

The APPC Resource Book

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Note!

Before using this information, be sure to read the general information under "Notices" on page iii.

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SystemView
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BCMS	Policy Management Systems Corporation
BrxLU6.2	Brixton Systems, Inc.
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Claims Management System	Policy Management Systems Corporation
Client Information System	Policy Management Systems Corporation
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Host•OSI	Proginet Corporation
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Inside CICS	American Data Group, Inc.
Inside VTAM	American Data Group, Inc.
INSTALL/1	Andersen Consulting

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LEAFS	American Management Systems, Inc.
LGFS	American Management Systems, Inc.
LU 6.2 VTC	Applied Computer Technology
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The Management Information System	Policy Management Systems Corporation
MetaNet	LEGENT Corporation
Metaview	Metafile Information Systems, Inc.
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Origin	BellSouth Information Systems, Inc.
PAPI	PeerLogic, Inc.
PIPES Application Programmer's Interface	PeerLogic, Inc.
PIPES Platform	PeerLogic, Inc.
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PRISM	Marcam Corporation
SDTF	Applied Computer Technology
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SNA*ps	Apple Computer, Inc.
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SQLGateway	Gupta Technologies, Inc.
SQLHost	Gupta Technologies, Inc.
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SQL*TextRetrieval	Oracle Corporation
SYNERGIST	Gateway Systems Corporation
TesTool	Applied Computer Technology
TextDBMS	Data Retrieval Corporation
TransQueue	LEGENT Corporation
UMS	Policy Management Systems Corporation
The Underwriting Management System	Policy Management Systems Corporation
UNIX	Unix System Laboratories, Inc.
VIS/TP	VISystems, Inc.
VTC	Applied Computer Technology
Wingx	Informix
XCOM 6.2	Spectrum Concepts, Inc.
4th Dimension	4th Dimension Software, Ltd.

A Few Words about This Resource Book

This book reflects a rapidly growing interest in communication systems that use Advanced Program-to-Program Communication (APPC), Advanced Peer-to-Peer Networking (APPN), and the Common Programming Interface for Communications (CPI-C).

This book provides information on:

Educational opportunities and materials on APPC

Part 1, "APPC Education" provides information on courses offered by IBM* and other companies on APPC and related topics. These courses range from traditional classroom instruction and seminars to self-study materials, audio cassettes, videotapes, and computer-aided instruction.

This section also includes information on publications which address APPC, APPN, CPI-C, and other SNA-related topics. These publications include:

- Related IBM manuals and books
- Books from other sources
- Specialized periodicals.

Finally, this section describes the APPC Info Exchange Forum on CompuServe.

APPC platforms, gateways, development tools, and applications

Part 2, "APPC Platforms, Gateways, Tools, and Applications" includes comprehensive directories of APPC platforms, gateways, and applications.

This section also provides detailed information on software tools used to develop APPC applications. These APPC development tools help you develop high-level applications without knowing the details of APPC. Such tools can greatly simplify application development, thereby reducing development time and enhancing productivity.

Appendix A, "Contacts for Vendors" on page 137 contains the addresses and phone numbers of all vendors whose products are listed in this book.

Submitting Information for This Book

This book will be updated periodically to include new and changed information on APPC education and products.

We value your contributions to this book. To submit information about APPC classes, books, applications, or other products, mail the information to:

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Research Triangle Park, North Carolina USA 27709-2195

If you prefer, you can:

- Fax the information to us. Our fax number is 919-254-5410.
- Send the information to the APPC Info Exchange form on CompuServe.
- Send the information via Internet. Our Internet ID is appcmrkt@ralvm6.vnet.ibm.com.

What Is APPC Market Enablement?

APPC Market Enablement is part of the Architecture and Telecommunications group of IBM's Networking Systems division. Our mission: to provide you with the information and support you need to use APPC, APPN, and CPI-C successfully.

We provide a wide variety of different services, including:

Education

We develop and conduct APPC classes for software vendors, such as "Designing Client/Server Applications Using APPC" on page 9.

Publications

We write and contribute to articles on APPC in journals and the trade press. We also publish this *APPC Resource Book*.

Forums

We sponsor the APPC Info Exchange Forum on CompuServe. To access this forum, type **GO APPC** at the ! prompt. For more information on this forum, see page 53.

New Products

We work with other IBMers who are developing new APPC products.

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APPC Education Offered by IBM

This chapter describes:

- The types of courses offered by IBM, including instructions for enrolling in these courses
- Specific courses on APPC and related topics.

IBM offers courses on the following topics:

- SNA
- APPC
- AIX*
- AS/400*
- MVS
- OS/2*
- VTAM.*

To review a comprehensive list of all IBM education offerings, refer to the *Catalog of IBM Education*, G320-1244. To order this catalog, call IBM Direct-Education at 800-IBM-TEACH (426-8322) between 6:00 a.m. and 6:00 p.m. MST (mountain standard time). To order other IBM publications, contact your IBM representative or your local IBM branch office.

For additional information about the IBM classes listed in this book, call IBM Direct-Education at 800-IBM-TEACH (426-8322).

Types of Courses Offered by IBM

IBM offers courses in four different formats:

- Classroom courses
- Private classes
- Personalized Learning Series
- Learning Centers.

Classroom Courses

IBM offers many classes to the public at IBM Education Centers throughout the United States. IBM classroom courses encourage in-depth discussions between students and instructors. Many offer extensive labs with state-of-the-art equipment.

Note: If you are enrolling in a no-charge class, do not follow the procedures below. Instead, call your local IBM branch office.

To enroll in a classroom course offered to the public:

1. Gather the following information:
 - Course code
 - Course title
 - Class date (1st and 2nd choices)
 - IBM Customer Number
 - Purchase order number.

2. Call IBM Direct-Education at 800-IBM-TEACH (426-8322) between 6:00 a.m. and 6:00 p.m. MST. The customer service representative will confirm your enrollment and provide additional information, if necessary.
3. You will receive a written confirmation of your enrollment, including the name and code of the course you are attending and the dates and location of the class. If your enrollment status changes, you will be notified by telephone.
4. After you successfully complete the course, you will receive a completion certificate. IBM does not administer final examinations or give grades.
5. After you attend the course, IBM will bill you at the rate in effect on the date you enroll, plus any applicable taxes. Payment is due to your local IBM branch office on presentation of the invoice.

Private Classes

In addition to providing public classes at IBM Education Centers, IBM can schedule private classes at individual business locations. These private classes cover the same material as public courses. However, IBM can tailor these courses to your needs by selecting the most appropriate modules from several courses and by using examples related to your business. These reasonably-priced courses enable you to train your staff effectively and efficiently.

To request a private class:

1. Check the course description to ensure that it can be privately taught.
2. Gather the following information:
 - Course code
 - Course title
 - Requested date (1st and 2nd choices)
 - IBM Customer Number.
3. Call IBM Direct-Education at 800-IBM-TEACH (426-8322) between 6:00 am and 6:00 p.m. MST. Tell the customer service representative which class you want to request and whether you want the class tailored to your needs. The customer service representative will forward your request to an IBM education specialist.
4. Within five business days, an education specialist will contact you to confirm your request, discuss your requirements, and schedule the class.
5. After you successfully complete the course, you will receive a completion certificate. IBM does not administer final examinations or give grades.
6. After you attend the course, IBM will bill you at the rate in effect on the date you enroll, plus any applicable taxes. Payment is due to your local IBM branch office on presentation of the invoice.

Personalized Learning Series

The Personalized Learning Series provides an alternative for students who cannot attend an IBM classroom course. The course materials for these self-study courses include:

- An electronic textbook based on material in an IBM classroom course. A companion handbook contains visuals.

- A mastery test that students take at the beginning of the course to determine which sections of the textbook they need to study. If students already know information, they can skip it, thereby reducing training time.

Many Personalized Learning Series courses also include hands-on exercises.

To order a Personalized Learning Series course, contact your IBM marketing representative or an IBM Business Partner.

Learning Centers

To meet the needs of students who do not have a self-study environment available, IBM offers Learning Centers in over 150 IBM branch offices throughout the United States. Learning Centers offer a complete curriculum of self-study courses, including Discover/Education* and other self-study courses.

In each Learning Center, students study in individual work areas at their own pace. IBM Learning Centers have all the materials needed to take courses, including IBM InfoWindow* systems, IBM computer systems, and video players. Each Learning Center has an administrator who maintains a current reference library. Though administrators are not experts in all subjects taught, they can help guide students through a course.

To enroll in a Learning Center course:

1. Gather the following information:
 - Course code
 - Course title
 - Dates
 - IBM marketing representative
 - IBM Customer Number.
2. Call your local IBM branch office or nearest Learning Center. The Learning Center administrator will confirm a time and date for you to take the course.
3. After you attend the course, IBM will bill you at the rate in effect on the date you enroll, plus any applicable taxes. Payment is due to your local IBM branch office on presentation of the invoice.

SNA Education

Fundamentals of SNA

- Course number: G3717
- Duration: 3 days
- Type: Classroom (lectures, quizzes)
- Audience: Technical managers and technical personnel involved with SNA networks
- Abstract: Presents a broad and comprehensive view of the components and operation of an SNA network. Using a practical approach, SNA is described in terms of the node types and logical units that comprise the network and the protocols they use to communicate. This course also presents information on the functions and flexibility provided by SNA's architectures/extensions for peer-to-peer communications: APPC, LEN, and APPN.

SNA LU 6.2 Data Flow

- Course number: G3664
- Duration: 2 days
- Type: Classroom (lectures, class exercises)
- Audience: Personnel responsible for LU 6.2 transaction program design, communications network planning, or LU 6.2 problem isolation
- Abstract: Presents LU 6.2 from an architecture perspective— independent of the specific products that implement LU 6.2. Teaches the concepts required to design transaction programs that communicate with each other through an SNA network.

SNA LU Data Flow and Performance

- Course number: G3670
- Duration: 3.5 days
- Type: Classroom (lectures, class exercises)
- Audience: Personnel responsible for implementing SNA communications or tuning the network
- Abstract: Presents logical data flow protocols used on an LU-to-LU session and describes the performance implications of each. Also describes the way in which the user defines the implementation of these protocols in the various subsystem products.

This course covers all types of LU-to-LU sessions, including peer-to-peer sessions between T2.1 nodes. Also examines session parameters for LU types 1, 2, and 6.2.

SNA Network Tuning

- Course number: G3671
- Duration: 4.5 days
- Type: Classroom (lectures, class exercises)
- Audience: Personnel responsible for tuning an SNA network
- Abstract: Presents a methodology to identify the presence of a performance problem, to isolate the location of the problem, and to correct the problem. Covers the mechanics of tuning the network.

APPC Education

Designing Client/Server Applications Using APPC

- Course number: Call IBM Direct-Education at 800-IBM-TEACH (426-8322).
- Duration: 3 days
- Type: Classroom
- Audience: Application designers and developers who need in-depth skill in designing and writing APPC applications
- Abstract: Provides the information needed to:
 - Identify decision criteria for distributing your applications
 - Define APPC conversation types, states, and verbs
 - Explain the differences between the APPC interface and the Common Programming Interface for Communications (CPI-C)
 - Understand how APPN improves APPC configuration
 - Create efficient designs for client/server applications.

Includes the following topics:

- Why Use APPC?
- SNA Terminology
- Overview of APPC Verbs
- What Is CPI-C?
- What Is APPN?
- Concepts of Distributed Applications
- Fundamental Techniques
- Performance Techniques
- Understanding The Network
- Error Handling
- Error Reporting
- APPC Application Testing
- Performance and Optimization
- Designing Servers.

