)	Tartan, Inc. Tartan Ada VMS/1750A, Version 4.0 (#90121311.11118)	VAXstation 3200 (under VMS 5.2)	Texas Instruments STL VHSIC 1750A (bare machine)
Tartan, Inc. Tartan Ada Sun/Sun, Version 4.0 (#90121111.11118)	Sun 3/60 (under SunOS Version 4.0.3)	Same as Host	*Validated by Registration Tartan, Inc. Tartan Ada VMS/1750A, Version 4.1 (BASE #90121311.11118)	VAXstation 3200 (under VMS 5.2)	Texas Instruments STL VHSIC 1750A (bare machine)
*Validated by Registration Tartan, Inc. Tartan Ada Sun/Sun, Version 4.1 (BASE #90121111.11118)	Sun 3/60 (under SunOS Version 4.0.3)	Same as Host	Tartan, Inc. Tartan Ada VMS/680X0, Version 4.1 (#91061311.11171)	VAXstation 3100 (under VMS 5.2)	Motorola MVME134 (MC68020) (bare machine)
			*Validated by Registration Tartan, Inc. Tartan Ada VMS/680X0, Version 4.1.1 (BASE #91061311.11171)	VAXstation 3100 (under VMS 5.2)	Motorola MVME134 (MC68020), MVME143 (MC68030), & MVME165 (MC68040) (bare machines)

## Ada PROCESSORS, *Continued*

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration			*Validated by Registration		
Tartan, Inc. Tartan Ada VMS/680X0/IPS, Version 4.1.2 (BASE #91061311.11171)	VAXstation 3100 (under VMS 5.2)	Motorola MVME134 (MC88020) (bare machine)	TeleSoft TeleGen2 Ada Cross Development System for VAX to 68K, Version 4.1 (BASE #91012111.11124)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS Versions 5.0, 5.1, 5.2, 5.3 & 5.4, as supported)	Motorola board series MVME133*, MVME135*, MVME136* (MC88020); MVME141* & MVME147* (MC88030); and Force CPU-30, CPU-31, CPU-32 & CPU-37 (bare machines)
Tartan, Inc. Tartan Ada SPARC C30, Version 4.2 (#92031311.11244)	SPARCstation ELC (under SunOS version 4.1.1)	Texas Instruments TMS320C30 Application Board (bare machine)	*Validated by Registration		
Tartan, Inc. Tartan Ada SPARC 1750a, Version 4.2 (#92031311.11245)	SPARCstation ELC (under SunOS version 4.1.1)	Fairchild F9450 on an SBC-50 board (MIL-STD-1750A) (bare machine)	TeleSoft TeleSoft TRIAD System for VAX/VMS to 68K, Version 4.1 (BASE #91012111.11124)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS Versions 5.0, 5.1, 5.2, 5.3 & 5.4, as supported)	Motorola board series MVME147* (MC88030) (bare machines, using TeleAda-Exec)
Tartan, Inc. Tartan Ada SPARC 680X0, Version 4.2 (#92031311.11246)	SPARCstation ELC (under SunOS version 4.1.1)	Motorola MVME134 (MC88020) (bare machine)	*Validated by Registration		
Tartan, Inc. Tartan Ada SPARC 980mc, Version 4.2 (#92031311.11247)	SPARCstation ELC (under SunOS version 4.1.1)	Intel EXV80980MC board (bare machine)	TeleSoft TeleGen2 Ada Cross Development System for VAX/VMS to 68K, Version 4.1 (BASE #91012111.11124)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (as supported) (under VMS Versions 5.0, 5.1, 5.2, 5.3 & 5.4)	Motorola MVME165* & MVME167* (68040) board families (bare machines)
Tartan, Inc. Tartan Ada VMS/C40 v4.2.1 (#92103011.11298)	VAXstation 4000 Model 60 (under VMS 5.5)	Texas Instruments TMS320C40 Parallel Processing Development System (bare machine)	TeleSoft TeleGen2 Ada Cross Development System, Version 4.1, for VAX/VMS to MIPS (#91012311.11125)	MicroVAX 3800 (under VAX/VMS Version 5.2)	Integrated Device Technology IDT7RS301 System (R3000/R3010) (bare machine)
TeleSoft TeleGen2 Sun-3 Ada Development System, Version 4.01 (#90052511.11012)	Sun-3/280 (under Sun UNIX 4.2, Release 4.0.3)	Same as Host	TeleSoft TeleGen2 Ada Cross Development System, Version 4.1, for SUN-3 to 68K (#91012511.11126)	Sun-3/480 (under Sun UNIX, Release 4.1)	Motorola MVME135-1 (MC88020) (bare machine)
TeleSoft TeleGen2 Ada Host Development System, Version 4.1, for SPARCSystems (#901128W1.11090)	Sun-4/280 (under Sun UNIX 4.2, Release 4.1)	Same as Host	TeleSoft TeleGen2 Ada Cross Development System, Version 3.1 for VAX/VMS to 386 (#91032511.11136)	VAX 6210 (under VMS 5.3)	Intel ISBC 386-120 (80386/387) (bare machine, using TeleAda-EXEC 1.0)
*Validated by Registration			*Validated by Registration		
TeleSoft TeleGen2 Ada Host Development System for SPARCSystems, Version 4.1 (BASE #901128W1.11090)	Sun Microsystems Sun-4, SPARCserver, SPARCstation, & SPARCengine computer families (under SunOS 4.2, release 4.1)	Any Host	TeleSoft TeleGen2 Ada Cross Development System, Version 3.1 (BASE #91032511.11136)	VAX 4000-300 (under VMS 5.4-3)	Intel ISBC 486/133SE board (bare machine, using TeleAda-EXEC 1.0)
*Validated by Registration			*Validated by Registration		
TeleSoft TeleGen2 Ada Host Development System for SPARCSystems, Version 4.1 (BASE #901128W1.11090)	Solbourne Series 5 & 5E; and S4000 (under OS/MP 4.1)	Any Host	TeleSoft TeleGen2 Ada Cross Development System, Version 3.1 for SPARC to 68K (#91032511.11140)	Sun-4/60 (under SunOS 4.1)	Motorola MVME147 (68030) (bare machine, using TeleAda-EXEC 1.0)
TeleSoft TeleGen2 Ada Cross Development System, Version 4.1, for VAX/VMS to 68K (#91012111.11124)	MicroVAX 3800 (under VAX/VMS Version 5.2)	Motorola MVME133A-20 (MC88020) (bare machine)	*Validated by Registration		
			TeleSoft TeleGen2 Ada Cross Development System for SPARC to 68K, Version 4.1 (BASE #91032511.11140)	Sun Microsystems Sun-4, SPARCserver & SPARCstation computer families (under SunOS 4.1)	Motorola MVME133*, MVME135*, MVME136* (68020); MVME141* & MVME147* (68030); and MVME165* & MVME167* (68040) board families (bare machines, optionally using TeleAda_Exec 2.0)



## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
TeleSoft TeleGen2 Ada Host Development System, Version 4.1, for MacII Systems (#91072111.11194)	Apple Macintosh IIfx (under A/LX 2.0)	Same as Host	TLD Systems, Ltd. TLD Sun-4/MIL-STD-1750A Ada Compiler System, Version 2.9.0 (#920319W1.11240)	Sun-4/75 (under SunOS, Version 4.1.1)	TLD MIL-STD-1750A Multiple Processor Simulator (bare machine simulation, using TLDrtx Real Time Executive, Version 1.0.0, and executing on the Host)
*Validated by Registration TeleSoft TeleGen2 Ada Host Development System for MacII Systems, Version 4.1 (BASE #91072111.11194)	Apple Macintosh II family, & SE/30 (under A/LX Release 2.0)	Any Host	TLD Systems, Ltd. TLD RISC8000/MIL-STD-1750A Ada Compiler System, Version 2.9.0 (#920319W1.11241)	IBM RISC System 6000, Model 530 (under AIX, Version 3.1)	TLDmpe MIL-STD-1750A Multiple Processor Simulator (bare machine simulation, using TLDrtx Real Time Executive, Version 1.0.0, and executing on the Host)
TeleSoft TeleGen2 Ada Development System for VAX to 1750A, Version 3.25 (#91102811.11229)	MicroVAX 3800 (under VMS Version 5.4)	MIL-STD-1750A ECSP0 ITS RAID Simulator, Version 6.0 (bare machine simulation, executing on the Host)	*Validated by Registration TLD Systems, Ltd. TLD RISC8000/MIL-STD-1750A Ada Compiler System, Version 2.9.0 (BASE #920319W1.11241)	IBM RISC System 6000 series (under AIX, Version 3.1)	IBM User Console with IBM Generic VHSIC Spaceborne Computer (bare machine, using TLDrtx Real Time Execution, Version 1.0.0)
TeleSoft TeleGen2 Ada Compilation System for VAX to 80960, Version 4.1 (#91121311.11235)	MicroVAX 3800 (under VMS Version 5.4)	Intel EXV 980 MC-MIL (980 XA) (bare machine, using Hughes O.S. Ada RTS Interface)	TLD Systems, Ltd. TLD VAX/MIL-STD-1750A Ada Compiler System, Version 2.9.0 (#920319W1.11242)	MicroVAX 3500 (under VMS, Version 5.1)	TLD MIL-STD-1750A Multiple Processor Simulator (bare machine simulation, using TLDrtx Real Time Executive, Version 1.0.0, and executing on the Host)
TeleSoft TeleGen2 Ada Cross Development System Version 4.1.1 for SUN-4 to eMIPS (#92102911.11295)	Sun-4/690 (under SunOS Release 4.1.2)	Integrated Device Technology IDT7RS301 System (R3000/R3010) (bare machine)	*Validated by Registration TLD Systems, Ltd. TLD VAX/MIL-STD-1750A Ada Compiler System, Version 2.9.0 (BASE #920319W1.11242)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 4000, VAX 8000, VAX 8000, & VAX 9000 Series of computers (under VMS 5.4)	IBM User Console with IBM Generic VHSIC Spaceborne Computer (bare machine, using TLDrtx Real Time Execution, Version 1.0.0)
Texas Instruments MIPS-Ada, Version 3.0 (#901030W1.11052)	MIPS M/2000 (under RISC/os 4.02)	TI DP32 R3000 Processor (bare machine, using TI DP32 RTE Version 1.0)	TLD Systems, Ltd. TLD HP 9000/MIL-STD-1750 A Ada Compiler System, Version 2.9.0 (#920319W1.11243)	HP 9000/350 (under HP-LUX, Version 7.0)	TLDmpe MIL-STD-1750A Multiple Processor Simulator (bare machine simulation, using TLDrtx Real Time Executive, Version 1.0.0, and executing on the Host)
Texas Instruments TI Ada, Version 1.0 (#910403W1.11135)	MicroVAX 3400 (under VMS 5.3-1)	TI DP32 R3000 Processor (bare machine, using TI Executive and Runtime Services (EARS) Version 1.0)	U.S. Air Force AFCAS 1750A Ada Compiler, Version 1.0 (#910425W1.11142)	VAXstation 3100 (under VMS Version 5.3)	Air Force RAID MIL-STD-1750A simulator (bare machine simulation, executing on the Host)
TLD Systems, Ltd. TLD Sun-4/MIL-STD-1750A Ada Compiler System, Version 2.9.0 (#920319W1.11237)	Sun-4/75 (under SunOS, Version 4.1.1)	Rockwell International R8-1750AB Brassboard Development System (bare machine, using TLDrtx Real Time Executive, Version 1.0.0)	*Validated by Registration U.S. Air Force AFCAS 1750A Ada Compiler, Version 1.1 (BASE #910425W1.11142)	DEC VAXstation 3100 (under VMS Version 5.4)	Air Force RAID MIL-STD-1750A simulator (bare machine simulation, executing on the Host)
TLD Systems, Ltd. TLD MV/MV Ada Compiler System, Version 2.9.0 (#920319W1.11238)	Data General MV/32 20000-2 (under AOS/VS II, Version 2.03)	Same as Host	U.S. Air Force AFCAS 1750A/XMEM Ada Compiler, Version 1.0 (#910425W1.11143)	VAXstation 3100 (under VMS Version 5.3)	Air Force RAID MIL-STD-1750A simulator (bare machine simulation, executing on the Host)
TLD Systems, Ltd. TLD Sun-4/MIL-STD-1750A Ada Compiler System, Version 2.9.0 (#920319W1.11236)	Sun-4/75 (under SunOS, Version 4.1.1)	Honeywell Program Development Unit (PDU) with Honeywell Generic VHSIC Spaceborne Computer (GVSC) MIL-STD-1750A (bare machine, using TLDrtx Real Time Executive, Version 1.0.0)	*Validated by Registration U.S. Air Force AFCAS 1750A/XMEM Ada Compiler, Version 1.1 (BASE #910425W1.11143)	DEC VAXstation 3100 (under VMS Version 5.4)	Air Force RAID MIL-STD-1750A simulator (bare machine simulation, executing on the Host)

## Ada PROCESSORS, *Continued*

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
U.S. NAVY AdaVAX, Version 5.0 (/OPTIMIZE) (#910517S1.11182)	VAX 8800 (under VMS Version 5.3)	Same as Host	U.S. NAVY Ada/M, Version 4.5 (/OPTIMIZE) (#920918S1.11273)	VAX Cluster (comprising VAX 8550, 8800, & 8850)	VHSIC Processor Module (VPM) AN/AYK-14 (bare machine machines) (under VMS Version 5.3)
U.S. NAVY AdaVAX, Version 5.0 (/NO_OPTIMIZE) (#910517S1.11183)	VAX 8800 (under VMS Version 5.3)	Same as Host	U.S. NAVY Ada/M, Version 4.5 (/NO_OPTIMIZE) (#920918S1.11274)	VAX Cluster (comprising VAX 8550, 8800, & 8850)	Enhanced Processor (EP) AN/UYK-44 (bare machine machines) (under VMS Version 5.3)
U.S. NAVY AdaVAX, Version 5.0 (/OPTIMIZE) (#910517S1.11184)	VAX-11/785 (under VMS Version 5.3)	Same as Host	U.S. NAVY Ada/M, Version 4.5 (/NO_OPTIMIZE) (#920918S1.11275)	VAX Cluster (comprising VAX 8550, 8800, & 8850)	VHSIC Processor Module (VPM) AN/AYK-14 (bare machine machines) (under VMS Version 5.3)
U.S. NAVY AdaVAX, Version 5.0 (/NO_OPTIMIZE) (#910517S1.11185)	VAX-11/785 (under VMS Version 5.3)	Same as Host	UNISYS Corporation UCS Ada, Version 1R1 (#910510S1.11181)	UNISYS 2200/600 (under OS1100, Version 43R2)	Same as Host
U.S. NAVY Ada/L, Version 4.0 (/OPTIMIZE) (#910626S1.11172)	VAX 8550 (under VMS Version 5.3)	AN/UYK-43 (single cpu) (bare machine)	*Validated by Registration UNISYS Corporation UCS Ada, Version 1R1 (BASE) #910510S1.11181	UNISYS 1100/80, 2200/100, /200, /400, /600, & /900 (under OS 1100, Versions 43R2 & 43R3, as supported)	Any Host
U.S. NAVY Ada/L, Version 4.0 (/OPTIMIZE) (#910626S1.11173)	VAX 8550 (under VMS Version 5.3)	AN/UYK-43 (EMR) (bare machine)	Verdix Corporation VAda-110-6161, Version 6.0.2 (#900228W1.11001)	DECstation 3100 (under ULTRIX 3.1)	Same as Host
U.S. NAVY Ada/M, Version 4.0 (/OPTIMIZE) (#910626S1.11174)	VAX 8550 (under VMS Version 5.3)	AN/UYK-44 (EMR) (bare machine)	*Validated by Registration Verdix Corporation VAda-110-6161, Version 6.0.2 (BASE) #900228W1.11001	DECstation 2100, 5000; DECsystem 5400, 5810, 5820, 5830, 5840 (under ULTRIX 3.1)	Any Host
U.S. NAVY Ada/M, Version 4.0 (/OPTIMIZE) (#910626S1.11175)	VAX 8550 (under VMS Version 5.3)	AN/AYK-14 (bare machine)	*Validated by Registration Verdix Corporation VADS DEC-RISC, Ultrix 4.0, VAda-110-6161, Version 6.0 (BASE) #900228W1.11001	DECstation 2100, 3100, 5000 & 5200; and DECsystem 3100, 5000, 5100, 5200, 5400, 5500, 5810, 5820, 5830 & 5840 (under ULTRIX 4.0)	Any Host
U.S. NAVY Ada/L, Version 4.0 (/OPTIMIZE) (#910626S1.11176)	VAX-11/785 (under VMS Version 5.3)	AN/UYK-43 (single cpu) (bare machine)	*Validated by Registration Verdix Corporation VADS DEC-RISC, Ultrix 4.1, VAda-110-6161, Version 6.0 (BASE) #900228W1.11001	DECstation 2100, 3100, 5000 & 5200; and DECsystem 3100, 5000, 5100, 5200, 5400, 5500, 5810, 5820, 5830 & 5840 (under ULTRIX 4.1)	Any Host
U.S. NAVY Ada/L, Version 4.0 (/OPTIMIZE) (#910626S1.11177)	VAX-11/785 (under VMS Version 5.3)	AN/UYK-43 (EMR) (bare machine)	*Validated by Registration Verdix Corporation VADS DEC-RISC, Ultrix 4.2, VAda-110-6161, Version 6.0 (BASE) #900228W1.11001	DECstation 2100, 3100, 5000 & 5200; DECsystem 3100, 5000, 5100, 5200, 5400, 5500, 5810, 5820, 5830 & 5840 (under Ultrix 4.2)	Any Host
U.S. NAVY Ada/M, Version 4.0 (/OPTIMIZE) (#910626S1.11178)	VAX-11/785 (under VMS Version 5.3)	AN/UYK-44 (EMR) (bare machine)	*Validated by Registration Verdix Corporation VADS DEC-RISC, Ultrix 4.2, VAda-110-6161, Version 6.0 (BASE) #900228W1.11001	DECstation 2100, 3100, 5000 & 5200; DECsystem 3100, 5000, 5100, 5200, 5400, 5500, 5810, 5820, 5830 & 5840 (under Ultrix 4.2)	Any Host
U.S. NAVY Ada/M, Version 4.0 (/OPTIMIZE) (#910626S1.11179)	VAX-11/785 (under VMS Version 5.3)	AN/AYK-14 (bare machine)	*Validated by Registration Verdix Corporation VADS DEC-RISC, Ultrix 4.2, VAda-110-6161, Version 6.0 (BASE) #900228W1.11001	DECstation 2100, 3100, 5000 & 5200; DECsystem 3100, 5000, 5100, 5200, 5400, 5500, 5810, 5820, 5830 & 5840 (under Ultrix 4.2)	Any Host
U.S. NAVY AdaVAX, Version 5.5 (/OPTIMIZE) (#920918S1.11270)	VAXstation 4000 (under VMS Version 5.5)	Same as Host	*Validated by Registration Verdix Corporation VADS DEC-RISC, Ultrix 4.2, VAda-110-6161, Version 6.0 (BASE) #900228W1.11001	DECstation 2100, 3100, 5000 & 5200; DECsystem 3100, 5000, 5100, 5200, 5400, 5500, 5810, 5820, 5830 & 5840 (under Ultrix 4.2)	Any Host
U.S. NAVY AdaVAX, Version 5.5 (/NO_OPTIMIZE) (#920918S1.11271)	VAXstation 4000 (under VMS Version 5.5)	Same as Host	*Validated by Registration Verdix Corporation VADS DEC-RISC, Ultrix 4.2, VAda-110-6161, Version 6.0 (BASE) #900228W1.11001	DECstation 2100, 3100, 5000 & 5200; DECsystem 3100, 5000, 5100, 5200, 5400, 5500, 5810, 5820, 5830 & 5840 (under Ultrix 4.2)	Any Host
U.S. NAVY Ada/M, Version 4.5 (/OPTIMIZE) (#920918S1.11272)	VAX Cluster (comprising VAX 8550, 8800, & 8850 machines) (under VMS Version 5.3)	Enhanced Processor (EP) AN/UYK-44 (bare machine)	Verdix Corporation VAda-110-0202, Version 6.0 (#900228W1.11002)	VAXsystem 3100 (under ULTRIX 3.1)	Same as Host





# Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Corporation VADS VAX/VMS 5.2, VAda-110-0303, Version 8.0 (#900726W1.11020)	VAX/VMS V5.2)		*Validated by Registration Verdix Corporation VADS VAX/ULTRIX => 68K, ULTRIX 3.1, VAda-110-02125, Version 6.0 (BASE #900726W1.11023)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS 5.3)	Any Host
*Validated by Registration Verdix Corporation VADS VAX/VMS 5.3, VAda-110-0303, Version 8.0 (BASE #900726W1.11020)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS 5.3)				
Verdix Corporation VADS VAX/VMS => 68k, VMS 5.2, VAda-110-03125, Version 8.0 (#900726W1.11021)	MicroVAX 3100 (under VAX/VMS V5.2)	Motorola MVME147 (MC88030) (bare machine)			
*Validated by Registration Verdix Corporation VADS VAX/VMS => 68K, VMS 5.2, VAda-110-03125, Version 8.0 (BASE #900726W1.11021)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS 5.2)	Cyclone CVME 44, CVME 46 & CVME 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME147 Series & MVME141 (MC88030), MVME133 Series, MVME134, MVME135 & MVME138 (MC88020), MVME-165 & MVME187; Tadpole TP32V & TP33M (bare machines)	Verdix Corporation VADS DEC-RISK => 68k, Ultrix 3.1, VAda-110-61125, Version 6.0 (#900726W1.11024)	DECstation 3100 (under Ultrix 3.1)	Motorola MVME147 (MC88030) (bare machine)
Verdix Corporation VADS VAX/VMS => Intel 386, VMS 5.2, VAda-110-03315, Version 8.0 (#900726W1.11022)	MicroVAX 3100 (under VAX/VMS V5.2)	Intel ISBC 386/32 (bare machine)	*Validated by Registration Verdix Corporation VADS DEC-RISC => 68K, Ultrix 4.0, VAda-110-61125, Version 8.0 (BASE #900726W1.11024)	DECstation 2100, 3100, 5000 & 5200; and DECsystem 3100, 5000, 5100, 5200, 5400, 5500, 5810, 5820, 5830 & 5840 (under ULTRIX 4.0)	Cyclone CVME 44, CVME 46 & CVME 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME147 Series (MC88030), MVME133 Series, MVME134 & MVME135 (MC88020); Tadpole TP32V & TP33M (bare machines)
*Validated by Registration Verdix Corporation VADS VAX/VMS => Intel 386, VMS 5.3, VAda-110-03315, Version 8.0 (BASE #900726W1.11022)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS 5.3)	Intel ISBC 386/32 (bare machine)	Verdix Corporation VADS IBM RISC System/6000 => 68k, ADX 3.1, VAda-110-71125, Version 6.0 (#900726W1.11025)	IBM RISC System/6000 Model 530 (under ADX 3.1)	Motorola MVME147 (MC88030) (bare machine)
Verdix Corporation VADS VAX/Ultrix => 68k, Ultrix 3.1, VAda-110-02125, Version 8.0 (#900726W1.11023)	MicroVAX 3100 (under Ultrix 3.1)	Tektronix MV System, MV 68020 Support System, using TekDB Version 5.0.2 emulation software (bare machine simulation)	*Validated by Registration Verdix Corporation VADS IBM RISC System/6000 => 68K, ADX 3.1, VAda-110-71125, Version 6.0 (BASE #900726W1.11025)	IBM RISC System/6000 Models 320, 520, 540, 730 & 930 (under ADX 3.1)	Cyclone CVME 44, CVME 46 & CVME48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME133 Series, MVME134, MVME135 & MVME147 Series; and Tadpole TP32V & TP33M (bare machines)



## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Verdix Corporation VADS IBM RISC System/6000 -> 386, ADX 3.1, VAdA-110-71315, Version 6.0 (#900726W1.11026)	IBM RISC System/6000 Model 530 (under ADX 3.1)	Intel ISBC 386/116 (bare machine)	Verdix Corporation VADS Sequent Balance DYNIX V3.0, VAdA-110-2323, Version 6.0 (#901129W1.11066)	Sequent Balance 6000 (under DYNIX Version 3.0)	Same as Host
*Validated by Registration Verdix Corporation VADS IBM RISC System/6000 -> 386, ADX 3.1, VAdA-110-71315, Version 6.0 (BASE #900726W1.11026)	IBM RISC System/6000 Models 320, 520, 540, 730 & 830 (under ADX 3.1)	Intel ISBC 386/116 (bare machine)	Verdix Corporation VADS Sun4 => 68K, Sun OS 4.0, VAdA-110-40125, Version 6.0 (#901129W1.11067)	Sun-4/260 (under SunOS 4.0)	Motorola MVME147 (88030) (bare machine)
*Validated by Registration Verdix Corporation VADS IBM RISC System/6000 -> 386, ADX 3.1, VAdA-110-71315, Version 6.0 (BASE #900726W1.11026)	IBM RISC System/6000 Models 220, 320, 320H, 340, 350, 520, 520H, 530H, 540, 550, 560, 730, 830, & 950 (under ADX 3.2)	Intel ISBC 486/125 (bare machine)	*Validated by Registration Verdix Corporation VADS Sun4 => 68K, Sun OS 4.0, VAdA-110-40125, Version 6.0 (BASE #901129W1.11067)	Sun-4/20, /65, /110 & /150; SPARCserver 330, 370, 390, 470 & 490; SPARCstation SLC, 1, 1+, 2, 330 & 370; and SPARCengine 1 VME (under SunOS 4.1)	Cyclone CVME 44, CVME 46 & CVME 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurlixon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME110 (MC68000), MVME133 Series, MVME134, MVME135 & MVME136 (MC68020), MVME147 Series & MVME141 (MC68030), MVME-165 & MVME-167 (MC68040); Tadpole TP32V & TP33M (bare machines)
Verdix Corporation VADS VAX/VMS 5.2 -> Intel 80386/WEITEK 3167, VAdA-110-03315, Version 6.0 (#901129W1.11064)	MicroVAX 3100 (under VMS Version 5.2)	Intel ISBC 386/116 using a WEITEK 3167 fpu (bare machine)	*Validated by Registration Verdix Corporation VADS Sun4 => 68K, Sun OS 4.1, VAdA-110-40125, Version 6.0 (BASE #901129W1.11067)	Sun Microsystems Sun-4, SPARCserver, SPARCstation, & SPARCengine computer families (under SunOS 4.1)	Cyclone CVME 44, 46, & 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37, & Golden Triangle Firepower; Heurlixon HK68/V2E Series, /V2F Series, & /V30 Series; Integrated Solutions VME68K20, 68K30, 68225, & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120, MZ8130, & CPU330; Motorola MVME133 Series, MVME134, MVME135, & MVME147 Series; Sun Microsystems 3E board set; and Tadpole Technology TP32V & TP33M (bare machines)
*Validated by Registration Verdix Corporation VADS VAX/VMS 5.3 -> Intel 80386/WEITEK 3167, VAdA-110-03315, Version 6.0 (BASE #901129W1.11064)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 6000 & VAX 9000 Series of computers (under VMS 5.3)	Intel ISBC 386/116 using a WEITEK 3167 fpu (bare machine)	Verdix Corporation VADS Sun-4 => Sun-3, Sun OS 4.0, VAdA-110-4013, Version 6.0 (#901129W1.11068)	Sun-4/260 (under SunOS 4.0)	Sun-3/280 (under SunOS 4.0)
Verdix Corporation VADS UNIX System V/386, Rel. 4, VAdA-110-3232, Version 6.0 (#901129W1.11065)	Intel 302 System (under UNIX System V/386, Release 4)	Same as Host	*Validated by Registration Verdix Corporation VADS Sun-4 => Sun-3, Sun OS 4.0, VAdA-110-4013, Version 6.0 (BASE #901129W1.11068)	Sun-4/20, /65, /110, /150, /260 & /280; SPARCserver 330, 370, 390, 470 & 490; SPARCstation SLC, 1, 1+, 2, 330 & 370; and SPARCengine 1 VME (under SunOS 4.1)	Sun-3/50, /60, /80, /150, /160, /260, /280, /470 & /480 (under SunOS 4.1)
*Validated by Registration Verdix Corporation VADS UNIX System V/486, Rel. 4, VAdA-110-3232, Version 6.0 (BASE #901129W1.11065)	NCR 3000, 3320, 3335, 3345, 3445, 3447, 3450, & 3550 (under UNIX System V/486, Release 4)	Any Host	*Validated by Registration Verdix Corporation VADS Sun-4 => Sun-3, Sun OS 4.0, VAdA-110-4013, Version 6.0 (BASE #901129W1.11068)	Sun-4/20, /65, /110, /150, /260 & /280; SPARCserver 330, 370, 390, 470 & 490; SPARCstation SLC, 1, 1+, 2, 330 & 370; and SPARCengine 1 VME (under SunOS 4.1)	Sun-3/50, /60, /80, /150, /160, /260, /280, /470 & /480 (under SunOS 4.1)
*Validated by Registration Verdix Corporation VADS UNIX System V/486, Rel.4, VAdA-110-3232, Version 6.0 (BASE #901129W1.11065)	NCR 3000, 3320, 3335, 3345, 3445, 3447, 3450, & 3550 (under NCR UNIX System V, Release 4.0); AST Premium 486/33 (under UNIX System V/486, Release 4.0)	Any Host			

## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Verdix Corporation VADS AT&T 3B2/600G UNIX System V, Release 3.2.2, VAda-110-5151, Version 6.0 (#901129W1.11099)	AT&T 3B2/600G (under UNIX System V, Release 3.2.2)	Same as Host	*Validated by Registration Verdix Corporation VADS BCS/88K, VAda-110-8080, Version 6.1 (BASE #901129W1.11101)	Motorola 68000 Delta Series (MC88000), all models (under Unix System V/88, R32V3)	Any Host
Verdix Corporation VADS HP-6000/300 => 68K, HP-UX 7.0 , VAda-110-15125, Version 6.0 (#901129W1.11100)	HP 9000 Model 350 (under HP-UX 7.0)	Motorola MVME133A (68020) (bare machine)	Verdix Corporation VADS Sun4 => SPARC, Sun OS 4.1, VAda-110-40440, Version 6.0 (#901129W1.11102)	Sun-4/490 (under SunOS 4.1) (bare machine)	SPARCengine 1E (bare machine)
*Validated by Registration Verdix Corporation VADS HP-6000/300 => 68K, HP-UX 7.0, VAda-110-15125, Version 6.0 (BASE #901129W1.11100)	HP 9000 Series 300 Models 310, 320, 330, 340, 350, 360 & 370 (under HP-UX 7.0)	Cyclone CVME 44, CVME 46 & CVME 48; Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 37 & Golden Triangle Firepower; Heurikon HK68/V30 Series, V2E Series & V2F Series; Integrated Solutions VME68K20, VME68K30, VME68225 & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7120, MZ7122, MZ7124, MZ7130, MZ8120 & MZ8130; Sun Microsystems 3E Board Set; Motorola MVME147 Series (MC88030), MVME133 Series, MVME134 & MVME135 (MC88020); Tadpole TP32V & TP33M (bare machines)	*Validated by Registration Verdix Corporation VADS Sun4 => SPARC, Sun OS 4.1, VAda-110-40440, Version 6.0 (BASE #901129W1.11102)	Sun-4/20, /65, /110, /150 & /260; SPARCserver 330, 370, 390, 470 & 490; and SPARCstation SLC, 1, 1+, 2, 330 & 370 (under SunOS 4.1)	SPARCengine 1E (bare machine)
Verdix Corporation VADS BCS/88K, AViion DGUX 4.3, VAda-110-8080, Version 6.1 (#901129W1.11101)	Data General AViion Model 5120 (under DG/UX 4.3)	Same as Host	Verdix Corporation VADS Sun-3 SunOS => 68k, VAda-110-13140, Version 6.0 (BASE #910517W1.11149)	Sun 3/260 (under SunOS Release 4.0)	Motorola MVME165 (68040) (bare machine)
*Validated by Registration Verdix Corporation VADS BCS/88K, AViion DGUX 4.3, VAda-110-8080, Version 6.1 (BASE #901129W1.11101)	DG AViion Models 4000, 4000GHI, 4020, 4100, 4120, 5010, 5200, 5220, 5240, 5300, 5310, 5400, 5402, 5410, 5412, 6200 & 6220 (under DG/UX 4.3)	Any Host	*Validated by Registration Verdix Corporation VADS Sun-3 SunOS => 68k, VAda-110-13140, Version 6.0 (BASE #910517W1.11149)	Sun Microsystems Sun-3 computer family (under SunOS 4.1)	Motorola MVME 165 (MC88040) (bare machine)
*Validated by Registration Verdix Corporation VADS BCS/88K, AViion DGUX 5.4, VAda-110-8080, Version 6.1 (BASE #901129W1.11101)	Data General AViion Models 4000, 4000GHI, 4020, 4100, 4120, 5010, 5200, 5220, 5240, 5300, 5310, 5400, 5402, 5410, 5412, 6200 & 6220; MODCOMP Real Star Family (under DG/UX 5.4)	Any Host	Verdix Corporation VADS DEC-RISC => MIPS R3000, VAda-110-61620, Version 6.1 (#910517W1.11150)	DECstation 5000-200 (under ULTRIX V4.0)	Lockheed Sanders STAR MVP (R3000) (bare machine)
*Validated by Registration Verdix Corporation VADS BCS/88K, VAda-110-8080, Version 6.1 (BASE #901129W1.11101)	MODCOMP Real Star Family (under REAL/IX C.0.2)	Any Host	*Validated by Registration Verdix Corporation VADS DEC-RISC => MIPS R3000, VAda-110-61620, Version 6.1 (BASE #910517W1.11150)	DEC DECstation & DECsystem computer families (under ULTRIX 4.0)	Lockheed Sanders STAR MVP (R3000) (bare machine)
*Validated by Registration Verdix Corporation VADS BCS/88K, VAda-110-8080, Version 6.1 (BASE #901129W1.11101)	MODCOMP Real Star Family (under REAL/IX C.0.2)	Any Host	Verdix Corporation VADS VMS => MIPS R3000, VAda-110-03620, Version 6.1 (#910517W1.11151)	MicroVAX 3600 (under VMS V5.2)	Integrated Device Technology IDT7RS302 (bare machine)
*Validated by Registration Verdix Corporation VADS BCS/88K, VAda-110-8080, Version 6.1 (BASE #901129W1.11101)	MODCOMP Real Star Family (under REAL/IX C.0.2)	Any Host	*Validated by Registration Verdix Corporation VADS VMS => MIPS R3000, VAda-110-03620, Version 6.1 (BASE #910517W1.11151)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000 & VAX 9000 Series of computers (under VMS 5.3)	Integrated Device Technology IDT7RS302 (bare machine)

## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Verdix Corporation VADS Sun-4 SunOS => 68k, VAdA-110-40140, Version 6.0 (#910517W1.11152)	Sun 4/280 (under SunOS Release 4.0)	Motorola MVME165 (68040) (bare machine)	*Validated by Registration Verdix Corporation VADS 386/486 System V, Rel. 3.2, VAdA-110-3232, Version 6.0 (BASE #910517W1.11155)	Any Computer System Comprising: cpu: any that executes the intel 80386/486 instruction set (under Any operating system compatible with Unix System V Release 3.2)	Same as Host
*Validated by Registration Verdix Corporation VADS Sun4 SunOS => 68k, VAdA-110-40140, Version 6.0 (BASE #910517W1.11152)	Sun Microsystems Sun-4, SPARCserver & SPARCstation computer families (under SunOS 4.1)	Motorola MVME165 (68040) (bare machine)	Verdix Corporation VADS Sun-4 SunOS => AMD 28K, 6.0 VAdA-110-40525, Version 6.0 (#910517W1.11156)	Sun 4/280 (under SunOS 4.0.3)	Ironics IV8001 board (AMD 28000) (bare machine)
Verdix Corporation VADS DEC-RISC => 68k, VAdA-110-61680, Version 6.1 (#910517W1.11153)	DECstation 2100 (under ULTRIX V4.0)	Motorola MVME181 (bare machine)	*Validated by Registration Verdix Corporation VADS Sun4 SunOS => AMD 28K, VAdA-110-40525, Version 6.0 (BASE #910517W1.11156)	Sun Microsystems Sun-4, SPARCserver & SPARCstation computer families (under SunOS 4.1)	Ironics IV8001 board (AMD 28000) (bare machine)
*Validated by Registration Verdix Corporation VADS DEC-RISC => 68k, VAdA-110-61680, Version 6.1 (BASE #910517W1.11153)	DEC DEcstation & DEcsystem computer families (under ULTRIX 4.0)	Motorola MVME181 (68000) (bare machine)	Verdix Corporation VADS UNIX System V/486, SCO UNIX 3.2, VAdA-110-3232, Version 6.1 (#910517W1.11157)	Intel 402 (under SCO UNIX 3.2v2.e)	Same as Host
Verdix Corporation VADSworks Sun4 => 68k, VAdA-115-40800, Version 2.0 (#910517W1.11154)	Sun 4/20 (under SunOS 4.1.1)	Motorola MVME147SA (bare machine, using vxWorks 5.0)	*Validated by Registration Verdix Corporation VADS 386/486 System V, Rel. 3.2, VAdA-110-3232, Version 6.1 (BASE #910517W1.11157)	Any Computer System Comprising: cpu: any that executes the intel 80386/486 instruction set (under Any operating system compatible with Unix System V Release 3.2)	Same as Host
*Validated by Registration Verdix Corporation VADSworks Sun4 => 68k, VAdA-115-40800, Version 2.0 (BASE #910517W1.11154)	Sun Microsystems Sun-4, SPARCserver & SPARCstation computer families (under SunOS 4.1)	Force CPU 21, CPU 29, CPU 30, CPU 31, CPU 32, CPU 33, CPU 37, & Golden Triangle Firepower; General Micro Systems GMSV17 & GMSV37; Heurikon HK88/V20, /V2E, /V2F, /V2FA, /V30, /V30XE, /V3E, & /V3F; Ironics IV-3201a, 3204a, 3220, & 3230; Matrix MS-CPU320; Mizar MZ7122 & MZ7124; Motorola MVME133 Series, MVME135, MVME135A, MVME141, MVME143, & MVME147; Radstone PME 68-25 & 68-31; SBE VLAN-e & VPU30; Sun Microsystems 3E; and Tadpole Technology TP32V-4MB (bare machines, using vxWorks 5.0)	Verdix Corporation VADS MIPS, VAdA-110-6262, Version 6.1 (#910620W1.11200)	MIPS RC3230 (under RISC/os 4.52)	Same as Host
Verdix Corporation VADS UNIX System V/486, SCO UNIX 3.2, VAdA-110-03140, Version 6.0 (#910517W1.11155)	Zenith Z-486/25E (under SCO UNIX I386 release 3.2)	Same as Host	Verdix Corporation VADS VAX/VMS => 68040, VAdA-110-03140, Version 6.0 (#910620W1.11201)	MicroVAX 3100 (under VMS 5.3)	Motorola MVME165 (68040) (bare machine)
*Validated by Registration Verdix Corporation VADS UNIX System V/486, SCO UNIX 3.2, VAdA-110-3232, Version 6.0 (BASE #910517W1.11155)	Zenith Z-486/33E (under SCO UNIX I386 release 3.2)	Same as Host	*Validated by Registration Verdix Corporation VADS VAX/VMS => 68040, VAdA-110-03140, Version 6.0 (BASE #910620W1.11201)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 8000, & VAX 9000 Series of computers (under VMS 5.3)	Motorola MVME165 (68040) (bare machine)
*Validated by Registration Verdix Corporation VADS IBM RS/6000 => MIPS R3000, VAdA-110-71620, Version 6.1 (#910620W1.11202)	Zenith Z-486/33E (under SCO UNIX I386 release 3.2)	Same as Host	*Validated by Registration	IBM RISC System/6000 Model 530 (under AIX 3.1)	IDT 7RS302 (R3000) (bare machine)



## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Verdix Corporation VADS IBM RS/6000 ADX 3.1, VAdA-110-71620, Version 6.1 (BASE #910920W1.11202)	IBM RISC System/6000 Models 320, 520, 540, 730, & 930 (under ADX 3.1)	IDT 7RS302 (R3000) (bare machine)	*Validated by Registration Verdix Corporation VADS Sun-4 SunOS => CPU32, VAdA-110-40150, Version 6.0 (BASE #910920W1.11207)	Sun Microsystems Sun-4, SPARCserver, SPARCstation, & SPARCengine computer families (under SunOS 4.1)	Motorola CPU32-68331, -68333, & -68340 Evaluation Systems (bare machines)
Verdix Corporation VADS Sun-4 => MIPS R3000, VAdA-110-40620, Version 6.1 (#910920W1.11205)	SPARCserver 480 (under SunOS Release 4.1)	LSI LR33000 Pocket Rocket Evaluation board (R3000) (bare machine)	Verdix Corporation VADS IBM PS/2, ADX 1.1, VAdA-110-3535, Version 6.1 (#910920W1.11206)	IBM PS/2 Model 80 (under ADX 1.1)	Same as Host
*Validated by Registration Verdix Corporation VADS Sun-4 => MIPS R3000, VAdA-110-40620, Version 6.1 (BASE #910920W1.11205)	Sun Microsystems Sun-4, SPARCserver, & SPARCstation computer families (under SunOS 4.1)	LSI LR33000 Pocket Rocket Evaluation board (R3000) (bare machine)	Verdix Corporation VADS MIPS => MIPS R3000, VAdA-110-62620, Version 6.1 (#910920W1.11206)	MIPS RC3230 (under RISC/os 4.52)	Lockheed Sanders STAR MVP (R3000) (bare machine)
Verdix Corporation VADS Sun-4 SunOS => MC88000/10, VAdA-110-40128, Version 6.0 (#910920W1.11206)	Sun-4/280 (under SunOS Release 4.0.3)	Motorola MVME101 (68000) with MVME222-1 memory board (bare machine)	Verdix Corporation VADS Sun-3 SunOS => 68020/30 ARTX, VAdA-110-13120, Version 6.0 (#910920W1.11210)	Sun-3/280 (under SunOS Release 4.0)	Motorola MVME147 (68030) (bare machine)
*Validated by Registration Verdix Corporation VADS Sun4 => MC88000/10, VAdA-110-40128, Version 6.0 (BASE #910920W1.11206)	Sun Microsystems Sun-4, SPARCserver, & SPARCstation computer families (under SunOS 4.1)	Motorola MVME101 (68000) with MVME222-1 memory board (bare machine)	*Validated by Registration Verdix Corporation VADS Sun3 SunOS => 68020/30 ARTX, VAdA-110-13120, Version 6.0 (BASE #910920W1.11210)	Sun Microsystems Sun-3 computer family (under SunOS 4.1)	Cyclone CVME 44, 46, & 48; Force CPU 21, CPU 28, CPU 30, CPU 31, CPU 32, CPU 37, & Golden Triangle Firepower; Heurikon HK68/V2E Series, /V2F Series, & /V30 Series; Integrated Solutions VME88K20, 68K30, 68225, & Liberator SBC; Matrix MS-CPU220 & MS-CPU320; Mizar MZ7122, MZ7124, MZ7130, MZ8120, & MZ8130; Motorola MVME133 Series, MVME134, MVME135, MVME136, MVME141, & MVME147 Series; Sun Microsystems 3E board set; and Tadpole Technology TP32V & TP32M (bare machines)
*Validated by Registration Verdix Corporation VADS Sun-4 => MC88000/10, SunOS 4.1, VAdA-110-40128, Version 6.0 (BASE #910920W1.11206)	Sun Microsystems Sun-4, SPARCserver, SPARCstation, & SPARCengine computer families (under SunOS 4.1)	Motorola 68302, Phillips-Signetics 68070, & Tohiba 68301 (bare machines)	Verdix Corporation VADS Sun4 SunOS => 68020/30 ARTX, VAdA-110-40120, Version 6.0 (#910920W1.11211)	SPARCstation 2 (under SunOS Release 4.1.1)	Motorola MVME147 (68030) (bare machine)
Verdix Corporation VADS Sun-4 SunOS => CPU32, VAdA-110-40150, Version 6.0 (#910920W1.11207)	Sun-4/280 (under SunOS Release 4.0.3)	Motorola CPU32 - M68332EVS Evaluation System (68332) (bare machine)	*Validated by Registration Verdix Corporation VADS Sun4 SunOS => 68020/30 ARTX, VAdA-110-40120, Version 6.0 (BASE #910920W1.11211)	Sun Microsystems Sun-4, SPARCserver, & SPARCstation computer families (under SunOS 4.1)	Motorola MVME147 (68030) (bare machine)
*Validated by Registration Verdix Corporation VADS Sun-4 SunOS => CPU32, VAdA-110-40150, Version 6.0 (BASE #910920W1.11207)	Sun Microsystems Sun-4, SPARCserver, & SPARCstation computer families (under SunOS 4.1)	Motorola CPU32 - M68332EVS Evaluation System (68332) (bare machine)	Verdix Corporation VADS IBM RISC System/6000 ADX => 68020/30 ARTX, VAdA-110-71120, Version 6.0 (#910920W1.11212)	IBM RISC System/6000 Model 530 (under ADX 3.1)	Motorola MVME147 (68030) (bare machine)



## Ada PROCESSORS, *Continued*

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
*Validated by Registration			Verdix Corporation VADSworks Sun4 => 68K, VAda-115-40800, Version 2.0 (#920513W1.11256)	Sun-4/20 (under SunOS, 4.1.1)	Motorola MVME167A (88040) (bare machine, using VxWorks 5.0)
Verdix Corporation VADS IBM RISC System/6000 ADX => 68020/30 ARTX, VAda-110-71120, Version 6.0 (BASE #910820W1.11212)	IBM RISC System/6000 Models 320, 520, 540, 730, & 930 (under ADX 3.1)	Motorola MVME147 (88030) (bare machine)	Verdix Corporation VADSworks Sun4 => SPARC, VAda-115-40850, Version 2.0 (#920513W1.11257)	Sun-4/20 (under SunOS, 4.1.1)	Sun SPARCengine 1e (bare machine, using VxWorks v5.0)
Verdix Corporation VADS SYSTEM V/860 RELEASE 4, VAda-110-6060, Version 6.1 (#910820W1.11213)	Okidata 1860 Workstation (under UNIX SYSTEM V/860 RELEASE 4 v1.0)	Same as Host	Verdix Corporation VADS Sun SPARC => 386, VAda-110-40315, Version 6.2 (#920513W1.11258)	Sun-4/280 (under SunOS, Version 4.1.2)	Intel ISBC 386/20p (bare machine)
Verdix Corporation VADS VMS => AMD29000, VAda-110-03525, Version 6.04 (#910820W1.11214)	MicroVAX 3800 (under VMS 5.2)	Ironics IV9001 board (AMD 29000) (Am29000 bare VME machine)	Verdix Corporation VADSworks DEC-RISC => MIPS R3000, VAda-115-61640, Version 2.0 (#921004W1.11277)	DECstation 5000/200 (under Ultrix V4.1)	Lockheed Sanders STAR MVP board (bare machine, using vxWorks 5.0)
*Validated by Registration			Verdix Corporation VADS IBM RISC System/6000, VAda-110-7171, Version 6.2 (#921004W1.11278)	IBM RISC System/6000 model 220 (under ADX 3.2)	Same as Host
Verdix Corporation VADS VAX VMS => AMD 29K, VAda-110-03525, Version 6.04 (BASE #910820W1.11214)	DEC VAX-11, VAXserver, VAXstation, MicroVAX, VAX 6000, VAX 6000, & VAX 9000 Series of computers (under VMS 5.3)	Ironics IV9001 board (AMD 29000) (Am29000 bare VME machine)	Verdix Corporation VADS IBM RISC System/6000, VAda-110-7171, Version 6.2 (#921004W1.11279)	IBM RISC System/6000 model 530H (under ADX 3.2)	Same as Host
Verdix Corporation VADS Sun-3 SunOS => AMD 29K, VAda-110-13525, Version 6.04 (#910820W1.11215)	Sun-3/180 (under SunOS 4.1.1)	Ironics IV9001 board (AMD 29000) (Am29000 bare VME machine)	Verdix Corporation VADS System V/386/486, VAda-110-3232, Version 6.1 (#921004W1.11280)	ASL 486/33 (under UNIX System V, Release 3.2)	Same as Host
*Validated by Registration			Verdix Corporation VADS System V/386/486, VAda-110-3232, Version 6.1 (#921004W1.11281)	AST Premium 486 (under UNIX System V, Release 4.0)	Same as Host
Verdix Corporation VADS Sun-3 SunOS => AMD 29K, VAda-110-13525, Version 6.04 (BASE #910820W1.11215)	Sun Microsystems Sun-3 computer family (under SunOS 4.1)	Ironics IV9001 board (AMD 29000) (Am29000 bare VME machine)	Verdix Corporation VADS System V/386/486, VAda-110-3232, Version 6.1 (#921004W1.11282)	NCR model 3450 (under NCR UNIX SVR4 MP-RAS Release 2)	Same as Host
Verdix Corporation VADS AT&T 382/600GR UNIX System V, Release 4.0, VAda-110-6363, Version 6.1 (#920513W1.11252)	AT&T 382/600GR (under UNIX System V, Release 4.0)	Same as Host	Verdix Corporation VADS System V/386/486, VAda-110-3232, Version 6.1 (#921004W1.11283)	NCR model 3550 (under NCR UNIX SVR4 MP-RAS Release 2)	Same as Host
Verdix Corporation VADS IBM RISC System/6000 => IBM RISC System/6000, VAda-110-71710, Version 6.2 (#920513W1.11253)	IBM RISC System/6000 Model 530 (under ADX 3.2)	IBM RISC System/6000 Model 320 (bare machine)	Verdix Corporation VADS BCS => 68K, VAda-110-80680, Version 6.1 (#920513W1.11254)		
Verdix Corporation VADS BCS => 68K, VAda-110-80680, Version 6.1 (#920513W1.11254)	Motorola 88000 Delta (under R32V3 620117)	Motorola MVME187 (88000) (bare machine)			

## Ada PROCESSORS, Continued

VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)	VENDOR, COMPILER & CERTIFICATE #	HOST MACHINE & (OS)	TARGET MACHINE & (OS)
Verdix Corporation VADS Sun SPARC Solaris 2.1, VAda-110-4040, Version 6.2 (#821004W1.11284)	RDI Britelite ITX Laptop (under Solaris 2.1)	Same as Host	York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (#901127N1.11073)	Intergraph InterPro 3050 Workstation (under CLX R3.1)	Same as Host
Verdix Corporation VADS Sun SPARC Solaris 2.1, VAda-110-4040, Version 6.2 (#821004W1.11285)	SPARCstation 4/30 (under Solaris 2.1)	Same as Host	*Validated by Registration York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (BASE #901127N1.11073)	Intergraph Mobile GIS/C2 (under CLX Release 3.1)	Same as Host
Verdix Corporation VADS Sun SPARC Solaris 2.1, VAda-110-4040, Version 6.2 (#821004W1.11286)	SPARCstation 10 model 30 (under Solaris 2.1)	Same as Host	*Validated by Registration York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (BASE #901127N1.11073)	InterPro 125, 225, 340, 360, 2020, 3070, 6040, 6240, 6080 & 6280 (under CLX Release 3.1)	Any Host
Verdix Corporation VADS Sun SPARC Solaris 2.1, VAda-110-4040, Version 6.2 (#821004W1.11287)	SPARCstation 10 model 41 (under Solaris 2.1)	Same as Host	*Validated by Registration York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (BASE #901127N1.11073)	InterView 220 & 3050 (under CLX Release 3.1)	Any Host
Verdix Corporation VADS Sun SPARC Solaris 2.1, VAda-110-4040, Version 6.2 (#821004W1.11288)	SPARCstation 10 model 42 (under Solaris 2.1)	Same as Host	*Validated by Registration York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (BASE #901127N1.11073)		
Verdix Corporation VADS Sun SPARC Solaris 2.1, VAda-110-4040, Version 6.2 (#821004W1.11289)	Sun SPARCserver 690 (under Solaris 2.0)	Same as Host	*Validated by Registration York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (BASE #901127N1.11073)	InterAct 220, 2020, 3050, 6040, 6080, 6240 & 6280 (under CLX Release 3.1)	Any Host
Verdix Corporation VADS MP Sun SPARC Solaris 2.1, VAda-110-4141, Version 6.2 (#821004W1.11290)	Sun SPARCserver 690 (under Solaris 2.0)	Same as Host	*Validated by Registration York Software Engineering Limited York Ada Compiler Environment (ACE) Release 5 (BASE #901127N1.11073)	InterServe 200, 300, 2000, 3000, 4200, 5200, 6000, 6105 & 6505 (under CLX Release 3.1)	Any Host
Verdix Corporation VADS Silicon Graphics Self, VAda-110-6464, Version 6.2 (#821004W1.11291)	Silicon Graphics IRIS 4D/440 (under IRIX 4.0.1)	Same as Host			
Wang Laboratories, Inc. Wang VS Ada Version 5.00.00 (#901129W1.11083)	Wang VS 8480 (under Wang VSOS 7.30.02)	Same as Host			
*Validated by Registration Wang Laboratories, Inc. Wang VS Ada Version 5.00.00 (BASE #901129W1.11083)	Wang VS Models: 100 & 300; 5430, 5440, 5450 & 5480; 7010, 7110, 7120, 7150 & 7310; 8220, 8230, 8260, 8430, 8460, 8470 & 8480; and 10050, 10075 & 10100 (under all VS OS versions 7.21.xx & 7.30.xx)	Same as Host			

## 2.10 PASCAL PROCESSORS

VENDOR	PROCESSOR ID <i>VSR # &amp; LEVEL</i>	HARDWARE & <i>OPERATING SYSTEM</i>	EXPIRY DATE	OTHER ENVIR HW/OS	NONCON- FORMITIES
Bull HN	Pascal Version PCV1.2 <i>NIST-92/1683 Level 0/1</i>	DPS 90 <i>GCOS-8 Version SR4020</i>	8/1/93	DPS 8000, 9000 <i>GCOS-8 Version SR4020</i>	
Bull S.A.	Pascal SXL-3002 Version 01.01 <i>PCVS/0003/F Level 0/1</i>	DPX/2 250 <i>BOS, Version 2.0</i>	3/31/93	DPX/2200 and 300 <i>BOS Version 1.1 and 2.0</i>	
Control Data Corporation	PASCAL/VE Version 1.8 Level 780 <i>NIST-92/1423 Level 0/1</i>	CYBER 180-995 <i>NOS/VE Version 1.6.1 Level 780</i>	4/1/93	Cyber 180 Ser; Cyber 2000 <i>NOS/VE Ver. 1.6.1 Level 780</i>	
Digital Equipment Corporation	VAX Pascal, Version 4.4 <i>NIST-92/2249 Level 0/1</i>	VAX 3100 Model 76 <i>VAX/VMS Version 5.5</i>	12/1/93	VAX 4000 Mod 200 300; 6000 Mod 200 300 400 500; 8200 8250 8300 8350 85xx 8600 8650 8700 8800 8810 8820 8830 8840; 9000 Mod 210 400; VAXr 3000-310; VAX11/730 /750/780/785; MicroVAX II 2000 3100 3300 3400 3500 3600 3800 3900; VAXstation II 2000 3100 3200 3500 3520 3540; VAXserver 3100 3300 3400 3500 3600 3602 3800 3900 4000 Mod 200 300; 6000 Mod 210/220 310/320 410/420 510/520 <i>VMS Version 5.5</i>	
	DEC Pascal for RISC OSF Version 1.2 <i>NIST-92/2248 Level 0/1</i>	DECstation 5000-125 <i>OSF/I Version 1.0</i>	12/1/93	DECstation 2100, 3100, 3100s; 5000-120/125; 5000 models 200, 200CX, 200PX, 200 PXG, 200PXG TURBO; DECsystem 3100, 5000 models 200, 5100, 5400, 5500, 5820, 5830, 5840 <i>OSF/I Version 1.0</i>	
	DEC Pascal for RISC Version 1.2 <i>NIST-92/2247 Level 0/1</i>	DECstation 5000 Model 200 <i>ULTRIX Version 4.2</i>	12/1/93	DECstations 130; 2100, 3100, 3100s, 5000-120/125, 5000-200, 200CX, 200PX, 200PXG, 200PXG TURBO DECsystems 3100, 5000-200, 5100, 5400, 5500, 5810, 5820, 5830, 5840 <i>ULTRIX Version 4.2 &amp; 4.2</i>	
Edinburgh Portable Compilers	Pascal-E Version 4.3.2 <i>PCVS/0092/UK Level 0</i>	ICL DRS 6000 <i>DRS/NX 6000 Version 4.0</i>	1/1/93		
	Pascal-E Version 4.3.2 <i>PCVS/0093/UK Level 0</i>	ICL DRS 3000 <i>DRS/NX 3000 Version 5.0</i>	1/1/93		
	Pascal-E Version 4.3.3 <i>PCVS/0091/UK Level 0</i>	PC/AT 80386 <i>Interactive UNIX Release 3.2.2</i>	1/1/93		



## PASCAL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & LEVEL	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	OTHER ENVIR HW/OS	NONCON- FORMITIES
IBM Canada LTD	IBM AIX XL PASCAL Compiler/6000 Version 1 Release 1 <i>NIST-92/1342 Level 0</i>	IBM RISC System/6000 POWERstation 530 <i>IBM AIX Version 3 Release 2</i>	3/1/93	IBM RISC System/6000 Powerstation/ Powerserver 220, 320H, 340, 350, 520H, 530, 530E, 540, 550, 560, 560F, 730; Powerserver 930, 950 <i>AIX RISC System/6000 Version 3 Release 2</i>	
Intergraph Corporation	Pascal-CLIPPER Version 1.8.4B <i>NIST-93/1042 Level 0</i>	CLIPPER IS4000 <i>CLIX Version 6.5</i>	12/1/93	CLIPPER C300 and C400 <i>CLIX Version 6.5</i>	
Olivetti Systems & Networks	Olivetti Green Hills Pascal Version 1.2 <i>IMQ/PCVS-002/92 Level 0</i>	Olivetti LSX 5010 <i>Olivetti Unix System V R4.0 Version 2</i>	1/10/93		
Siemens Nixdorf Information Systems AG	SNI Pascal-XT Version 2.1B <i>PCVS/0095/UK Level 0/1</i>	MX300-50 <i>SINIX-L Version 5.41</i>	2/1/93		
	SNI Pascal-XT Version 2.1B <i>PCVS/0097/UK Level 0/1</i>	RM600 <i>SINIX-P Version 5.41</i>	2/1/93		
	SNI Pascal-XT Version 2.1A <i>PCVS/0096/UK Level 0/1</i>	MX300 <i>SINIX-H Version 5.24</i>	2/1/93		
	SNI Pascal-XT Version 2.2A <i>PCVS/0094/UK Level 0/1</i>	H120-I 7.500 <i>BS2000 Version 10.0</i>	2/1/93		

## 2.11 C PROCESSORS

VENDOR	PROCESSOR ID VSR # & LEVEL	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	OTHER ENVIR HW/OS	NONCON- FORMITIES
Amdahl Corporation	Amdahl C Version 1 Release 2 <i>NIST-92/2083</i>	Amdahl 5990 <i>MLS Version 2 Release 1.4</i>	12/1/93	Amdahl 5995-1400, 5995M, 5890 <i>MLS Version 2 Release 1.4</i>	
Hewlett-Packard Company	HP C/HP-UX Version A.09.26 <i>NIST-93/1151</i>	HP9000 Series 720 <i>HP-UX Version A.09.00</i>	1/1/94	HP9000 808, 815, 822, 825, 832, 835, 842, 850, 852, 855, 860, 865; 870/100 /200 /300 /400; 890/1 /2 /3 /4; 807, 817, 827, 837, 847, 857, 867, 877, 887, 897, 635, 645, F10, F20, F30, G30, G40, G50, H20, H30, H40, H50, I30, 710, 705, 715, 725, 735, 755, 745i, 747i, 750 <i>HP-UX Version A.09.00</i>	
	HP C/HP-UX Version B.08.35 <i>NIST-93/1152</i>	HP9000 Series 42S <i>HP-UX Version B.09.00</i>	1/1/94	HP9000 425e, 425t, 425s, 433, 382, 380 <i>HP-UX Version B.09.00</i>	
	HP C/HP-UX Version A.08.25 <i>NIST-93/1154</i>	HP9000 Series 827 <i>HP-UX Version 8.02</i>	1/1/94		
	HP C/iX Version A.04.51 <i>NIST-93/1153</i>	HP3000 Series 927LX <i>MPE/iX Version 4.5</i>	1/1/94	HP3000 917LX, 927LX, 937LX, 947LX, 957LX, 967LX, 977SX, 987SX, 990; 992/100 /200 /300 /400; 937RX, 947RX, 957RX, 967RX, 937SX, 947SX, 957SX, 967SX <i>MPE/iX Version 4.5</i>	
IBM Canada Ltd.	XL C Compiler Version 1.2 <i>NIST-92/1851</i>	IBM RISC System/6000 <i>AIX for RISC System/6000 Version 3 Release 2</i>	7/1/93	IBM RISC 6000 POWERstation/ POWERservers 220, 320, 320H, 340, 350, 520, 520H, 530, 530H, 540, 550, 560; POWER- server(s) 730, 930, 950, 970 <i>AIX for RISC 6000 Version 3 Release 2</i>	
	IBM SAA C/400 Version 2 Release 2 <i>NIST-92/2091</i>	AS/400 D80 <i>OS/400, Version 2 Release 2</i>	11/1/93	9402 System Models D02, E02, C04, D04, E04, C06, D06, E06; 9404 System Models B10, C10, D10, E10, B20, C20, D20, E20, C25, D25, E25; 9406 System Models B35, B40, B45, B50, B60, B70, D35, D45, D50, D60, D70, D80, E35, E45, E50, E60, E70, E80, E90, E95 <i>OS/400 Version 2 Release 2</i>	
	C/370 Compiler Version 2 Release 1 <i>NIST-93/1051</i>	ES/9000 <i>MVS/ESA SP Version 4 Release 2</i>	1/1/94	3090, 308X, 43XX, 937X <i>MVS/ESA SP Version 4 Release 2</i>	
	C/370 Compiler Version 2 Release 1 <i>NIST-93/1052</i>	ES/9000 <i>VM/ESA Version 1 Release 1.1</i>	1/1/94	3090, 308X, 43XX, 937X <i>VM/ESA Version 1 Release 1.1</i>	

## C PROCESSORS, *Continued*

VENDOR	PROCESSOR ID <i>VSR # &amp; LEVEL</i>	HARDWARE & <i>OPERATING SYSTEM</i>	EXPIRY DATE	OTHER ENVIR HW/OS	NONCON- FORMITIES
	C/370 Compiler Version 2 Release 1 <i>NIST-93/1053</i>	ES/9000 <i>VM/SP Version 1 Release 6</i>	1/1/94	3090, 308X, 43XX, 937X <i>VM/SP Version 1 Release 6</i>	
	C/370 Compiler Version 2 Release 1 <i>NIST-93/1054</i>	ES/9000 <i>VM/XA SP Version 1 Release 2</i>	1/1/94	3090, 308X, 43XX, 937X <i>VM/XA SP Version 1 Release 2</i>	
	SAA AD/CYCLE C/400 Version 1 Release 1.1 <i>NIST-93/1055</i>	ES/9000 <i>MVS/ESA SP Version 4 Release 2</i>	1/1/94	3909, 908X, 43XX, 937X <i>MVS/ESA SP Version 4, Release 2</i>	
	XL C Compiler Version 1 Release 2 <i>NIST-93/1056</i>	IBM RISC 6000 Model 220 <i>AIX for RISC 6000 Version 3 Release 2</i>	1/1/94	IBM RISC 6000 POWERstation/ POWERservers 320, 320H, 340, 350, 520, 520H, 530, 530H, 540, 550, 560, 580; POWER- server(s) 730, 930, 950, 970, 980 <i>AIX for RISC 6000 Version 3 Release 2</i>	
	XL C Compiler Version 1 Release 2 <i>NIST-93/1057</i>	IBM RISC 6000 Model 530H <i>AIX for RISC 6000 Version 3 Release 2</i>	1/1/94	IBM RISC 6000 POWERstation/ POWERservers 220, 320, 320H, 340, 350, 520, 520H, 530, 540, 550, 560, 580; POWER- server(s) 730, 930, 950, 970, 980 <i>AIX for RISC 6000 Version 3 Release 2</i>	
Intergraph Corporation	Clipper Advanced Optimizing C Version 1.57 <i>NIST-93/1043</i>	Clipper AS4000 <i>CLIX Version 6.5</i>	12/1/93	Clipper C3000 and C4000 <i>CLIX Version 6.5</i>	
NCR Corporation	NCR C Development Toolkit Release 2 <i>NIST-92/2321</i>	NCR System 3000 Model 3550 <i>NCR UNIX SVR4 MP-RAS Release 2</i>	1/1/94	NCR System 3000 Models 3345, 3445, 3447 <i>NCR UNIX SVR4 MP-RAS Release 2</i>	
	NCR C Development Toolkit Release 2 <i>NIST-92/2322</i>	NCR System 3000 Model 3450 <i>NCR UNIX SVR4 MP-RAS Release 2</i>	1/1/94	NCR System 3000 Models 3335, 3350, 3355, 3360 <i>NCR UNIX SVR4 MP-RAS Release 2</i>	
Sequent Computer Systems, Inc.	ptx/C Version 2 Release 0 <i>NIST-92/2142</i>	S2000/250 <i>DYNIX/ptx Version 2 Release 0</i>	10/1/93	S2000/450, S2000/750 <i>DYNIX/ptx Version 2 Release 0</i>	
Sun Microsystems, Inc.	Sun ANSI C Version 2.0.1 <i>NIST-92/2331</i>	SPARCstation 4/30 <i>Solaris Version 2.1</i>	1/1/94		
	Sun ANSI C Version 2.0.1 <i>NIST-92/2332</i>	SPARCstation 10 model 30 <i>Solaris Version 2.1</i>	1/1/94		
	Sun ANSI C Version 2.0.1 <i>NIST-92/2333</i>	SPARCstation 10 model 41 <i>Solaris Version 2.1</i>	1/1/94		



## C PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & LEVEL	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	OTHER ENVIR HW/OS	NONCON- FORMITIES
	Sun ANSI C Version 2.0.1 <i>NIST-92/2334</i>	SPARCstation 10 model 42 <i>Solaris Version 2.1</i>	1/1/94		
	Sun ANSI C Version 2.0.1 <i>NIST-92/2335</i>	RDI Britelite <i>Solaris Version 2.1</i>	1/1/94		
	Interactive Unix Software Development System ANSI C Version 3 <i>NIST-92/2336</i>	Alpha Systems Lab PC model ASL 486/33 <i>Sun Interactive Unix Version 3.2 Release 3.0.1</i>	1/1/94		

## 2.12 MUMPS PROCESSORS

VENDOR	PROCESSOR ID & VSR #	HARDWARE & OPERATING SYSTEM	EXPIRY DATE	LEVEL	OTHER ENVIR HW/OS	NONCON- FORMITIES
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No entries at this time.

## 3. DATABASE LANGUAGE (SQL)

### 3.1 FIPS Database Language Standards

As specified by the FIPS, FIRMR and the associated Federal ADP and Telecommunications Standards Index, Federal agencies, when acquiring SQL processors, are responsible for assuring that processors are in accordance with FIPS PUB 127-1, Database Language SQL.

### 3.2 Organization of Database Language Processor Entries

Each entry in the VPL is a very limited extract from the Validation Summary Report (VSR) available from NIST. See 3.4 below.

The entries in the VPL for database language processors are presented as follows:

- The **VENDOR ID** column contains the name of the Vendor of the processor.
- The **PROCESSOR ID** column contains the name of the processor, its version number, the VSR number, and the Expiry date of the Notification of Registration. The term "Pre-release" means that the vendor has designated the SQL processor as "not commercially available" at the time of validation. The product is listed to assist users in planning for future procurements.
- The **INTERFACES & COMPILERS** column contains the names of associated interactive SQL or programming language interfaces, and identification of the programming language compilers that interface with the SQL processor. A listing in the **COMPILERS** column is not an indication that the compiler has been validated for the applicable programming language standard. See the preceding "Programming Languages" Section for a list of validated compilers.
- The **HARDWARE & OPERATING SYSTEM** column presents the hardware and operating system environment used during the validation.
- The entries in the **OTHER HW/OS & COMPILERS** column include other hardware and operating system environments in which the processor operates, and the programming language compilers that interface with the SQL processor. The listings of the compilers and operating systems may contain a range of versions that are supported.
- The **NONCONFORMITIES** column lists the number of nonconformities for each interface tested (Ada, C, COBOL, Fortran, and Pascal). If a product supports both module language and embedded interfaces for a given programming language, then the programming language will be preceded by "Embedded" or "Module," as appropriate. Schema nonconformities are deficiencies in support for standard schema definition language constructs. "FIPS Flagger" in this column indicates that the mandatory FIPS Flagger requirement of FIPS 127-1 was not implemented. "IEF" nonconformities are deficiencies in the optional "Integrity Enhancement Feature" of FIPS 127-1. "Sizing" designates failure to support default minimum "Sizing for Database Constructs" specified under "Special Procurement Considerations" of FIPS 127-1. "Interactive" errors are deficiencies in the "Interactive SQL" interface defined in the "Special Procurement Considerations" section of FIPS 127-1. Refer to VSR for details. The number of nonconformities is only one limited measure of the quality of an SQL interface. It is more important to analyze the nature of each individual nonconformity and its impact on meeting user requirements.



### 3.3 Validation Requirements

The requirements for validation of database language processors are the same as those for programming language processors, listed in section 2.3.1.

### 3.4 Registered Report

A registered Validation Summary Report is issued for those SQL processors that have been tested and are considered to be in compliance with FIPS as specified by the FIPS, by the FIRMR, and the associated Federal ADP and Telecommunications Standards Index. VSRs are available from the Database and Graphics Group address below.

### 3.5 Validation Procedures and Test Suite

SQL processors are tested in accordance with procedures described in the NIST Language Processor Validation Procedures for SQL Validation Service. The current version of the SQL Validation System is Version 3.0. Any product with a VSR expiration date of July 1993 or later has been tested with Version 3.0. Those with no known non-conformities have received a Certificate of Conformance to FIPS 127-1. The validation procedures and test suite are available from:

National Institute of Standards and Technology (NIST)  
Computer Systems Laboratory  
Database and Graphics Group  
Building 225, Room A266  
Gaithersburg, MD 20899  
Telephone (301) 975-3258, (301) 975-3267 (Voice)  
(301) 590-0932 (FAX)

### 3.6 SQL PROCESSORS

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
Digital Equipment Corporation	VAX Rdb/VMS Version 4.1 NIST-82/7351 10/01/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded Ada Module Ada VAX Ada Version 2.2 Embedded C Module C VAX C Version 3.2 Embedded COBOL Module COBOL VAX COBOL Version 4.4 Embedded FORTRAN Module FORTRAN VAX FORTRAN Version 5.7 Embedded PASCAL Module PASCAL VAX Pascal Version 4.2 Interactive SQL (FIPS Default)	VAXstation 3500 and VAX 8800 VAX/VMS Ver. 5.4-3	VAX, MicroVAX, and VAXstation VMS Versions 5.0 - 5.4-3  VAX Ada V2.0 - 2.2 VAX C V3.0 - 3.2 VAX COBOL V4.2 - 4.4 VAX Fortran V5.0 - 5.7 VAX Pascal V3.9 - 4.2	
	VAX Rdb/VMS Version 4.1 NIST-82/7352 10/01/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded Ada Module Ada VAX Ada Version 2.1 Embedded C Module C VAX C Version 3.2 Embedded COBOL Module COBOL VAX COBOL Version 4.4 Embedded FORTRAN Module FORTRAN VAX FORTRAN Version 5.7 Embedded PASCAL Module PASCAL VAX Pascal Version 4.2 Interactive SQL (FIPS Default)	VAXstation 4000 Cluster VAX/VMS Ver. 5.5-2	VAX, MicroVAX, and VAXstation VMS Versions 5.0 - 5.5-2  VAX Ada V2.0 - 2.1 VAX C V3.0 - 3.2 VAX COBOL V4.2 - 4.4 VAX Fortran V5.0 - 5.7 VAX Pascal V3.9 - 4.2	
	VAX Rdb/VMS Version 4.2 Pre-release NIST-82/7353 10/01/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded Ada Module Ada VAX Ada Version 2.2 Embedded C Module C VAX C Version 3.2 Embedded COBOL Module COBOL VAX COBOL Version 4.4 Embedded FORTRAN Module FORTRAN VAX FORTRAN Version 5.7 Embedded PASCAL Module PASCAL VAX Pascal Version 4.2 Interactive SQL (FIPS Default)	VAXstation 3500 and VAX 8800 VAX/VMS Ver. 5.4-3	VAX, MicroVAX, and VAXstation VMS Versions 5.0 - 5.4-3  VAX Ada V2.0 - 2.2 VAX C V3.0 - 3.2 VAX COBOL V4.2 - 4.4 VAX Fortran V5.0 - 5.7 VAX Pascal V3.9 - 4.2	
	VAX Rdb/VMS Version 4.2 Pre-release NIST-82/7354 10/01/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded Ada Module Ada VAX Ada Version 2.1 Embedded C Module C VAX C Version 3.2 Embedded COBOL Module COBOL VAX COBOL Version 4.4 Embedded FORTRAN Module FORTRAN VAX FORTRAN Version 5.7 Embedded PASCAL Module PASCAL VAX Pascal Version 4.2 Interactive SQL (FIPS Default)	VAXstation 4000 Cluster VAX/VMS Ver. 5.5-2	VAX, MicroVAX, and VAXstation VMS Versions 5.0 - 5.5-2  VAX Ada V2.0 - 2.1 VAX C V3.0 - 3.2 VAX COBOL V4.2 - 4.4 VAX Fortran V5.0 - 5.7 VAX Pascal V3.9 - 4.2	

## SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
IBM Corporation	SQL/DS Version 3 Release 2 NIST-80/7021 1/1/83	Embedded C IBM C/370 Version 1 Release 2 Embedded COBOL IBM VS COBOL II Version 1 Release 3.1 Embedded Fortran IBM VS Fortran Version 2 Release 4.0 Interactive SQL (FIPS Default)	IBM 3080 VM/XA SP Release 2	IBM 3080, 4330, 8080, 8330 VM/ESA Release 1 VM/SP Release 6 VM/XA SP Release 2	
	SQL/DS Version 3 Release 2 NIST-80/7022 1/1/83	Embedded COBOL IBM VS COBOL II Version 1 Release 3.2 Embedded Fortran IBM VS Fortran Version 1 Release 4.1 Interactive SQL (FIPS Default)	IBM 3080 VSE/ESA Release 1	IBM 3080, 4330, 8080, 8330 VSE/ESA Release 1 VSE/SP Release 3 VSE/SP Release 4	
	Database 2 (DB2) Version 2 Release 3 NIST-82/7201 5/1/83	Embedded C IBM C/370 Ver 1 Rel 2 Embedded COBOL IBM SAA AD/CYCLE COBOL/370 Ver 1 Rel 1 Embedded Fortran IBM VS FORTRAN Ver 2 Rel 5 Module Language Ada IBM Ada/370 Ver 1 Rel 2 with IBM Ada/370 Module Processor for DB2 Interactive SQL (FIPS Default)	IBM ES9021-770 MVS/ESA SP V.3 R.1.3	IBM 3080, 4330, 8080 MVS/XA SP V2R2 MVS/ESA SP V4R2	
Informix Software Inc.	INFORMIX-OnLine Version 4.10 NIST-81/7031 2/1/83	Schema Processor INFORMIX-SQL Version 4.00 Embedded C INFORMIX-ESQL/C Version 4.10 Sun C 4.1	Sun 4 Model 260 Sun OS 4.1	Sun Model 4/60, 4/100, 4/200; Sun Sparcserver 1, 1+, 330, 370, 380, 490; Sun Sparcstation 300, 330 Sun OS 4.1 Solbourne Series 4/801, 4/802, 4/803, 4/804, 5/801, 5/802, 5/804, 5/871, 5/872, 5/873, 5/874 OS/MP 4.0	1 C
	INFORMIX-OnLine Version 4.10 NIST-81/7032 2/1/83	Schema Processor INFORMIX-SQL Version 4.00 Embedded C INFORMIX-ESQL/C Version 4.10 AT&T C 4.2	AT&T 3B2/700 Unix System V Release 3.2.1, Rev. 3	AT&T 3B2 300, 310, 400, 500, 600, 750 Unix System V Release 3.2.1, Rev. 3	1 C
	INFORMIX-OnLine Version 4.10 NIST-81/7033 2/1/83	Schema Processor INFORMIX-SQL Version 4.00 Embedded C INFORMIX-ESQL/C Version 4.10 HPUX C	HP 9000/825 HP-UX Version A.B7.00	HP 9000/808, 808S, 815, 815S, 822, 825, 825S, 832, 834, 835, 835S, 835SE, 840, 842, 845, 845S, 850, 852, 855 HP-UX A.B7.00	1 C
	INFORMIX-OnLine Version 4.10 NIST-81/7034 2/1/83	Schema Processor INFORMIX-SQL Version 4.00 Embedded C INFORMIX-ESQL/C Version 4.10 C 4.1	Prime EXL320 Unix System V 3.1		1 C
	INFORMIX-OnLine Version 4.10 NIST-81/7035 2/1/83	Schema Processor INFORMIX-SQL Version 4.00 Embedded C INFORMIX-ESQL/C Version 4.10 Interactive C 4.1.5	INTEL WS3000 Interactive Unix System V 3.2.2	Compaq Systempro 488 Compaq Deskpro 388/25; 388/33; 488/25 MDL120; 488/25 MDL 320; 488/25 MDL650; 488/33; Data General Dasher 388/386SX Interactive Unix V/386 2.2 AT&T 6386; 6386/25; 6386/33 Unix System 3.2	1 C



## SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
	INFORMIX-ESQL/C Version AR4.00 NIST-91/7036 2/1/83  Features Tested: Level 2 ANSI SQL (single-user) FIPS Sizing Defaults FIPS Flagger	Schema Processor INFORMIX-SQL Version 4.00 Embedded C INFORMIX-ESQL/C Version AR4.00 Microsoft 6.0 C	Concord 386 MS-DOS 3.30	Compaq Deskpro 386/486 MS-DOS 3.30 IBM PC AT MS-DOS 4.0/3.30 Toshiba 3100 SX/3200 MS-DOS 4.01	14 C
	INFORMIX-OnLine Version 5.0 NIST-91/7037 5/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C Sun C as bundled with Sun OS 4.1.1 Interactive SQL (FIPS Default) INFORMIX DB-Access	Sun SPARCserver 470 Sun OS 4.1.1	Sun Model 4/60, 4/100, 4/200, 4/260; Sun Sparcserver 1, 1+, 330, 370, 390; Sun Sparcstation 300, 330 Sun OS 4.1 - 4.1.1	1 IEF Schema
	INFORMIX-OnLine Version 5.0 NIST-91/7038 5/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C C as bundled with ULTRIX 4.0 rev 179 Interactive SQL (FIPS Default) INFORMIX DB-Access	DECSYSTEM 3100 ULTRIX 4.0 rev 179	DECSYSTEM 3100, 5100, 5400, 5500, 5810, 5820, 5830, 5840; DECSTATION 2100, 3100, 5000-200 ULTRIX 4.0 rev 179	1 IEF Schema
	INFORMIX-OnLine Version 5.0 NIST-91/7039 5/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C C as bundled with Software Development System 4.1.5 Interactive SQL (FIPS Default) INFORMIX DB-Access	Zenith 386/33E SCO Unix System V 3.2	Altos Series 5000; Bull HN DPX/Prostation 25I, 25E; Compaq Deskpro 386/25, 20E; Deskpro 386/33, System Pro; Deskpro 386/SX; Deskpro 486/25 MDL 120, 123; Deskpro 486/33 System Pro M; Systempro MDL 485 Dual Proc.;; Dec System 316+, 325, 333 SCO Unix System V 3.2	1 IEF Schema
	INFORMIX-OnLine Version 5.01 Pre- release NIST-92/7191 3/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C 5.00 Sun C as bundled with Sun OS 4.1.1 Module Ada INFORMIX-ADA/SAME 5.00 Verdix Ada 8.03 Interactive SQL (FIPS Default) INFORMIX DB-Access 5.00	Sun 4/60 Sun OS 4.1.1	Sun Model 4/60, 4/100, 4/200, 4/260; Sun Sparcserver 1, 1+, 330, 370, 390, 470; Sun Sparcstation 300, 330 Sun OS 4.1 - 4.1.1	
	INFORMIX-OnLine Version 5.01 Pre- release NIST-92/7195 3/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded Ada INFORMIX-ESQL/Ada 4.00 Verdix Ada 8.03	Sun 4/60 Sun OS 4.1.1	Sun Model 4/60, 4/100, 4/200, 4/260; Sun Sparcserver 1, 1+, 330, 370, 390, 470; Sun Sparcstation 300, 330 Sun OS 4.1 - 4.1.1	7 Embedded Ada
	INFORMIX-OnLine Version 5.0 NIST-92/7192 3/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C 5.00 C as bundled with ULTRIX 4.0 rev 179 Embedded Ada INFORMIX-ESQL/Ada 4.00 Verdix Ada 8.1 Module Ada INFORMIX-ADA/SAME 5.00 Verdix Ada 8.1 Interactive SQL (FIPS Default) INFORMIX DB-Access 5.00	DECSYSTEM 3100 ULTRIX 4.2 rev 98	DECSYSTEM 3100, 5100, 5400, 5500, 5810, 5820, 5830, 5840; DECSTATION 2100, 3100, 5000-200 ULTRIX 4.0 - 4.2	1 IEF Schema 7 Embedded Ada

## SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
	INFORMIX-OnLine Version 5.0 NIST-82/7183 3/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C 5.00 C as bundled with Software Development System 4.1.5 Embedded Ada INFORMIX-ESQL/Ada 4.00 Verdix Ada 6.1 Module Ada INFORMIX-ADA/SAME 5.00 Verdix Ada 6.1 Interactive SQL (FIPS Default) INFORMIX DB-Access 5.00	Zenith Z-486/25E SCO Unix System V 3.2	Altos Series 5000; Bull HN DPX/Prostation 25i, 25E; Compaq Deskpro 386/25, 20E; Deskpro 386/33, System Pro; Deskpro 386/SX; Deskpro 486/25 MDL 120, 123; Deskpro 486/33 System Pro M; Systempro MDL 485 Dual Proc.; Dec System 316+, 325, 333 SCO Unix System V 3.2	1 IEF Schema 7 Embedded Ada
	INFORMIX-OnLine/Secure Version 4.10 Pre-release NIST-82/7184 3/1/83  Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger	Embedded C INFORMIX-ESQL/C Version 4.10 Sun C 4.1 Interactive SQL (FIPS Default) INFORMIX DB-Access 4.10	Sun 4 Model 260 Sun OS 4.1.1	Sun Model 4/60, 4/100, 4/200; Sun Sparcserver 1, 1+, 330, 370, 390, 490; Sun Sparcstation 300, 330 Sun OS 4.1.1; Sun C 4.1.1 Solbourne Series 4/601, 4/602, 4/603, 4/604, 5/601, 5/602, 5/604, 5/671, 5/672, 5/673, 5/674 OS/MP 4.0 Solbourne C4.0	1 C
	INFORMIX-OnLine/Secure Version 5.00 NIST-83/7301 12/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Module Ada INFORMIX-ADA/SAME Version 5.00 SunAda Version 2.0 Embedded C INFORMIX-ESQL/C Version 5.00 Sun ANSI C Version 2.0.1 Interactive SQL (FIPS Default) INFORMIX DB-Access Version 5.00	RDI BriteLite iPX Laptop Solaris 2.1	Sun4c sparc Solaris 2.1	
	INFORMIX-OnLine/Secure Version 5.00 NIST-83/7302 12/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Module Ada INFORMIX-ADA/SAME Version 5.00 SunAda Version 2.0 Embedded C INFORMIX-ESQL/C Version 5.00 Sun ANSI C Version 2.0.1 Interactive SQL (FIPS Default) INFORMIX DB-Access Version 5.00	Sun SPARCstation 10, Model 30 Solaris 2.1	Sun4m sparc Solaris 2.1	
	INFORMIX-OnLine/Secure Version 5.00 NIST-83/7303 12/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Module Ada INFORMIX-ADA/SAME Version 5.00 SunAda Version 2.0 Embedded C INFORMIX-ESQL/C Version 5.00 Sun ANSI C Version 2.0.1 Interactive SQL (FIPS Default) INFORMIX DB-Access Version 5.00	Sun SPARCstation 10, Model 41 Solaris 2.1	Sun4m sparc Solaris 2.1	
	INFORMIX-OnLine/Secure Version 5.00 NIST-83/7304 12/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Module Ada INFORMIX-ADA/SAME Version 5.00 SunAda Version 2.0 Embedded C INFORMIX-ESQL/C Version 5.00 Sun ANSI C Version 2.0.1 Interactive SQL (FIPS Default) INFORMIX DB-Access Version 5.00	Sun SPARCstation 10, Model 42 Solaris 2.1	Sun4m sparc Solaris 2.1	
	INFORMIX-OnLine/Secure Version 5.00 NIST-83/7305 12/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Module Ada INFORMIX-ADA/SAME Version 5.00 SunAda Version 2.0 Embedded C INFORMIX-ESQL/C Version 5.00 Sun ANSI C Version 2.0.1 Interactive SQL (FIPS Default) INFORMIX DB-Access Version 5.00	Sun SPARCstation 4/30 Solaris 2.1	Sun4m sparc Solaris 2.1	

## SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
	INFORMIX-OnLine/Secure Version 5.00 NIST-93/7306 12/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Module Ada INFORMIX-ADA/SAME Version 5.00 SunAda Version 2.0 Embedded C INFORMIX-ESQL/C Version 5.00 Interactive ANSI C Version 3.0 Interactive SQL (FIPS Default) INFORMIX DB-Access Version 5.00	Alpha Systems Lab PC Model ASL 486/33 Sun Interactive Unix, Version 3.0.1, Release 3.2	Intel 486 Sun Interactive Unix, Version 3.0.1, Release 3.2	
	INFORMIX-OnLine/Secure Version 5.00 NIST-93/7307 12/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Module Ada INFORMIX-ADA/SAME Version 5.00 Alysa Ada for HP9000 Series 800, Version A.05.35 Embedded C INFORMIX-ESQL/C Version 5.00 HP C Version A.08.17 Interactive SQL (FIPS Default) INFORMIX DB-Access Version 5.00	Hewlett-Packard 9000 Series 800 Model 867 HP BLS A.08.08	HP9000 Series 800, Series 700 HP BLS A.08.08-09	
	INFORMIX-OnLine/Secure Version 5.00 NIST-93/7308 12/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Module Ada INFORMIX-ADA/SAME Version 5.00 Alysa Ada for HP9000 Series 800, Version A.05.35 Embedded C INFORMIX-ESQL/C Version 5.00 HP C Version A.08.17 Interactive SQL (FIPS Default) INFORMIX DB-Access Version 5.00	Hewlett-Packard 9000 Series 800 Model 827 HP BLS A.08.08	HP9000 Series 800, Series 700 HP BLS A.08.08-09	
	INFORMIX-OnLine/Secure Version 5.00 NIST-93/7309 12/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger	Module Ada INFORMIX-ADA/SAME Version 5.00 Alysa Ada for HP9000 Series 800, Version A.05.35 Embedded C INFORMIX-ESQL/C Version 5.00 HP C Version A.08.17 Interactive SQL (FIPS Default) INFORMIX DB-Access Version 5.00	Hewlett-Packard 9000 Series 800 Model 807 HP BLS A.08.08	HP9000 Series 800, Series 700 HP BLS A.08.08-09	
NCR/ ShareBase	ShareBase III, Release 1.2 NIST-92/7251 7/1/83  Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults	Embedded C Sun UNIX C Release 4.1.1	Client: Sun SPARC SLC SunOS, Release 4.1.1 Server: Server/8000 Sharebase III, Release 1.2	Client: Sun SPARC SLC SunOS, Release 4.1.1 Server: NCR System 3000 Model 3445 System V Release 4 (rel. 1.2)	FIPS Flagger
Oracle Corporation	ORACLE RDBMS Version 8.0 NIST-91/7052 4/1/83  Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults	Embedded C Pro*C Version 1.4 VAX C Version 3.1 Embedded COBOL Pro*COBOL Version 1.4 VAX COBOL Version 4.2 Embedded Fortran Pro*Fortran Version 1.4 VAX Fortran Version 5.2 Embedded Pascal Pro*Pascal Version 1.4 VAX Pascal Version 3.9 Interactive SQL (FIPS Default) SQL*DBA Version 8.0 SQL*Plus Version 3.0	DEC VAX 6580 VMS Version 5.4	VAX, MicroVAX, VAXStation VMS Versions 4.6 - 5.4	2 Schema 14 C 11 COBOL 11 Fortran 11 Pascal 9 Interactive  FIPS Flagger



## SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
	Trusted ORACLE7, Release 7.0 Pre-release NIST-92/7801 07/1/93	Embedded Ada Pro*Ada Version 1.5 ALSYS Ada DS B2425, Version A.05.35 Embedded C Pro*C Version 1.5 HP C HP 92453-01, Version A.08.79 Embedded COBOL Pro*COBOL, Version 1.5 Micro Focus COBOL/2, Version 1.1 revision 002 Embedded FORTRAN Pro*FORTRAN, Version 1.5 FORTRAN 77/UX HP92430, Version A.08.14 Schema Processor SQL*DBA Version 7.0	Hewlett-Packard 9000/835 HP-UX BLS Version 8.04	HP 9000/700 Series and HP 9000/800 Series HP-UX BLS Version 8.04	
	Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger				
	ORACLE7, Release 7.0 NIST-93/7101 11/1/93	Embedded Ada Pro*Ada, Version 1.5 VADS IBM RISC System/8000, AIX 3.2, VAda 110-7171, Version 6 Embedded C Pro*C, Version 1.5 IBM XL C Compiler/8000, Version 1.2	IBM RISC System 8000 Model 530H IBM AIX for RISC System/8000, Version 3 Release 2	IBM RISC System 6000 Models 220, 320, 320H, 340, 350, 520, 520H, 540, 550, 560, 730, 930, 950, 970 AIX for RISC System/8000, Version 3 Release 2	
	Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger				
	ORACLE7, Release 7.0 NIST-93/7102 11/1/93	Embedded C Pro*C, Version 1.5 NCR C Development Toolkit, Rel 2	NCR 3450 NCR System V Release 4 MP- RAS, Rel 2	NCR Series 3000, to include 3335, 3345, 3447, 3550, 3600 NCR System V Release 4 MP- RAS, Rel 2	
	Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger				
	ORACLE7, Release 7.0 NIST-93/7103 11/1/93	Embedded C Pro*C, Version 1.5 NCR C Development Toolkit, Rel 2	NCR 3550 NCR System V Release 4 MP- RAS, Rel 2	NCR Series 3000, to include 3335, 3345, 3447, 3550, 3600 NCR System V Release 4 MP- RAS, Rel 2	
	Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger				
	ORACLE7, Release 7.0 NIST-93/7104 11/1/93	Embedded Ada Pro*Ada, Version 1.5 Verdix Corp. VADS UNIX System V/386, Release 4, Version 6.1	NCR 3450 NCR System V Release 4 MP- RAS, Rel 2	NCR Series 3000, to include 3335, 3345, 3447, 3550, 3600 NCR System V Release 4 MP- RAS, Rel 2	
	Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger				
	ORACLE7, Release 7.0 NIST-93/7105 11/1/93	Embedded Ada Pro*Ada, Version 1.5 Verdix Corp. VADS UNIX System V/386, Release 4, Version 6.1	NCR 3550 NCR System V Release 4 MP- RAS, Rel 2	NCR Series 3000, to include 3335, 3345, 3447, 3550, 3600 NCR System V Release 4 MP- RAS, Rel 2	
	Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger				
	Trusted ORACLE7, Release 7.0 NIST-93/7106 11/1/93	Embedded Ada Pro*Ada, Version 1.5 Aisys Ada HP-B2425, Version A.05.35 Embedded C Pro*C, Version 1.5 HP C HP 92453-01, Version A.08.17	Hewlett-Packard 9000/807 HP-UX BLS, Version 8.08	HP 9000/7xx HP-UX BLS Release 8.09 HP 9000/8xx HP-UX BLS Release 8.08	
	Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger				

## SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
	Trusted ORACLE7, Release 7.0 NIST-93/7107 11/1/83	Embedded Ada Pro*Ada, Version 1.5 Alsys Ada HP-B2425, Version A.05.35 Embedded C Pro*C, Version 1.5 HP C HP 92453-01, Version A.08.17	Hewlett-Packard 9000/817 HP-UX BLS, Version 8.08	HP 9000/7xx HP-UX BLS Release 8.08 HP 9000/8xx HP-UX BLS Release 8.08	
	Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger				
	Trusted ORACLE7, Release 7.0 NIST-93/7108 11/1/83	Embedded Ada Pro*Ada, Version 1.5 Alsys Ada HP-B2425, Version A.05.35 Embedded C Pro*C, Version 1.5 HP C HP 92453-01, Version A.08.17	Hewlett-Packard 9000/847 HP-UX BLS, Version 8.08	HP 9000/7xx HP-UX BLS Release 8.08 HP 9000/8xx HP-UX BLS Release 8.08	
	Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger				
	Trusted ORACLE7, Release 7.0 NIST-93/7109 11/1/83	Embedded Ada Pro*Ada, Version 1.5 Alsys Ada HP-B2425, Version A.05.35 Embedded C Pro*C, Version 1.5 HP C HP 92453-01, Version A.08.17	Hewlett-Packard 9000/867 HP-UX BLS, Version 8.08	HP 9000/7xx HP-UX BLS Release 8.08 HP 9000/8xx HP-UX BLS Release 8.08	
	Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger				
	Trusted ORACLE7, Release 7.0 NIST-93/710A 11/1/83	Embedded Ada Pro*Ada, Version 1.5 AlsysComp_034, Version 5.1 Embedded C Pro*C, Version 1.5 SecureWare CMW+, Version 2.2 Native C	Zenith Data Systems Z-Station 433 DEH SecureWare CMW+, Version 2.2		
	Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger				
Software AG	ADABAS SQL Server, Version 1.1 NIST-93/7201 1/1/84	Embedded C ADABAS Version 1.2 HP C Version A.08.17	HP 9000/817 HP/UX A.08.0.02		10 C
	Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger				
	ADABAS SQL Server, Version 1.1 NIST-93/7202 1/1/84	Embedded COBOL ADABAS Version 1.2 HP Micro Focus COBOL/2, Version 1.1 Rev. 002	HP 9000/817 HP/UX A.08.0.02		10 COBOL
	Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger				
	ADABAS SQL Server, Version 1.1 NIST-93/7203 1/1/84	Embedded COBOL ADABAS Version 5.3 COBOL II, Version 3.2	Hitachi HDS/EX80 MVS/ESA Version 4.2.2		10 COBOL
	Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger				
Sybase, Inc.	Sybase System 10/Version 5.0 Pre-release NIST-93/7051 11/1/83	Schema Processor Sybase Isql/4.2.5 Embedded C Sybase ESQL/C, Version 5.0 gcc V 2.1 Other Software Sybase Open Client Ct-library 5.0	Sun 4/75 SunOS 4.1.1		
	Features Tested: Level 2 ANSI SQL Integrity Enhancement Option FIPS Sizing Defaults FIPS Flagger				

## SQL PROCESSORS, *Continued*

VENDOR	PROCESSOR ID VSR # & EXPIRY DATE	INTERFACES & COMPILERS	HARDWARE & OPER. SYS.	OTHER HW/OS & COMPILERS	NONCON- FORMITIES
Unisys Corporation	SQLDB Mark 3.9 NIST-90/7011 1/1/93  Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults FIPS Flagger	Module COBOL A Series COBOL  ANSI-85, Version 2.0	Unisys A15 Model H MCP/AS Mark 3.9	Unisys Micro A, A1, A2, A3, A4, A5, A6, A9, A10, A12, A15, A16, A17, A19 MCP/AS Mark 3.9	
White Cross Systems Ltd.	WHITE CROSS 9000 Release 1.0.0 NIST-93/7251 1/1/94  Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults	Embedded C WHITE CROSS 9000 Client Utilities Release 1.0.0 MICROSOFT C/C++ Optimizing Compiler Version 7.00 Communications FTP PC/TCP Version 2.05 (over Ethernet)	Client: Custom-built 80486- based PC MICROSOFT MS-DOS Version 5.00 Server: WHITE CROSS 9000 Model WCS/9010		
	WHITE CROSS 9000 Release 1.0.0 NIST-93/7252 1/1/94  Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults	Embedded C WHITE CROSS 9000 Client Utilities Release 1.0.0 NeXTSTEP Objective C Release 3.0 Communications TCP/IP software bundled with OS (over Ethernet)	Client: NeXTstation NeXTSTEP Release 3.0 Server: WHITE CROSS 9000 Model WCS/9010		
	WHITE CROSS 9000 Release 1.0.0 NIST-93/7253 1/1/94  Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults	Embedded C WHITE CROSS 9000 Client Utilities Release 1.0.0 C Optimizing Compiler Version 5.10 Communications TCP/IP software bundled with OS (over Ethernet)	Client: Custom-built 80486- based PC SCO UNIX SYSTEM V/386 Development System Release 3.2 Server: WHITE CROSS 9000 Model WCS/9010		
	WHITE CROSS 9000 Release 1.0.0 NIST-93/7254 1/1/94  Features Tested: Level 2 ANSI SQL FIPS Sizing Defaults	Embedded C WHITE CROSS 9000 Client Utilities Release 1.0.0 SPARCCompiler C Version 2.0.1 Communications TCP/IP software bundled with OS (over Ethernet)	Client: SPARCstation IPX SunOS Release 4.1.2 Server: WHITE CROSS 9000 Model WCS/9010		



## 4. GRAPHICS CONFORMANCE TESTING

### 4.1 FIPS GKS Standard

The Graphical Kernel System (GKS) is a two-dimensional graphics tool box which provides for the display and manipulation of pictures and graphical input from the operator. The purpose of GKS is to promote portability of graphics applications for use on a variety of graphics workstations. It provides a functional interface between an application program and a configuration of graphical devices. The interface is at such a level of abstraction that hardware peculiarities are shielded from the application program.