AIX Education

AIX Version 3 Host Communications

- Course number: Q1018
- Duration: 5 days
- Type: Classroom
- Audience: AIX programmers and network administrators
- Abstract: Describes how to install, configure, customize, and use the host communications products provided with the RISC System/6000* product family. Also covers AIX SNA Services, including the Network Management NetView* interface. Provides extensive hands-on lab exercises to reinforce the lectures.

AS/400 Education

AS/400 Communications Programming Workshop

- Course number: S6017
- Duration: 3 days
- Type: Lab/lecture
- Audience: Individuals responsible for writing and maintaining AS/400 RPG or COBOL programs to communicate with programs on other IBM systems
- Abstract: Provides information needed to code, enter, compile, debug, and test online AS/400 high-level language programs that communicate with programs on other IBM systems. Serves as a complementary lab class for students who attended either AS/400 System and System/3X Networking or AS/400 Networking and who want hands-on lab experience in a structured environment.

AS/400 Communication Introduction

- Course number: G3770
- Duration: 1 day
- Type: Classroom
- Audience: AS/400 administrators, data processing managers, programmers, and system programmers who need a basic understanding of the AS/400 communication capabilities
- Abstract: Covers the communication capabilities of the AS/400 to assist you in meeting your business requirements. Discusses both hardware and software communication capabilities.

AS/400 Peer Communications

- Course number: G3771
- Duration: 3 days
- Type: Classroom
- Audience: AS/400 administrators, data processing managers, programmers, and system programmers responsible for designing, installing, implementing, or operating an AS/400 that communicates in an SNA peer environment.
- Abstract: Provides details on using and implementing an AS/400 system for data communications in an SNA peer network.

AS/400 to S/390 Communications

- Course number: G3772
- Duration: 3 days
- Type: Classroom
- Audience: AS/400 administrators, data processing managers, programmers, and system programmers responsible for designing, installing, implementing, or operating an AS/400 system that communicates to an S/390* in an SNA environment.
- Abstract: Provides details on using and implementing an AS/400 system for data communications in an SNA S/390 network.

MVS Education

APPC/MVS Fundamentals

- Course number: H3922
- Duration: 1.5 days
- Type: Classroom
- Audience:
 - Application designers and programmers responsible for planning for cooperative applications
 - System programmers responsible for installing and supporting MVS resources.
- Abstract: Presents the new facilities of APPC in an MVS/ESA* environment. APPC/MVS completes the MVS partnership with other SAA* operating systems. APPC/MVS enables remote program access to MVS resources and enables MVS programs to initiate connections to remote applications. This course introduces both the programming support and the system support provided by APPC/MVS.

APPC/MVS Implementation

- Course number: H3940
- Duration: 3 days
- Type: Classroom
- Audience:
 - System programmers responsible for the installation and definition of the MVS resources used in an APPC/MVS application planning for cooperative applications
 - Application designers responsible for developing APPC/MVS applications. Note that the course does not cover programming of APPC/MVS applications.
- Abstract: Presents the implementation of APPC/MVS. This course introduces the administrative services provided by APPC/MVS and the system definitions required by MVS/ESA. The course includes machine exercises in which students fully implement an APPC/MVS application.

OS/2 Education

OS/2 EE 1.2 APPC: Concepts and Configuration

- Course number: IT286
- Duration: 127 minutes
- Type: Self-study, mixed media (Field Television Network videotape from 4/12/90)
- Audience: Technical coordinators, dealers, and IBM Business Partners
- Abstract: The first segment provides an overview of the OS/2 APPC concept, including an explanation of some APPC terms and an APPC example. The second segment presents a detailed description of the OS/2 EE APPC configuration process.

OS/2 Communications: Hands-on Workshop for Communications Manager

- Course number: G3716
- Duration: 4 days
- Type: Classroom/lab
- Audience: Technical support personnel responsible for planning, installation, user training, and support for communications workstations in a networked environment
- Abstract: Provides information on installing OS/2 Communications Manager V1.3, along with steps to plan, implement and manage the OS/2 EE Communications Manager. Laboratory projects cover 3270 emulation, 5250 emulation, asynchronous emulation, APPC (LU 6.2) to host or peer, and OS/2 LAN Requester to a server.

EASEL OS/2 EE Cooperative Processing

- Course number: IT289
- Duration: 128 minutes
- Type: Self-study (Field Television Network videotape from 5/11/90)
- Audience: Technical coordinators, dealers, and Business Partners
- Abstract: Explains IBM EASEL** for OS/2 EE, presenting EASEL concepts and facilities and an overview of how applications are produced. Topics include EASEL support for APPC Cooperative Processing.

VTAM Education

APPC/VTAM Macro Coding Workshop

- Course number: G3718
- Duration: 3 days
- Type: Classroom/labs
- Audience: VTAM application programmers and designers; VTAM system programmers who require knowledge about VTAM LU 6.2 (APPC) programming
- Abstract: Provides information on using APPC/VTAM macros to create VTAM LU 6.2 programs that communicate with other LU 6.2 programs in the network.

CICS Implementation of Intercommunication Facilities

- Course number: U3913
- Duration: 2.5 days
- Type: Classroom/labs
- Audience: Implementers of the CICS facility of ISC and MRO with CICS/ESA*, CICS/MVS*, CICS/OS/VM 1.7, and CICS/DOS/VS 1.7.
- Abstract: Provides information on implementing CICS intercommunication facilities, including CICS to CICS Intersystem Communication (ISC) using ACF/VTAM* and APPC, and CICS Multiregion Operation (MRO) using Interregion Communication (IRC).

APPC Education Offered by Other Companies

This section describes selected courses offered by the following companies:

- American Data Group, Inc.
- American Institute Consulting Group
- Applied Learning
- Automated Training Systems
- Cap Gemini Logic Monitor
- Center for Advanced Professional Development
- Communications Solutions, Inc.
- Galaxy Consultants
- Gen2 Ventures
- Kaptronix, Inc.
- Network Software Associates
- Proginet Corporation
- Saratoga Group
- Software Education Corporation
- SRA
- Systems Technology Forum.

If you know of other companies that provide courses on APPC, APPN, and CPI-C, please let us know.

American Data Group, Inc. Seminars

American Data Group (ADG) offers public seminars on VTAM network operations and other SNA topics at locations across the US. To ensure optimum interaction between instructors and participants, ADG limits enrollment in public seminars to 20 participants. All seminars can be tailored to your specific needs. ADG also provides system and application consulting services.

For more information about classes offered by American Data Group, contact:

American Data Group
P.O. Box 920697
Norcross, Georgia USA 30092
Phone: 800-521-0935 or 404-921-1123
Contact: Judith Anderson

SNA Concepts and Products

- Duration: 3.5 days
- Type: Public seminar
- Audience: Systems programmers, system engineers, network support and operations personnel, senior programmers, managers of SNA network support personnel, and others who require a firm SNA technical foundation
- Abstract: Topics include:
 - Introducing SNA
 - SNA Network Elements
 - Physical vs. Logical Units
 - Network Element Hierarchy
 - SNA Connectivity
 - SNA Element Structure
 - SNA Protocols
 - SNA Formats
 - Data Link Protocols
 - Distributed Processing with SNA
 - Controlling SNA Networks
 - Troubleshooting SNA Problems.

IBM Token-Ring for Practitioners

- Duration: 4.5 days
- Type: Public seminar
- Audience: Telecommunications analysts, system engineers, and network support personnel and managers
- Abstract: Topics include:
 - Overview of LANs
 - Token-Rings and IBM SNA Networks
 - Components of a Token-Ring
 - Using Bridges and Gateways
 - How Data Flows Across a Token-Ring
 - How Token-Rings Carry SNA Data
 - How LU 6.2 Operates on Token-Ring Networks
 - Planning, Installing, and Defining Token-Ring Networks
 - Correcting Token-Ring Problems.

American Institute Consulting Group Courses

American Institute offers a series of hands-on training courses on data communications, LANs, and PCs. They also have a 4-level certification curriculum:

- Level 1: Survey level
- Level 2: Intermediate
- Level 3: Advanced
- Level 4: Expert

For more information about classes offered by the American Institute Consulting Group, contact:

American Institute Consulting Group
437 Madison Avenue, 23rd floor
New York, New York USA 10022
Phone: 800-345-8016 or 212-826-1260
Contact: Stewart Abowitz

Hands-On APPC

- Duration: 3 days
- Type: Classroom/labs
- Audience: Network planners and technicians, application programmers, systems programmers, communications managers, and LAN specialists
- Abstract: Topics include SAA and environments, SAA distributed applications, APPC, LU 6.2 components, APPC protocol boundary, GDS, session activation, LEN, PU 2.1 components/activation, PU 2.1 link activation, and services.

Applied Learning Multimedia Courses

Applied Learning offers a wide range of multimedia courses.

For more information about courses offered by Applied Learning, contact:

Applied Learning
1751 West Diehl Road
Naperville, Illinois USA 60563
Phone: 800-433-5825 or 708-369-3000

SNA: A Layered Architecture

- Type: Eight-course interactive videodisc for the IBM InfoWindow System
- Audience: Technical managers, system programmers, network designers, and administrators
- Abstract: Examines the following topics:
 - SNA concepts and terminology
 - SNA layers and the way they communicate
 - Key services and functions performed by SNA layers
 - Logical unit types, APPC concepts, and LU 6.2 facilities
 - General requirements for interconnecting networks.

Automated Training Systems (ATS) Classes

ATS offers various self-paced, audio-cassette courses on AS/400 topics and issues.

For more information about classes offered by ATS, contact:

Automated Training Systems
21250 Califa Street, Suite 107
Woodland Hills, California USA 91367
Phone: 818-999-5753 or 800-426-8737

AS/400 Connectivity Options

- Duration: Approximately 30 hours (self-paced)
- Type: Self-study (audio-cassettes, workbooks, and diskettes)
- Audience: Technical personnel responsible for network design, hardware configuration, software implementation, and maintenance
- Abstract: Provides comprehensive, practical training in connecting AS/400s and other systems/devices via communications. Covers a five-step approach to protocol, hardware and software selection; a step-by-step guide to creating and using configurations; and a detailed look at protocols. Includes information on:
 - Planning for Remote Communications
 - Communications Configuration
 - Communication Features
 - Communication Functions Supported (APPC and APPN included)
 - Workstations and Controllers
 - Local Cabling Media
 - Troubleshooting.

AS/400 APPC Topics

- Duration: Approximately 30 hours (self-paced)
- Type: Self-study (audio-cassettes, workbooks, and diskettes)
- Audience: Technical personnel responsible for communications software implementation, network design, and maintenance
- Abstract: Provides comprehensive, practical training in a variety of APPC topics. This course addresses configuring two or more AS/400s in a network using APPC, and introducing APPN. Includes a step-by-step guide to setting up switch and nonswitched configurations. Other topics include:
 - APPC Communications Configuration
 - Display Station Pass-Through (DSPT)
 - File Transfer Support (FTS)
 - Distributed Data Management (DDM)
 - System Network Architecture Distribution Services (SNADS)
 - APPN Communications Configuration.

Cap Gemini Logic Monitor

Cap Gemini Logic Monitor conducts courses on distributed processing and APPC, as well as seminars on communications with personal computers. Most seminars are conducted in Stockholm, but courses can be scheduled for other sites in Europe and the U.S.

For more information on seminars offered by Cap Gemini Logic Monitor, contact:

Cap Gemini Logic Monitor
Rådmansgatan 49
S-113 60 Stockholm Sweden
Phone: 46 8 300710
Contact: Tibor Karaszi

Client/Server and Distributed Processing

- Duration: 2 days
- Type: Seminar
- Audience: Anyone responsible for planning, evaluating, or developing applications in a distributed environment
- Abstract: Topics include:
 - Overview of SAA
 - Client/Server and Cooperative Processing
 - SNA Subarea Networking
 - Advanced Peer-to-Peer Networking
 - Local Area Networks
 - Overview of APPC and CPI-C
 - Relational Databases
 - Distributed Databases
 - Presentation: CUA* principles, Presentation Manager, Windows.

APPC Programming Workshop

- Duration: 4 days
- Type: Seminar and case study
- Audience: Systems analysts and programmers who need to understand how to design and code programs using APPC. Participants must be familiar with application programming in C and COBOL.
- Abstract: Topics include:
 - APPC Base Protocols
 - LU 6.2 Functions
 - Verbs in APPC
 - CPI-C
 - APPC Support and Programming for CICS
 - APPC Support and Programming for OS/2
 - Designing and Coding a Distributed Application.

Center for Advanced Professional Development

The Center for Advanced Professional Development offers onsite technical seminars on SNA topics. Seminars include both instructor-led discussions and hands-on activities. Class sizes range from 5 to 75 students; a maximum of 30 students is recommended. These seminars can be customized to meet your specific requirements.

For more information on onsite seminars offered by Center, contact:

Center for Advanced Professional Development
1820 E. Garry St., Suite 110
Santa Ana, California USA 92705
Phone: 714-261-0240
Fax: 714-261-6277
Contact: Barbara Stern

SNA Concepts, Design, and Implementation

- Duration: 2 days
- Type: Onsite seminar
- Audience: Anyone interested in learning the fundamentals of the latest SNA technology
- Abstract: Topics include:
 - SNA Concepts
 - Protocol Design
 - LU-LU Session Type 6.2 (APPC)
 - Physical Unit Type 2.1 (LEN)
 - Multiple Systems Networking Facility
 - SNA Products
 - Architectural Issues and IBM Future Directions.

Concepts of SNA: Networking and Gateways

- Duration: 3-5 days
- Type: Onsite seminar
- Audience: Data processing managers, systems analysts, network planners, telecommunications managers, consultants, system designers, and programmers

- Abstract: Topics include:
 - Basis Concepts of SNA
 - VTAM and TCAM Concepts
 - Layering of SNA
 - SNA Operating Sequences
 - SNA Network Interconnection
 - Gateway Functions from Major Vendors
 - Systems Management
 - SNA Applications
 - Protocol Converters and Terminal Emulators
 - X.25 Packet Switching and Services for SNA
 - SNA Updates.

Advanced SNA Topics: Peer-to-Peer Networking and SAA

- Duration: 3-5 days
- Type: Onsite seminar
- Audience: Data processing managers, systems analysts, network planners, telecommunications managers, consultants, system designers, and programmers
- Abstract: Topics include:
 - Peer-to-Peer and SAA Architectural Strategies and Issues
 - Network Architecture
 - Network Operating System and Local Area Networks
 - SNA Background
 - Extended SNA Features for Peer-to-Peer Communications
 - Productivity Implementation Extensions in Node Connectivity
 - Applications Extensions
 - SAA Basics
 - Compound Electronic Documents
 - Cooperative Processing
 - SAA Connectivity
 - Implementations of LU 6.2
 - Common User Access* (CUA)
 - Common Programming Interface (CPI)
 - Common Programming Interface for Communications (CPI-C)
 - SAA Services
 - Application Design for SAA.

Communications Solutions Onsite Seminars

Communications Solutions, Inc. (CSI) offers a series of one-, two-, and three-day onsite technical seminars focused on networking technologies. These seminars can be customized to address the specific technical issues that are important to your organization.

For more information on onsite seminars offered by CSI, contact:

Communications Solutions, Inc.
2071 Hamilton Avenue
San Jose, California USA 95125
Phone: 408-371-5790
Fax: 408-371-5779

Using Advanced Program-to-Program Communications

- Duration: 2 days
- Type: Onsite seminar
- Audience: Applications programmers
- Abstract: Topics include LU 6.2 architecture, refining and completing transaction processing verbs, control operator verbs, SAA Common Programming Interface, and an APPC case study (a test program running a local conversation). APPC for the OS/2 EE environment is used to illustrate the details necessary for mastering APPC technology. A case study of an actual LU 6.2 transaction program shows the step-by-step process of using APPC.

SNA Architecture and Implementation

- Duration: 3 days
- Type: Onsite seminar
- Abstract: Technical introduction to IBM's Systems Network Architecture (SNA), including key concepts, protocols, and functions at each architectural layer.

IBM's Distributed Networking Architecture

- Duration: 3 days
- Type: Onsite seminar
- Abstract: Covers IBM's latest distributed architectures and protocols, including LU 6.2/APPCC, LEN/APPN/Node Type 2.1, and SAA.

SNA Network Management

- Duration: 2 days
- Type: Onsite seminar
- Abstract: Covers the entire scope of managing an SNA or multivendor data communications network. Focuses on IBM's networking management architectures, including NetView and NetView/PC, and also includes reviews of data communication management products from many other vendors such as AT&T, DEC, and HP.

SNA Overview

- Duration: 1 day
- Type: Onsite seminar
- Abstract: Provides an introduction to Systems Network Architecture (SNA), including basic concepts, layers, connectivity, logical units, and SNA's relationship to other networking technologies.

Galaxy Consultants Classes

Galaxy Consultants specializes in classes and consulting services in IBM SNA/LU 6.2, APPC, and SAA/CPI-C. They offer a series of basic and advanced seminars for the general public in major cities throughout the USA. Hotel accommodations and group discounts are available.

For more information about classes offered by Galaxy Consultants, contact:

Galaxy Consultants, Inc.
17235 Buena Vista Avenue
Los Gatos, California USA 95030
Phone: 408-354-2997
Fax: 408-354-2365

Introduction to SAA Distributed Network Architectures

- Duration: 1 day
- Type: Seminar
- Audience: Managers
- Abstract: Presents an overview of SAA/LU 6.2 distributed networking standards and IBM strategies for the 90's. Covers the emerging IBM communications architectures, technologies, products and strategies. Evaluates and compares SAA Common Communications with the international standards OSI and X.25.

SNA/LU 6.2 and PU 2.1 Distributed Networks and Products

- Duration: 2 days
- Type: Seminar
- Audience: Networking and technical staff, communications specialists, network designers, analysts, and system programmers
- Abstract: Provides in-depth information on the new IBM distributed standards LU 6.2, Node Type 2.1 and APPC networking architectures and implementations on PC/DOS, OS/2 EE, AS/400 and IBM hosts. Covers LU 6.2 and Node Type 2.1 network message flows, network start-up and configuration, and the issues related to supporting and managing LU 6.2 distributed networks.

APPC/LU 6.2 and SAA/CPI Distributed Application Design and Implementation Issues

- Duration: 2 days
- Type: Seminar
- Audience: Distributed application designers, programmers, analysts, APPC implementers, technical and support staff
- Abstract: Provides in-depth knowledge of APPC/LU 6.2 and SAA/CPI-C architectures and implementations, and the issues related to designing and implementing APPC/LU 6.2 distributed applications.

Gen2 Ventures Seminars

Gen2 Ventures offers public and private seminars as well as video training and self-study courses on SNA networking topics. All seminars are designed and conducted by the cofounders of Gen2 Ventures, Don Czubek and Steve Randesi. The seminars can be customized to meet your specific requirements. Gen2 Ventures also provides consulting services on APPC, APPN, CPI-C, and related technologies.

For more information on onsite seminars offered by Gen2 Ventures, contact:

Gen2 Ventures
 12930 Saratoga Avenue, Suite D-5
 Saratoga, California USA 95070
 Phone: 408-446-2277
 Fax: 408-446-4755

LU 6.2 and APPN Video Seminar

- Type: Videotape with student workbooks
- Audience: Networking professionals who need an update on SNA's latest technologies
- Abstract: Includes the following topics:
 - Introduction to APPC
 - LU 6.2 Base and Towers
 - APPC Conversations vs. SNA Sessions
 - Peer-to-Peer Networking in SNA
 - Overview of Low-Entry Networking (LEN)
 - APPN Node Types
 - Structure of APPN Peer-to-Peer Networks
 - How SNA Subarea Networks Fit into APPN.

SNA Video Seminar

- Type: Videotapes with student workbooks
- Audience: Includes:
 - Sales and marketing representatives and support people
 - Executives
 - MIS/DP people
 - Network designers.
- Abstract: Includes the following topics:
 - The SNA Environment and Overview of SNA Layering (46 minutes)
 - SNA Network Components and Data Structures (41 minutes)
 - IBM's SNA Hardware and Software Products (37 minutes)
 - SNA Network Configuration and Start-Up (34 minutes)
 - SNA Functional Layers and Protocols I (34 minutes)
 - SNA Functional Layers and Protocols II (52 minutes)
 - SNA APPC and Peer-to-Peer Communications (30 minutes)
 - SNA Network Management and Application Architectures (51 minutes).

SNA Self-Study Courses

- Duration: 3-4 hours per course
- Type: PC-based interactive software
- Abstract: Gen2 provides self-study courses on the following topics:
 - SNA
 - LU 6.2 and Peer-to-Peer Communications
 - SAA, TCP/IP and OSI.

Understanding SNA

- Duration: 2 days
- Type: Public or private (onsite) seminar
- Audience: Anyone who wants a basic understanding of SNA
- Abstract: Includes the following topics:
 - SNA Architectural Layering Overview
 - SNA Architectural Components
 - SNA Data Formats
 - SNA Implementations in IBM Communications Products
 - SNA Network Operations
 - SNA Commands and Protocols
 - SNA Logical Unit (LU) Types
 - SNA Peer-to-Peer Networking
 - SNA Network Management.

Cooperative Processing with SAA

- Duration: 2 days
- Type: Public or private (onsite) seminar
- Audience: Anyone who wants an in-depth understanding of SAA technologies
- Abstract: Includes the following topics:
 - Introduction to SAA
 - SAA Strategic Issues
 - Key Elements of SAA
 - Common User Access (CUA)
 - Common Programming Interface (CPI)
 - Common Communications Support (CCS)
 - SAA Products
 - SAA Directions.

Note: For those who want a basic understanding of SAA, Gen2 also offers a one-day onsite seminar on these topics.

Interoperability and Internetworking with SNA

- Duration: 2 days
- Type: Public or private (onsite) seminar
- Audience: Networking professionals with a working knowledge of SNA who need to integrate products that support TCP/IP, OSI, DECnet** and PC-LAN products
- Abstract: Includes the following topics:
 - Interoperability and Internetworking in SNA Networks
 - Basic Approaches to Interoperability
 - Overview of TCP/IP
 - Overview of OSI
 - Overview of DECnet
 - Overview of LAN Networking Technologies
 - The Role of Bridges
 - The Role of Routers
 - The Role of Gateways
 - Network Management Issues
 - The Future of Multiprotocol SNA Networking.