FIPS PUB 120-1, GKS, is the first Federal Information Processing Standard Publication (FIPS PUB) registered for computer graphics systems. In accordance with FIPS PUB 120-1, two-dimensional graphics toolbox packages acquired for Federal use after November 3, 1986 should implement FIPS GKS. Conformance testing of GKS implementations protects Federal investment by ensuring adherence to the graphics standard. FIPS PUB 120-1 requires that GKS implementations offered to Federal agencies be tested using the NIST Test Suite to ensure that a particular implementation meets the specifications of the FIPS. The GKS Validation Test Suite (Fortran) is available from:

Ms. Susan Sherrick  
National Institute of Standards and Technology  
Building 225, Room A266  
Gaithersburg, MD 20899  
(301) 975-3268

### 4.2 Organization of GKS Entries

The entries in the VPL for GKS implementations are presented as follows:

- The **VENDOR ID** column contains the name of the Vendor of the implementation.
- The **GKS NAME** column contains the name of the implementation, its version number, the **VSR** number, and the **Expiry** date of the certificate of validation.
- The **HARDWARE & OP. SYSTEM** column presents the hardware and operating system environment used during the validation.
- The **GRAPHICS DEVICES** column includes the graphics devices that were validated.
- The **GKS LEVEL** column indicates the level of GKS that was validated.
- The entries in the **OTHER HW/OS** column include other hardware and operating system environments in which the processor operates.
- The **NONCONFORMITIES** column indicates whether or not the GKS implementation conforms to the applicable FIPS in one or more cases as evidenced by the validation. The **VSR** should be reviewed for details of the nonconformities.

### 4.3 FIPS CGM Standard

The Computer Graphics Metafile (CGM) is a data interchange standard suitable for the storage and retrieval of picture information in a device independent manner. The purpose of the CGM is to facilitate the transfer of graphical information among different computer systems, devices and/or applications.

The CGM application profile specified by Military Specification MIL-D-28003 adopts FIPS 128 and defines additional requirements. FIPS 128 in conjunction with MIL-D-28003 should be used when the representation of graphical information in digital form is to be used in technical illustrations and publications, and when the use of a general-purpose, graphical interchange mechanism is required.

The NIST CGM Test Suite tests the degree to which a binary encoded CGM complies with FIPS 128 and MIL-D-28003.

#### 4.3.1 CGM Test Labs and Test Suite

CGM Validation Testing is available from the National Institute of Standards and Technology through its Computer Systems Laboratory (NIST/CSL).

National Institute of Standards and Technology  
CGM Test Service  
Building 225, Room A266  
Gaithersburg, MD 20899  
(301) 975-3265

The CGM Validation Test Software is based on CTS/Metacheck, version 2.06 and is available for purchase from:

Advanced Technology Center  
22982 Mill Creek Drive  
Laguna Hills CA 92653  
(714) 583-9119

#### 4.3.2 Certificate of Validation

A certificate of validation is issued for those CGM files that have been tested and are in compliance with FIPS 128 and/or the Military Specification MIL-D-28003. Conformance of a metafile does NOT necessarily imply conformance of the CGM generator, CGM interpreter, or other CGMs created on the same hardware and software platform.

#### 4.3.3 Validation Procedures and Test Suite

CGM files are tested in accordance with procedures described in the NIST Procedures for CGM Testing. The current version of the Validation Test Software is Version 2.06. The validation procedures and information pack are available from:

National Institute of Standards and Technology (NIST)  
Computer Systems Laboratory  
CGM Test Service  
Room A266 Technology Building  
Gaithersburg, MD 20899 Telephone (301) 975-3265

#### **4.3.4 Validated Metafiles**

The metafiles identified in Section 4.5 have been tested for conformity with FIPS PUB 128 and MIL-D-28003. Each entry in the VPL is a very limited extract from the Validation Summary Report (VSR) available from NIST/CSL.

## 4.4 GKS IMPLEMENTATIONS

VENDOR	GKS NAME EXPIRY & VSR #	HARDWARE & OP. SYSTEM	GRAPHICS DEVICES	GKS LEVEL	OTHER HW/OS	NONCON- FORMITIES
Advanced Technology Center	GRAFFPAK-GKS Release 4.0	NCR 3450	X Window System V11	Level 2c		No
	12/1/93	Unix System V Release 4	PostScript Portrait Oriented Workstation (using QMS PS 810 Laser Printer)			
	NIST/NCC-92/967					
	GRAFFPAK-GKS Release 4.0	NCR 3550	X Window System V11	Level 2c		No
	12/1/93	Unix System V Release 4	PostScript Portrait Oriented Workstation (using QMS PS 810 Laser Printer)			
	NIST/NCC-92/968					
	GRAFFPAK-GKS Release 4.0	IBM RS6000 Model 220	X Window System V11	Level 2c		No
	12/1/93	AIX 3.2	PostScript Portrait Oriented Workstation (using QMS PS 810 Laser Printer)			
NIST/NCC-92/969						
GRAFFPAK-GKS Release 4.0	12/1/93	IBM RS6000 Model 530H	X Window System V11	Level 2c		No
		AIX 3.2	PostScript Portrait Oriented Workstation (using QMS PS 810 Laser Printer)			
GRAFFPAK-GKS Release 4.0	12/1/93	HP-9000/817	X Window System V11	Level 2c		No
		HP-UX 8.08	PostScript Portrait Oriented Workstation (using QMS PS 810 Laser Printer)			
GRAFFPAK-GKS Release 4.0	12/1/93	HP-9000/827	X Window System V11	Level 2c		No
		HP-UX 8.02	PostScript Portrait Oriented Workstation (using QMS PS 810 Laser Printer)			
GRAFFPAK-GKS Release 4.0	12/1/93	Sun Sparcstation 1	X Window System V11	Level 2c		No
		Solaris 2.1	PostScript Portrait Oriented Workstation (using QMS PS 810 Laser Printer)			
Rutherford Appleton Laboratory	RAL GKS V1.34	Sun 3/60	PostScript Portrait Oriented Workstation	2B Including RAL		No
	5/1/93	SUNOS Release 4.0.3	Sun 3/60 Monochrome Workstation running SunView Tektronix 4014-1	GKSM Input, RAL GKSM Output, and Workstation Independent Segment Storage		
	NIST/NCC-91/949					



## 4.5 COMPUTER GRAPHICS METAFILES

Client: Interleaf, Inc  
El Segundo, CA

VSR # & date: NIST-M-92/003-001 9/2/92

# CGM submitted/conforming: 1/1

CGM/size/date: asg.cgm 8880 8/31/92  
Generator: Interleaf Inc MDL/G  
Platform (as reported by vendor):  
Interleaf 5 v5.3, HP9000/700, HP UX v8.07

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Client: IBM Corporation  
Federal Sector Division  
Oswego, NY

VSR # & date: NIST-M-92/005-002 10/28/92

# CGM submitted/conforming: 5/5

CGM/size/date: gcgm\_l220.cgm 5280 10/27/92  
Generator: GRAFFPAK-CGM 1.1.2  
Platform (as reported by vendor):  
IBM RS6000 Model 220, AIX 3.2

CGM/size/date: gcgm\_l530.cgm 5280 10/27/92  
Generator: GRAFFPAK-CGM 1.1.2  
Platform (as reported by vendor):  
IBM RS6000 Model 530, AIX 3.2

CGM/size/date: gcgm\_n345.cgm 5280 10/27/92  
Generator: GRAFFPAK-CGM 1.1.2  
Platform (as reported by vendor):  
NCR 3450, NCR UNIX SVR4

CGM/size/date: gcgm\_n355.cgm 5280 10/27/92  
Generator: GRAFFPAK-CGM 1.1.2  
Platform (as reported by vendor):  
NCR 3550, NCR UNIX SVR4

CGM/size/date: gks\_l530.cgm 23680 10/27/92  
Generator: GRAFFPAK-GKS 4.0  
Platform (as reported by vendor):  
IBM RS6000 Model 530, AIX 3.2



## **5. U.S. GOSIP TESTING PROGRAM REGISTER DATABASE SYSTEM (GRD)**

### **5.1 Description**

The United States Government Open Systems Interconnection Profile (GOSIP) Testing Program was defined to assist Federal Agencies in assuring conformance to the GOSIP Standard. Testing for conformance to the Open Systems Interconnection (OSI) standards and for interoperability with other OSI implementations is available.

NISTIR 4594, "GOSIP Conformance and Interoperation Testing and Registration" establishes the framework for the establishment of registers for Test Suites, Test Systems (Means of Testing), Conformance Testing Laboratories, and Interoperability Testing Services.

### **5.2 U.S. GOSIP Register Database (GRD)**

The U.S. GOSIP Register Database (GRD) is an online database facility developed by NIST. It provides up-to-date reference information for the following list of registers:

1. U.S. GOSIP Abstract Test Suites (ATS).
2. Assessed Means of Testing (MOT).
3. NVLAP Accredited Test Laboratories.
4. Conformance Tested GOSIP Products.
5. Interoperability Test Suites (ITS) for OSI Products.
6. Reference Entities for Means of Testing Assessment(s).
7. Interworking GOSIP Products.
8. Interoperability Test and Registration Services.

### **5.3 How To Access the GOSIP Register Database (GRD)**

The GRD can be accessed in two ways.

1. Using the Internet address 138.27.7.2 and logging on under the user-name "JITCL". No password is necessary.
2. Via a modem by dialing the phone number (602) 538-5233. Log in using the user-name "JITCL". No password is necessary. (Recommended modem configuration is 8-bits, 1 stop bit, no parity and baud rates of 1200 or 2400 speed.)

Currently, when using a modem, the GRD system allows for two simultaneous users only. If connection is not established please hang up and try again later.

Once connected the user will immediately be put into an introduction screen. After hitting the return key, a screen is presented to allow the user to select the appropriate terminal type. Enter the corresponding number from the list provided. After this the user is put into the main application menu. It is recommended to read the help option ("GRD Operation Information") first before performing any queries. The "GRD Operation Information" option is option three of the main menu. Option four, "U.S. GOSIP Register Information", gives general information about the U.S. GOSIP Testing Program and the

## **U.S. GOSIP REGISTER DATABASE SYSTEM, *Continued***

contents of the registers. Option five, "Register Directory", lists the registers and in turn allows the user to perform queries on the register contents.

For any questions, problems or comments dealing with the GRD or the U.S. GOSIP Testing Program please contact:

Ken Thomas  
Joint Interoperability Test Center - TCBB  
Fort Huachuca, AZ 85613-7020  
(602) 538-5170  
e-mail: C3A-TCB@huachuca-EMH2.army.mil



## 5.4 GOSIP REGISTERS

### 5.4.1 REGISTER OF CONFORMANCE TESTING LABORATORIES

Conformance Testing Laboratories for the U.S. GOSIP Testing Program are listed here. All registered laboratories are deemed qualified to conduct conformance testing for U.S. GOSIP, for the Means of Testing Identified. Entries on this Register may be Full or Provisional. Provisional entries are assessed and awaiting formal NVLAP Accreditation; entries are valid for 12 months from the date of registration. Fully Registered entries are NVLAP Accredited; entries are valid until expiration, revocation or suspension of NVLAP Accreditation.

NVLAP Laboratory Code: 0355

Laboratory Name: Bull HN Conformance Test Center  
13430 North Black Canyon Highway  
P.O. Box 8000  
Phoenix, AZ 85029

Contact and Phone: Oscar Hefner, Tel (602) 862 6001  
Fax (602) 862 6051

Scope of Registration: FTAM/ACSE/Presentation(Session), X.400  
MHS: P2/P1/RTS/(Session), Session, TP4,  
CLNP

Type of Laboratory (1st, 2nd or 3rd Party): 1st Party

Type of Registration (Full or Provisional): Full

Registered Until: July 1, 1993

NVLAP Laboratory Code: 0364

Laboratory Name: CDA Incorporated  
Open Systems Development Group  
8301 Greensboro Drive Suite 610  
McLean, VA 22102-3603

Contact and Phone: Kevin P. Murray Tel (703) 821 1858  
Fax (703) 821 9859

Scope of Registration: FTAM/ACSE/Presentation(Session), X.400  
MHS: P2/P1/RTS/(Session), Session, TP0,  
TP4, CLNP, X.25:PLP/HDLC Lap B

Type of Laboratory (1st, 2nd or 3rd Party): 3rd Party

Type of Registration (Full or Provisional): Full

Registered Until: July 1, 1993

NVLAP Laboratory Code: 0354

Laboratory Name: Control Data Corp, OSI Conformance Test  
Center  
4201 North Lexington Avenue  
Arden Hills, MN 55126-6198

Contact and Phone: Ronald Swan Tel (612) 482 6257  
Fax (612) 482 3616

Scope of Registration: X.400 MHS: P2/P1/RTS/(Sessio), TP4, TP0,  
CLNP, X.25:PLP/HDLC/LAP B

Type of Laboratory (1st, 2nd or 3rd Party): 1st Party

Type of Registration (Full or Provisional): Full

Registered Until: July 1, 1993

NVLAP Laboratory Code: 0363

Laboratory Name: Corporation for Open Systems  
Suite 700  
8260 Willow Oaks Corporate Drive  
Fairfax, VA 22031

Contact and Phone: Andrea Reitzel, Tel (703) 205 2809  
Fax (703) 848 4572

Scope of Registration: FTAM/ACSE/Presentation(Session), X.400  
MHS: P2/P1/RTS/(Session), TP4, TP0,  
CLNP, 8802.2/8802.3, X.25:PLP/HDLC Lap  
B

Type of Laboratory (1st, 2nd or 3rd Party): 3rd Party

Type of Registration (Full or Provisional): Full

Registered Until: July 1 1993.

NVLAP Laboratory Code: 0362

Laboratory Name: Digital Equipment Corporation  
OSI Conformance Interoperability Test Center  
550 King Street  
Littleton, MA 01460

Contact and Phone: Keith A. Clinkscales, Tel (508) 486 5496  
Fax (508) 486 7414

Scope of Registration: FTAM/ACSE/Presentation(Session), X.400  
MHS: P2/P1/RTS/(Session), TP4,  
TP0,CLNP, X.25:PLP/HDLC Lap B

Type of Laboratory (1st, 2nd or 3rd Party): 1st Party

Type of Registration (Full or Provisional): Full

Registered Until: July 1, 1993

NVLAP Laboratory Code: 0365

Laboratory Name: Hewlett-Packard, OSI Conformance Test Center  
19420 Homestead Road  
Cupertino, CA 95014-9810

Contact and Phone: Murali Subbarao, Tel (408) 447 2822  
Fax (408) 447 3660

Scope of Registration FTAM/ACSE/Presentation(Session), X.400  
MHS: P2/P1/RTS/(Session), TP4, TP0,  
CLNP,

Type of Laboratory (1st, 2nd or 3rd Party): 1st Party

Type of Registration (Full or Provisional): Full

Registered Until: July 1, 1993

## GOSIP REGISTERS, *Continued*

NVLAP Laboratory Code: 0361

Laboratory Name: IBM Corp - OSI Lower Layer Conformance Center  
600 Park Place - Route 54  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact and Phone: J.P. Streck, Tel (919) 254 4360  
Fax (919) 254 5410

Scope of Registration: X.25 PLP/HDLC LAP B

Type of Laboratory (1st, 2nd or 3rd Party): 1st Party

Type of Registration (Full or Provisional): Full

Registered Until: July 1, 1993

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NVLAP Laboratory Code: 0357

Laboratory Name: The National Computing Centre Ltd  
Oxford House, Oxford Road  
Manchester, M1 7ED  
United Kingdom

Contact and Phone: A. E. J. PINK Tel +44 61 228 6333  
Fax +44 61 236 4715

Scope of Registration: FTAM/ACSE/Presentation(Session), X.400  
MHS: P2/P1/RTS/(Session), Session, TP4,  
TP0, CLNP

Type of Laboratory (1st, 2nd or 3rd Party): 3rd Party

Type of Registration (Full or Provisional): Full

Registered Until: July 1, 1993

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NVLAP Laboratory Code: 0367

Laboratory Name: UNISYS  
Open System Interconnect Laboratory  
P.O. Box 203  
2450 Swedesford Road  
Paoli, PA 19301

Contact and Phone: Andy Kalish, Tel (215) 993 7044  
Fax (215) 993 7425

Scope of Registration: FTAM/ACSE/Presentation(Session), X.400  
MHS: P2/P1/RTS/(Session), TP4, TP0,  
CLNP, X.25:PLP/HDLC Lap B

Type of Laboratory (1st, 2nd or 3rd Party): 1st Party

Type of Registration (Full or Provisional): Full

Registered Until: July 1, 1993.

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NVLAP Laboratory Code: 0371

Laboratory Name: ATI Conformance Accreditation and Test Center  
7011 Koll Center Parkway, Suite #200  
Pleasanton, CA 94566-3101

Contact and Phone: Sanjay Lokare (510) 484-5674  
(510) 484-4078

Scope of Registration: FTAM/ACSE/Presentation(Session),  
Session, TP4, TP0, CLNP

Type of Laboratory (1st, 2nd or 3rd Party): 3rd Party

Type of Registration (Full or Provisional): Full

Registered Until: October 1, 1993

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NVLAP Laboratory Code: 0385

Laboratory Name: Department of Defense  
Joint Interoperability Test Center  
Fort Huachuca, AZ 85613-7020

Contact: Mr. Kenneth Thomas (602) 538-5170  
Fax (602) 538-2380

Scope of Registration: FTAM/ACSE/Presentation(Session),  
Session, TP4, TP0, CLNP, 8802.2/8802.3,  
X.25 PLP HDLC

Type of Laboratory: (1st, 2nd or 3rd Party): 1st Party

Type of Registration (Full or Provisional): Full

Registered Until: April 1, 1993

---

NVLAP Laboratory Code: 0370

Laboratory Name: Conformance Expert Centre for OSI Bull-CECOB  
rue Jean Jaures, B.P. 68  
78430 Les Clayes/Bois, France

Contact and Phone: Gerard Vanderschooten Tel +33 1 30 80 68 11  
Fax +33 1 30 80 78 79

Scope of Registration: Session, TP4, TP0, CLNP, 802.2, 802.3,  
X.25: PLP:/HDLC LAP B

Type of Laboratory (1st, 2nd or 3rd Party): 1st Party

Type of Registration (Full or Provisional): Full

Registered Until: October 1, 1993

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## GOSIP REGISTERS, *Continued*

NVLAP Laboratory Code: 0391

Laboratory Name: Data General Corporation  
OSI Conformance Test Center  
4400 Computer Drive, MS/D216  
Westboro, MA 01580

Contact and Phone: Charles Stakus Tel (508) 870-6392  
Fax (508) 898-4694

Scope of Registration: FTAM/ACSE/Presentation(Session), X.400  
MHS: P2/P1/RTS/(Session), Session, TP4,  
TP0, CLNP

Type of Laboratory (1st, 2nd or 3rd Party): 1st Party

Type of Registration (Full or Provisional): Full

Registered Until: October 1, 1993

NVLAP Laboratory Code: 0392

Laboratory Name: IBM - ROME Networking Systems Laboratory  
OSI Conformance and Interoperability Dept  
via P. di Dono, 44  
00144 Rome, Italy

Contact and Phone: Michael Sullivan Tel +39 6 5187 2517  
Fax +39 6 5187 2467

Scope of Registration: FTAM/ACSE/Presentation(Session), X.400  
MHS: P2/P1/RTS/(Session), Session, TP4,  
TP0, CLNP

Type of Laboratory (1st, 2nd or 3rd Party): 1st Party

Type of Registration (Full or Provisional): Full

Registered Until: October 1, 1993

NVLAP Laboratory Code: 0394

Laboratory Name: Telecommunications Laboratories Test Center  
P.O. Box 71  
Chung-Li, 329 Taiwan

Contact and Phone: Ching-Sung Lu Tel +886 3 424-4377  
Fax +886 3 490-4464

Scope of Registration: FTAM, SESSION, TP4, TP0, CLNP

Type of Laboratory (1st, 2nd or 3rd Party): 3 Party

Type of Registration (Full or Provisional): Full

Registered Until: October 1, 1993

### 5.4.2 REGISTER OF APPROVED US GOSIP MOT VALIDATION LABORATORIES

NVLAP Laboratory Code: 0385

Laboratory Name: Department of Defense  
Joint Interoperability Test Center  
Fort Huachuca, AZ 85613-7020

Contact: Mr. Kenneth Thomas Tel (602) 538-5170

Scope of Registration: FTAM/ACSE/Presentation(Session),  
Session, TP4, TP0, CLNP, 8802.2/8802.3,  
X.25 PLP HDLC

Type of Laboratory: MOT Qualification

Type of Registration (Full or Provisional): Full

Registered Until: March 1994.

RNE Accreditation Number: 77.90/01

Laboratory Name: ACERLJ  
5, Voie Verte  
92260 Fontenay-aux-Roses  
France

Contact: Mr. J-P Baconnet Tel +33 1 46 38 35 08  
Fax +33 1 46 38 82 05

Scope of Registration: FTAM, MMS, and 8804/4

Type of Laboratory: MOT Qualification

Type of Registration (Full or Provisional): Full

Registered Until: March 1994.



## GOSIP REGISTERS, *Continued*

### 5.4.3 REGISTER OF CONFORMANCE TESTED GOSIP PRODUCTS

Products which have been tested in accordance with the GOSIP program of conformance testing are listed here. These products relate to the protocols identified in FIPS 146 GOSIP, Version 1. For further details of each product listed please contact the named supplier. Entries are registered according to the provisions of the "GOSIP Conformance and Interoperation Testing and Registration" proposed FIPS.

#### P-1 WAN Products

Supplier: A.T. & T. Computer Systems  
307 Middletown - Lincroft Road  
Lincroft, NJ 07738  
Contact: Reginald Lewis, Tel (908) 898-6005,  
Fax (908) 898-3717  
GOSIP Product Name, Release and Date:  
AT & T X.25 Network Interface Product,  
Release 2.0, January 1991.  
Hardware and Operating System Platform(s):  
AT & T 6386 StarServer S (or StarServer E), UNIX System  
V, Release 4.0; GPSC-AT, or GPSC-AT/E Synchronous  
Card  
Base/Derived: Base  
Connectivity: X.21 (bis), V.35, RS 232C  
Protocols and Profiles:  
1984 CCITT X.25 PLP/ X.25 HDLC LAP B  
Date Registered: April 9, 1991  
Type of Registration: Provisional, based on use of ATS-1 and  
ATS-2 GOSIP Version 1  
Conformance Lab Used: Corporation for Open Systems  
Suite 700  
8260 Willow Oaks Corporate Drive  
Fairfax, VA 22031

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195  
Contact: John P. Streck, Tel (919) 254-4360,  
Fax (919) 254-5410  
GOSIP Product Name, Release and Date:  
IBM X.25 NCP Packet Switching Interface  
Version 3 Release 4, June 28, 1991  
Hardware and Operating System Platform(s):  
Communications Controllers IBM 3745; Op. Sys. MVS/SP  
Network Control Program (NCP) V5R4; System Support  
Program (SSP) V3R6; Virtual Telecommunications Access  
Method (VTAM) Version 3  
Base/Derived: Base  
Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)  
Protocols and Profiles:  
1984 CCITT X.25 PLP/ X.25 HDLC LAP B  
Date Registered: July 10, 1991  
Type of Registration: Provisional, based on use of  
ATS-1 and ATS-2 GOSIP Version 1  
Conformance Lab Used: IBM-OSI Lower Layer Conformance  
Center  
600 Park Place-Route 54, P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195  
Contact: John P. Streck, Tel (919) 254-4360,  
Fax (919) 254-5410  
GOSIP Product Name, Release and Date:  
IBM X.25 NCP Packet Switching Interface  
Version 3 Release 4, June 28, 1991  
Hardware and Operating System Platform(s):  
Communications Controllers IBM 3745 Op. Sys. MVS/XA  
Network Control Program (NCP) V5R4 System  
Support Program (SSP) V3R6 Virtual Telecommunications  
Access Method (VTAM) Version 3  
Base/Derived: Base  
Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)  
Protocols and Profiles:  
1984 CCITT X.25 PLP/ X.25 HDLC LAP B  
Date Registered: July 10, 1991  
Type of Registration: Provisional, based on use of ATS-1 and  
ATS-2 GOSIP Version 1  
Conformance Lab Used: IBM-OSI Lower Layer Conformance  
Center  
600 Park Place-Route 54, P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195  
Contact: John P. Streck, Tel (919) 254-4360  
Fax (919) 254-5410  
GOSIP Product Name, Release and Date:  
IBM 6611 Network Processor Model 140 Version 1.0, June  
26, 1992  
Hardware and Operating System Platform(s):  
IBM 6611 Network Processor; Op. Sys. Based on AIX V 3.2  
for RISC sys/6000 IBM Multiprotocol Network Program  
Base/Derived: Derived  
Connectivity: V.24 or RS-232C, (X.21 bis) non-switched up to 19.2K  
bps, V.35 up to 56K bps, X.21 non-switched up to 64K  
bps  
Protocols and Profiles:  
Conforms to ISO 7776 and ISO 8208 for CCITT 1980 and  
1984 version. TCP/IP to compatible TCP/IP systems,  
Qualified Logical Link Controller (QLLC)  
Date Registered: March 25, 1992  
Type of Registration: Provisional, based on use of ATS-1, GOSIP  
Version 1  
Conformance Lab Used: IBM-OSI Lower Layer Conformance  
Center  
600 Park Place-Route 54, P.O. Box 12195  
Research Triangle Park, NC 27709-2195



## GOSIP REGISTERS, *Continued*

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact: John P. Streck, Tel (919) 254-4360,  
Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
IBM 6611 Network Processor Model 170  
Version 1.0, June 26, 1992

Hardware and Operating System Platform(s):  
IBM 6611 Network Processor  
Op. Sys. Based on AIX Version 3.2 for RISC sys/6000  
IBM Multiprotocol Network Program

Base/Derived: Derived

Connectivity: V.24 or RS-232C, (X.21 bis) non-switched up to 19.2K  
bps, V.35 up to 56K bps, X.21 non-switched up to 64k  
bps

Protocols and Profiles:  
Conforms to ISO 7776 and ISO 8208 for CCITT 1980 and  
1984 version. TCP/IP to compatible TCP/IP systems,  
Qualified Logical Link Controller (QLLC)

Date Registered: March 25, 1992

Type of Registration: Provisional, based on use of ATS-1 GOSIP  
Version 1

Conformance Lab Used: IBM-OSI Lower Layer Conformance  
Center  
600 Park Place-Route 54, P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact: John P. Streck, Tel (919) 254-4360,  
Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
IBM X.25 NCP Packet Switching Interface  
Version 3 Release 4, June 28, 1991

Hardware and Operating System Platform(s):  
Communications Controllers IBM 3745  
Op. Sys. VM/XA; Network Control Program (NCP) V5R4;  
System Support Program (SSP) V3R6; Virtual  
Telecommunications Access Method (VTAM) Version 3

Base/Derived: Derived

Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)

Protocols and Profiles:  
CCITT X.25 PLP/ X.25 HDLC LAP B

Date Registered: July 10, 1991

Type of Registration: Provisional, based on use of  
ATS-1 and ATS-2, GOSIP Version 1

Conformance Lab Used: IBM-OSI Lower Layer Conformance  
Center  
600 Park Place-Route 54, P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact: John P. Streck, Tel (919) 254-4360,  
Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
IBM X.25 NCP Packet Switching Interface  
Version 3 Release 4, June 28, 1991

Hardware and Operating System Platform(s):  
Communications Controllers IBM 3745 Op. Sys. MVS/ESA  
Network Control Program (NCP) V5R4 System Support  
Program (SSP) V3R6 Virtual Telecommunications Access  
Method (VTAM) Version 3

Base/Derived: Derived

Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)

Protocols and Profiles:  
1984 CCITT X.25 PLP/ X.25 HDLC LAP B

Date Registered: July 10, 1991

Type of Registration: Provisional, based on use of  
ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: IBM-OSI Lower Layer Conformance  
Center  
600 Park Place-Route 54, P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact: John P. Streck, Tel (919) 254-4360,  
Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
IBM X.25 NCP Packet Switching Interface  
Version 3 Release 4, June 28, 1991

Hardware and Operating System Platform(s):  
Communications Controllers IBM 3720  
Op. Sys. MVS/SP  
Network Control Program (NCP) V5R4  
System Support Program (SSP) V3R6  
Virtual Telecommunications Access Method (VTAM) Ver 3

Base/Derived: Derived

Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)

Protocols and Profiles:  
1984 X.25 PLP/ X.25 HDLC LAP B

Date Registered: July 10, 1991

Type of Registration: Provisional, based on use of  
ATS-1 and ATS-2 GOSIP Version 1

Conformance Lab Used: IBM-OSI Lower Layer Conformance  
Center  
600 Park Place-Route 54, P.O. Box 12195  
Research Triangle Park, NC 27709-2195

## GOSIP REGISTERS, *Continued*

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact: John P. Streck, Tel (919) 254-4360  
Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
IBM X.25 NCP Packet Switching Interface  
Version 3 Release 4, June 28, 1991

Hardware and Operating System Platform(s):  
Communications Controllers IBM 3720  
Op. Sys. VM/SP; Network Control Program (NCP) V5R4  
System Support Program (SSP) V3R6; Virtual  
Telecommunications Access Method (VTAM) Version 3

Base/Derived: Derived

Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)

Protocols and Profiles:  
1984 X.25 PLP/ X.25 HDLC LAP B

Date Registered: July 10, 1991

Type of Registration: Provisional, based on use of  
ATS-1 and ATS-2, GOSIP Version 1

Conformance Lab Used: IBM-OSI Lower Layer Conformance Center  
600 Park Place-Route 54, P.O. Box 12195  
Research Triangle Park, NC 27709-2195

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Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact: John P. Streck, Tel (919) 254-4360,  
Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
IBM X.25 NCP Packet Switching Interface  
Version 3 Release 4, June 28, 1991

Hardware and Operating System Platform(s):  
Communications Controllers IBM 3720  
Op. Sys. VM/XA; Network Control Program (NCP) V5R4  
System Support Program (SSP) V3R6 Virtual  
Telecommunications Access Method (VTAM) Version 3

Base/Derived: Derived

Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)

Protocols and Profiles:  
1984 X.25 PLP/ X.25 HDLC LAP B

Date Registered: July 10, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: IBM-OSI Lower Layer Conformance  
Center  
600 Park Place-Route 54, P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact: John P. Streck, Tel (919) 254-4360  
Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
IBM X.25 NCP Packet Switching Interface  
Version 3 Release 4, June 28, 1991

Hardware and Operating System Platform(s):  
Communications Controllers IBM 3720  
Op. Sys. MVS/ESA; Network Control Program (NCP) V5R4;  
System Support Program (SSP) V3R6; Virtual  
Telecommunications Access Method (VTAM) Version 3

Base/Derived: Derived

Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)

Protocols and Profiles:  
1984 X.25 PLP/ X.25 HDLC LAP B

Date Registered: July 10, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: IBM-OSI Lower Layer Conformance  
Center  
600 Park Place-Route 54, P.O. Box 12195  
Research Triangle Park, NC 27709-2195

---

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact: John P. Streck, Tel (919) 254-4360  
Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
IBM X.25 NCP Packet Switching Interface  
Version 3 Release 4, June 28, 1991

Hardware and Operating System Platform(s):  
Communications Controllers IBM 3720  
Op. Sys. MVS/XA; Network Control Program (NCP) V5R4;  
System Support Program (SSP) V3R6; Virtual  
Telecommunications Access Method (VTAM) Version 3

Base/Derived: Derived

Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)

Protocols and Profiles:  
X.25 PLP/ X.25 HDLC LAP B

Date Registered: July 10, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: IBM-OSI Lower Layer Conformance  
Center  
600 Park Place-Route 54, P.O. Box 12195  
Research Triangle Park, NC 27709-2195



## GOSIP REGISTERS, *Continued*

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact: John P. Streck, Tel (919) 254-4360  
Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
IBM X.25 NCP Packet Switching Interface  
Version 3 Release 4, June 28, 1991