Internetworking with the New SNA

- Duration: 1 day
- Type: Onsite seminar
- Audience: Networking professionals who need to know the latest developments in SNA and IBM's SNA-based products
- Abstract: Includes the following topics:
 - Review of the Current SNA Trends
 - Changing Shape of SNA Networking
 - The New Advanced Peer-to-Peer Networking (APPN)
 - Management of Peer-to-Peer SNA Networks
 - New SNA LAN Support
 - Multiprotocol Backbones for SNA Networks
 - SNA Coexistence with Other Industry Standard Protocols
 - Future of SNA Networking.

Selling and Supporting SNA Products

- Duration: 1 day
- Type: Onsite seminar
- Audience: Anyone involved in marketing or supporting SNA-compatible products
- Abstract: Includes the following topics:
 - Overview of the Mainframe Environment
 - Overview of SNA
 - IBM Software Packages and Products that Interface with Them
 - IBM Hardware Products
 - Compatibility and Configuration Issues.

SAA vs. AIX: Conflict or Coexistence?

- Duration: 2 days
- Type: Onsite seminar
- Audience: Anyone who works with either (1) IBM's cooperative processing and networking products or (2) AIX platforms.
- Abstract: Includes the following topics:
 - IBM's SAA Strategy
 - SAA Overview
 - SAA Platforms
 - IBM's AIX Strategy
 - AIX Family Definition
 - AIX Platforms
 - Tying SAA and AIX Together.

IBM Networking for the 1990s

- Duration: 2 days
- Type: Onsite seminar
- Audience: Networking professionals who need an overview of IBM's major networking architectures
- Abstract: Includes the following topics:
 - IBM's Major Strategies
 - Review of the Current State of SNA
 - Changing Shape of SNA Networking
 - Review of the Current State of SAA
 - SAA vs. UNIX** and Open Systems
 - Introduction to the SystemView* Architecture
 - Impact of the SystemView Architecture on Network Management
 - How the Three Major Architectures Work Together.

Kaptronix Seminars

Kaptronix, Inc. offers various seminars taught by experts on SNA networks and PC LANs. Hands-on knowledge is a part of every teaching hour. In addition, actual examples and extensive reviews help reinforce concepts and prepare for appropriate implementation and management.

Kaptronix also offers onsite training for groups of eight or more. Onsite seminars can be customized to your specific requirements.

For more information on classes offered by Kaptronix, contact:

Kaptronix, Inc.
 332 Lincoln Drive
 Haworth, New Jersey USA 07641
 Phone: 201-769-4250
 Contact: Anne Kielblock

Networking and Interoperability with IBM Systems

- Type: Seminar
- Abstract: Set of seven seminars touring the US. Seminars include:
 - Data Communications Concepts
 - SNA Fundamentals
 - Token Ring and SNA: Gateways, Bridges, and Network Management
 - SNA Gateways and Interoperability
 - APPC/LU 6.2: Applications and Implementations (see description below).

APPC/LU 6.2: Applications and Implementations

- Duration: 2 days
- Type: Seminar
- Audience: Technology and systems planners, systems designers and analysts, applications programmers, software support personnel, product developers, and APPC product marketing personnel
- Abstract: Provides a thorough discussion of APPC/LU 6.2 architecture and products. Also presents SAA's Common Programming Interface for Communications (CPI-C), a programming interface for both APPC and OSI transaction programs. The seminar answers the following questions:
 - What are the major characteristics of the APPC/LU 6.2 environment?
 - What are the roles of independent LUs?
 - What are the implications of PU 2.1?
 - What connectivity options are available?
 - Should you use CPI-C or the APPC API?
 - How can you use APPC/LU 6.2 in a PC/LAN environment?
 - How do you build applications, especially distributed applications, in these environments? What are the pitfalls?

Network Software Associates Services

Network Software Associates provides an APPC Developer's Kit to complement the APPC courses offered by Galaxy Consultants. If you purchase the APPC Developer's Kit, you receive discounts on Galaxy's courses and training video. For more information about Galaxy's courses, see "Galaxy Consultants Classes" on page 22. Network Software Associates also provides a phone support service and onsite consulting.

For more information on services offered by Network Software Associates, contact:

Network Software Associates, Inc.
 39 Argonaut
 Laguna Hills, California USA 92656
 Phone: 714-768-4013 or 800-352-3270
 Fax: 714-768-5049
 Contact: Karen O'Callaghan

APPC Developer's Kit

- Contents:
 - Two copies of AdaptSNA APPC, including the ASSIST toolkit
 - One copy of AdaptSNA APPC+3270
 - Source code samples
 - Technical reference documentation
 - PC-to-PC testing link drivers.

Proginet Corporation Seminars

Proginet Corporation offers courses on LU 6.2 and related topics at locations in Europe, Africa, Australia, and North America. Proginet's training focuses on third-party implementations of LU 6.2. Proginet also provides consulting, systems integration, software, and publications on LU 6.2.

For more information on seminars offered by Proginet, contact:

Proginet Corporation
 50 Charles Lindbergh Boulevard
 Uniondale, New York USA 11553
 Phone: 516-228-6616
 Fax: 516-228-6605
 Contact: Joe Mohen

Logical Unit 6.2

- Duration: 2 days
- Type: Seminar with case studies and exercises
- Audience: Managers, strategists, programmers, systems programmers, support staff, data communications specialists
- Abstract: Provides a detailed investigation of LU 6.2 and APPC, and their implementations in an IBM environment. Topics include:
 - Review of SNA Fundamentals
 - Introduction to APPC
 - Overview of Verbs
 - Option Sets
 - Composition of the Logical Unit
 - Transmission Control Layer
 - Data Flow Control
 - Presentation Services
 - Security
 - Protocol Boundary for Transaction Programmers
 - Debugging
 - Market Review of APPC Platforms
 - Practical Considerations and Performance Considerations
 - Common Programming Interface for Communications.

Saratoga Group Computer-Aided Instruction Courses

The Saratoga Group provides PC-based learning products that make it easy and convenient to learn complex technologies.

These "personal trainer" products are available in several formats: PC software, audio cassettes, and/or videotapes. In addition, hard-copy reference materials accompany each course.

These materials include:

- A Reference Guide, which provides a concise presentation of key topics related to the subject
- A Reference Card, which lists important acronyms, products, and/or topics that users can scan quickly.

For more information on computer-based courses offered by The Saratoga Group, contact:

The Saratoga Group

12930 Saratoga Avenue, Suite A-1

Saratoga, California USA 95070

Phone: 408-446-9115

Fax: 408-446-4755

Contact: Stuart Skjerven

SNA Desktop Seminar

- Type: DeskTop Seminar (diskettes)
- Abstract: Topics include:
 - Introduction to SNA
 - The Structure of an SNA Network
 - SNA Functional Layering
 - Architecture of Network Nodes
 - SNA Data Structures
 - How IBM Products Implement SNA.

LU 6.2 & Peer-to-Peer Communications

- Type: DeskTop Seminar (diskettes)
- Abstract: Topics include:
 - Evolution of SNA and Logical Unit 6.2
 - LU 6.2 (APPC)
 - Node Type 2.1 (Low Entry Networking)
 - LU 6.2 in IBM Products
 - LU 6.2 in Systems Application Architecture*.

Systems Application Architecture

- Type: DeskTop Seminar (diskettes)
- Abstract: Topics include:
 - What is SAA?
 - Common User Access (CUA)
 - Common Programming Interface (CPI)
 - Common Communications Support (CCS)
 - SAA in IBM Products.

Software Education Corporation Courses

Software Education Corporation offers technical training on APPC and SNA topics, as well as seminars on language and programming skills, specialized software, and design and management concepts. All training can be customized to meet specific educational and technical needs.

For more information on Software Education Corporation, contact:

Software Education Corporation
P.O. Box 155
Marlboro, New Jersey USA 07746
Phone: 908-946-0606
Fax: 908-946-3332
Contact: Doug Edwards

AS/400 Advanced Program-to-Program Communications

- Duration: 3 days
- Type: Customized seminar
- Abstract: Topics include:
 - Introduction to Distributed Processing
 - Overview of SNA Concepts
 - APPC Verb Set
 - OS/400 APPC
 - Configuring OS/400 APPC
 - APPC in Other Environments.

Advanced Program-to-Program Communication

- Duration: 4-5 days
- Type: Customized seminar with labs
- Abstract: Topics include:
 - Overview of Distributed Processing
 - Introduction to APPC Concepts
 - APPC Verb Set
 - Attach Manager
 - Coding Conventions
 - Managing Links and Sessions
 - APPC in Other Environments.

SRA Self-Study Courses

The self-study courses from SRA are designed to complement IBM's curriculum of classroom courses. You can take these courses at IBM Learning Centers or your own business location.

SRA courses follow a mini-course format; many hours of instruction are divided into manageable 20- to 40-minute segments. Exercises give students an opportunity to practice the skills presented, while mastery tests help students evaluate their performance.

SRA courses are available in many media, from self-study manuals to the most sophisticated interactive video. Most SRA courses also include a Personal Reference Guide, the student's guide to the course. Personal Reference Guides serve as workbooks during the course and as valuable reference tools afterwards.

To order SRA classes, contact:

SRA

Phone: 800-SRA-1277

For information on invoices and billing, contact:

SRA Direct

Phone: 312-984-7317

For other inquiries, contact:

SRA Market

Phone: 312-984-7110

SNA Fundamental Series

- Type: Self-study (diskettes, texts, videotape, etc.)
- Abstract: Covers the overall hardware and software environment in which SNA fits. The courses included in the series include:
 - The SNA Environment (course number 32045)
 - SNA Sessions between Logical Units (course number 32046)
 - Configuring and Controlling SNA Networks (course number 32047).

SNA Sessions between Logical Units

- Course number: 32046
- Duration: 5-7 hours
- Type: Self-study (computer-based training)
- Audience: Systems analysts and technical staff
- Abstract: Provides a basis for understanding SNA technologies. Serves as a foundation for more advanced courses on SNA.

SNA LU 6.2 Data Flow and Transaction Programming

- Course number: 32054
- Duration: 5-7 hours
- Type: Self-study (computer-based training)
- Audience: Systems analysts and technical staff
- Abstract: Covers the capabilities of LU 6.2 and Node Type 2.1 architectures, showing how implementations of these architectures provides APPC facilities, the program interface associated with LU 6.2.

Systems Technology Forum Seminars

Systems Technology Forum seminars are conducted by professionals in the telecommunications field. In-class presentations are enhanced by computer-generated graphics. Course materials include a course notebook.

For more information on seminars offered by Systems Technology Forum, contact:

Systems Technology Forum
 10201 Lee Highway, Suite 150
 Fairfax, Virginia USA 22030
 Phone: 800-336-7409 or 703-591-3666
 Fax: 703-273-7935

Systems Network Architecture (SNA)

- Duration: 3 days
- Type: Seminar
- Audience: Managers of telecommunications, systems engineers, communications managers, communications software specialists, and network planners
- Abstract: Focuses on SNA as a data communication architecture: its concepts, components, and protocol. Addresses SNA as it may apply to your communication strategies. Reviews the advantages and disadvantages of all SNA network topologies. Covers various aspects of components, functions, and protocol as they relate to commercial products.

IBM Systems Network Architecture Technical Overview is used as a reference manual for this course.

Advanced SNA: APPC

- Duration: 2 days
- Type: Seminar
- Audience: Product managers, data network professionals, systems managers, telecommunications analysts, senior programmers, computer analysts, and project leaders
- Abstract: Offers an in-depth understanding of LU 6.2 and SNA. Provides detailed information, both practical and theoretical, about the new form of connectivity, the new program interface, and other new architectures. Examines five different implementations of LU 6.2: System/38, AS/400, Scanmaster, APPC for the IBM PC under DOS and OS/2.