Hardware and Operating System Platform(s):  
Communications Controllers IBM 3745  
Op. Sys. VM/SP; Network Control Program (NCP) V5R4  
System Support Program (SSP) V3R6; Virtual  
Telecommunications Access Method (VTAM) Version 3

Base/Derived: Derived

Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)

Protocols and Profiles:  
1984 X.25 PLP/ X.25 HDLC LAP B

Date Registered: July 10, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: IBM-OSI Lower Layer Conformance Center  
600 Park Place-Route 54, P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact: John P. Streck, Tel (919) 254-4360,  
Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
IBM AS/400 X.25 Communication Support Program  
Version 2 Release 1, May 24, 1991

Hardware and Operating System Platform(s):  
Processor IBM 9402  
Op. Sys. OS/400 V2 R1

Base/Derived: Derived

Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)

Protocols and Profiles:  
1984 X.25 PLP/ X.25 HDLC LAP B

Date Registered: September 25, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: International Business Machines  
Corporation  
Conformance Center for OSI Lower Layers  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact: John P. Streck, Tel (919) 254-4360  
Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
IBM AS/400 X.25 Communication Support Program  
Version 2 Release 1, May 24, 1991

Hardware and Operating System Platform(s):  
Processor IBM 9406  
Op. Sys. OS/400 V2 R1

Base/Derived: Base

Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)

Protocols and Profiles:  
1984 CCITT X.25 PLP/ X.25 HDLC LAP B

Date Registered: September 25, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: International Business Machines Corp.  
Conformance Center for OSI Lower Layers  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Supplier: International Business Machines Corporation  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

Contact: John P. Streck, Tel (919) 254-4360,  
Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
IBM AS/400 X.25 Communication Support Program  
Version 2 Release 1, May 24, 1991

Hardware and Operating System Platform(s):  
Processor IBM 9404  
Op. Sys. OS/400 V2 R1

Base/Derived: Derived

Connectivity: V.24 or RS-232-C, V.35, X.21 switched and  
non-switched, ISDN via X.21 connection (IBM 7820  
Terminal Adapter)

Protocols and Profiles:  
1984 CCITT X.25 PLP/ X.25 HDLC LAP B

Date Registered: September 25, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: International Business Machines Corp.  
Conformance Center for OSI Lower Layers  
P.O. Box 12195  
Research Triangle Park, NC 27709-2195

## GOSIP REGISTERS, *Continued*

Supplier: Harris Adacom Corporation  
16001 Dallas Parkway  
Dallas, Texas 75248

Contact: Gregory Pryn, Tel (214) 386-2000,  
Fax (214) 386-2239

GOSIP Product Name, Release and Date:  
Challenger ES/174-20  
Release 2.1, October 7, 1991

Hardware and Operating System Platform(s):  
Challenger ES/174-20 Release 2.1  
DTE/DCE Environment

Base/Derived: Base

Connectivity: RS 232 WAN Port

Protocols and Profiles:  
1984 CCITT X.25 PLP/ X.25 HDLC LAP B

Date Registered: October 17, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: CDA, Incorporated  
8301 Greensboro Drive  
McLean, VA 22102

Supplier: Harris Adacom Corporation  
16001 Dallas Parkway  
Dallas, Texas 75248

Contact: Gregory Pryn, Tel (214) 386-2000,  
Fax (214) 386-2524

GOSIP Product Name, Release and Date:  
Challenger ES/174-10  
Release V2.1, October 7, 1991

Hardware and Operating System Platform(s):  
Challenger ES/174-10 V2.1

Base/Derived: Derived

Connectivity: RS 232 WAN Port

Protocols and Profiles:  
1984 X.25 PLP/ X.25 HDLC LAP B

Date Registered: October 30, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: CDA, Incorporated  
8301 Greensboro Drive #610  
McLean, VA 22102

Supplier: Harris Adacom Corporation  
16001 Dallas Parkway  
Dallas, Texas 75248

Contact: Gregory Pryn, Tel (214) 386-2000,  
Fax (214) 386-2524

GOSIP Product Name, Release and Date:  
Challenger ES/174-60  
Release V2.1, October 7, 1991

Hardware and Operating System Platform(s):  
Challenger ES/174-60 V 2.1

Base/Derived: Derived

Connectivity: RS 232 WAN Port

Protocols and Profiles:  
X.25 PLP/ X.25 HDLC LAP B

Date Registered: October 30, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: CDA, Incorporated  
8301 Greensboro Drive #610  
McLean, VA 22102

Supplier: Memorex TELEX Corporation  
Federal Systems  
205 Van Buren Street, Suite #180  
Herdon, VA 22070

Contact: Kevin Good, Tel (703) 318-5600,  
Fax (703) 318-7575

GOSIP Product Name, Release and Date:  
1174-60R Version B1.3  
October 17, 1991

Hardware and Operating System Platform(s):  
1174-60R Version B1.3

Base/Derived: Base

Connectivity: RS-232-C

Protocols and Profiles:  
1984 CCITT X.25 PLP/ X.25 HDLC LAP B

Date Registered: October 30, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: CDA, Incorporated  
8301 Greensboro Drive #610  
McLean VA 22102



## GOSIP REGISTERS, *Continued*

Supplier: Memorex TELEX Corporation  
Federal Systems  
205 Van Buren Street, Suite #180  
Herdon, VA. 22070

Contact: Kevin Good Tel (703) 318-5600,  
Fax (703) 318-7575

GOSIP Product Name, Release and Date:  
1174-10R Version B1.3  
October 17, 1991

Hardware and Operating System Platform(s):  
1174-10R Version B1.3

Base/Derived: Derived

Connectivity: RS-232-C WAN Port

Protocols and Profiles:  
1984 X.25 PLP/ X.25 HDLC LAP B

Date Registered: October 30, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: CDA, Incorporated  
8301 Greensboro Drive #610  
McLean VA. 22102

Supplier: McData Corporation  
310 Interlocken Parkway  
Broomfield, CO 80021-3464

Contact: Steve Cartwright, Tel (303) 460-9200  
Fax (303) 465-4996

GOSIP Product Name, Release and Date:  
LinkMaster 7100 Model 20R  
Release 3.0, November 11, 1991

Hardware and Operating System Platform(s):  
LinkMaster 7100 Model 20R

Base/Derived: Base

Connectivity: RS232 / V.35, X.21

Protocols and Profiles:  
1984 CCITT X.25 PLP/ X.25 HDLC LAP B

Date Registered: December 17, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: CDA, Incorporated  
8301 Greensboro Drive, Suite 610  
McLean VA. 22102-3603

Supplier: Memorex TELEX Corporation  
Federal Systems  
205 Van Buren Street, Suite #180  
Herdon, VA. 22070

Contact: Kevin Good Tel (703) 318-5600,  
Fax (703) 318-7575

GOSIP Product Name, Release and Date:  
1174-90R Version B1.3  
October 17, 1991

Hardware and Operating System Platform(s):  
1174-90R Version B1.3

Base/Derived: Derived

Connectivity: RS-232-C WAN Port

Protocols and Profiles:  
1984 X.25 PLP/ X.25 HDLC LAP B

Date Registered: October 30, 1991

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: CDA, Incorporated  
8301 Greensboro Drive #610  
McLean VA. 22102

Supplier: McData Corporation  
310 Interlocken Parkway  
Broomfield, CO 80021-3464

Contact: Steve Cartwright Tel (303) 460-9200  
Fax (303) 465-4996

GOSIP Product Name, Release and Date:  
LinkMaster 7100 Model 10  
Release 3.0, November 11, 1991

Hardware and Operating System Platform(s):  
LinkMaster 7100 Model 10

Base/Derived: Derived

Connectivity: RS232 / V.35, X.21

Protocols and Profiles:  
1984 CCITT X.25 PLP/ X.25 HDLC LAP B

Date Registered: January 29, 1992

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: CDA, Incorporated  
8301 Greensboro Drive, Suite 610  
McLean VA. 22102-3603









## GOSIP REGISTERS, *Continued*

Supplier: SUN Microsystems, Inc.  
International Centre for Network Computing  
32 Rue du Vieux Chene  
F-38240 Meylan France

Contact: Mr. Tom Hull           Tel +33 76 41 42 18  
  Fax +33 76 41 41 42 41

GOSIP Product Name, Release and Date:  
SUNNET X.25  
Version 7.0.1, Release 1 October 1992

Hardware and Operating System Platform(s):  
SUN 4/75, SUNNET O/S 4.1.2 (SOLARIS 1.0.1)

Base/Derived: Base

Connectivity: RS-232

Underlying Stack: None

Protocols and Profiles:  
X.25 PLP/X.25 HDLC LAP-B

Date Registered: October 7, 1992

Type of Registration: Provisional, based on use of ATS-1 and ATS-2  
GOSIP Version 1

Conformance Lab Used: CDA, Inc, NVLAP #0364  
8301 Greensboro Drive, Suite 610  
McLean, Virginia 22102-3603

Supplier: UNISYS Corporation  
8008 Westbrook Drive  
McLean, VA 22102

Contact: Mr. Keith Fretz       Tel (703) 556-5665  
  Fax (703) 556-5172

GOSIP Product Name, Release and Date:  
X.25 PSCS SIRA & PCRs (up to 1929 Inclusive)  
October 1, 1992

Hardware and Operating System Platform(s):  
DCP-15, O/S DCP/OS 5R2A, TELCON 9R1A

Base/Derived: Base

Connectivity: RS-232 & V.35

Underlying Stack: None

Protocols and Profiles:  
X.25 LAP B / X.25 PLP

Date Registered: October 19, 1992

Type of Registration: Provisional, based on use of ATS-1 & ATS-2,  
GOSIP Version 1

Conformance Lab Used: UNISYS Corporation NVLAP #0367  
Open System Interconnect Laboratory  
2450 Swedesford Road P.O. Box 203  
Paoli, PA 19301

Supplier: IBM  
3605 Highway 52 North  
Rochester, MN 55091-7829

Contact: Mr. John P. Streck     Tel (919) 254-4360  
  Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
AS/400 X.25, Version 2, Release 2, September 25, 1992

Hardware and Operating System Platform(s):  
AS/400, Model IBM 9404, O/S, OS/400, Ver 2, Rel 2

Base/Derived: Base

Connectivity: WAN RS-232 / V.35

Underlying Stack: None

Protocols and Profiles:  
CCITT and ISO X.25 PLP / X.25 HDLC LAP B

Date Registered: November 13, 1992

Type of Registration: Provisional, based on use of ATS-1 & ATS-2,  
GOSIP Version 1

Conformance Lab Used: IBM Corporation  
Conformance Test Center for OSI  
Lower Layer, NVLAP 0361  
P.O. Box 12195  
Research Triangle Park, NC 27709

Supplier: IBM  
3605 Highway 52 North  
Rochester, MN 55091-7829

Contact: Mr. John P. Streck     Tel (919) 254-4360  
  Fax (919) 254-5410

GOSIP Product Name, Release and Date:  
AS/400 X.25, Version 2, Release 2, September 25, 1992

Hardware and Operating System Platform(s):  
AS/400, Model IBM 9402, 9406, O/S, OS/400, Ver 2, Rel 2

Base/Derived: Derived

Connectivity: WAN RS-232 / V.35

Underlying Stack: None

Protocols and Profiles:  
1984 CCITT and ISO X.25 PLP / X.25 HDLC LAP B

Date Registered: November 13, 1992

Type of Registration: Provisional, based on use of ATS-1 & ATS-2,  
GOSIP Version 1

Conformance Lab Used: IBM Corporation  
Conformance Test Center for OSI  
Lower Layer, NVLAP 0361  
P.O. Box 12195  
Research Triangle Park, NC 27709





## GOSIP REGISTERS, *Continued*

### P-2 LAN Products

Supplier: Bull HN Information Systems  
Technology Park  
Billerica, MA 01821-4199

Contact: Kenneth B. Finkenauer, OSI Program Manager  
(508) 294-2909/2699

GOSIP Product Name, Release and Date:  
Local Area Controller Subsystem (LACS) (8802/2,8802/3)

Hardware and Operating System Platform(s):  
DPS6000/HVS6 Release 2

Base/Derived: Base

Connectivity: 8802/3 10 Base 5 PLS

Protocols and Profiles:  
ISO 8802/2, 8802/3

Date Registered: April 1, 1991

Type of Registration: Provisional, based on use of ATS-3 and ATS-6  
GOSIP Version 1

Conformance Lab Used: Corporation for Open Systems  
Suite 700  
8260 Willow Oaks Corporate Drive  
Fairfax, VA 22031

Supplier: Control Data Corporation  
4201 North Lexington Ave  
Arden Hills, MN, 55126-6198

Contact: R.D. Swan Tel (612) 482-6257  
Fax (612) 482-3616

GOSIP Product Name, Release and Date:  
CDCNET Ethernet Serial Channel Interface  
LLC/MAC 1.7.1, PLS 1.6.1, Release October 1, 1992

Hardware and Operating System Platform(s):  
Device Interface Model #GH120B, Equipment #DY0227-B,  
Product #2608-6 (Stand-alone Machine), O/S None

Base/Derived: Base

Connectivity: 802.2 (LLC) / 802.3 (MAC/PLS)

Underlying Stack: None

Protocols and Profiles:  
LLC1 / MAC / PLS

Date Registered: October 15, 1992

Type of Registration: Provisional, based on use of ATS-3 and  
ATS-6 GOSIP Version 1

Conformance Lab Used: Corporation for Open Systems  
Suite 700  
8260 Willow Oaks Corporate Drive  
Fairfax, VA 22031

Supplier: 3COM Corporation  
5600 Bayfront Plaza P.O. Box 58145 Technology Park  
Santa Clara, CA 95052-8145

Contact: Howard Chan Tel (408) 764-5827

GOSIP Product Name, Release and Date:  
Ethernet 16, 3C507/Revision A, August 1, 1990

Hardware and Operating System Platform(s):  
PC AT 386, MS DOS 3.3

Base/Derived: Base

Connectivity: 8802/3 Base 5 PLS

Protocols and Profiles:  
ISO 8802/3

Date Registered: February 14, 1992

Type of Registration: Provisional, based on use of ATS-3 (PLS &  
MAC) GOSIP Version 1

Conformance Lab Used: Corporation for Open Systems  
Suite 700  
8260 Willow Oaks Corporate Drive  
Fairfax, VA 22031

### P-3 INTERMEDIATE System

Supplier: UNISYS Corporation  
8008 Westbrook Drive  
McLean, VA 22102

Contact: Mr. Keith Fretz Tel (703) 556-5665  
Fax (703) 556-5172

GOSIP Product Name, Release and Date:  
DCP OSITS, Version 2R1A plus PCRs 192-194, 197,  
199, 202, 203, 205, 207, Release April 8, 1992

Hardware and Operating System Platform(s):  
DCP-15 through DCP-55 Front End Processors, O/S  
DCP/OS 5R2A, TELCON 9R1A

Base/Derived: Base

Connectivity: 802.2 (LLC) / 802.3 (MAC) and X.25

Underlying Stack: WAN - PSCS (Version 51RA & PCRs), DCP-15,  
LAN - LAM Platform 2R2A, DCP 802.3 Lan Line  
Module, Feature #F5137-00

Protocols and Profiles:  
CLNP / IS

Date Registered: October 16 1992

Type of Registration: Provisional, based on use of ATS-7/1,  
GOSIP Version 1

Conformance Lab Used: UNISYS Corporation NVLAP #0367  
Open System Interconnect Laboratory  
2450 Swedesford Road P.O. Box 203  
Paoli, PA 19301

## GOSIP REGISTERS, *Continued*

### P-4 TRANSPORT Products

Supplier: Hewlett-Packard Company  
19420 Homestead Road  
Cupertino, CA 95014-9810

Contact: Murali Subbarao      Tel (408) 447-2822  
   Fax (408) 447-3660

Marketing Bruce Talley,  
   Tel (408) 447-3599,  
   Fax (408) 447-3660

GOSIP Product Name, Release and Date:  
HP OSI/Transport Services/9000, P/N 32070A, Version  
C.02.00, June 10, 1991

Hardware and Operating System Platform(s):  
HP 9000 Series 800/ HP-UX Operating System, Version 8.0

Base/Derived: Base  
Connectivity: LAN/9000 Link for HP 9000 Series 800, P/N 36967A

Protocols and Profiles:  
IS 8073, Transport Class 4/IS 8473, CLNP

Date Registered: May 28, 1991  
Type of Registration: Provisional, based on use of ATS-7 and  
ATS-9 GOSIP Version 1

Conformance Lab Used: Hewlett-Packard OSI Conformance  
Center  
19420 Homestead Road  
Cupertino, CA 95014

Supplier: International Business Machines Corporation  
Rome Networking Systems Laboratory  
Via Di Dono, 44  
Rome, Italy 00143

Contact: Gerard Bonnes      Tel 33 92 11 41 22  
   Fax 33 93 24 71 57

GOSIP Product Name, Release and Date:  
OSI/Communications Subsystem, Version 1 Release 1.1  
December, 1990

Hardware and Operating System Platform(s):  
IBM System/370, System/390, MVS/ESA V3R1

Base/Derived: Base

Connectivity: X.25, provided by IBM NCP Packet Switching Interface

Protocols and Profiles:  
Transport Class 4, (ISO 8073)/CLNP (IS 8473)/X.25  
(CCITT)

Date Registered: February 12, 1992

Type of Registration: Provisional, based on use of ATS-7 and ATS-9  
GOSIP Version 1

Conformance Lab Used: IBM Corporation  
OSI Conformance Testing Laboratory  
OSI Competence and Services Department  
CER IBM - BP 05  
La Gaude 06610, France

Supplier: International Business Machines Corporation  
Rome Networking Systems Laboratory  
Via Di Dono, 44  
Rome, Italy 00143

Contact: Gerard Bonnes      Tel 33 92 11 41 22  
   Fax 33 93 24 71 57

GOSIP Product Name, Release and Date:  
OSI/Communications Subsystem  
Version 1 Release 1.1  
December, 1990

Hardware and Operating System Platform(s):  
IBM System/370, System/390  
MVS/ESA V3R1

Base/Derived: Base

Connectivity: X.25, provided by IBM NCP Packet Switching Interface

Protocols and Profiles:  
IS 8073, Transport Class 0

Date Registered: November 1, 1991

Type of Registration: Provisional, based on use of ATS-7 and  
ATS-9 GOSIP Version 1

Conformance Lab Used: IBM Corporation  
OSI Conformance Testing Laboratory  
OSI Competence and Services Department  
CER IBM - BP 05  
La Gaude 06610, France

Supplier: International Business Machines Corporation  
Rome Networking Systems Laboratory  
Via Di Dono, 44  
Rome, Italy 00143

Contact: Gerard Bonnes      Tel 33 92 11 41 22  
   Fax 33 93 24 71 57

GOSIP Product Name, Release and Date:  
OSI/Communications Subsystem  
Version 1 Release 1.1  
December, 1990

Hardware and Operating System Platform(s):  
IBM System/370, System/390  
MVS/ESA V3R1

Base/Derived: Base

Connectivity: X.25, provided by IBM NCP Packet Switching Interface

Protocols and Profiles:  
Transport Class 4 (IS 8073)/X.25 (CCITT)

Date Registered: February 12, 1992

Type of Registration: Provisional, based on use of ATS-7 and  
ATS-9 GOSIP Version 1

Conformance Lab Used: IBM Corporation  
OSI Conformance Testing Laboratory  
OSI Competence and Services Department  
CER IBM - BP 05  
La Gaude 06610, France







## GOSIP REGISTERS, *Continued*

Supplier: International Business Machines Corporation  
Rome Networking Systems Laboratory  
Via Di Dono, 44  
Rome, Italy 00143

Contact: Gerard Bonnes                      Tel 33 92 11 41 22  
Fax 33 93 24 71 57

GOSIP Product Name, Release and Date:  
OSI/Communications Subsystem  
Version 1 Release 1.1  
December, 1990

Hardware and Operating System Platform(s):  
IBM System/370, System/390 VM/SP R5

Base/Derived: Derived

Connectivity: X.25, provided by IBM NCP Packet Switching Interface

Protocols and Profiles:  
IS 8073, Transport Class 0

Date Registered: November 1, 1991

Type of Registration: Provisional, based on use of ATS-7 and ATS-9  
GOSIP Version 1

Conformance Lab Used: IBM Corporation  
OSI Conformance Testing Laboratory  
OSI Competence and Services Department  
CER IBM - BP 05  
La Gaude 06610, France

Supplier: Control Data Corporation  
4201 North Lexington Ave  
Arden Hills, MN, 55126-6198

Contact: J.F. Carey                      Tel (612) 482-2567  
Fax (612) 482-2791

GOSIP Product Name, Release and Date:  
Control Data EP/IX Access and Directory  
Version 1.4.2, November 27, 1991

Hardware and Operating System Platform(s):  
Control Data 4000  
Control Data EP/IX Version 1.4.2

Base/Derived: Base

Connectivity: 8802/3 10 Base 5 PLS

Protocols and Profiles:  
Transport Class 4 (IS 8073) CLNP (IS 8473)

Date Registered: February 25, 1992

Type of Registration: Provisional, based on use of ATS-7 and  
ATS-9 GOSIP Version 1

Conformance Lab Used: Control Data Corporation, OSI  
Accredited                      Test Center  
4201 North Lexington Ave  
Arden Hills, MN 55126-6198

Supplier: Novell, Inc.  
2180 Fortune Drive  
San Jose, Ca, 95131

Contact: Ms. Jan Provan                      Tel (408) 473-8422  
Fax (408) 433-9827

GOSIP Product Name, Release and Date:  
NetWare FTAM Transport Component  
Version 1.2, Revision B, April 20, 1992

Hardware and Operating System Platform(s):  
AST Premium 386/33 with 8 Mb Ram  
Novell 3.11 Operating System over  
Novell NE2000 Ethernet Card (802.3)

Base/Derived: Base

Connectivity: CLNP/8802/2/802.3  
Novell 3.11 Operating System over  
Novell NE2000 Ethernet Card

Protocols and Profiles:  
Transport Class 4 (IS 8073) CLNP (IS 8473)

Date Registered: June 24, 1992

Type of Registration: Provisional, based on use of ATS-7 and  
ATS-9 GOSIP Version 1

Conformance Lab Used: National Computing Centre Ltd  
Manchester, UK  
Oxford House, Oxford Road  
Manchester, M1 7ED UK

Supplier: Novell, Inc.  
2180 Fortune Drive  
San Jose, Ca, 95131

Contact: Ms. Jan Provan                      Tel (408) 473-8422  
Fax (408) 433-9827

GOSIP Product Name, Release and Date:  
NetWare FTAM Transport Component  
Version 1.2, Revision B, April 20, 1992

Hardware and Operating System Platform(s):  
AST Premium 386/33 with 8 Mb Ram  
Novell 3.11 Operating System over  
Novell NE2000 Ethernet Card (802.3)

Base/Derived: Derived

Connectivity: CLNP/Novell 3.11 Operating System over  
8802.2 (LLC)/8802.4 (MAC), NE2000 and IBM 4 Mbs  
Token Ring Card

Protocols and Profiles:  
Transport Class 4 (IS 8073) CLNP (IS 8473)

Date Registered: June 24, 1992

Type of Registration: Provisional, based on use of ATS-7 and ATS-9  
GOSIP Version 1

Conformance Lab Used: National Computing Centre Ltd  
Manchester, UK  
Oxford House, Oxford Road  
Manchester, M1 7ED UK









## GOSIP REGISTERS, *Continued*

Supplier: Data General Corporation  
4400 Computer Drive  
P.O. Box MS D 134  
Westborough, MA 01580

Contact: Mr. Charles Stakus      Tel (508) 870-6392  
Fax (508) 898-4694

GOSIP Product Name, Release and Date:  
OSI/Platform for AViiON Systems, Version 3.0, Release  
June 1, 1992

Hardware and Operating System Platform(s):  
AViiON 5000/6000 Series, O/S DG/UX for AViiON Systems,  
Version 5.4.1

Base/Derived: Base

Connectivity: X.25

Underlying Stack: X.25

Protocols and Profiles:  
Transport Class 0, (ISO 8073)

Date Registered: October 23, 1992

Type of Registration: Provisional, based on use of ATS-8, GOSIP  
Version 1

Conformance Lab Used: ATI's Conformance Accreditation Test  
Center  
NVLAP #0371  
7011 Koli Center Parkway, Suite 200  
Pleasanton, CA 94566-3101

Supplier: Data General Corporation  
4400 Computer Drive  
P.O. Box MS D 134  
Westborough, MA 01580

Contact: Mr. Charles Stakus      Tel (508) 870-6392  
Fax (508) 898-4694

GOSIP Product Name, Release and Date:  
OSI/Platform for AViiON Systems, Version 3.0, Release  
June 1, 1992

Hardware and Operating System Platform(s):  
AViiON 5000/6000 Series, O/S DG/UX for AViiON Systems,  
Version 5.4.1

Base/Derived: Base

Connectivity: 802.2/802.3

Underlying Stack: 802.2/802.3

Protocols and Profiles:  
Transport Class 4, (ISO 8073) / CLNP, (ISO 8473)

Date Registered: October 23, 1992

Type of Registration: Provisional, based on use of ATS-78 and  
ATS-9, GOSIP Version 1

Conformance Lab Used: ATI's Conformance Accreditation Test  
Center  
NVLAP #0371  
7011 Koli Center Parkway, Suite 200  
Pleasanton, CA 94566-3101

Supplier: SynOptics Communications, Inc.  
4401 Great America Parkway  
Santa Clara, CA 95052-8185

Contact: Mr. Brian Sheffer      Tel (703) 684-2627  
Fax (703) 684-5115

GOSIP Product Name, Release and Date:  
Encore EnComm ISO Transport Services - with SynOptics  
LattisNet Model 3030 Concentrator, Release 3.0.0, Release  
date Aug 1, 1992

Hardware and Operating System Platform(s):  
Encore Infinity 90 Series GPIO I, O/S UMAX V3.0.7

Base/Derived: Base

Connectivity: 802.2 (LLC) / 802.3 (MAC)/PLS/Physical Media

Underlying Stack: 802.2 LLC/802.3 MAC

Protocols and Profiles:  
CLNP over LAN

Date Registered: October 27, 1992

Type of Registration: Provisional, based on use of ATS-7, GOSIP  
Version 1

Conformance Lab Used: CDA, Inc, NVLAP #364  
8301 Greensboro Drive, Suite 610  
McLean, Virginia, 22102-3603

Supplier: SUN Microsystems, Inc.  
International Centre for Network Computing  
32 Rue du Vieux Chene  
F-38240 Meylan France

Contact: Mr. Tom Hull      Tel +33 76 41 42 18  
Fax +33 76 41 42 41

GOSIP Product Name, Release and Date:  
SUNNET OSI Version 7.1, October 1, 1992

Hardware and Operating System Platform(s):  
SUN SPARC Station 2-4/75, SUN O/S 4.1.2 (Solaris)

Base/Derived: Base

Connectivity: 802.2 (LLC1) / 802.3 (MAC)

Underlying Stack: SUNNET OSI Version 7.1 LLC1 (HW) Sun CPU  
board  
LAN, interface (IEEE 802.3 CSMA/CD Access  
Method)

Protocols and Profiles:  
TP4/CLNP

Date Registered: October 14, 1992

Type of Registration: Provisional, based on use of ATS-7, and  
ATS-9, GOSIP Version 1

Conformance Lab Used: National Computing Centre Ltd.,  
NVLAP # 0357  
Oxford Road  
Manchester M1 7ED UK

## GOSIP REGISTERS, *Continued*

Supplier: UNISYS Corporation  
8008 Westbrook Drive  
McLean, VA 22102

Contact: Mr. Keith Fretz            Tel (703) 556-5665  
   Fax (703) 556-5172

GOSIP Product Name, Release and Date:  
DCP OSITS, Version 2R1A plus PCRs 192, 193, 194, 197,  
199, 202, 203, 205, 207, Release March 1, 1992

Hardware and Operating System Platform(s):  
DCP-15 through DCP-55 Front End Processors, O/S  
DCP/OS 5R2A (4/8/92), TELCON 9R1A (4/8/92)

Base/Derived: Derived

Connectivity: X.25

Underlying Stack: X.25 LAP B/X.25 PLP

Protocols and Profiles:  
Transport Class 4, (ISO 8073) / CLNP, ISO 8473 OR  
Transport Class 4, (ISO 8073)

Date Registered: October 19, 1992

Type of Registration: Provisional, based on use of ATS-7 and  
ATS-9, GOSIP Version 1

Conformance Lab Used: UNISYS  
Open System Interconnect Laboratory  
2450 Swedesford Road P.O. Box 203  
Paoli, PA 19301

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Supplier: UNISYS Corporation  
8008 Westbrook Drive  
McLean, VA 22102

Contact: Mr. Keith Fretz            Tel (703) 556-5665  
   Fax (703) 556-5172

GOSIP Product Name, Release and Date:  
CMS 1100/OSITS, Version 7R2B plus PCR 15312/2R1A  
plus PCRs 192, 193, 194, 197, 199, 202, 203, 205, 207,  
Release March 1, 1992

Hardware and Operating System Platform(s):  
OS1100 Exec. Cersion 43R2 running on 2200 systems and  
1190/80 Processors DCP-15 through DCP-55 Front End  
Processors, O/S OS1100 Exec. on Processors DCP/OS  
5R2A, TELCON 9R1A on Front End Processors

Base/Derived: Derived

Connectivity: X.25

Underlying Stack: X.25 PSCS Version 51RA plus PCRs 1891-1899,  
1902, 1911, 1923, 1929

Protocols and Profiles:  
Transport Class 4 (ISO 8073) / CLNP (ISO 8473)

Date Registered: October 16 1992

Type of Registration: Provisional, based on use of ATS-7, GOSIP  
Version 1

Conformance Lab Used: UNISYS Corporation NVLAP #0367  
Open System Interconnect Laboratory  
2450 Swedesford Road P.O. Box 203  
Paoli, PA 19301

Supplier: UNISYS Corporation  
8008 Westbrook Drive  
McLean, VA 22102

Contact: Mr. Keith Fretz            Tel (703) 556-5665  
   Fax (703) 556-5172

GOSIP Product Name, Release and Date:  
DCP OSITS, Version 2R1A plus PCRs 192, 193, 194,  
197, 199, 202, 203, 205, 207, Release March 1, 1992

Hardware and Operating System Platform(s):  
DCP-15 through DCP-55 Front End Processors, O/S  
DCP/OS Version 5R2A (4/8/92) and TELCON Version  
9R1A (4/8/92)

Base/Derived: Base

Connectivity: 802.2 (LLC) / 802.3 (MAC)

Underlying Stack: Lan Platform 2R2A, DCP 802.3 LAN Line Module,  
Feature #F5137-00

Protocols and Profiles:  
Transport Class 4 (ISO 8073) / CLNP (ISO 8473)

Date Registered: October 19, 1992

Type of Registration: Provisional, based on use of ATS-7 and  
ATS-9, GOSIP Version 1

Conformance Lab Used: UNISYS Corporation NVLAP #0367  
Open System Interconnect Laboratory  
2450 Swedesford Road P.O. Box 203  
Paoli, PA 19301

---

Supplier: UNISYS Corporation  
8008 Westbrook Drive  
McLean, VA 22102

Contact: Mr. Keith Fretz            Tel (703) 556-5665  
   Fax (703) 556-5172

GOSIP Product Name, Release and Date:  
DCP OSITS, Version 2R1A plus PCRs 192, 193, 194,  
197, 199, 202, 203, 205, 207, Release March 1, 1992

Hardware and Operating System Platform(s):  
DCP-15 through DCP-55 Front End Processors, O/S  
DCP/OS Version 5R2A (4/8/92) and TELCON Version  
9R1A (4/8/92)

Base/Derived: Base

Connectivity: X.25

Underlying Stack: X.25 LAP B / X.25 PLP

Protocols and Profiles:  
Transport Class 0 (ISO 8073)

Date Registered: October 19, 1992

Type of Registration: Provisional, based on use of ATS-8, GOSIP  
Version 1

Conformance Lab Used: UNISYS Corporation NVLAP #0367  
Open System Interconnect Laboratory  
2450 Swedesford Road P.O. Box 203  
Paoli, PA 19301











## GOSIP REGISTERS, *Continued*

### P-6 X.400 Products

Supplier: Hewlett-Packard Company  
19420 Homestead Road  
Cupertino, CA 95014-9810

Contact: Murali Subbarao      Tel (408) 447-2822  
   Fax (408) 447-3660

Marketing Todd Goldman,  
   Tel (408) 447-2645,  
   Fax (408) 447-3660

GOSIP Product Name, Release and Date:  
HP X.400/9000 P/N HP32032A, Version C.02.00, June 10,  
1991 (X400 Interface) HP OpenMail, P/N B1600A, V.A.  
00.02.03, June 10, 1991