SNA Transaction Programmer's Reference Manual for LU 6.2 is used as a reference manual for this course.

Education Offered by Other Companies

IBM Manuals and Publications on APPC

This section lists over 150 different IBM publications on APPC and related topics. This section provides brief descriptions of the following types of publications:

- General publications on distributed computing
- APPC, APPN, and CPI-C publications
- Publications for each of the platforms on which APPC is available
- Technical SNA publications
- Inter-Operation Test Services (IOTS) information.

To order IBM publications, contact your IBM representative or your local IBM branch office.

Read These Books First

These books provide an excellent introduction to APPC, CPI-C, and APPN.

APPC and CPI-C Product Implementations, GG24-3520. Shows how different products have implemented LU 6.2 and compares the different product implementations against the LU 6.2 architecture. Contains chapters comparing APPC to NetBIOS, TCP/IP, and OSI.

APPN Architecture and Product Implementation, GG24-3669. Contains a tutorial on APPN, as well as an overview of the various product implementations.

Distributed Computing

This section lists current IBM publications on general topics in distributed computing.

Transaction Processing: Concepts and Products, GC33-0754. Provides an overview of transaction processing and describes IBM's transaction processing products.

APPC, APPN, and CPI-C Publications

This section lists current IBM publications related to general APPC, APPN, and CPI-C topics.

APPC (Advanced Program-to-Program Communications)

APPC and CPI-C Product Implementations, GG24-3520. Shows how different products have implemented LU 6.2 and compares the different product implementations against the LU 6.2 architecture. Contains chapters comparing APPC to NetBIOS, TCP/IP, and OSI.

Program-to-Program Communications in SAA Environments, GG24-3482.

Systems Network Architecture Technical Overview, GC30-3073.

SNA Transaction Programmer's Reference Manual for LU 6.2, GC30-3084. Presents detailed information on the functions that SNA LU 6.2 provides to systems and applications programs through the description of the protocol boundary for LU 6.2.

SNA LU Type 6.2 Reference: Peer Protocols, SC31-6808. A detailed, formal, and comprehensive definition of LU 6.2 using SSCP-independent protocols.

SNA Format and Protocol Reference Manual: Architecture Logic for Type 2.1 Nodes, SC30-3422. Defines the protocols and operation of an SNA Type 2.1 Node.

Customer Cues Coexistence Solution Series, G320-9561. Discusses Forest Computer's Connection Systems, which allows AS/400 and DEC VAX computers to coexist by joining SNA and DECnet networks. LU 6.2 is discussed.

Advanced Architectures: APPC, SNADS, DIA, and DCA, GG22-9105. Examines the relationship between APPC, SNADS, DIA, and DCA. Emphasis on APPC and SNADS and how together these architectures provide an advanced form of communication through an SNA network, and form a base to support architectures for specific applications, such as DIA and DCA.

Low Entry Networking and APPC, GG22-9137.

Enterprise Networking with SNA T2.1 Nodes, GG24-3433.

SNA Networks for Small Systems, GG66-0216.

APPN (Advanced Peer-to-Peer Networking)

APPN Architecture and Product Implementation, GG24-3669. Contains a tutorial on APPN, as well as an overview of the various product implementations.

An Overview: Advanced Peer-to-Peer Networking, GC38-7026. Discusses SNA LEN as a new extension to the SNA architecture that supports peer-to-peer communications S/36 and AS/400.

APPN/Subarea Networking Design and Interconnection, GG24-3364. A guide for planning interconnection of APPN and SNA subarea networks.

CPI-C (Common Programming Interface for Communications)

Note: A related book, *X/Open Developer's Specifications (CPI-C)* is described on page 47.

SAA Common Programming Interface Communications Reference, SC26-4399-4. The definitive reference on CPI-C verbs and usage.

The latest edition of this book includes CPI-C information for CICS, MVS, and OS/2.

Program-to-Program Communications in Systems Application Architecture (SAA) Environments, GG24-3482. Provides extended information on configuring VM, OS/2, and OS/400* for SAA communications.

VM Programmable Workstation Communication Services, Programming for VM PWSCS, SC24-5586. VM PWSCS provides a CPI-C programming interface for developing applications that communicate between VM and either DOS, Microsoft Windows**, OS/2, or AIX workstations. While the application programming interface is CPI-C, the underlying communications protocol is not APPC/LU 6.2.

Common Programming Interface Resource Recovery Reference, SC31-6821. Defines the resource recovery element of the SAA common programming interface (CPI). SAA resource recovery, also known as CPI Resource Recovery, provides a consistent interface to system services that enable programs to coordinate exchanges of data and updates to databases and other resources.

Publications for Product Platforms

The product platforms are listed below in alphabetical order. Publications that apply to more than one platform appear under each of the appropriate platforms.

General Information on IBM Platforms

Network Products Reference, GX28-8002-01. Provides a concise reference for IBM communications software and hardware products.

AIX on the RISC System/6000

AIX Version 3: Communications Concepts and Procedures, GC23-2203. Describes how to define the SNA profiles required to establish communication from the RISC System/6000 to other APPC systems.

AIX Version 3: Communication Programming Concepts, GC23-2206. Describes the programming interface for LU 6.2.

VM Programmable Workstation Communication Services, Programming for VM PWSCS, SC24-5586. VM PWSCS provides a CPI-C programming interface for developing applications that communicate between VM and either DOS, Windows, OS/2, or AIX workstations. While the application programming interface is CPI-C, the underlying communications protocol is not APPC/LU 6.2.

AS/400

AS/400 Communications: APPC Programmer's Guide, SC21-8189. Describes the APPC support provided by the AS/400 system and is intended to be used as a guide for developing application programs and defining the communications environment.

Examples of APPC Between the AS/400 and CICS, GC21-8183. A short book containing two extended examples of APPC between the AS/400 and CICS on MVS.

OS/2 EE APPC to AS/400 APPC Programming, GC21-8247. Demonstrates how to use the OS/2 EE API to allow application programs running on a OS/2 system to communicate with application programs running on an AS/400 system

AS/400 PC Support: DOS Router Application Program Interface Reference, SC21-8254. Describes the APPC program interface provided by the PC Support DOS router function.

AS/400 PC Support: DOS and OS/2 Technical Reference, SC21-8091.

AS/400 PC Support: OS/2 Planning and Installation Guide, SC21-8196.

AS/400 Communications: User's Guide, SC21-9601.

AS/400 Programming: Performance Capabilities Reference, ZC21-8166.

IBM AS/400 - Consultant Reports on Client/Server Computing (by INTECO Corporation), G325-4131, 4/91.

AS/400 Communications: APPN Network User's Guide, SC21-8188. Describes the APPN support provided by the AS/400 system. Also describes APPN concepts and provides information for configuring an APPN network. APPN advanced considerations and configuration examples are included.

AS/400 Distributed Systems Implementation Guide Volume 3, GG22-9458. Discusses the decision criteria that must be considered when choosing a topology for an AS/400 System APPN network.

S/3X and AS/400 APPN Nodes Using the SNA/LEN Subarea, GG24-3288. Describes the incorporation of a S/370 SNA subarea into a network comprising APPN network nodes. Intended for systems programmers and systems engineers in the intermediate systems and VTAM/NCP areas.

AS/400, System/38, and PS/2 as T 2.1 Nodes in a Subarea Network*, GG24-3420. Contains information on the implementation of APPN in a network consisting of an AS/400, an S/38, a PS/2, and a S/370 SNA subarea network.

Managing Multiple AS/400s in a Peer Network, GG24-3614. Describes the tasks required to manage multiple AS/400 systems in a networked environment with AS/400 acting as the management focal point.

AS/400 Communications: APPC and APPN User's Guide, SC21-9598 or SQ00-1254. Describes the APPC and APPN support provided by the AS/400 system and is intended to be used as a guide in developing communications application programs that use APPC/APPN.

Networking Services/2 Installation, Customization, and Operation, GG24-3662. Provides planning information for Networking Services/2. Contains an extended example on connecting Networking Services/2 and AS/400, with their respective configurations.

Networking with AS/400s in an SNA Network, GG66-3161.

Transaction Processing: Concepts and Products, GC33-0754. Provides an overview of transaction processing and describes IBM's transaction processing products. Includes an appendix on AS/400.

CICS (Customer Information Control System)

Examples of APPC Between the AS/400 and CICS, GC21-8183. Short book containing two extended examples of APPC between the AS/400 and a System/370 running CICS.

CICS/OS/VS Version 1 Intercommunication Facilities Guide, SC33-0230. Contains guidance information on intersystem communication (CICS to CICS, CICS to APPC system, and CICS to IMS/VS) and CICS multiregion operation.

CICS/MVS 2.1 Intercommunication Guide, SC33-0519. Contains guidance information on intersystem communication (CICS to CICS, CICS to APPC system, and CICS to IMS/VS) and CICS multiregion operation.

CICS/ESA Version 3 Intercommunication Guide, SC33-0657.

CICS/ESA Version 3.1.1 Application Programmer's Reference, SC33-0676.

CICS/VSE Intercommunication Guide Version 2*, SC33-0701. Contains guidance information on intersystem communication (CICS to CICS, CICS to APPC system, and CICS to IMS/VS) and CICS multiregion operation.

Experiences Connecting APPC/PC and CICS/VS with the 3174 Token-Ring, GG66-0287.

APPC Security in a Network with System/36, System/38, and CICS/VS, GG22-9427. Intended as a guide for systems programmers for implementing LU 6.2 security between System/36, System/38, and CICS systems.

National Support Center CICS/VS APPC, G320-0579. Views APPC primarily from a CICS/VS perspective. However, most of the information about the reasons for the evolution of this architecture and the functions it provides may be applied to other products implementing support for LU 6.2.

Transaction Processing: Concepts and Products, GC33-0754. Provides an overview of transaction processing and describes IBM's transaction processing products. Includes an appendix on CICS.

CICS OS/2

CICS OS/2 Version 1.20 System and Application Guide, SC33-0616.

Communicating with CICS OS/2, SC33-0736.

CICS OS/2 Communications with CICS/VSE, GG24-3460. Designed to be a cookbook for installing and configuring CICS OS/2 and for configuring and testing Function Shipping (FS) and Transaction Routing (TR) on an LU 6.2 link.

CICS OS/2 and CICS/ESA Cooperative Processing: Implementation Examples, GG24-3541.

DOS

APPC/PC User Application Interface, GG24-3025.

Introduction to Programming for APPC/PC, GG24-3034. Provides an introduction to APPC/PC which allows users to write transaction programs for a PC that will execute in cooperation with transaction programs on other APPC systems, according to the LU 6.2 architecture.

IBM APPC/PC Programming, SX27-3757.

Experiences Connecting APPC/PC and CICS/VS with the 3174 Token-Ring, GG66-0287.

APPC/PC Programming Guide, SC40-0100. This publication helps application programmers develop programs that use the APPC/PC API and can communicate with other APPC systems.

AS/400 PC Support: DOS Router Application Program Interface Reference, SC21-8254. Describes the APPC program interface provided by the PC Support DOS APPC router function.

AS/400 PC Support: DOS and OS/2 Technical Reference, SC21-8091.

VM Programmable Workstation Communication Services, Programming for VM PWSCS, SC24-5586. VM PWSCS provides a CPI-C programming interface for developing applications that communicate between VM and either DOS, Windows, OS/2, or AIX workstations. While the application programming interface is CPI-C, the underlying communications protocol is not APPC/LU 6.2.

IMS (Information Management System)

IMS/VS LU 6.2 Adapter Function and Implementation, GG24-3323. Provides hints and tips for installing, implementing and customizing the Adapter for LU 6.2 application.

IMS/VS Version 2 Release 2 LU 6.1 Adapter for LU 6.2 Applications, SC26-4328. Describes how to install and operate the IMS LU 6.1 Adapter for LU 6.2 applications in an installation.

IMS/ESA V3R1 LU 6.1 Adapter for LU 6.2, SC26-4392*. Describes how to install and operate the IMS LU 6.1 Adapter for LU 6.2 applications in an installation.

IMS LU 6.1 Adapter for LU 6.2 Applications, SH20-9254. Describes the tasks a system programmer or applications programmer must perform to use the IMS/VS LU 6.2 Adapter.

Transaction Processing: Concepts and Products, GC33-0754. Provides an overview of transaction processing and describes IBM's transaction processing products. Includes an appendix on CICS.

MVS (Multiple Virtual Storage)

APPC Programming Considerations in MVS/ESA and OS/2, GG24-3818. Provides information about developing cooperative applications using APPC/MVS and Networking Services/2 in the MVS/ESA and OS/2 environments.

MVS/ESA Applications Development: Writing Transaction Programs for APPC/MVS, GC28-1121. Describes how to design, code, and test APPC/MVS transaction programs, and how to define MVS using TP profiles and side information.

MVS/ESA Planning: APPC Management, GC28-1110.

MVS/ESA APPC/MVS Handbook for the OS/2 System Administrator, GC28-1133.

MVS/ESA SP Version 4 APPC/MVS, GG24-3596. Describes the functions provided by the implementation of the APPC protocols in APPC/MVS.

MVS/ESA SP Version 4 APPC/MVS Technical Presentation Guide, GG24-3596.

SAA and LU 6.2 Considerations for CICS/MVS Applications, GG24-3295. Contains guidelines on CICS/MVS application design in an SAA environment using LU 6.2 communication.

Performance Considerations in an APPC/MVS Environment, GG66-3206. Intended to help customers tune APPC/MVS and APPC/MVS applications.

*VTAM Programming for LU 6.2 V3R3 for MVS, VM and VSE/ESA**, SC31-6410. Describes VTAM's LU 6.2 programming interface for host application programs.

OS/2 Extended Edition: OS/2 Communications Manager

APPC Programming Considerations in MVS/ESA and OS/2, GG24-3818. Provides information about developing cooperative applications using APPC/MVS and Networking Services/2 in the MVS/ESA and OS/2 environments.

OS/2 EE V1.3 APPC Programming Reference, S01F-0295. Contains information necessary to create programs in C, COBOL, Pascal, or Macro Assembler that use the APPC programming interface functions in OS/2 EE V1.3 Communications Manager. This manual is superseded by the *Networking Services/2 APPC Programming Reference*.

OS/2 Extended Edition Communications Manager, Z360-2786. Presentation guide providing an in-depth overview of the Communications Manager. Intended for customers interested in OS/2 installation and migration, especially connectivity solutions.

OS/2 Extended Edition Version 1 Cookbook: Communications Manager Design and Implementation, GG24-3552. Provides detailed information on the design and practical implementation of the Communications Manager component of OS/2 EE V1.2. This includes an overview, practical configuration examples, as well as programming considerations.

OS/2 Extended Edition 1.2 Cookbook: Communications Manager SNA Environment, GG24-3553. Provides an introduction of the OS/2 EE V1.2, containing information for designing, implementing, and maintaining OS/2 EE V1.2 based applications.

AS/400 PC Support under OS/2 Extended Edition Version 1.2, GG24-3446.

AS/400, S/38, and PS/2 as T 2.1 Nodes in a Subarea Network, GG24-3420. Contains information on the implementation of APPN in a network consisting of an AS/400, S/38, PS/2 and a S/370 SNA subarea network.

OS/2 EE APPC to AS/400 APPC Programming, GC21-8247. Demonstrates how to use the OS/2 EE API to allow application programs running on a PS/2 system to communicate with application programs running on an AS/400 system.

Integrating OS/2 Workstations into Local Area Networks and Enterprise Networks, GG22-9490.

MVS/ESA APPC/MVS Handbook for the OS/2 System Administrator, GC28-1133. Describes how to configure APPC for a connection between OS/2 and MVS step-by-step, coordinate APPC-related information with other components in SNA networks and validate the APPC configuration.

VM - OS/2 Connectivity and Functional Use, GG24-3473. Describes the different products and possibilities that IBM provides to allow a VM system to be connected to a personal computer running OS/2. It is intended to help VM specialists understand the capabilities of the various products in terms of functionality and connectivity.

VM Programmable Workstation Communication Services, Programming for VM PWSCS, SC24-5586. VM PWSCS provides a CPI-C programming interface for developing applications that communicate between VM and either DOS, Windows, OS/2, or AIX workstations. While the application programming interface is CPI-C, the underlying communications protocol is not APPC/LU 6.2.

OS/2 Extended Edition: SAA Networking Services/2

Networking Services/2 Installation and Network Administrator's Guide, SC52-1110.

Networking Services/2 System Management Programming Reference, SC52-1111.

Networking Services/2 APPC Programming Reference, SC52-1112. Contains information necessary to develop programs in C, COBOL, Pascal, or Macro Assembler that use the APPC and CPI-C programming interfaces in OS/2 EE Communications Manager with Networking Services/2.

Networking Services/2 Problem Determination Guide, SC52-1113.

Networking Services/2 Installation, Customization, and Operation, GG24-3662. Provides planning information for Networking Services/2, including information concerning the optimization of the network based upon node configuration. Contains an extended example on connecting Networking Services/2 and AS/400, with their respective configurations.

Networking Services/2 Presentation Guide, G326-0029.

Series/1

Series/1 Event Driven Executive: Advanced Program-to-Program Communication Programming Guide and Reference*, SC34-0960 or SQ00-0519. Describes how to install and use the support for APPC on an EDX system.

Series/1 Event Driven Executive: Network Definition Utility Guide, SC34-0764. Intended for anyone who needs to define DLC devices, APPC nodes, or a primary SNA communication network.

Series/1 Realtime Programming System: Advanced Program-to-Program Communications Programming Guide and Reference, SC34-0608.

Series/1 Realtime Programming System: Network Definition Utility User's Guide, SC34-0623.

System/36

System/36 APPC/Distributed Data, SR28-0532.

System/36 Using System/36 Communications, SC21-9082. Among other things, provides information for the reader to be able to define an APPC or APPN subsystem.

System/36 Interactive Communications Feature: Base Subsystems Reference, SC21-9530. Describes the APPC, BSCE, CCP and Peer subsystems.

System/36 APPC Implementation Guide, GG24-1693.

System/36 APPN, SC21-9471. Assists the System/36 programmer in planning, installing,

configuring, activating, and debugging APPN networks.

APPC Security in a Network with System/36, System/38, and CICS/VS, GG22-9427. Intended as a guide for systems programmers for implementing LU 6.2 security between System/36, System/38, and CICS systems.

System/38

System/38 Implementation of Communications Architecture, SC21-8033. Contains reference information on System/38 implementation of SNA LU 6.2, SNADS, DIA, and DDM.

System/38 Communication Administrator's Guide, SC21-8035. Contains information on System/38 communications as it relates to APPC and Document Interchange, describing the function and administration of a SNADS application and the use of a system distribution directory.

System/38 Distributed Data Management Performance Guidelines, GG22-9424. Discusses user-written APPC programs.

AS/400, System/38, and PS/2 as T 2.1 Nodes in a Subarea Network, GG24-3420. Contains information on the implementation of APPN in a network consisting of an AS/400, System/38, PS/2 and a System/370 SNA subarea network.

APPC Security in a Network with System/36, System/38, and CICS/VS, GG22-9427. Intended as a guide for systems programmers to implement LU 6.2 security between System/36, System/38, and CICS systems.

System/88

System/88 Advanced Program-to-Program Communication: Planning and Operations Guide*, SC34-0759. Provides information for systems administrators and network operators on planning and operating APPC in a System/88 environment.

System/88 Advanced Program-to-Program Communication: Programming Guide and Reference, SC34-0760. Provides programming information for System/88 APPC users who write either programs for APPC or programmed operator applications for an APPC environment.

System/88 Primary and Secondary System Network Architecture, Programming Guide and Reference, SC34-0758. Provides programming information for System/88 APPC users who write either programs for APPC or programmed operator applications for an APPC environment.

System/88 APPC Resource Definition Guidelines, GG66-3133.

System/88 and Cooperative Processing, GG24-3495. Describes a method of developing applications according to the principle of cooperative processing between System/88 and another system offering APPC communications.

Transaction Processing: Concepts and Products, GC33-0754. Provides an overview of transaction processing and describes IBM's transaction processing products. Includes an appendix on CICS.

VM (Virtual Machine)

VM/SP Connectivity Programming Guide and Reference Release 6, SC24-5377.

VM/ESA CMS Application Development Guide*, SC24-5450. Contains information on APPC/VM or CPI-C facilities. Samples programs are also included.

VM/SP Connectivity Planning, Administration, and Operation, SC24-5378.

VM/ESA Connectivity Planning, Administration and Operation, SC24-5448. Describes how to set up and maintain APPC programs, the TSAF virtual machines, and APPC/VM VTAM Support (AVS) virtual machines.

VTAM Programming for LU 6.2 V3R3 for MVS, VM and VSE/ESA, SC31-6410. Describes VTAM's LU 6.2 programming interface for host application programs.

Using the Enhanced Connectivity Features of VM/SP R6. GG24-3372. Contains a CPI-C sample.

VM - AS/400 Connectivity and Functional Use, GG24-3430.

VM - OS/2 Connectivity and Functional Use, GG24-3473. Describes the different products and possibilities that IBM provides to allow a VM system to be connected to a personal computer running OS/2. It is intended to help VM specialists understand the capabilities of the various products in terms of functionality and connectivity.

VM Programmable Workstation Communication Services, Programming for VM PWSCS, SC24-5586. VM PWSCS provides a CPI-C programming interface for developing applications that communicate between VM and either DOS, Windows, OS/2, or AIX workstations. While the application programming interface is CPI-C, the underlying communications protocol is not APPC/LU 6.2.

VSE (Virtual Storage Extended)

VTAM Programming for LU 6.2 V3R3 for MVS, VM and VSE/ESA, SC31-6410. Describes VTAM's LU 6.2 programming interface for host application programs.

VTAM (Virtual Telecommunications Access Method)

VTAM Programming for LU 6.2 V3R3 for MVS, VM and VSE/ESA, SC31-6410. Describes VTAM's LU 6.2 programming interface for host application programs.

VTAM Programming for LU 6.2, SC30-3400. Documents the VTAM programming interface for LU 6.2 sessions.

DB2-APPC/VTAM Distributed Database Usage Guide*, GG24-3600.

VTAM APPC API Scenarios and Programming Experiences, GG24-3297. Describes how to implement VTAM LU 6.2 programs running under MVS/VTAM V3R2.

Practical Conversations with APPC, ZZ81-0231. Provides detailed information on VTAM APPC programs that are required to be in session with other APPC partner programs.

3174

Experiences Connecting APPC/PC and CICS/VS with the 3174 Token-Ring, GG66-0287.