Hardware and Operating System Platform(s):  
Session/Transport: HP OSI Transport Services/9000 Series 800.  
HP 9000 Series 800/ HP-UX Operating System, Version 8.0

Base/Derived: Base  
Connectivity: LAN/9000 Link for HP 9000 Series 800, P/N 36967A  
Protocols and Profiles:  
CCITT X.400 1984 Series P1, P2, and RTS  
CCITT X.225 ISO 8327 Session

Date Registered: August 19, 1991

Type of Registration: Provisional, based on use of ATS-15,  
ATS-14, ATS-13 and ATS-10 (MHS Subset)  
GOSIP Version 1

Conformance Lab Used: Hewlett-Packard OSI Conformance Center  
19420 Homestead Road  
Cupertino, CA 95014

### P-6 MHS Products

Supplier: UNISYS Corporation  
8008 Westbrook Drive  
McLean, VA 22102

Contact: Mr. Keith Fretz      Tel (703) 556-5665  
   Fax (703) 556-5172

GOSIP Product Name, Release and Date:  
OS 1100 OSI-MHS DDP-PPC: 5RIA & PCR 987, Version  
OSI-HS 2R1B, Release May 6, 1992

Hardware and Operating System Platform(s):  
1100/90 and 2200 Series Processors, O/S 1100 Exec.,  
Version 43R2

Base/Derived: Base

Connectivity: TP4/CLNP/LAN (802.3)

Underlying Stack: TP4/CLNP/LAN (802.3)

Protocols and Profiles:  
MHS (X.400) P2/P1/RTS/Session (X.25)

Date Registered: September 10, 1992

Type of Registration: Provisional, based on use of ATS-10, ATS-  
13, ATS-14, and ATS-15, GOSIP Version 1

Conformance Lab Used: UNISYS  
Open System Interconnect Laboratory  
2450 Swedesford Road P.O. Box 203  
Paoli, PA 19301

Supplier: UNISYS Corporation  
8008 Westbrook Drive  
McLean, VA 22102

Contact: Mr. Keith Fretz      Tel (703) 556-5665  
   Fax (703) 556-5172

GOSIP Product Name, Release and Date:  
DDP-PPC & OS 1100 OSI-MHS, Version DDP-PPC 5RIA +  
PCR 987, Release March 30, 1992

Hardware and Operating System Platform(s):  
Model 1100/90 or any 2200 Series System and DCP-15  
through DCP-55 Front End Processors, O/S 1100 Exec.,  
Version 43R2 and TELCON Version 9R1A

Base/Derived: Derived

Connectivity: TP4 or TP0

Underlying Stack: TP4/CLNP/X.25 GOSIP Product 105/P4.2  
TP4/X.25 GOSIP Product 105/P4.3  
TP0/X.25 GOSIP Product 105/P4.4

Protocols and Profiles:  
MHS P2/P1/RTS/Session

Date Registered: October 16, 1992

Type of Registration: Provisional, based on use of ATS-10, ATS-  
14, ATS-15, and ATS-16, GOSIP Version 1

Conformance Lab Used: UNISYS Corporation, NVLAP #0367  
Open System Interconnect Laboratory  
2450 Swedesford Road P.O. Box 203  
Paoli, PA 19301

Supplier: SUN Microsystems, Inc.  
International Centre for Network Computing  
32 Rue du Vieux Chene  
F-38240 Meylan France

Contact: Mr. Tom Hull      Tel +33 76 41 42 18  
   Fax +33 76 41 42 41

GOSIP Product Name, Release and Date:  
SUN NET MHS Gateway, Version 7.1, October 1, 1992

Hardware and Operating System Platform(s):  
SUN 4, Station 2-4/75, SUN O/S 4.0.3, 4.1, 4.1.1

Base/Derived: Base

Connectivity: P1/RTS/Session

Underlying Stack: TP4/CLNP/LLC1/802.3

Protocols and Profiles:  
P1, RTS, Session

Date Registered: October 14, 1992

Type of Registration: Provisional, based on use of ATS-10, ATS-13  
and ATS-14, GOSIP Version 1

Conformance Lab Used: National Computing Centre Ltd.,  
NVLAP # 0357  
Oxford Road  
Manchester M1 7ED UK





## GOSIP REGISTERS, *Continued*

Supplier: NCR  
9900 Old Grove Road  
San Diego Ca, 92131

Contact: Ms. Maureen Murphy      Tel 619-693-5802

GOSIP Product Name, Release and Date:  
NCR OSI STAR PRO FTAM,  
Version 2.00.00, July 1, 1992

Hardware and Operating System Platform(s):  
NCR System 3000, UNIX System V Release 4, Consisting  
of the following models, 3320, 3340, 3345, 3447, 3600  
Version 2.00.XX

Base/Derived: Base

Connectivity: FTAM/ACSE/PRESENTATION/SESSION/CLNP/TP4/8  
02.2(LLC)/802.3(MAC)

Protocols and Profiles:  
IS 8571 FTAM, IS 8650 ACSE, IS 8823 PRESENTATION, IS  
8327 FTAM Subset Embedded Session

Date Registered: August 7, 1992

Type of Registration: Provisional, based on use of ATS-16 (FTAM  
Subset), GOSIP Version 1

Conformance Lab Used: Corporation for Open Systems  
Suite 700  
8260 Willow Oaks Corporate Drive  
Fairfax, Virginia 22031

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Supplier: Digital Equipment Corporation  
550 King Street  
Littleton, MA 01460

Contact: Ms. Lanan Porooshani      Tel (508) 486-7123  
Mr. Keith Clinkscales      Tel (508) 486-5496

GOSIP Product Name, Release and Date:  
DECNET-VAX (TM) EXTENSIONS V5.4A/VAX FTAM 2.0A,  
March 1992

Hardware and Operating System Platform(s):  
Digital VAX with VMS V5.4 and DECnet-VAX V5.4  
Extensions

Base/Derived: Base

Connectivity: FTAM/ACSE/PRESENTATION/SESSION/CLNP/TP4/8  
02.2(LLC)/802.3(MAC)

Protocols and Profiles:  
IS 8571 FTAM, IS 8650 ACSE, IS 8823 PRESENTATION, IS  
8327 FTAM Subset Embedded Session

Date Registered: August 16, 1992

Type of Registration: Provisional, based on use of ATS-16 (FTAM  
Subset), GOSIP Version 1

Conformance Lab Used: Digital Equipment Corporation  
550 King Street  
Littleton, MA 01460

Supplier: UNISYS  
Open System Interconnect Laboratory  
2450 Swedesford Road P.O. Box 203  
Paoli, PA 19301

Contact: Mr. Ed Kelly      Tel (215) 993-7208

GOSIP Product Name, Release and Date:  
OSI-FTAM Release 2R1A, 3 May 1992

Hardware and Operating System Platform(s):  
1. 1100/90 and 2000 series systems OS1100 Release  
43R1  
2. DCP-15 through DCP-55 DCP/OS Version  
5R2A/TELCON,      Version 9R1a

Base/Derived: Base

Connectivity: FTAM/ACSE/PRESENTATION/SESSION/TP4/CLNP/8  
02.2(LLC)/802.3(MAC)

Protocols and Profiles:  
IS 8571 FTAM, T1 Simple File Transfer, IS 8650 ACSE, IS  
8823 PRESENTATION, IS 8327 FTAM Subset Embedded  
Session

Date Registered: September 1, 1992

Type of Registration: Provisional, based on use of ATS-16 (FTAM  
Subset), GOSIP Version 1

Conformance Lab Used: UNISYS  
Open System Interconnect Laboratory  
2450 Swedesford Road P.O. Box 203  
Paoli, PA 19301

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Supplier: Encore Computing Corporation  
6901 West Sunrise Boulevard  
Ft. Lauderdale, FL, 33313-4499

Contact: Augle Gonzales,      Tel (305) 587-2900,  
Fax (305) 797-5807

GOSIP Product Name, Release and Date:  
EnComm FTAM Version 2.0.1, 1 September 1992

Hardware and Operating System Platform(s):  
Encore Infinity 90 Series GPIO, O/S UMAX Version 3.0.7

Base/Derived: Base

Connectivity: FTAM/ACSE/Presentation/Session/CLNP/TP4/802.2  
LLC/802.3 MAC

Protocols and Profiles:  
IS 8571 FTAM, IS 8650 ACSE, IS 8823 Presentation, IS  
8327 FTAM Subset Embedded Session, T1 Simple  
File Transfer

Date Registered: September 23, 1992

Type of Registration: Provisional, based on use of ATS-16 (FTAM  
Subset) GOSIP Version 1

Conformance Lab Used: CDA, Inc.  
Open Systems Development Group  
8301 Greensboro Drive, Suite 610  
McLean, VA 22102-3603



## GOSIP REGISTERS, *Continued*

Supplier: UNISYS Corporation  
2450 Swedesford Road  
Paoli, PA 19301

Contact: Mr. Ed. Kelly Tel (215) 993-7208

GOSIP Product Name, Release and Date:  
OSI-FTAM, Release 2R1A, 3 May 1992

Hardware and Operating System Platform(s):  
1) 1100/90 and 2200 Series Processors, O/S 1100 Exec.,  
Version 43R1  
2) DCP-15 through DCP-55, DCP/OS Version 9R1A

Base/Derived: Base

Connectivity: FTAM/ACSE/Presentation/Session/TP4/CLNP/802.2  
(LLC)/802.3 (MAC)

Protocols and Profiles:  
IS 8571 FTAM, IS 8650 ACSE, IS 8823 Presentation, IS  
8327 FTAM Subset Embedded Session, T1 Simple File Transfer

Date Registered: September 10, 1992

Type of Registration: Provisional, based on use of ATS-16, (FTAM  
Subset) GOSIP version 1

Conformance Lab Used: UNISYS  
Open System Interconnect Laboratory  
2450 Swedesford Road P.O. Box 203  
Paoli, PA 19301

Supplier: SUN Microsystems, Inc.  
International Centre for Network Computing  
32 Rue du Vieux Chene  
F-38240 Meylan France

Contact: Mr. Tom Hull Tel +33 76 41 42 18  
Fax +33 76 41 42 41

GOSIP Product Name, Release and Date:  
SUN NET OSI, Version 7.1, October 1, 1992

Hardware and Operating System Platform(s):  
SUN 4, SUN O/S 4.0.3, 4.1, 4.1.1, 4.1.2

Base/Derived: Derived

Connectivity: FTAM/ACSE/Presentation/SESSION

Underlying Stack: SunNet X.25

Protocols and Profiles:  
FTAM ISO 8571, T1 Profile

Date Registered: November 25, 1992

Type of Registration: Provisional, based on use of ATS-16, GOSIP  
Version 1

Conformance Lab Used: National Computing Centre Ltd.,  
NVLAP # 0357  
Oxford Road  
Manchester M1 7ED UK

Supplier: SUN Microsystems, Inc.  
International Centre for Network Computing  
32 Rue du Vieux Chene  
F-38240 Meylan France

Contact: Mr. Tom Hull Tel +33 76 41 42 18  
Fax +33 76 41 42 41

GOSIP Product Name, Release and Date:  
SUN NET OSI FTAM, Version 7.1, October 1, 1992

Hardware and Operating System Platform(s):  
SUN 4, SUN O/S 4.0.3, 4.1, 4.1.1, 4.1.2

Base/Derived: Base

Connectivity: TP4/CLNP/802.2/802.3

Underlying Stack: TP4/CLNP/802.2/802.3

Protocols and Profiles:  
FTAM ISO 8571, T1 Profile, ACSE ISO 8649/8650,  
Presentation ISO 8822/8823, Session ISO 8326/8327

Date Registered: October 14, 1992

Type of Registration: Provisional, based on use of ATS-16, GOSIP  
Version 1

Conformance Lab Used: National Computing Centre Ltd.,  
NVLAP # 0357  
Oxford Road  
Manchester M1 7ED UK

Supplier: UNISYS Corporation  
2450 Swedesford Road  
Paoli, PA 19301

Contact: Mr. Keith Fretz Tel (703) 556-5665  
Fax (703) 556-5172

GOSIP Product Name, Release and Date:  
OSI-FTAM, Release 2R1A, 3 May 1992

Hardware and Operating System Platform(s):  
1100/90 and all 2000 Series Systems, O/S 1100, Release  
43R1

Base/Derived: Derived

Connectivity: FTAM/ACSE/Presentation/Session/CLNP/TP4/X.25

Underlying Stack: CLNP/TP4/X.25

Protocols and Profiles:  
IS 8571 FTAM, T1 Simple File Transfer, Gosip Version 1,  
IS 8650 ACSE, IS 8823 Presentation, IS 8327 FTAM Subset  
Embedded Session

Date Registered: October 16, 1992

Type of Registration: Provisional, based on use of ATS-16, (FTAM  
Subset) GOSIP Version 1

Conformance Lab Used: UNISYS Corporation, NVLAP #0367  
Open System Interconnect Laboratory  
2450 Swedesford Road P.O. Box 203  
Paoli, PA 19301





## 6. NIST POSIX CONFORMANCE TESTING

### 6.1 FIPS POSIX Standard

The National Institute of Standards and Technology through its Computer Systems Laboratory (NIST/CSL), has established a Conformance Testing policy for the Federal Information Standard for POSIX (FIPS 151-1). This standard is based on the IEEE POSIX Std 1003.1-1988. The testing model is made up of a Certification Authority, Accredited Testing Laboratories, Clients, and the official NIST POSIX Conformance Test Suite (NIST-PCTS). The Certification Authority is under the auspices of the Director of NIST/CSL. Testing labs are accredited by the National Voluntary Laboratory Accreditation Program (NVLAP), also an arm of NIST. The test suite is the NIST-PCTS:151-1 developed at NIST/CSL, and is based on the test assertions specified by the IEEE 1003.3 working group on test methods.

### 6.2 POSIX Test Procedures

There are eight POSIX test labs accredited by NVLAP to do POSIX testing. NVLAP accreditation is renewable after one year, and identifies the specific testing procedures which the lab is authorized to run. The labs provide testing and analysis services to their Clients, and may forward the final test results to NIST/CSL for evaluation and subsequent issuance of a Certificate of Validation by NIST/CSL. The POSIX Conformance testing procedures/requirements are published in the following documents:

- a. "NIST POSIX Testing Policy General Information" Version 4.0, January 22, 1992.
- b. "NIST POSIX Testing Policy Certificate of Validation Requirements, #1 - FIPS 151-1."

This register is available on an electronic mail (email) file server system. For most email systems, send an email message ([mail\\_posix@nist.gov](mailto:mail_posix@nist.gov)). The first line of the message should contain a command to send register. After issuing a send command and a carriage return, end the email message. This register will be returned via email to your email address.

### 6.3 POSIX Test Suite

The NIST-PCTS is available from the National Technical Information Services (NTIS), 5825 Port Royal Road, Springfield, VA 22161, (703) 487-4650, for \$2500 in the U.S. It will be the base PCTS for the life of FIPS 151-1. Occasional fixes to the PCTS will be made by NIST/CSL. These "fixes" are automatically sent to the accredited labs, and will be available from NIST/CSL to all owners of the NIST/PCTS:151-1.

### 6.4 Validation Requirements

An accredited lab may submit a "clean" test report to NIST/CSL for evaluation in anticipation of a Certificate of Validation being issued. "Clean" implies no test assertion failures. However, recognizing that errors could exist in either the FIPS 151-1, the test assertions in IEEE 1003.3, or in the NIST-PCTS, any "failures" must be resolved to acceptable "Resolved Test Codes" as listed in the NIST test method documentation. The Certificate of Validation will confirm that the stated product has been tested using the official NIST-PCTS and that the test results have been validated by NIST/CSL. It will contain information on the product tested, the hardware/software environment used for testing, supplier, testing lab, and the PCTS. Additional information on conditional features supported, configuration details, and resolved test codes will be available from NIST/CSL as referenced by a file number on the Certificate. These certificates will be issued by NIST/CSL through the testing lab. Fees for services by the testing labs will be established by the respective labs.

## 6.5 NIST POSIX TESTING LABORATORIES

The National Voluntary Laboratory Accreditation Program (NVLAP) has accredited the following laboratories to test computer operating system interfaces for conformance with the Federal Information Processing Standard 151-1 (FIPS 151-1) using the NIST POSIX Conformance Test Suite (NIST-PCTS:151-1). Only accredited laboratories may submit test reports to NIST/CSL for validation.

**Applications Software Incorporated**  
1656 Gryc Court  
Mendota Heights, MN 55118

Contact: Mr. Robin Ehrlich  
Phone: 612-456-5364

**BULL SA / Laboratoire POSIX**  
1 rue de Provence / BP208  
38432 ECHIROLLES CEDEX (France)

Contact: Mr. Georges Chardon  
Phone: (33) 76 39 75 93

**DataFocus Incorporated**  
12500 Fair Lakes Circle, Suite 400  
Fairfax, VA 22033-3831

Contact: Mr. James Hegerty  
Phone: 703-631-6770

**Hewlett-Packard Company**  
Hewlett-Packard POSIX Conformance Test Center  
250 Apollo Drive  
Chelmsford, MA 01824

Contact: Ms. Linda DeYoung  
Phone: 508-256-6600

**Mindcraft, Inc.**  
410 Cambridge Avenue  
Palo Alto, CA 94306

Contact: Mr. Bruce Weiner  
Phone: 415-323-9000

**National Computing Centre Ltd**  
Oxford Road  
Manchester, M1 7ED, ENGLAND

Contact: Ms. A. E. J. Pink  
Phone: +44 61 228-6333

**PERENNIAL**  
4699 Old Ironsides Drive, Suite 210  
Santa Clara, CA 95054

Contact: Mr. Barry E. Hedquist  
Phone: 408-748-2900

**UniSoft Corporation**  
6121 Hollis Street  
Emeryville, CA 94608-2092

Contact: Ms. Barb Moran  
Phone: 510-420-6400



## 6.6 NIST POSIX VALIDATED PRODUCTS

The following products have been tested by an Accredited POSIX Testing Laboratory (APTL) using the official National Institute of Standards and Technology POSIX Conformance Test Suite (NIST-PCTS:151-1) for the Federal Information Processing Standards Publication 151-1 (FIPS PUB 151-1). A Certificate of Validation has been issued by NIST/CSL.

Additional information is available from NIST/CSL on conditional features supported, configuration details, and resolved test codes (if appropriate).

### PRODUCT SUPPLIERS

Apple Computer Inc.  
AT&T  
Control Data Corporation  
CONVEX Computer Corporation  
Data General Corporation  
Digital Equipment Corporation  
Encore Computer Corporation  
ESIX/Everex Systems, Inc.  
Harris Corporation  
Hewlett-Packard Company  
  
Interactive Systems Corp.  
Intergraph Corporation  
International Business Machines Inc.  
Modular Computer Systems, Inc.  
NCR Corporation  
Pyramid Technology Corporation  
Santa Cruz Operation Inc.  
Sequent Computer Systems Inc.  
Silicon Graphics, Inc.  
Sun Microsystems Computer Corp., Inc.  
SunSoft, Inc.  
Unisys Corporation  
UNIX System Laboratories

### REFERENCE FILE #

APP2482, APP3355, APP7224, APP7235, APP8616, APP9125, APP9165  
ATT1566  
CDC1101, CDC5574, CDC5750  
CON0202, CON2551, CON6027  
DGC2542, DGC4767, DGC8016, DGC8703, DGC9391, DGC9574  
DEC0638, DEC5794, DEC7386, DEC7917, DEC9418, DEC9672  
ENC6897  
EVR0901, EVR9749  
HAR5240  
HPC0115, HPC0303, HPC0535, HPC1581, HPC1992, HPC2540, HPC2698, HPC2952, HPC3760,  
HPC4246, HPC6391, HPC6637, HPC7051, HPC7716, HPC8098, HPC9185  
INT5154  
INT4675  
IBM0320, IBM0458, IBM1344, IBM2592, IBM3697  
MOD4817  
NCR0554, NCR2047, NCR2805, NCR3331, NCR4518  
PYR1271, PYR3067, PYR3233, PYR4970, PYR9863  
SCO3664, SCO3832, SCO4102, SCO5199, SCO6748, SCO8054, SCO9875  
SEC8754  
SGI5507, SGI9297  
SUN2031, SUN3402, SUN5782, SUN5970, SUN7188, SUN7793  
SUN0617, SUN2241, SUN3129, SUN3403, SUN5382, SUN6635, SUN9763  
UNI0505, UNI1798, UNI3690, UNI5711, UNI9063, UNI9080  
USL2115, USL3610

### SYSTEM SUPPLIERS

AGI Computer, Inc.  
Alpha Systems Lab  
Apple Computer Inc.  
AST Research, Inc.  
AT&T  
Compaq Computer Corporation  
Control Data Corporation  
CONVEX Computer Corporation  
Data General Corporation  
Diamond Flower Incorporated  
Digital Equipment Corporation  
Encore Computer Corporation  
ESIX/Everex Systems, Inc.  
Harris Corporation  
Hewlett-Packard Company  
  
Intergraph Corporation  
International Business Machines Inc.  
Modular Computer Systems, Inc.  
NCR Corporation  
Pyramid Technology Corporation  
RDI  
Sequent Computer Systems Inc.  
Silicon Graphics, Inc.  
Sun Microsystems Computer Corp., Inc.  
  
Unisys Corporation  
Zenith Data Systems

### REFERENCE FILE #

EVR0901  
SUN3403  
APP2482, APP3355, APP7224, APP7235, APP8616, APP9125, APP9165  
SCO4102, USL2115  
ATT1566, USL3610  
INT5154  
CDC1101, CDC5574, CDC5750  
CON0202, CON2551, CON6027  
DGC2542, DGC4767, DGC8016, DGC8703, DGC9391, DGC9574, SCO6748  
SCO3664, SCO8054  
DEC0638, DEC5794, DEC7386, DEC7917, DEC9418, DEC9672  
ENC6897  
EVR9749  
HAR5240  
HPC0115, HPC0303, HPC0535, HPC1581, HPC1992, HPC2540, HPC2698, HPC2952, HPC3760,  
HPC4246, HPC6391, HPC6637, HPC7051, HPC7716, HPC8098, HPC9185  
INT4675  
IBM0320, IBM0458, IBM1344, IBM2592, IBM3697  
MOD4817  
NCR0554, NCR2047, NCR2805, NCR3331, NCR4518  
PYR1271, PYR3067, PYR3233, PYR4970, PYR9863  
SUN3402  
SEC8754  
SGI5507, SGI9297  
SUN0617, SUN2031, SUN2241, SUN3129, SUN5382, SUN5782,  
SUN5970, SUN6635, SUN7188, SUN7793, SUN9763  
UNI0505, UNI1798, UNI3690, UNI5711, UNI9063, UNI9080, SCO9875  
SCO3832, SCO5199

# NIST POSIX VALIDATED PRODUCTS, *Continued*

Reference File #: APP2482

Product Supplier: Apple Computer Inc.  
Product Tested: A/UX Version: 2.0.1 Release: 01/30/1991  
System Supplier: Apple Computer Inc.  
System Hardware: Macintosh Model: IIfx  
C Compiler: A/UX native C compiler (cc) Version: 1.21 Release:  
01/13/1991  
PCTS: 151-1 Version: 1.1 - 04/26/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 05/24/91

Reference File #: APP3355

Product Supplier: Apple Computer Inc.  
Product Tested: A/UX Version: 3.0 Release: March 9, 1992  
System Supplier: Apple Computer Inc.  
System Hardware: Macintosh Model: Quadra 700  
C Compiler: A/UX native C compiler (cc) Version: 1.23 Release:  
February 9, 1992  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 04/16/92

Reference File #: APP7224

Product Supplier: Apple Computer Inc.  
Product Tested: A/UX Version: 3.0 Release: March 9, 1992  
System Supplier: Apple Computer Inc.  
System Hardware: Macintosh Model: Quadra 950  
C Compiler: A/UX native C compiler (cc) Version: 1.23 Release:  
February 9, 1992  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 05/14/92

Reference File #: APP7235

Product Supplier: Apple Computer Inc.  
Product Tested: A/UX Version: 2.0.1 Release: 01/30/1991  
System Supplier: Apple Computer Inc.  
System Hardware: Macintosh Model: IIfx  
C Compiler: A/UX native C compiler (cc) Version: 1.21 Release:  
01/13/1991  
PCTS: 151-1 Version: 1.1 - 04/26/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 05/24/91

Reference File #: APP8616

Product Supplier: Apple Computer Inc.  
Product Tested: A/UX Version: 2.0.1 Release: 01/30/1991  
System Supplier: Apple Computer Inc.  
System Hardware: Macintosh Model: IIfx  
C Compiler: A/UX native C compiler (cc) Version: 1.21 Release:  
01/13/1991  
PCTS: 151-1 Version: 1.1 - 04/26/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 05/24/91

Reference File #: APP9125

Product Supplier: Apple Computer Inc.  
Product Tested: A/UX Version: 3.0 Release: March 9, 1992  
System Supplier: Apple Computer Inc.  
System Hardware: Macintosh Model: Quadra 700  
C Compiler: A/UX Developer's Tools (c89) Version: 1.1 Release:  
April 1, 1992  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 08/11/92

Reference File #: APP9165

Product Supplier: Apple Computer Inc.  
Product Tested: A/UX Version: 3.0 Release: March 9, 1992  
System Supplier: Apple Computer Inc.  
System Hardware: Macintosh Model: Quadra 950  
C Compiler: A/UX Developer's Tools (c89) Version: 1.1 Release:  
April 1, 1992  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 08/11/92

Reference File #: ATT1566

Product Supplier: AT&T  
Product Tested: AT&T UNIX System V Version: Release 4  
Release: 4.0.3  
System Supplier: AT&T  
System Hardware: AT&T 3B2 R3 Series Model: 3B2/600 GR  
C Compiler: AT&T 3B2/RISC C Development System Version: 1.0  
PCTS: 151-1 Version: 1.1 - 09/11/91  
APTL: 0343 DataFocus Incorporated Date Issued: 11/06/91

Reference File #: CDC1101

Product Supplier: Control Data Corporation  
Product Tested: EP/IX Version: 1.4.2 Release: November  
27, 1991  
System Supplier: Control Data Corporation  
System Hardware: Control Data 4000 Model: 4680MP  
C Compiler: EP/IX C Language RISCCompiler Version: C 2.11  
Release: July 1990  
PCTS: 151-1 Version: 1.1 - 09/11/91  
APTL: 0356 Applications Software Incorporated Date Issued:  
01/29/92

Reference File #: CDC5574

Product Supplier: Control Data Corporation  
Product Tested: EP/IX Version: 1.3.1 Release: 03/21/1991  
System Supplier: Control Data Corporation  
System Hardware: Control Data 4000 Model: 4330-250  
C Compiler: EP/IX C Language RISCCompiler Version: 2.11  
Release: July 1990  
PCTS: 151-1 Version: 1.1 - 04/26/91  
APTL: 0356 Applications Software Incorporated Date Issued:  
05/24/91

Reference File #: CDC5750

Product Supplier: Control Data Corporation  
Product Tested: EP/IX Version: 1.3.1 Release: 03/21/1991  
System Supplier: Control Data Corporation  
System Hardware: Control Data 4000 Model: 4680  
C Compiler: EP/IX C Language RISCCompiler Version: 2.11  
Release: 07/16/1990  
PCTS: 151-1 Version: 1.1 - 04/26/91  
APTL: 0356 Applications Software Incorporated Date Issued:  
05/24/91

Reference File #: CON0202

Product Supplier: CONVEX Computer Corporation  
Product Tested: ConvexOS Version: 10.1 Release: C200  
Series  
System Supplier: CONVEX Computer Corporation  
System Hardware: C2 Model: C220  
C Compiler: CONVEX C Version: 4.3.2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0343 DataFocus Incorporated Date Issued: 05/11/92



# NIST POSIX VALIDATED PRODUCTS, *Continued*

## Reference File #: CON2551

Product Supplier: CONVEX Computer Corporation  
Product Tested: ConvexOS Version: 10.1 Release: C3800 Series  
System Supplier: CONVEX Computer Corporation  
System Hardware: C38 Model: C3810  
C Compiler: CONVEX C Version: 4.3.2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0343 DataFocus Incorporated Date Issued: 05/11/92

## Reference File #: CON6027

Product Supplier: CONVEX Computer Corporation  
Product Tested: ConvexOS Version: 10.1 Release: C3400 Series  
System Supplier: CONVEX Computer Corporation  
System Hardware: C34 Model: C3440  
C Compiler: CONVEX C Version: 4.3.2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0343 DataFocus Incorporated Date Issued: 05/11/92

## Reference File #: DEC0638

Product Supplier: Digital Equipment Corporation  
Product Tested: VMS Version: 5 Release: 5 (with VMS POSIX, version 1.0)  
System Supplier: Digital Equipment Corporation  
System Hardware: VAXstation Model: 3100 M76  
C Compiler: VAX C Version: 3 Release: 2  
PCTS: 151-1 Version: 1.1 - 09/11/91  
APTL: 0343 DataFocus Incorporated Date Issued: 01/29/92

## Reference File #: DEC5794

Product Supplier: Digital Equipment Corporation  
Product Tested: ULTRIX Version: 4.2 Release: May 31, 1991  
System Supplier: Digital Equipment Corporation  
System Hardware: VAXstation II Model: GPX  
C Compiler: pcc Version: 4.2  
PCTS: 151-1 Version: 1.1 - 04/26/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 06/17/91

## Reference File #: DEC7386

Product Supplier: Digital Equipment Corporation  
Product Tested: The ULTRIX Operating System Version: 4.3 Release: August 1992  
System Supplier: Digital Equipment Corporation  
System Hardware: DECstation Model: 5000/200  
C Compiler: Mips C Compiler Version: 2.10  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 09/18/92

## Reference File #: DEC7917

Product Supplier: Digital Equipment Corporation  
Product Tested: the ULTRIX Operating System Version: 4.2A Release: November 18, 1991  
System Supplier: Digital Equipment Corporation  
System Hardware: DECstation Model: 3100  
C Compiler: MIPS C Compiler Version: 2.10  
PCTS: 151-1 Version: 1.1 - 09/11/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/06/91

## Reference File #: DEC9418

Product Supplier: Digital Equipment Corporation  
Product Tested: ULTRIX Version: 4.2 Release: May 31, 1991  
System Supplier: Digital Equipment Corporation  
System Hardware: DECstation Model: 3100  
C Compiler: MIPS C Compiler Version: 2.10  
PCTS: 151-1 Version: 1.1 - 04/26/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 06/17/91

## Reference File #: DEC9672

Product Supplier: Digital Equipment Corporation  
Product Tested: The ULTRIX Operating System Version: 4.2A Release: December 1991  
System Supplier: Digital Equipment Corporation  
System Hardware: DECstation Model: 5000/200  
C Compiler: MIPS C Compiler Version: 2.10  
PCTS: 151-1 Version: 1.1 - 09/11/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 02/12/92

## Reference File #: DGC2542

Product Supplier: Data General Corporation  
Product Tested: DG/UX Version: 5.4  
System Supplier: Data General Corporation  
System Hardware: AViiON 5000 Model: AV/5240  
C Compiler: GNU C Compiler for AViiON Systems Version: 1.37.23  
PCTS: 151-1 Version: 1.1 - 07/01/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 09/10/91

## Reference File #: DGC4767

Product Supplier: Data General Corporation  
Product Tested: DG/UX Version: 5.4.2 Release: August 1992  
System Supplier: Data General Corporation  
System Hardware: AViiON AV/530/4600 Model: AV/532  
C Compiler: GNU C Compiler for AViiON Systems Version: DG-2.2.3 Release: August 1992  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 09/09/92

## Reference File #: DGC8016

Product Supplier: Data General Corporation  
Product Tested: DG/UX Version: 5.4  
System Supplier: Data General Corporation  
System Hardware: AViiON 400/4000 Model: AV/4100  
C Compiler: GNU C Compiler for AViiON Systems Version: 1.37.23  
PCTS: 151-1 Version: 1.1 - 07/01/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 09/10/91

## Reference File #: DGC8703

Product Supplier: Data General Corporation  
Product Tested: DG/UX Version: 5.4  
System Supplier: Data General Corporation  
System Hardware: AViiON 400/4000 Model: AV/412  
C Compiler: GNU C Compiler for AViiON Systems Version: 1.37.23  
PCTS: 151-1 Version: 1.1 - 07/01/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 09/10/91

## Reference File #: DGC9391

Product Supplier: Data General Corporation  
Product Tested: DG/UX Version: 4.32  
System Supplier: Data General Corporation  
System Hardware: AViiON AV/400/4000 Model: AV/410  
C Compiler: GNU C Compiler for AViiON Sys Version: 1.37.23  
PCTS: 151-1 Version: 1.1 - 04/26/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 05/24/91