4680

IBM 4680 SNA LU 6.2 Communications, GG24-3623. Describes implementation and/or the migration to LU 6.2 communications function contained in the 4680 Operation System V3.1 product. Provides configuration and application program interface descriptions, samples, and technical hints on installing LU 6.2 in various environments.

Technical SNA Manuals

Data Management Architecture: General Information, GC21-9527.

Data Management Architecture: Implementation Planner's Guide, GC21-9528.

Data Management Architecture: Implementation Programmer's Guide, SC21-9529.

IBM Distributed Data Management Architecture: Reference, SC21-9526.

IBM Implementation of X.21 Interface General Information Manual, GA27-3287.

IBM Synchronous Data Link Control: General Information, GA27-3093. Describes the procedures and components of SDLC.

An Introduction To Advanced Communications Function, GC30-3033. Presents an overview of SNA's networking concepts.

SAA Overview, GC26-4341.

SAA CPI Communications Reference, SC26-4399-3.

SNA Concepts and Products, GC30-3072. Provides an overview of SNA concepts, terminology, and implementing products.

SNA/Distribution Services Reference, SC30-3098. Provides a detailed, state-oriented definition of SNA/DS.

SNA/File Services Reference, SC31-6807. Provides a detailed definition of SNA/FS.

SNA Format and Protocol Reference Manual: Architecture Logic, SC30-3112. A detailed, formal, and comprehensive definition of SNA for designers. SC30-3339.

SNA Format and Protocol Reference Manual: Architecture Logic for LU Type 6.2, SC30-3269. Presents a detailed, formal, and comprehensive definition of LU type 6.2 using SSCP-dependent protocols.

SNA Format and Protocol Reference Manual: Architecture Logic for Type 2.1 Nodes, SC30-3422.

SNA Format and Protocol Reference Manual: SNA Network Interconnection, SC30-3339.

SNA Formats, GA27-3136. Provides all the formats needed for attaching a peripheral node to an SNA subarea network and for APPN networks.

SNA Fundamentals, a self-study course including:

- Text Vol. 1, SR20-8490
- Text Vol. 2, SR20-8491
- Personal Reference Guide, SR20-8492
- Videotape, SR20-8498.

SNA/Management Services: Alert Implementation Guide, GC31-6809.

SNA Management Services Overview, GC30-3429. Provides an overview for the reader who is interested in the management services reference manual.

SNA/Management Services Reference, SC30-3346. Provides a comprehensive definition of SNA management services.

SNA Network Product Formats, LY43-0081. Provides selected reference information on all node types, primarily format and profile descriptions and error data.

SNA Network Registry, G325-6025. Describes how a company can obtain a unique SNA network ID (NETID) for use throughout their company.

SNA: Sessions Between Logical Units, GC20-1868. Provides a definition of various LU types other than LU type 6.2.

Token-Ring Network Architecture Reference, SC30-3374.

The X.25 [1980] Interface for Attaching IBM SNA Nodes to Packet-Switched Data Networks—General Information Manual, GA27-3345. Describes the elements of the 1980 CCITT Recommendation X.25 selected for use in SNA products.

IOTS

The X.25 1984 DTE/DCE and DTE/DTE Interface Architecture Reference, SC30-3409. Describes the elements of 1984 CCITT Recommendation X.25 selected for use in SNA products.

The X.25 1984 DTE/DCE and DTE/DTE Interface General Information Manual, GA27-3761.

IOTS (Inter-Operation Test Service)

IBM provides the Inter-Operation Test Service for companies developing APPC platforms, not applications. This service enables a company with a new APPC implementation to test whether

that implementation matches the architected definition of APPC and thus communicates successfully with other APPC implementations.

SNA LU 6.2 Inter-Operation Test Service General Information, GC31-6820. Describes how this service enables communication systems developers to ensure that CPI Communications and LU 6.2 implementations are consistent as defined by SAA.

APPC Books from Other Sources

This section provides brief descriptions of the following types of publications:

- General publications on distributed computing
- APPC and SNA publications
- Publications for IBM and non-IBM platforms on which APPC is available.

Distributed Computing

Note: See also the IBM distributed computing publication on 34.

SAA Common Communications Support: Distributed Applications, James Martin with Kathleen Kavanagh Chapman and Joe Leben, ISBN 0-13785-908-2,, Prentice-Hall, 1992. Common Communications Support (CCS) is one of the standard set of computer interfaces provided by SAA. This book explains how to use IBM's CCS facilities to construct distributed applications.

Distributed Computing and the Mainframe, Kurt Ziegler, Jr., ISBN 0-47151-753-4, New York: John Wiley & Sons, Inc., 1991. Provides the background needed to reorganize your overall information strategy in light of the latest developments in distributed computing.

Communications for Cooperating Systems: OSI, SNA, and TCP/IP, R. J. Cypser, ISBN 0-20150-775-7, Reading, MA: Addison-Wesley Publishing Co., 1991.

"This book provides the first comprehensive description of IBM's new computing paradigm to supply network services in a heterogeneous, multivendor environment. Drawing on hundreds of interviews with the top technical staffs at IBM's eleven laboratories, the author presents a detailed vision of where the industry requirements and technology will take networks in the coming years. It explains the objectives and technical approaches of the Advanced Peer-to-Peer Network and its relation to SNA subarea networks."

SAA IBM's Systems Application Architecture. Stephen J. Randesi and Donald H. Czubek, ISBN 0-44200-468-0, New York: Van Nostrand Reinhold, 1991.

APPC Publications

Note: See also the IBM APPC publications on page 34.

SAA/LU 6.2 Distributed Networks and Applications. John J. Edmunds, ISBN 0-07019-022-4, New York: McGraw-Hill, 1991.

This book focuses on APPC as the IBM connectivity method for SAA enterprise networks in the 1990s. This book can help you design cooperative processing applications as well as distributed applications using the APPC and CPI-C cooperative processing architectures.

APPC: Introduction to LU 6.2. Alex Berson, ISBN 0-07005-075-9, New York: McGraw-Hill, 1990.

"Here is an accessible and comprehensive guide to mastering this powerful new system. Starting with the foundations of APPC, this reference systematically explains key topics. Illustrated with coding examples and resource definitions for LU 6.2, and supplemented with a complete list of LU 6.2 verbs, *APPC: Introduction to LU 6.2* covers the cutting edge of networking and communications."

To order the following book, contact:

Architecture Technology Corporation
P.O. Box 24344
Minneapolis, Minnesota USA 55424
Phone: 612-935-2035

Inside APPC. Michael Hurwicz, ISBN
0-93940-502-4, Minneapolis: Architecture
Technology Corporation, 1987.

"Inside APPC is an in-depth monograph delving into Advanced Program-to-Program Communication (APPC) and related technology issues. This very readable book begins with a conceptual and historical overview of APPC, including its relationship to IBM's Systems Network Architecture (SNA), its benefits for users and vendors, and likely future directions. It discusses the APPC architecture, formats and protocols, and compatible products and programs. Finally, it provides examples of how APPC verbs are used."

To order the following report, contact:

International Data Corporation (IDC)
Five Speen Street, Box 9015
Framingham, Massachusetts USA 01701
Phone: 508-872-8200
Fax: 508-935-4015
Contact: Lucinda Santisario

Advanced Program-to-Program Communication End-User Survey, 42 pages, 1991. This report, a summary of a recent user survey, profiles the APPC activity at IBM mainframe installations and discusses the demand for and growth in APPC applications.

CPI-C Publications

X/Open Developer's Specifications (CPI-C).
X/Open Company, Ltd., ISBN 1-87263-002-2,
Reading, Berkshire, UK: Maple Press, 1990.

SNA Publications

Note: See also the IBM SNA publications on page 43.

SNA Architecture, Protocols, and Implementation,
Atul Kapoor, ISBN 0-07033-727-6, McGraw-Hill,
1991.

This book provides a concise overview of SNA, plus details on the components of SNA and how they work. This guide examines SNA protocols, data structures, and flows, peer-to-peer distributed processing using APPC, SNA gateways to other SNA networks, Token-Ring LANs, and OSI, and network operation and management.

SNA: A Tutorial, Anton Meijer, ISBN
0-04702-101-5X, John Wiley & Sons, Inc., 1988.

Systems Network Architecture: IBM's Networking Solution, James Martin and Kathleen Kavanagh Chapman, ISBN 0-13815-143-1, Prentice-Hall, Englewood Cliffs, N.J., 1987.

To order the following report, contact:

Gen2 Ventures
12930 Saratoga Avenue, Suite D-5
Saratoga, California USA 95070
Phone: 408-446-2277
Fax: 408-446-4755

Internetworking with the New SNA. This research report addresses the most challenging networking problem for the 1990s, internetworking, from the point of view of the industry's largest corporate networks.

To order the following book, contact:

American Data Group
P.O. Box 920687
Norcross, Georgia USA 30092
Phone: 800-521-0935 or 404-921-1123
Contact: Judith Anderson

*SNA/MATE***. This 374-page reference handbook contains formats and descriptions of major SNA commands, sense codes, SDLC formats, 3270 DSC screen controls, and sample USS and logmode tables.

Publications for Product Platforms

The IBM and non-IBM product platforms are listed below in alphabetical order. Publications that apply to more than one platform appear under each of the appropriate platforms.

CICS (Customer Information Control System)

Understanding CICS Internals. Richard Lefkon and John Kneiling, ISBN 0-07037-040-0, New York: McGraw-Hill.

This book provides the most recent information on CICS foundations, including storage allocation, task management, program control, terminal access, and terminal hardware and management programs. Over 1000 quick review questions and answers provide you with specific solutions to every problem you face when dealing with CICS.

Distributed Processing in the CICS Environment. Arlene J. Wipfler, ISBN 0-07071-136-4, New York: McGraw-Hill, 1989.

"Distributed Processing in the CICS Environment is the complete guide to CICS Intercommunication. This practical book begins with a comprehensive overview, including a discussion of IBM's System Network Architecture and its relation to CICS InterSystem Communication. The detailed discussions address design issues, application programming considerations, internal mechanisms in CICS, and resource definitions. Command syntax is explained, and coding examples are abundant."

CICS Handbook. Yukihsa Kageyama, ISBN 0-07033-637-7, New York: McGraw-Hill, 1989.

"Fully up-to-date and comprehensive, CICS Handbook is your practical and authoritative guide to every aspect of CICS application development. CICS Handbook describes virtually all CICS commands with commonly-used options. It stresses practical applications, and

features real-world programming techniques illustrated with scores of useful examples."

To order the following books, contact:

American Data Group
P.O. Box 920687
Norcross, Georgia USA 30092
Phone: 800-521-0935 or 404-921-1123
Contact: Judith Anderson

*CICS/MATE**.* This 670-page reference handbook explains the purpose, structure, and content of major CICS control areas. This book also serves as a reference to command level functions and syntax, CEMT commands, and more.

*Inside CICS**.* This 305-page study guide explains how CICS is composed and describes logical structures and control flows and linkages of major CICS components.

CICS/OS/2

Note: See also the IBM CICS/OS/2 publications on page 37.

IBM Workstation CICS. Bob Crownhart, ISBN 0-07014-770-1, New York: McGraw-Hill.

This manual serves as a guide to the transaction management and development facilities on your PC. It provides workable examples that show you how to move host applications, enable CICS OS/2 communication, and maintain CICS OS/2 applications on multiple workstations.

DOS

Note: See also the IBM DOS publications on page 38.