## Reference File #: DGC9574

Product Supplier: Data General Corporation  
Product Tested: DG/UX Version: 5.4.2 Release: August 1992  
System Supplier: Data General Corporation  
System Hardware: AViiON AV/8000 Model: AV/6240  
C Compiler: GNU C Compiler for AViiON Systems Version: DG-2.2.3 Release: August 1992  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 11/03/92



# NIST POSIX VALIDATED PRODUCTS, *Continued*

Reference File #: ENC6897

Product Supplier: Encore Computer Corporation  
Product Tested: UMAX V Release: 3.0.6  
System Supplier: Encore Computer Corporation  
System Hardware: 91 Series Model: 91-02427  
C Compiler: Green Hills Software, Inc. C Release: 1.1  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0345 UniSoft Corporation Date Issued: 3/12/92

Product Supplier: Hewlett-Packard Company

Product Tested: HP-UX Version: 8.02 Release: 10/06/91  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 800 Model: 827S  
C Compiler: HP C Compiler Version: A 08.71 Release: 10/06/91  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/08/92

Reference File #: EVR0901

Product Supplier: ESIX/Everex Systems, Inc.  
Product Tested: ESIX System V Release 4 Version: 4  
Release: 4.0  
System Supplier: AGI Computer, Inc.  
System Hardware: AGI Model: 486/33  
C Compiler: ESIX ANSI C Compiler Version: 5.0  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0343 DataFocus Incorporated Date Issued: 05/28/92

Reference File #: HPC1992

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8.08 Release: 11/23/92  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 800 Model: 827S  
C Compiler: HP C Compiler Version: A 08.71 Release: 10/06/91  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/08/92

Reference File #: EVR9749

Product Supplier: ESIX/Everex Systems, Inc.  
Product Tested: ESIX System V Release 4 Version: 4  
Release: 4.0  
System Supplier: ESIX/Everex Systems, Inc.  
System Hardware: Everex Model: 3000S 386/33  
C Compiler: ESIX ANSI C Compiler Version: 5.0  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0343 DataFocus Incorporated Date Issued: 05/28/92

Reference File #: HPC2540

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8.07 Release: December  
1991  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 700 Model: 720  
C Compiler: HP C Compiler Version: A 08.71 Release: December  
1991  
PCTS: 151-1 Version: 1.1 - 09/11/91  
APTL: 0346 Hewlett-Packard POSIX Conformance Test Center  
Date Issued: 01/29/92

Reference File #: HAR5240

Product Supplier: Harris Corporation  
Product Tested: CX/UX Release: 5.3  
System Supplier: Harris Corporation, Computer Systems Division  
System Hardware: Night Hawk Model: HN4802  
C Compiler: Harris C Compiler Release: 5.3  
PCTS: 151-1 Version: 1.1 - 09/11/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/16/91

Reference File #: HPC2698

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8.02 Release: 10/06/91  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 800 Model: 817S  
C Compiler: HP C Compiler Version: A 08.71 Release: 10/06/91  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/08/92

Reference File #: HPC0115

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8.02 Release: 10/06/91  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 800 Model: 867S  
C Compiler: HP C Compiler Version: A 08.71 Release: 10/06/91  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/08/92

Reference File #: HPC2952

Product Supplier: Hewlett-Packard Company  
Product Tested: Domain/OS Version: 10.4 Release: April  
1992  
System Supplier: Hewlett-Packard Company  
System Hardware: Domain Series 400 Model: 433s  
C Compiler: Domain/C Version: 6.9.M/MPX Release: May 1992  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0346 Hewlett-Packard POSIX Conformance Test Center  
Date Issued: 09/2/92

Reference File #: HPC0303

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8.02 Release: 10/06/91  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 800 Model: 867s  
C Compiler: HP C Compiler Version: A 08.17 Release: 10/06/91  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0346 Hewlett-Packard POSIX Conformance Test Center  
Date Issued: 09/09/92

Reference File #: HPC3760

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8.02 Release: 10/06/91  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 800 Model: 847S  
C Compiler: HP C Compiler Version: A 08.71 Release: 10/06/91  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/08/92

Reference File #: HPC0535

Product Supplier: Hewlett-Packard Company  
Product Tested: Domain/OS Version: 10.4 Release: April  
1992  
System Supplier: Hewlett-Packard Company  
System Hardware: Domain Series 4000 Model: DN4500  
C Compiler: Domain/C Version: 6.9.M/MPX Release: May 1992  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0346 Hewlett-Packard POSIX Conformance Test Center  
Date Issued: 09/2/92

Reference File #: HPC1581

# NIST POSIX VALIDATED PRODUCTS, *Continued*

**Reference File #:** HPC4246

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8.08 Release: 11/23/92  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 800 Model: 807S  
C Compiler: HP C Compiler Version: A 08.71 Release: 10/06/91  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/08/92

**Reference File #:** HPC6391

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8.00 with PHCO\_0800 (Patch)  
Release: January 1991, January 1992 (Patch)  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 400 Model: 400S  
C Compiler: HP C Compiler Version: B 08.00 Release: December 1991  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0346 Hewlett-Packard POSIX Conformance Test Center  
Date Issued: 04/17/92

**Reference File #:** HPC6637

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8.08 Release: 11/23/92  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 800 Model: 817S  
C Compiler: HP C Compiler Version: A 08.71 Release: 10/06/91  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/08/92

**Reference File #:** HPC7051

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8.08 Release: 11/23/92  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 800 Model: 867S  
C Compiler: HP C Compiler Version: A 08.71 Release: 10/06/91  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/08/92

**Reference File #:** HPC7716

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8.08 Release: 11/23/92  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 800 Model: 847S  
C Compiler: HP C Compiler Version: A 08.71 Release: 10/06/91  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/08/92

**Reference File #:** HPC8098

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8.02 Release: 10/06/91  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 800 Model: 807S  
C Compiler: HP C Compiler Version: A 08.71 Release: 10/06/91  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/08/92

**Reference File #:** HPC9185

Product Supplier: Hewlett-Packard Company  
Product Tested: HP-UX Version: 8 Release: 5/6/91  
System Supplier: Hewlett-Packard Company  
System Hardware: HP9000 Series 800 Model: 835  
C Compiler: HP C Compiler Version: A 08.17 Release: 5/6/91  
PCTS: 151-1 Version: 1.1 - 09/11/91  
APTL: 0346 Hewlett-Packard POSIX Conformance Test Center  
Date Issued: 12/18/91

**Reference File #:** IBM0320

Product Supplier: International Business Machines Inc.  
Product Tested: AIX Version 3 for RISC System/6000  
Version: 3 Release: 2  
System Supplier: International Business Machines Inc.  
System Hardware: RISC System/6000 Model: 220  
C Compiler: xlc Version: 1 Release: 2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 02/25/92

**Reference File #:** IBM0458

Product Supplier: International Business Machines Inc.  
Product Tested: AIX Version 3 for RISC System/6000  
Version: 3 Release: 2  
System Supplier: International Business Machines Inc.  
System Hardware: RISC System/6000 Model: 530H  
C Compiler: xlc Version: 1 Release: 2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 02/25/92

**Reference File #:** IBM1344

Product Supplier: International Business Machines Inc.  
Product Tested: AIX Version: 3 Release: 1  
System Supplier: International Business Machines Inc.  
System Hardware: RISC System/6000 Model: 320  
C Compiler: xlc Version: 3 Release: 1  
PCTS: 151-1 Version: 1.1 - 04/26/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 05/24/91

**Reference File #:** IBM2592

Product Supplier: International Business Machines Inc.  
Product Tested: AIX Version: 3 Release: 1  
System Supplier: International Business Machines Inc.  
System Hardware: RISC System/6000 Model: 530  
C Compiler: xlc Version: 3 Release: 1  
PCTS: 151-1 Version: 1.1 - 04/26/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 05/24/91

**Reference File #:** IBM3697

Product Supplier: International Business Machines Inc.  
Product Tested: AIX Version 3 for RISC System/6000  
Version: 3 Release: 2  
System Supplier: International Business Machines Inc.  
System Hardware: RISC System/6000 Model: 320  
C Compiler: xlc Version: 1 Release: 2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 02/25/92

**Reference File #:** INT4675

Product Supplier: Intergraph Corporation  
Product Tested: CLIX Version: 06.02.01 Release: 3.1  
System Supplier: Intergraph Corporation  
System Hardware: Intergraph 6400 Series Workstation Model: 6450  
C Compiler: CLIPPER Advanced Optimizing C Compiler Version: 06.00.01.43 Release: 28-JAN-1992  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0343 DataFocus Incorporated Date Issued: 05/28/92



# NIST POSIX VALIDATED PRODUCTS, *Continued*

Reference File #: INT5154

Product Supplier: Interactive Systems Corp.  
Product Tested: Interactive UNIX Operating System Version: 3.0 Release: 3.2  
System Supplier: Compaq Computer Corporation  
System Hardware: Compaq Model: System Pro  
C Compiler: Interactive UNIX Software Development System Version: 3.0  
PCTS: 151-1 Version: 1.1 - 09/11/91  
APTL: 0345 UniSoft Corporation Date Issued: 10/16/91

APTL: 0343 DataFocus, Inc. Date Issued: 06/26/92

Reference File #: PYR1271

Product Supplier: Pyramid Technology Corporation  
Product Tested: OSx Version: 5.1a-92a023 Release: 0422a  
System Supplier: Pyramid Technology Corporation  
System Hardware: MIServer Model: MIS-2T  
C Compiler: att\_cc Version: 5.1  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0343 DataFocus Incorporated Date Issued: 05/28/92

Reference File #: MOD4817

Product Supplier: Modular Computer Systems, Inc.  
Product Tested: REAL/IX Version: V.3 Release: D.0  
System Supplier: Modular Computer Systems, Inc.  
System Hardware: REAL/STAR Model: 1000  
C Compiler: GNU C Compiler for REAL/IX Systems Version: 1.37  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 05/05/92

Reference File #: PYR3067

Product Supplier: Pyramid Technology Corporation  
Product Tested: DataCenter/OSx Version: dcosx Release: 1.1-92c027  
System Supplier: Pyramid Technology Corporation  
System Hardware: MIServer Model: 2S  
C Compiler: DataCenter/OSx C Compiler Release: 1.1-92c027  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0343 DataFocus Incorporated Date Issued: 09/09/92

Reference File #: NCR0554

Product Supplier: NCR Corporation  
Product Tested: NCR UNIX System V Version: Release 4 Release: 4.0.4  
System Supplier: NCR Corporation  
System Hardware: NCR 3B2 R3 Series Model: 3B2/1000 R3 (Military ID: 3B2/600 GR)  
C Compiler: 3B2/RISC C Development System Release: 1.1  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0343 DataFocus, Inc. Date Issued: 12/09/92

Reference File #: PYR3233

Product Supplier: Pyramid Technology Corporation  
Product Tested: DataCenter/OSx Version: dcosx Release: 1.1-92c027  
System Supplier: Pyramid Technology Corporation  
System Hardware: MIServer Model: 12S  
C Compiler: DataCenter/OSx C Compiler Release: 1.1-92c027  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0343 DataFocus Incorporated Date Issued: 10/05/92

Reference File #: NCR2047

Product Supplier: NCR Corporation  
Product Tested: NCR System V Release 4 MP-RAS, Rel 2 Version: SVR4 Release: 2  
System Supplier: NCR Corporation  
System Hardware: System 3000 Model: 3447  
C Compiler: NCR C Development Toolkit Release: 2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0343 DataFocus, Inc. Date Issued: 06/26/92

Reference File #: PYR4970

Product Supplier: Pyramid Technology Corporation  
Product Tested: DataCenter/OSx Version: dcosx Release: 1.1-92c027  
System Supplier: Pyramid Technology Corporation  
System Hardware: MIServer Model: 4S  
C Compiler: DataCenter/OSx C Compiler Release: 1.1-92c027  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0343 DataFocus Incorporated Date Issued: 09/09/92

Reference File #: NCR2805

Product Supplier: NCR Corporation  
Product Tested: NCR System V Release 4 MP-RAS, Rel 2 Version: SVR4 Release: 2  
System Supplier: NCR Corporation  
System Hardware: System 3000 Model: 3450  
C Compiler: NCR C Development Toolkit Release: 2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0343 DataFocus, Inc. Date Issued: 06/26/92

Reference File #: PYR9863

Product Supplier: Pyramid Technology Corporation  
Product Tested: OSx Version: 5.1a Release: 0318t  
System Supplier: Pyramid Technology Corporation  
System Hardware: MIServer Model: MIS-4T  
C Compiler: att\_cc Version: 5.1  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0343 DataFocus Incorporated Date Issued: 05/28/92

Reference File #: NCR3331

Product Supplier: NCR Corporation  
Product Tested: NCR System V Release 4 MP-RAS, Rel 2 Version: SVR4 Release: 2  
System Supplier: NCR Corporation  
System Hardware: System 3000 Model: 3345  
C Compiler: NCR C Development Toolkit Release: 2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0343 DataFocus, Inc. Date Issued: 06/26/92

Reference File #: SCO3664

Product Supplier: Santa Cruz Operation Inc.  
Product Tested: SCO Open Desktop Version: 2.0  
System Supplier: Diamond Flower Incorporated  
System Hardware: DFI Model: 486SX/25  
C Compiler: Microsoft C Version: 5.1  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0343 DataFocus Incorporated Date Issued: 11/02/92

Reference File #: NCR4518

Product Supplier: NCR Corporation  
Product Tested: NCR System V Release 4 MP-RAS, Rel 2 Version: SVR4 Release: 2  
System Supplier: NCR Corporation  
System Hardware: System 3000 Model: 3550  
C Compiler: NCR C Development Toolkit Release: 2  
PCTS: 151-1 Version: 1.1 - 01/22/92

Reference File #: SCO3832

Product Supplier: Santa Cruz Operation Inc.  
Product Tested: SCO UNIX System V/386 Version: Release 3.2  
System Supplier: Zenith Data Systems  
System Hardware: Z Station Model: 433DEH  
C Compiler: Microsoft C Version: 5.1  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0343 DataFocus Incorporated Date Issued: 09/28/92



# NIST POSIX VALIDATED PRODUCTS, *Continued*

**Reference File #:** SCO4102

Product Supplier: Santa Cruz Operation, Inc.  
Product Tested: SCO UNIX System V/386 Version: Release 3.2  
System Supplier: AST Research, Inc.  
System Hardware: Premium Series Model: 486/33  
C Compiler: Microsoft C Version: 5.1  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0343 DataFocus, Inc. Date Issued: 07/01/92

**Reference File #:** SCO5199

Product Supplier: Santa Cruz Operation Inc.  
Product Tested: SCO UNIX System V/386 Version: 3.2  
System Supplier: Zenith Data Systems  
System Hardware: Zenith Data Systems Supersport Laptop Model: Supersport SX  
C Compiler: Microsoft C Version: 5.1  
PCTS: 151-1 Version: 1.1 - 07/01/91  
APTL: 0343 DataFocus Incorporated Date Issued: 09/17/91

**Reference File #:** SCO6748

Product Supplier: Santa Cruz Operation Inc.  
Product Tested: SCO UNIX System V/386 Version: 3.2 Release: 2  
System Supplier: Data General Corporation  
System Hardware: Walkabout/SX Model: G2763  
C Compiler: Microsoft C Optimizing Compiler Version: 5.1  
PCTS: 151-1 Version: 1.1 - 07/01/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 09/10/91

**Reference File #:** SCO8054

Product Supplier: Santa Cruz Operation Inc.  
Product Tested: SCO Open Desktop Version: 2.0  
System Supplier: Diamond Flower Incorporated  
System Hardware: DFI Model: 486/33  
C Compiler: Microsoft C Version: 5.1  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0343 DataFocus Incorporated Date Issued: 11/02/92

**Reference File #:** SCO9875

Product Supplier: Santa Cruz Operation Inc.  
Product Tested: SCO UNIX System V/386 Version: 3.2  
System Supplier: UNISYS Corporation  
System Hardware: PW<sup>2</sup> Advantage 3000 Series Model: 3256  
C Compiler: Microsoft C Version: 5.1  
PCTS: 151-1 Version: 1.1 - 09/11/91  
APTL: 0343 DataFocus Incorporated Date Issued: 11/01/91

**Reference File #:** SEC8754

Product Supplier: Sequent Computer Systems Inc.  
Product Tested: DYNIX/ptx Operating System Version: 1.3.0  
System Supplier: Sequent Computer Systems Inc.  
System Hardware: Symmetry Series II Model: S27  
C Compiler: C Tools Version: 1.12p  
PCTS: 151-1 Version: 1.1 - 09/11/91  
APTL: 0345 UniSoft Corporation Date Issued: 12/09/91

**Reference File #:** SGI5507

Product Supplier: Silicon Graphics, Inc.  
Product Tested: IRIX Version: 4.0.5  
System Supplier: Silicon Graphics, Inc.  
System Hardware: IRIS Model: Crimson  
C Compiler: IRIS Development Option Version: 2.20  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 06/15/92

**Reference File #:** SGI9297

Product Supplier: Silicon Graphics, Inc.  
Product Tested: IRIX Version: 4.0.5  
System Supplier: Silicon Graphics, Inc.  
System Hardware: IRIS Model: Indigo  
C Compiler: IRIS Development Option Version: 2.20  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 06/15/92

**Reference File #:** SUN0617

Product Supplier: SunSoft, Inc.  
Product Tested: Solaris Version: 1.0.1 Release: PC  
System Supplier: Sun Microsystems Computer Corporation, Inc.  
System Hardware: SPARCstation IPC Model: GX  
C Compiler: Solaris C Compiler Version: 1.0.1 Release: December 4, 1991  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0343 DataFocus Incorporated Date Issued: 08/27/92

**Reference File #:** SUN2031

Product Supplier: Sun Microsystems Computer Corporation, Inc.  
Product Tested: Solaris Version: 2.1 Release: August 4, 1992  
System Supplier: Sun Microsystems Computer Corporation, Inc.  
System Hardware: SunWorkstation 4/30 Model: 4/30  
C Compiler: Sun C Compiler Version: 2.0 Release: June 30, 1992  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 10/08/92

**Reference File #:** SUN2241

Product Supplier: SunSoft, Inc.  
Product Tested: Solaris Version: 2.0 Release: June 1992  
System Supplier: Sun Microsystems Computer Corporation, Inc.  
System Hardware: SPARCstation 2 Model: 4/75  
C Compiler: Sun C Compiler Version: 2.0 Release: 20 May 1992  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 07/02/92

**Reference File #:** SUN3129

Product Supplier: SunSoft, Inc.  
Product Tested: Interactive Unix Operating System V/386 Version: 3.0.1 Release: 3.2  
System Supplier: Compaq Computer Corporation  
System Hardware: Desk Pro Model: 386/20E  
C Compiler: Interactive Unix Software Development System Version: 3.0 Release: December 4, 1991  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0345 UniSoft Corporation Date Issued: 9/18/92

**Reference File #:** SUN3402

Product Supplier: Sun Microsystems Computer Corporation, Inc.  
Product Tested: Solaris Version: 2.1 Release: August 4, 1992  
System Supplier: RDI  
System Hardware: BriteLite Model: IPX Color Laptop Workstation  
C Compiler: Sun C Compiler Version: 2.0 Release: June 30, 1992  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 10/16/92.

## NIST POSIX VALIDATED PRODUCTS, *Continued*

Reference File #: SUN3403

Product Supplier: SunSoft, Inc.  
Product Tested: Interactive Unix Operating System V/386  
Version: 3.0.1 Release: 3.2  
System Supplier: Alpha Systems Lab  
System Hardware: ASL486/33 Model: ASL433  
C Compiler: Interactive Unix Software Development System  
Version: 3.0  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0345 UniSoft Corporation Date Issued: 10/05/92

Reference File #: SUN5382

Product Supplier: SunSoft, Inc.  
Product Tested: Solaris Version: 1.0.1 Release: PC  
System Supplier: Sun Microsystems Computer Corporation, Inc.  
System Hardware: SPARCstation IPX Model: GX  
C Compiler: Solaris C Compiler Version: 1.0.1 Release:  
December 4, 1991  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0343 DataFocus Incorporated Date Issued: 09/2/92

Reference File #: SUN5782

Product Supplier: Sun Microsystems Computer Corporation, Inc.  
Product Tested: Solaris Version: 2.1 Release: August 4,  
1992  
System Supplier: Sun Microsystems Computer Corporation, Inc.  
System Hardware: SPARCserver 10 Model: 30  
C Compiler: Sun C Compiler Version: 2.0 Release: June 30, 1992  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 10/08/92

Reference File #: SUN5970

Product Supplier: Sun Microsystems Computer Corporation, Inc.  
Product Tested: Solaris Version: 2.1 Release: August 4,  
1992  
System Supplier: Sun Microsystems Computer Corporation, Inc.  
System Hardware: SPARCserver 10 Model: 41  
C Compiler: Sun C Compiler Version: 2.0 Release: June 30, 1992  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 10/08/92

Reference File #: SUN6635

Product Supplier: SunSoft, Inc.  
Product Tested: Solaris Version: 1.0.1 Release: PC  
System Supplier: Sun Microsystems Computer Corporation, Inc.  
System Hardware: SPARCserver 690 Model: 140  
C Compiler: Solaris C Compiler Version: 1.0.1 Release:  
December 4, 1991  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 02/19/92

Reference File #: SUN7188

Product Supplier: Sun Microsystems Computer Corporation, Inc.  
Product Tested: Solaris Version: 1.1 Release: August 24,  
1992  
System Supplier: Sun Microsystems Computer Corporation, Inc.  
System Hardware: SPARCstation 10 Model: GX-30  
C Compiler: Solaris C Compiler Version: 1.1 Release: August 24,  
1992  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 08/27/92

Reference File #: SUN7793

Product Supplier: Sun Microsystems Computer Corporation, Inc.  
Product Tested: Solaris Version: 2.1 Release: August 4,  
1992  
System Supplier: Sun Microsystems Computer Corporation, Inc.  
System Hardware: SPARCserver 10 Model: 42  
C Compiler: Sun C Compiler Version: 2.0 Release: June 30, 1992  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 10/08/92

Reference File #: SUN9763

Product Supplier: SunSoft, Inc.  
Product Tested: Solaris Version: 1.0.1 Release: PC  
System Supplier: Sun Microsystems Computer Corporation, Inc.  
System Hardware: SPARCstation 2 Model: GX  
C Compiler: Solaris C Compiler Version: 1.0.1 Release:  
December 4, 1991  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 02/19/92

Reference File #: UNI0505

Product Supplier: Unisys Corporation  
Product Tested: UNIX System V Release 4 Version: Revision  
1.0.2  
System Supplier: Unisys Corporation  
System Hardware: Unisys U 6000 Series Model: U 6000/15  
C Compiler: UNIX System V Release 4 Standard C Development  
Environment Version: 1.0.2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 04/30/92

Reference File #: UNI1798

Product Supplier: Unisys Corporation  
Product Tested: UNIX System V Release 4 Version: Revision  
1.0.2  
System Supplier: Unisys Corporation  
System Hardware: Unisys U 6000 Series Model: U 6000/65  
C Compiler: UNIX System V Release 4 Standard C Development  
Environment Version: 1.0.2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 05/12/92

Reference File #: UNI3690

Product Supplier: Unisys Corporation  
Product Tested: UNIX System V Release 4 Version: 1.1  
Release: October 30, 1992  
System Supplier: Unisys Corporation  
System Hardware: Unisys U 6000 Series Model: U6000/65  
C Compiler: UNIX System V Release 4 Standard C Development  
Environment Version: 1.1  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 09/28/92

Reference File #: UNI5711

Product Supplier: Unisys Corporation  
Product Tested: UNIX System V Release 4 Version: Revision  
1.0.2  
System Supplier: Unisys Corporation  
System Hardware: Unisys U 6000 Series Model: U 6000/60  
C Compiler: UNIX System V Release 4 Standard C Development  
Environment Version: 1.0.2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 05/12/92



## NIST POSIX VALIDATED PRODUCTS, *Continued*

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Reference File #: UNI9063

Product Supplier: Unisys Corporation  
Product Tested: UNIX System V Release 4 Version: Revision 1.0.2  
System Supplier: Unisys Corporation  
System Hardware: Unisys U 6000 Series Model: U 6000/35  
C Compiler: UNIX System V Release 4 Standard C Development Environment Version: 1.0.2  
PCTS: 151-1 Version: 1.1 - 01/22/92  
APTL: 0342 Mindcraft, Inc. Date Issued: 05/12/92

Reference File #: UNI9080

Product Supplier: Unisys Corporation  
Product Tested: CTOS II Version: 3 Release: 3  
System Supplier: Unisys Corporation  
System Hardware: Unisys B-Series Model: NGEN  
C Compiler: Microsoft C Version: 6.0  
PCTS: 151-1 Version: 1.1 - 07/01/91  
APTL: 0343 DataFocus Incorporated Date Issued: 09/17/91

Reference File #: USL2115

Product Supplier: UNIX System Laboratories, Inc.  
Product Tested: UNIX System V Release 4 Version: 4 Release: 4.0  
System Supplier: AST Research, Inc.  
System Hardware: Premium Series Model: 486/33  
C Compiler: Standard C Development Environment Version: 5.0  
PCTS: 151-1 Version: 1.1 - 05/21/92  
APTL: 0343 DataFocus, Inc. Date Issued: 07/01/92

Reference File #: USL3610

Product Supplier: UNIX System Laboratories, Inc.  
Product Tested: UNIX<sup>®</sup> System V Release 4 for the Intel386<sup>™</sup> Architecture Version: 4 Release: July 1991  
System Supplier: AT&T  
System Hardware: AT&T 6386/25 WGS Model: CPU 311 PC3B  
C Compiler: Standard C Development Environment Version: Issue 5  
PCTS: 151-1 Version: 1.1 - 09/11/91  
APTL: 0342 Mindcraft, Inc. Date Issued: 12/12/91

For further information on the NIST/CSL POSIX validation program contact Martha M. Gray, Computer Systems Laboratory, B266 Technology Bldg., NIST, Gaithersburg, MD 20899. Telephone: 301-975-3276, fax: 301-590-0932, e-mail: gray@swe.ncsl.nist.gov.

This register is also available on an electronic mail (email) file server system. To use the service, you must be able to send and receive email via the Internet. For most email systems, send an email message (*mail posix@nist.gov*). The first line of the message should contain a command to *send register*. After you issue the send command and a carriage return, the next line should simply have a period and a carriage return, signalling the end of your email message. This register will be returned via email to your email address.





## 7. COMPUTER SECURITY TESTING

### 7.1 Cryptographic Standards

The lists in Sections 7.6, 7.7 and 7.8 provide technical information about products that have been validated as conforming to the following computer security FIPS:

- a. Data Encryption Standard (DES), FIPS PUB 46-1,
- b. Message Authentication Code (MAC), FIPS PUB 113, and
- c. Key Management Using ANSI X9.17, FIPS PUB 171.

### 7.2 Data Encryption Standard Validation Tests

FIPS PUB 46-1 specifies a cryptographic algorithm that converts plaintext to ciphertext using a 56-bit key. Testing procedures for the validation of devices as conforming to FIPS PUB 46-1 are described in the NBS Special Publication 500-20, Validating the Correctness of Hardware Implementations of the NBS Data Encryption Standard. The validation of a device is performed by running the Monte Carlo test described in the publication. The Monte-Carlo test consists of eight million encryptions and four million decryptions, with two encryptions and one decryption making up a single test. The test is designed to use the Electronic Codebook Mode (ECB) of DES. Although the actual test described in NBS Special Publication 500-20 is the same test used to validate devices today, the procedures for administering the test have changed. Currently, the test is performed by the vendor using initial values supplied by NIST. The vendor uses the supplied information to run the Monte-Carlo test and sends the results to NIST.

### 7.3 Message Authentication Code (MAC) Validation System

FIPS PUB 113 specifies a Data Encryption Algorithm which may be used to detect unauthorized intentional and accidental modifications to data. This process is known as data authentication. The algorithm is based on DES and is used to authenticate an entire binary message. FIPS PUB 113 is compatible with ANSI X9.9 which provides methods for authenticating an entire binary message as well as all or parts of a message which are in a coded character format. Procedures for the validation of products which implement FIPS PUB 113 and ANSI X9.9 are described in NBS Special Publication 500-156, Message Authentication Code (MAC) Validation System: Requirements and Procedures.

### 7.4 Key Management Validation System (KMVS)

FIPS PUB 171 adopts ANSI X9.17 for Federal Government use. ANSI X9.17, Financial Institution Key Management (Wholesale), provides procedures and protocols for the secure generation, distribution, storage, entry, use and destruction of symmetric cryptographic keying material (e.g., DES). It provides key management solutions for a variety of operational environments, and as such, ANSI X9.17 contains a number of options. FIPS PUB 171 specifies a particular set of options whenever keying material is distributed using the protocols of ANSI X9.17. Procedures for the validation of products which conform to a subset of the options selected in FIPS PUB 171 are described in the Key Management Validation System: Point-to-Point Validation System document which is available from the Manager of the Security Group (see Section 8.5).

## **7.5 General**

### **7.5.1 Request for Validation.**

To validate a product, a vendor should send a formal request for validation which includes a clear indication of the product to be tested. The request must also include the name, address, and telephone number of the person within the vendor's organization who will be responsible for the validation testing. The request should be sent to:

Manager, Security Technology Group  
Computer Security Division  
National Computer Systems Laboratory  
Building 225, Room A216  
National Institute of Standards and Technology  
Gaithersburg, MD 20899  
Telephone (301) 975-2920

### **7.5.2 Information about Validated Products.**

It should be noted that the purpose of the following lists (see Sections 7.6, 7.7 and 7.8) is to provide technical information about products that have been validated as conforming to the FIPS Standards listed in Section 7.1. NIST has made every attempt to provide complete and accurate information about the products described in the following lists. However, due to the possibility of changes made within individual companies, NIST cannot guarantee that this document reflects the current status of each product.

### **7.5.3 Validation Documentation.**

Copies of the above FIPS and Special Publications are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. The KMVS validation requirements document discussed in Section 7.4 can be obtained by contacting the Manager of the Security Technology Group at the above address.



## 7.6 DES Validated Devices

**NOTE:** The purpose of this document is to provide technical information about devices that have been validated as conforming to Federal Information Processing Standard Publication 46-1, Data Encryption Standard. The National Institute of Standards and Technology (NIST) has made every attempt to provide complete and accurate information about the devices described in this document. However, due to the possibility of changes made within individual companies, NIST cannot guarantee that this document reflects the current status of each product.

MANUFACTURER ADDRESS	PRODUCT	VALIDATION DATE	DESCRIPTION
ADT Security Systems 2560 Huntington Avenue Fourth Floor Alexandria, VA 22303 Hal Marriott (703) 960-8548	ADT Universal Communicator	10/17/90	Chip is an on board component for products in the High Security Intrusion Detection System. System has integrated key management capabilities.
Advanced Micro Devices, Inc. 4115 Freiderich Lane Mail Stop 135 Austin, TX 78744 Patrick Sohelli (408) 749-2161	AmZ8068	1/28/81	One 40-pin DIP package; n-channel Si-gate technology; ECB, CBC and 8-bit CFB modes; separate ports for key input, clear data and enciphered data; concurrent input, output and ciphering activities; external DMA control; interfaces with AmZ8000 CPU bus directly, and with the 2900, 8080, 8085 and 8048 families with minimum throughput greater than 1 Mbytes per second; greater than 1 Mbytes per second.
	AM 9568	2/28/84	N-channel silicon gate LSI product containing the circuitry necessary to encrypt and decrypt data; can be used in terminals dedicated controllers, communication concentrators, and peripheral task processors in general processor systems; can be used in CF, ECB, or CBC operating modes; separate ports for key input, clear data, and enciphered data enhanced security; interface directly to the IAPX86, 88 bus; interfaces with 2900 and 8051 families with minimal external logic.
American Telephone and Telegraph Company (AT&T) 6612 E. 75th Street P.O. Box 1008 Indianapolis, IN 46206 Ken Zempel (908) 658-6870	AT&T Smart Card Version 2.11/DES	5/3/91	Card is part of a smart card based Computer Security System (CSS). The card is carried by an authorized user and permits the user to gain access to host computer systems that are protected by the CSS.
	AT&T Smart Card Version 3.0/DES (5E1)	7/19/91	This version of the AT&T Smart Card is designed to closely follow developments in the international standards arena in areas of card communication protocols, commands and file structures. It is a general purpose smart card that supports multiple applications and uses the DES as a basic part of its operating system.
Arkansas Systems inc. 8901 Kanis Road Little Rock, AR 72205-6498 David H. Bishop (501) 227-8471	DES-MATE	7/6/89	Provides data encryption for messages sent and received on-line between an ATM/EFT Network switch processor and an IBM host participant in that network. DES key management is automatic and under system control.
AT&T Whippany Road Whippany, N.J. 07981 William Oeschger (201) 898-1198	AT&T T7000A Digital Encryption Processor	4/22/86	Manufactured using CMOS technology; 40-pin DIP; encryption modes include ECB, CBC, CFB, and OFB; throughput 1.882 Mbytes/second on-chip RAM and ROM program memory.

## DES Validated Devices, *Continued*

MANUFACTURER ADDRESS	PRODUCT	VALIDATION DATE	DESCRIPTION
AT&T Bell Laboratories 25 Lindsley Drive Room 2B-309 Morristown, N.J. 07960 William Oeschger (201) 898-1198	DEP229ER (WE229ER)	9/6/83	3.5 micron NMOS technology; 40-pin DIP; encryption modes - ECB, CBC, OFB, CFB1, CFB8, CFB64; Throughput rate of 117K ciphering operation/second.
American Telephone and Telegraph Company AT&T Guilford Center I-85 and Mt Hope Church Road Mcleansville, NC 27420 Mr. B. F. Bailey (919) 279-3779	AT&T Mark E DES Key Generator, PN ON493049-1X	6/3/92	Not available
American Telephone and Telegraph Company AT&T Guilford Center I-85 and Mt Hope Church Road Mcleansville, NC 27420 Mr. M. Zugay (919) 279-3779	AT&T Mark ET DES Key Generator, Part No. AN10014-1	6/3/92	Not available
Collins Telecommunications Collins Defense Communications 350 Collins Road, NE Mail Stop 120-105 Cedar Rapids, Iowa 52498 Jim Perkins (319) 395-5773	765-5914-001  Voice Privacy Device VP430	10/15/77  10/6/81	pmos chip with 40 usec algorithm execution time; chip has approximately a 50 nsec state change; can perform I/O functions while the chip is in operation; part of network stand-alone encryptor.  Imbedded encryption device for commercial hand held communications devices.
Computer Elektronik Infosys of America, Inc. 512-A Herndon Parkway Herndon, VA 22070 A. Mark Brown (703) 435-3800	SuperCrypt	7/24/91	Chip designed for high speed (12 Megabytes/sec data rates) encryption and decryption. ECB, CBC, CFB and OFB modes of DES supported as well as MAC generation. Available as a 120 Pin Flat Pack.
Datakey Inc. 407 West Travelers Trail Burnsville, MN 55337-9990 Michael Carenzo (612) 890-6850	H8-310 ASACS Smart Card	7/2/92	The ASACS hardware consists of a credit-card sized smart card with an embedded Hitachi H8/310 microprocessor and a reader/writer interface which provides an RS-232 serial connection to a host computer. The smart card functions are implemented in firmware which is stored in the memory of the card's microprocessor.
The Exchange 15395 SE 30th Place Bellevue, WA 98007 Patricia Lenti-Crane (206)644-7000	EXCRYPT DEB-64-KM (originally EXCLUDE DEB-64-KM)	1/26/89	Encrypts and decrypts data; generates random keys; supports up to six security processor boards that can be run in parallel to enhance throughput; has storage capacity for up to 4000 DES keys; developed for secure financial transactions.
Front Line Software P.O. Box 217 Lowell, MA 01853 William Graham (617) 452-3352	726-8064 PROM Device	12/1/86	4 K EPROM to be used with intel IPAX family of microprocessors including all models of the IBM PC family; all modes of DES supported.
GEMPLUS CARD INTERNATIONAL 6290 Montrose Road Rockville, MD 20852 Gilles Lisimaque (301) 770-1558	MCOS16K EEPROM/DES	3/18/91	A multi-application smart card which complies with the ISO standard 7816 (parts 1, 2, and 3) for Integrated Circuit cards with contacts.

## DES Validated Devices, *Continued*

MANUFACTURER ADDRESS	PRODUCT	VALIDATION DATE	DESCRIPTION
General Electric Company Mountain View Road Lynchburg, VA 24502 Jim Elder (804) 948-6187	Part Number 19B801375	6/28/85	The GE DES IC is a microprocessor controlled, low speed asynchronous CMOS IC using DES. Intended to provide secure voice in commercial grade mobile radio applications.
Glencoe Engineering, Inc. 270 Lexington Drive Buffalo Grove, IL 60089-6930 D. Wade Clark (708) 808-0300	Glen-DES PN GL306051	5/8/92	The Glen-DES is a compact 20 pin design, using low power CMOS technology, operating at 3us using a 16 MHz clock. The DES chip features nonvolatile internal memory, an external key and a combined key. It is available with a simple CPU interface and it supports a DOS printer port implementation.
IBM Corporation Federal Systems Division WK4/988 P.O. Box 100 Kingston, NY 12401 Robert Elander (914) 385-6692	4402182	11/1/77	This card used in terminal equipment; the chip uses technology with PLA control to implement CBC;
	P/N 8270094 using DES Chip P/N 5898057 (originally 8269206)	8/25/78	This card is used in 3845 and 3846 equipment for 8-bit CFB.
	Two TTL cards - 8632242 and 8679176	9/21/79	Will operate at least at the 1.5 Mbytes 360 channel rate; card set is used in the 3848 cryptographic unit; uses "Emerald-5" technology.
IBM Corporation 1001 W.T. Harris Blvd. West Charlotte, NC 28257 William Rohland (704) 594-8250	4745 Security Interface Unit and the Personal Security Card	10/10/90	Devices are used in a transaction security system to protect the privacy and integrity of data using a common cryptographic interface. The security interface unit communicates with the Personal Security Card and the cryptographic adaptor, if present. The Personal Security Card is an integrated-circuit chip card that contains a single chip security processor.
Intel 1900 Pralre City Road Folsom, CA 95630 Joe Dragony (916) 351-5250	8294	1/3/78	Algorithm is microcode which is burned into a 1 Kbyte ROM on a 5 volt, 40-pin chip driven by a 8042 microprocessor.
	8294A	6/20/82	Same as the 8294 except for a maximum data transfer rate of 400 bytes per second.
John E. Holt & Associates 2714 Key Boulevard Arlington, VA 22201 John Holt (703) 524-2923	Krypton Firmware	2/12/86	ROM chips for the standard IBM PC family include eight 3722 chips, four 2764 chips and one 27256 chip; 1024-bit CBC chaining; encryption speed dependent on clock of PC; ROM can plug directly into ROM slot.
Lexicon ICOT Corporation 3801 Zanker Road P.O. Box 5143 San Jose, CA 95150-5143 Bob Lynch (408) 433-3300	LEX-POS (Model 600)	11/28/84	A Personal Identification Number (PIN) entry device; used in conjunction with financial transaction devices, 16 key keyboard, 20 character display, RS-232 compatible, Lexicon sold LEX-POS to ICOT Corporation.
LSI Logic/Dataco AS Smedeholm 12-14 DK-2730 Herlev Denmark Jens Kjelsbak 45 44 53 01 00	Dataco L5A4043 2030025402	1/12/90	Custom DES IC was manufacturer by LSI Logic for Dataco. The DES chip is designed for optional use in ScaNet local area network products.



## DES Validated Devices, *Continued*

MANUFACTURER ADDRESS	PRODUCT	VALIDATION DATE	DESCRIPTION
Matsushita Electronic Components Co. High Frequency Products Division One Panasonic Way Secaucus, NJ 07094 Dursun Sakarya (201) 348-7767	EBC 1642 IC Card	3/13/91	Card is designed to be a high security external storage media housing an 8 bit CPU and 64 Kbit EEPROM.
Micro Card Technologies, Inc. 14070 Proton Road Dallas, TX 75244 Jeff Lang (214) 788-4055	Micro Card TB100 Integrated Circuit Card	9/19/90	A multi-application Integrated circuit card which can simultaneously support several application data files. Ciphering and deciphering functions may be used to encrypt or decrypt external messages using DES.
Morse Security Group, Inc. 12960 Bradley Avenue Sylmar, CA 91342-0128 Nafin Chheda (800) 423-5669 (818) 367-5951	TRAP 5200 System	4/17/90	Touch response alarm processor system, including a receiver processor located in a data gathering center and a series of transponders located at remote locations, contains DES to produce encrypted data that flows along a communication path.
Motorola Microprocessor Products Division 6501 William Cannon Drive West Austin, TX 78735-8598 Don Ponder (512) 440-2956	MC6859 (originally MGD68NE)	2/11/80	Si-gate depletion mode, nMOS 24-pin DIP using single 5 volt power supply; implements ECB and CFB.
Newbridge Microsystems 603 March Road Kanata, Ontario Canada K2K 2M5 Tony Rosati (613) 592-0714	CA20C03A	4/10/91	A high performance WD20C03A compatible DES Data encryption processor with data transfer rates up to 4 Mbytes per second. Supports ECB and CBC; PLCC and PDIP packaging available.
Newnet S.A. Alsina 430 Buenos Aires 1087 Argentina Daniel Ramos 54 1 334 9732	Data Security Device (DSD 9612)	7/2/91	This device is based on an eight bit INTEL microprocessor with 8 Kbytes of EPROM. Transfer data at speeds of 1200 to 9600 bps and communicates with other devices via EIA RS-232-C ports.
Nixdorf Computer Corporation 168 Middlesex Turnpike Burlington, MA 01803 Kevin Madden (617) 890-3600	VEM Module	1/7/80	The plug-in module is used with the Nixdorf 8864 CPU for encrypting data transmission blocks and file protection; may be used in terminal applications in the financial community; uses TTL.
Racal-Milgo P.O. Box 407044 Ft. Lauderdale, FL 33340-7044 Richard Abbruscato (305) 476-6800	Datacryptor	1/7/80	Stand alone equipment with public key management remote distribution of master keys.
Rothenbuhler Engineering P.O. Box 708 2191 Rhodes Road Sedro Wolley, WA 98284-0708 Andrew Benson (206) 856-0836	CLS Series 5200 Encryption Module	3/19/91	The CLS Series 5200 Encryption Module is used in a system which communicates 8 channels of electronic security information between a client and a central monitoring facility.
Secur-Data Systems, Inc. Omega Center 7340 Executive Way, Suite R Frederick, MD 21701	DESPLEX	2/2/89	Used in a CF configuration as part of a firmware operating system for processing and transmission of alarm sensor data as well as receiving and annunciating data at an alarm monitoring facility.

## DES Validated Devices, *Continued*

MANUFACTURER ADDRESS	PRODUCT	VALIDATION DATE	DESCRIPTION
Ronald Baum (301) 698-9955			
Texas Instruments, Inc. P.O. Box 1443, M/S 736 Houston, TX 77001 Mike Polen (713) 274-3635	TMS 99541	2/28/82	Preprogrammed TMS7020 8-bit single chip microprocessor; 40-pin DIP plastic package I/O pins are TTL compatible; master and active key registers;
UNIVAC P.O. Box 3942 St. Paul, MN 55165 Jim Nelson (612) 631-6728	End-End/Mass Storage Encryptor	1/29/80	Prototype device for testing purposes only;
VLSI Technology, Inc. 8375 S. River Parkway Tempe, AZ 85284 R. Slusarczyk (602) 752-8574	VM007 - Data Encryption Processor	1/6/92	The VM007 Data Encryption Processor is a programmable integrated circuit that provides a complete cryptographic system on a single chip. It contains a hardware implementation of the DES, RISC-based sequencer, data storage registers, and ROM-based microprogram. It is designed to provide very high data and key processing rates (up to 190 Megabits per second), flexible I/O inter-facing, advanced security features and supports all DES modes of operation.
Wells Fargo Security Products A Unit of Baker Protective Services 1010 North Glebe Road, Suite 680 Arlington, VA 22201 William Martin (703) 247-4250	WP PN 5286/WP PN 5287	5/26/89	The monitor panels are intended for use in a monitoring station of a proprietary intrusion detection alarm system.
Western Digital Corporation 2445 McCabe Way Irvine, CA 92714 Product Marketing Manager for Security Devices (714) 474-2033 X7853	WD-2001/WD2002	8/9/79	Uses si-gate nMOS, TTL compatible; ECB speeds of up to 40 Kbytes/second, 161 Kbytes/second and 242 Kbytes/second.
	WD20C03 DES Device	2/19/87	Uses si-gate CMOS, TTL compatible; ECB and CBC, speeds of up to 403 Kbytes/second, 645 Kbytes/second and 807 Kbytes/second in ECB.

## 7.7 Message Authentication Code (MAC) Implementations

Vendor/Contact	Implementation	Validated Options	Vendor/Contact	Implementation	Validated Options
1. ACS Communications Systems Inc. 480 Spring Park Place Suite 900 Herndon, VA 22070  Don Cole, (703) 471-0882	Personal Computer Security Module, PCSM-T  May 18, 1986	BINARY OPTION (FIPS 113)	9. Digitech Telecommunications, Inc. 342 Madison Avenue Suite 2010 New York, NY 10017  James J. McKeeff, (212) 557-7230	Softnet Software, Version 1  June 29, 1987	BINARY OPTION (FIPS 113)
2. Federal Reserve Bank of Cleveland P.O.B. 6387 Cleveland, Ohio 44101  Dave Rich, (216) 579-2221	Jones Futurex PC Encryption Board FRS PC MAC Processor  October 28, 1988	BINARY OPTION (FIPS 113) CODED CHARACTERS, ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING	10. Sytek, Inc.  Rights transferred to AaT Research, Inc. on January 29, 1988 - see entry 17  AaT Research 675 North First Street Suite 800 San Jose, CA 95112  Linden Feldman, (408) 275-0820	MACbox  June 30, 1987	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING
3. Shannon Systems, Inc. Mountain View, CA  Out of Business	Remote Crypto Facility Software Version 3.0  January 18, 1987	BINARY OPTION (FIPS 113)	11. Inter-Quest, Inc. 16508 East Laser Drive Fountain Hills, AZ 85268  Charles Redding, (802) 948-2560	PORT-OF-ENTRY Computer Security System Vers 1.2 (Software)  August 17, 1987	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING
4. Codercard, Inc.  Rights transferred to LITRONICS Information Systems on Sept. 12, 1990 - see entry 23.  LITRONICS Information Systems 2950 Redhill Avenue Costa Mesa, CA 92626  Bob Gray, (714) 557-3444	Personal Computer Security Adaptor, CPS-300 Argus, Version 1 Software  February 26, 1987	BINARY OPTION (FIPS 113) CODED CHARACTERS, ENTIRE MESSAGE, NO EDITING CODED CHARACTERS, ENTIRE MESSAGE, EDITING CODED CHARACTERS, EXTRACTED MESSAGE ELEMENTS, NO EDITING CODED CHARACTERS, EXTRACTED MESSAGE ELEMENTS, EDITING	12. Rascal-Guardata Limited Richmond Court 308 Fleet Road Fleet, Hampshire GU13 8BU England  Paul Halliden, (252) 622144, England	PC Security Module, RGL 600 RGL 600 Host PC C Driver Software, Version: V1.01  November 20, 1987	BINARY OPTION (FIPS 113)
5. Jones Futurex, Inc. 10933 Trade Center Drive Rancho Cordova, CA 95870  Don Thompson, (916) 835-3972	MAC-310 Message Authenticator  February 27, 1987	BINARY OPTION (FIPS 113)	13. The Chase Manhattan Bank, N.A. 1 Seaport Plaza 11th Floor New York, New York 10038  Bob Marlian, (212) 797-4038	C-FIMAS 18 Software, Version 1.0  December 8, 1987	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING
6. Infomax Securities 6974 Sandpiper Place Carlsbad, CA 92009  David Howard, (619) 831-8787	Protecom Crypto Processor Protecom Device Driver & Utilities, Version 0.5  March 27, 1987	BINARY OPTION (FIPS 113)	14. Alalla Corporation 2304 Zanker Road San Jose, CA 95131  Dale Hopkins, (408) 435-8850	Personal Computer Module, CPCM CPCM.HEX Software, Version OA 13-2043-01  January 11, 1988	BINARY OPTION (FIPS 113)
7. Inter-Quest, Inc. 16508 E. Laser Drive Fountain Hills, AZ 85268  Charles Redding, (802) 948-2560	PORT-OF-ENTRY Computer Security System Vers. 1.1 (Software)  May 8, 1987	BINARY OPTION (FIPS 113)			
8. Infomax Securities 6974 Sandpiper Place Carlsbad, CA 92009  David Howard, (619) 831-8787	Protecom Crypto Processor Protecom Device Driver & Utilities, Version 0.8  May 11, 1987	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING			



# Message Authentication Code (MAC) Implementations, *Continued*

Vendor/Contact	Implementation	Validated Options	Vendor/Contact	Implementation	Validated Options
16. GN Telematic, Inc. 48 Manning Road Billerica, MA 01821  Poul Hebegaard, (617) 667-8644	safeMatic 2000, KB76-175 27  Coded Character Set Processing  Software, Model KB77-17012, Version A  February 3, 1988	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDIT- ING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING	22. Racal-Guardata, Inc 480 Spring Park Place Suite 900 Hamdon, VA 22070  Brian Bucholz, (703) 471-0892	X9 Crypto Server  June 1, 1980	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS, EXTRACTED MES- SAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MES- SAGE ELEMENTS; EDITING
17. AeT Research 675 North First Street Suite 800 San Jose, CA 95112  Originally validated on June 30, 1987 as a Sytek, Inc. device - see entry 10.  Linden Feldman, (408) 275-0820	MACbox  August 8, 1988	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDIT- ING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING	23. LITRONIC Information Systems 2950 Redhill Avenue Costa Mesa, CA 92626  Rights transferred on September 12, 1990  Bob Gray, (714) 545-8649 James Prohaska, (703) 980-8068	Personal Computer Security Adapter Argus, Version 1 Software**  Originally validated by Codercard, Inc. on February 28, 1987 - see entry 4.	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS, EXTRACTED MES- SAGE ELEMENTS; NO EDITING CODED CHARACTERS; EXTRACTED MES- SAGE ELEMENTS; EDITING
18. Atalla Corporation 2304 Zanker Road San Jose, CA 95131  Dale Hopkins, (408) 435-8850	Personal Computer Module, MN-40-249  CPCM.HEX Software, Version OE 13-2043-00  September 26, 1988	BINARY OPTION (FIPS 113)	24. IBM Corporation Dept. 65K/B204-3 1001 W.T. Harris Blvd. Charlotte, NC 28257  Roger Evans, (704) 594-7080	4755 Cryptographic Adapter  October 15, 1990	BINARY OPTION (FIPS 113)
19. Cypher Communica- tions Technology, Inc. 4520 East-West High- way Suite 550 Bethesda, MD 20814  Angel Bailey, (301) 652-6780	CYCOM SCI AX3 5.01, Version 10084002  February 2, 1989	BINARY OPTION (FIPS 113)	25. IBM Corporation Dept. 65K/B204-3 1001 W.T. Harris Blvd. Charlotte, NC 28257  Roger Evans, (704) 594-7080	4754 Security Interface Unit  October 15, 1990	BINARY OPTION (FIPS 113)
20. Dial-Guard 55 Koch Road/PO Box 7045 Corte Madera, CA 94925  Shun-Hwa Chang or Trone Miller, (415) 927-2232	Dial-Guard Remote Authentil- cator  01-103, Version 2.0 Rev. 0  March 8, 1989	BINARY OPTION (FIPS 113)	26. IBM Corporation Dept. 65K/B204-3 1001 W.T. Harris Blvd. Charlotte, NC 28257  Roger Evans, (704) 594-7080	IBM Personal Security Card  October 15, 1990	BINARY OPTION (FIPS 113)
21. Okiok Data 3945 St. Martin Laval, Quebec, Canada H7T 1B7  Claude Vigearnt, (514) 681-1881	RAC/M FAS-PACK, Version 1.0  April 24, 1989	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING CODED CHARACTERS; ENTIRE MESSAGE; EDITING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDIT- ING CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING	27. Cypher Communica- tions Technology, Inc. 15200 Shady Grove Rd. Suite 350 Rockville, MD 20850  Angel Bailey, (301) 590-9314	CYCOM SCI/SL 98 AX5 5.03, Version 10084012  December 19, 1990	BINARY OPTION (FIPS 113)
			28. Cypher Communica- tions Technology, Inc. 15200 Shady Grove Rd. Suite 350 Rockville, MD 20850  Angel Bailey, (301) 590-9314	CYCOM SCI 182 AX7 5.05, Version 10084020  January 10, 1991	BINARY OPTION (FIPS 113)

## Message Authentication Code (MAC) Implementations, *Continued*

Vendor/Contact	Implementation	Validated Options
29. Digital Equipment Corporation Digital Drive - MK01-2/B08 Merrimack, NH 03054  Steve Lawrence, (603) 884-3445	PIN Pad 201 SMD Model: P003-120-XX  March 25, 1991	BINARY OPTION (FIPS 113)
30. Information Security Corporation 1141 Lake Cook Road Suite D Deerfield, IL 60015  Michael Markowitz, (708) 405-0500	DES Module used in SpyProof  July 10, 1991	BINARY OPTION (FIPS 113)
31. Digital Signature  Validated by Information Security Corporation 1115 N. East Avenue Oak Park, IL 60302  Michael Markowitz, (708) 405-0500	DES Module used in CryptMaster (3.20) and SecretAgent (1.00)  July 15, 1991	BINARY OPTION (FIPS 113)
32. The Exchange Systems 15395 SE 30th Place Bellevue, WA 98007-6594  Robert Adamson, (206) 844-7000 X255	PCE-3000 (IBM PS/2 Microchannel)  January 8, 1992	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING  CODED CHARACTERS; ENTIRE MESSAGE; EDITING  CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING  CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING
33. The Exchange Systems 15395 SE 30th Place Bellevue, WA 98007-6594  Robert Adamson, (206) 844-7000 X255	PCE-1000 ISA Adaptor  January 9, 1992	BINARY OPTION (FIPS 113) CODED CHARACTERS; ENTIRE MESSAGE; NO EDITING  CODED CHARACTERS; ENTIRE MESSAGE; EDITING  CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; NO EDITING  CODED CHARACTERS; EXTRACTED MESSAGE ELEMENTS; EDITING

## 7.8 Validations for Key Management

Vendor/Contact	Implementation	Validated Options	Vendor/Contact	Implementation	Validated Options
<p>1. LITRONICS Information Systems 2850 Redhill Avenue Costa Mesa, CA 92628</p> <p>(Originally validated by Codercard; rights transferred on September 11, 1990)</p> <p>Bob Gray, (714) 545-8849 James Frohaska, (703) 960-8088</p>	<p>Hardware: <u>Argus-PC</u> Model: <u>CMS-100</u> Software: <u>Argus/MACE</u> <u>Software, Version:</u> <u>1.0</u></p> <p>September 23, 1988</p>	<p>No. of communicating pairs: <u>2</u> No. of manual (*)KCs per comm. pair: <u>2</u> Length of manual and auto. (*)KCs: <u>PAIR</u> Key generation capability: <u>YES</u> Number of auto. distr. (*)KCs shared: <u>UP TO 4</u> Number of KDs shared: <u>UP TO 8</u> 2 KDs in KSMS: <u>SOMETIMES</u> Send RSI messages: <u>NOT</u> <u>TESTED</u> Receive RSI messages: <u>NOT</u> <u>TESTED</u> Notarization of keys in KSMS: <u>ALWAYS</u> Send odd parity on keys in KSMS: <u>ALWAYS</u> Send IVs in KSMS: <u>SOMETIMES</u> Send encrypted IVs in KSMS: <u>ALWAYS</u> Send EDCs in RSIs and ESMs: <u>ALWAYS</u> Action if EDC received in RSIs and ESMs: <u>NOT APPLICABLE</u> Send EDKs in KSMS: <u>SOMETIMES</u> Action on count error: <u>ADJUST COUNT</u> Send DSMs: <u>YES</u> Receive DSMs: <u>YES</u> IDA in DSM if only one KD can be shared: <u>YES</u> Role assumed: <u>EITHER A OR B</u> Automatic error recovery: <u>NOT</u> <u>TESTED</u> Space &amp; CRLF as field delimiter: <u>NOT TESTED</u></p>	<p>3. TECHNICAL COMMUNICATIONS CORPORATION 100 Domino Drive CONCORD, Massachusetts 01742</p> <p>John Gill, (617) 862-8035</p>	<p>Hardware: <u>CX5000</u> Software: <u>Version: 2.0</u></p> <p>May 15, 1991</p>	<p>No. of communicating pairs: <u>1</u> No. of manual (*)KCs per comm. pair: <u>2</u> Length of manual and auto. (*)KCs: <u>PAIR</u> Key generation capability: <u>YES</u> Number of auto. distr. (*)KCs shared: <u>4</u> Number of KDs shared: <u>1</u> 2 KDs in KSMS: <u>NEVER</u> Send RSI messages: <u>NOT</u> <u>TESTED</u> Receive RSI messages: <u>NOT</u> <u>TESTED</u> Notarization of keys in KSMS: <u>ALWAYS</u> Send odd parity on keys in KSMS: <u>ALWAYS</u> Send IVs in KSMS: <u>SOMETIMES</u> Send encrypted IVs in KSMS: <u>ALWAYS</u> Send EDCs in RSIs and ESMs: <u>ALWAYS</u> Action if EDC received in RSIs and ESMs: <u>NOT</u> <u>APPLICABLE</u> Send EDKs in KSMS: <u>NEVER</u> Action on count error: <u>ADJUST COUNT</u> Send DSMs: <u>YES</u> Receive DSMs: <u>YES</u> IDA in DSM if only one KD can be shared: <u>YES</u> Role assumed: <u>EITHER A OR B</u> Automatic error recovery: <u>NOT</u> <u>TESTED</u> Space &amp; CRLF as field delimiter: <u>NOT TESTED</u></p>
<p>2. TECHNICAL COMMUNICATIONS CORPORATION 100 Domino Drive CONCORD, Massachusetts 01742</p> <p>John Gill, (617) 862- 8035</p>	<p>Hardware: <u>CX5000A</u> Software: <u>Version: 1.0</u></p> <p>May 6, 1991</p>	<p>No. of communicating pairs: <u>1</u> No. of manual (*)KCs per comm. pair: <u>2</u> Length of manual and auto. (*)KCs: <u>PAIR</u> Key generation capability: <u>YES</u> Number of auto. distr. (*)KCs shared: <u>0</u> Number of KDs shared: <u>1</u> 2 KDs in KSMS: <u>NEVER</u> Send RSI messages: <u>NOT</u> <u>TESTED</u> Receive RSI messages: <u>NOT</u> <u>TESTED</u> Notarization of keys in KSMS: <u>ALWAYS</u> Send odd parity on keys in KSMS: <u>ALWAYS</u> Send IVs in KSMS: <u>SOMETIMES</u> Send encrypted IVs in KSMS: <u>ALWAYS</u> Send EDCs in RSIs and ESMs: <u>ALWAYS</u> Action if EDC received in RSIs and ESMs: <u>NOT</u> <u>APPLICABLE</u> Send EDKs in KSMS: <u>NEVER</u> Action on count error: <u>ADJUST COUNT</u> Send DSMs: <u>YES</u> Receive DSMs: <u>YES</u> IDA in DSM if only one KD can be shared: <u>YES</u> Role assumed: <u>EITHER A OR B</u> Automatic error recovery: <u>NOT</u> <u>TESTED</u> Space &amp; CRLF as field delimiter: <u>NOT TESTED</u></p>	<p>4. COMMUNICATION DEVICES, INC. 1 Forstmann Court Clifton, NJ 07011</p> <p>Gene Hartzell, (201) 772-6887</p>	<p>Hardware: <u>RSD/E</u> Software: <u>Version 7.2</u></p>	<p>No. of communicating pairs: <u>1</u> No. of manual (*)KCs per comm. pair: <u>1</u> Length of manual and auto. (*)KCs: <u>PAIR</u> Key generation capability: <u>NO</u> Number of auto. distr. (*)KCs shared: <u>0</u> Number of KDs shared: <u>1</u> 2 KDs in KSMS: <u>NEVER</u> Send RSI messages: <u>NOT</u> <u>TESTED</u> Receive RSI messages: <u>NOT</u> <u>TESTED</u> Notarization of keys in KSMS: <u>ALWAYS</u> Send odd parity on keys in KSMS: <u>ALWAYS</u> Send IVs in KSMS: <u>SOMETIMES</u> Send encrypted IVs in KSMS: <u>ALWAYS</u> Send EDCs in RSIs and ESMs: <u>ALWAYS</u> Action if EDC received in RSIs and ESMs: <u>NOT APPLICABLE</u> Send EDKs in KSMS: <u>NEVER</u> Action on count error: <u>ADJUST COUNT</u> Send DSMs: <u>YES</u> Receive DSMs: <u>YES</u> IDA in DSM if only one KD can be shared: <u>YES</u> Role assumed: <u>EITHER A OR B</u> Automatic error recovery: <u>NOT</u> <u>TESTED</u> Space &amp; CRLF as field delimiter: <u>NOT TESTED</u> Number of communicating pairs: <u>1</u> Number of manual (*)KCs per comm. pair: <u>2</u> Length of manual and</p>





## **APPENDIX A**

### **FIPS CONFORMANCE TESTING PRODUCTS AND SERVICES**





## APPENDIX A

### FIPS CONFORMANCE TESTING PRODUCTS AND SERVICES

The purpose of this appendix is to provide information about products and services that are available to Federal Agencies for assessing products for conformance to FIPS.

The entries in this list identify the topic, the standard tested, the NIST contact, and the product or service offered. The letters T, S, or C in the Product/Service column indicate a test method, testing service, or certificate/registered report respectively.

<u>TOPIC</u>	<u>STANDARD</u>	<u>CONTACT</u>	<u>PRODUCT/SERVICE</u>
COBOL	FIPS PUB 21-3	Judy Kailey NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3259	T, S, C
Fortran	FIPS PUB 69-1	Judy Kailey NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3259	T, S, C
Pascal	FIPS PUB 109	Kathryn Miles NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3156	T, S, C
C	FIPS PUB 160	Kathryn Miles NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3156	T, S, C
Ada	FIPS PUB 119	William Dashiell NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-2490	T, S, C
MUMPS	FIPS PUB 125	William Dashiell NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-2490	T, S, C
SQL	FIPS PUB 127-1	Joan Sullivan NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3258	T, S, C

<u>TOPIC</u>	<u>STANDARD</u>	<u>CONTACT</u>	<u>PRODUCT/SERVICE</u>
GKS	FIPS PUB 120	Susan (Quinn) Sherrick NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3268	T, S, C
CGM	FIPS PUB 128 MIL-D-28003	Lynne Rosenthal NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3353	T, S, C
PHIGS	FIPS PUB 153 ANSI/ISO 9592.1-1989	John Cugini NIST, Bldg. 225, Rm. A266 Gaithersburg, MD 20899 (301) 975-3248	T, S, C
POSIX	FIPS PUB 151-1	Martha Gray NIST, Bldg. 225, Rm. B266 Gaithersburg, MD 20899 (301) 975-3276	T, S, C
Message Authentication	FIPS PUB 113	Miles Smid NIST, Bldg. 225, Rm. A216 Gaithersburg, MD 20899 (301) 975-2938	T, S, C
Key Management Validation	FIPS PUB 171 ANSI X9.17	Miles Smid NIST, Bldg. 225, Rm. A216 Gaithersburg, MD 20899 (301) 975-2938	T, S, C
Data Encryption Standard	FIPS PUB 46-1	Miles Smid NIST, Bldg. 225, Rm. A216 Gaithersburg, MD 20899 (301) 975-2938	T, S, C
GOSIP	FIPS PUB 146	Stephen Nightingale NIST, Bldg. 225, Rm 141 Gaithersburg, MD 20899 (301) 975-3616	T, S
1984 X25	CCITT X.25-1984 ISO 7776, ISO 8208 ISO 8882, ISO 9646 FIPS PUB 100-1	David Su NIST, Bldg. 223, Rm. B364 Gaithersburg, MD 20899 (301) 975-6194	T
ISDN Data Link Layer	Q921.LAPD ANSI T1.602	David Su NIST, Bldg. 223, Rm. B364 Gaithersburg, MD 20899 (301) 975-6194	T

<u>TOPIC</u>	<u>STANDARD</u>	<u>CONTACT</u>	<u>PRODUCT/SERVICE</u>
ISDN Physical Layer	S/T Interface ANSI T1.605 (S/T Interface) ANSI T1.601 (U Interface)	David Su NIST, Bldg. 223, Rm. B364 Gaithersburg, MD 20899 (301) 975-6194	T (abstract)
ISDN Network Layer	Q931 ANSI T1.607 ANSI T1.608 FIPS PUB (planned)	David Su NIST, Bldg. 223, Rm. B364 Gaithersburg, MD 20899 (301) 975-6194	T
FDDI	ANSI X3T9	David Su NIST, Bldg. 223, Rm. B364 Gaithersburg, MD 20899 (301) 975-6194	T







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