Cooperative Processing with AS/400 PC Support. Janice R. Glowacki, Stephen A. Knight, and Desiree S. Strom, ISBN 0-44200-624-1, New York: Van Nostrand Reinhold, 1991. Explains how to use PC Support functions, including the PC Support Router and other communications functions. This book provides details on the Router API (an APPC API) so that you can write your own programs to the API.

NetWare

To order the following books, contact:

Novell, Inc.

122 East 1700 South
Provo, Utah USA 84606-6194
Phone: 800-453-1267 or 801-429-7000
Fax: 801-429-5775

*NetWare** LU 6.2 In-Depth.* Part Number 471-000014-001. 1990. Provides an overview of the LU 6.2 environment and a detailed description of the NetWare product.

NetWare LU 6.2 Technical Reference. Part Number 100-000929-001. 1991. This book is intended for system programmers who need to write code so that two or more transaction programs can communicate with each other using the disciplines of IBM's LU 6.2 protocol.

NetWare LU 6.2 Programming Examples. Part Number 100-000638-002. 1991. Provides sample programs that illustrate typical LU 6.2 capabilities.

OS/2 Extended Edition

Note: See also the IBM OS/2 publications on page 39.

Client-Server Programming with OS/2 Extended Edition. Dan Harkey and Robert Orfali, ISBN 0-44200-826-0, New York: Van Nostrand Reinhold, 1991. 1088 pages. Contains information on designing and implementing client-server applications on OS/2 EE using multiple protocols. Contains an APPC tutorial and a chapter on building an APPC application in C.

"Find out how to develop practical business solutions fast using OS/2 Extended Edition as the operating system platform. A systematic treatment of client-servers explores integrating LANs, database, and preemptive multitasking with graphic front-end clients (GUIs). Covers both the theory and practice of building distributed client-server software."

OS/2 Notebook: The Best of the IBM Personal Systems Developer. Edited by Dick Conklin, ISBN 1-55615-316-3, Redmond, Washington: Microsoft Press, 1990. Contains articles from the *IBM Personal Systems Developer* magazine, including three articles on APPC for OS/2 EE.

SNA•ps

To order the following book, contact:

Apple Computer, Inc.

20525 Mariani Avenue
Cupertino, California USA 95014-6299
Phone: 408-996-1010

*SNA•ps** APPC Programmer's Reference.* 1991. Includes detailed information on programming with the SNA•ps product, Apple Computer's implementation of APPC. The book is intended for software developers who need to use SNA•ps to write transaction programs in a mixed IBM-Macintosh** environment.

VTAM (Virtual Telecommunications Access Method)

Note: See also the IBM VTAM publications on page 41.

Advanced SNA Networking: A Professional Guide to VTAM/NCP. Jay Ranade and George C. Sackett, ISBN 0-07051-143-8, New York: McGraw-Hill, 1991. This book is a sequel to the authors' 1989 book, *Introduction to SNA Networking Using VTAM/NCP*. It contains detailed information on 3745, 3174, SNI, LEN, and Token-Ring.

Introduction to SNA Networking Using VTAM/NCP. Jay Ranade and George C. Sackett, ISBN 0-07051-144-6, New York: McGraw-Hill, 1989.

"This is the first book ever published for programmers, consultants, and systems analysts new to SNA and VTAM/NCP software. It is aimed at the 150,000 data communications professionals working in 36,000 IBM installations worldwide."

VTAM

To order the following book, contact:

American Data Group
P.O. Box 920687
Norcross, Georgia USA 30092
Phone: 800-521-0935 or 404-921-1123
Contact: Judith Anderson

*Inside VTAM***. This 318-page study guide explains how VTAM is composed and describes logical structures and control flows and linkages of major VTAM components.

Specialized Periodicals on APPC

These periodicals specialize in coverage of SNA issues and products.

- *The Gen2 Report on IBM Networking and Cooperative Processing*

The Gen2 Report is a monthly report that provides news and analysis of the latest developments in SAA and SNA. Gen2 also publishes special reports, such as *Internetworking with the New SNA*.

Gen2 Ventures

12930 Saratoga Avenue, Suite D-5
Saratoga, California USA 95070
Phone: 408-446-2277
Fax: 408-446-4755
Attn: Steve Carpenter, sales representative

- *IBM Personal Systems Developer*

This quarterly journal is a publication of the IBM Developer Assistance Program. It regularly contains articles on APPC programming and related development tools.

IBM Personal Systems Developer
IBM Corporation
P.O. Box 1328
Boca Raton, Florida USA 33429-1328

- *SAA Alert Service*

The SAA Alert Service is a new SAA information service that provides all the

information you need to know about SAA events as they unfold. Each Alert contains focused, concise, insightful analysis of the specific SAA event. An Alert is typically 1 to 3 pages long.

Gen2 Ventures

12930 Saratoga Avenue, Suite D-5
Saratoga, California USA 95070
Phone: 408-446-2277
Fax: 408-446-4755
Attn: Steve Carpenter, sales representative

- *SNA Network Focus*

SNA Network Focus is a quarterly newsletter published by Network Software Associates, Inc.

Network Software Associates

39 Argonaut
Laguna Hills, California USA 92656
Phone: 714-768-4013
Fax: 714-768-5049

- *SNA Perspective*

SNA Perspective is a monthly newsletter covering IBM's Systems Network Architecture.

Communications Solutions, Inc.

2071 Hamilton Avenue
San Jose, California USA 95125
Phone: 408-371-5790
Fax: 408-371-5779

The APPC Info Exchange Forum on CompuServe

The APPC Info Exchange Forum provides you with the latest information and help on APPC topics and techniques, 24 hours a day.

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- Using the Common Programming Interface for Communications (CPI-C).

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- Recent technical papers on APPC application design and APPC products
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- Complete sample programs that demonstrate the power of APPC
- Tools and utilities for designing, coding, and testing your applications
- Configuration samples to help you build networks that support APPC applications.

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Part 2. APPC Platforms, Gateways, Tools, and Applications

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APPC Workstation Platforms Summary

This section provides the following information on APPC workstation platforms offered by IBM and other companies:

- Name of platform
- Operating environments supported
- Connectivity options supported
- Name of vendor.

The entries appear in alphabetical order by the name of the platform. Appendix A, "Contacts for Vendors" on page 137 contains addresses, phone numbers, and contacts for the vendors listed in this section.

APPC Workstation Platforms

Name of Platform	Environments Supported	Connectivity Supported	Vendor
AdaptSNA APPC, Version 4.3	DOS	Asynchronous, coaxial, IBM Token-Ring, NetBIOS, SDLC, X.25	Network Software Associates, Inc.
AdaptSNA APPC+3270, Version 4	DOS, Microsoft Windows 3.0	Asynchronous, coaxial, IBM Token-Ring, NetBIOS, SDLC, X.25	Network Software Associates, Inc.
APILU 6.2	DG ECLIPSE	SDLC	Data General Corporation
APPC/PC	DOS	IBM PC Network, IBM Token-Ring (4Mbps), SDLC	IBM
Arbiter Peer Services	DOS, Microsoft Windows 3.0	Over 108 connection types	Tangram Systems Corporation
BrxLU6.2** API	UNIX	SDLC	Brixton Systems, Inc.
CLEO APPC/LU 6.2	UNIX	Coaxial, SDLC	CLEO Communications
CTIX SNA LU 6.2 APPC Server	UNIX: Convergent S/Series	SDLC	Unisys Corporation
CTOS LU 6.2 Release 5.0	CTOS	PSH, QLLC, SDLC, Token-Ring	Unisys Corporation
Domain/LU 6.2	UNIX: Apollo workstations	Ethernet, Token-Ring (4Mbps), Apollo Token-Ring	Apollo Computer, Inc.
DynaComm/Elite, Version 3.1	Microsoft Windows 3.0	Coaxial, NetBIOS, SDLC, Token-Ring	Future Soft Engineering, Inc.
EiconAPPC	DOS, OS/2, UNIX	SDLC, X.25	Eicon Technology Corporation
EXPRESS	AIX	IBM SNA and BSC networks	Systems Strategies, Inc. (SSI)
IBM AS/400 PC Support	DOS, Microsoft Windows 3.0	Asynchronous, Ethernet, IBM PC Network, IBM Token-Ring, SDLC, twinaxial	IBM
IBM SNA Services for RISC System/6000	AIX	SDLC, Token-Ring, Ethernet	IBM
IBM VM Programmable Workstation Communication Services (VM PWSCS)	AIX, DOS, Novell** NetWare, OS/2	Ethernet, Token-Ring	IBM
Intergraph SNA/LU 6.2	Intergraph	Token-Ring, X.25	Intergraph Corporation
IRMA Workstation for Windows	Microsoft Windows 3.0	Asynchronous, coaxial, IBM Token-Ring, SDLC	Digital Communications Associates, Inc.
Lynx LU 6.2	SCO Open Desktop, SCO XENIX 386, UNIX	DFT, SDLC, Token-Ring, X.25	Computone Corporation

Name of Platform	Environments Supported	Connectivity Supported	Vendor
MacAPPC	Mac/OS	SDLC, Token-Ring	Apple Computer, Inc.
NCR SNA Software Distribution Products (SDP)	OS/2	Coaxial, IBM Token-Ring, SDLC	NCR Corporation
NetWare for SAA, Version 1.1	Novell servers	Coaxial, Ethernet, Token-Ring, SDLC	Novell, Inc.
NetWare 6.2	DOS	Coaxial, Ethernet, Token-Ring, SDLC	Novell, Inc.
OpenAdvantage APPC	AIX, XENIX, UNIX	Coaxial, SDLC, Token-Ring, X.25	Rabbit Software Corporation
OpenConnect/APPC	DOS, UNIX	Ethernet, channel-attached, SDLC, Token-Ring	OpenConnect Systems, Inc.
OS/2 Extended Edition	OS/2	Ethernet, IBM PC Network, IBM Token-Ring (16 and 4Mbps), SDLC, Twinaxial, X.25	IBM
SAA Networking Services/2	OS/2 EE 1.2 or 1.3	Ethernet, IBM PC Network, IBM Token-Ring (16 and 4Mbps), SDLC, Twinaxial, X.25	IBM
Select Communications Server	OS/2	DFT, SDLC, Token-Ring, X.25	Digital Communications Associates (DCA), Microsoft Corporation
Select Communications Workstation	DOS, OS/2	DFT, SDLC, Token-Ring, X.25	Digital Communications Associates (DCA), Microsoft Corporation
Six/25	DOS	Asynchronous, NetBIOS, QLLC, X.25	TDT Group, Inc.
SNA/LINK,	AT&T 3B2, StarServer, 6386 WGS,	SDLC, Token-Ring, QLLC, X.25	AT&T Computer Systems, Inc.
SNA-ps	Mac/OS	Coaxial, SDLC, Token-Ring,	Apple Computer, Inc.
Sunlink SNA Peer-to-Peer, Version 7.0	Sun workstations	Channel-attached, SDLC, Token-Ring	Sun Microsystems, Inc.
UniHorn SNA Workstation APPC	DOS, OS/2	IBM ARTIC, SDLC	UniHorn Software Solutions
UniHorn for OS/2	OS/2	IBM ARTIC	UniHorn Software Solutions
VS Access APPC	VS Minicomputers	SDLC, X.25	Wang Laboratories, Inc.

APPC Host Platforms Summary

This section provides the following information on APPC platforms for minicomputers and mainframes offered by IBM and other companies:

- Name of platform
- Operating environments supported
- Name of vendor.

The entries appear in alphabetical order by the name of the platform. Appendix A, "Contacts for Vendors" on page 137 contains addresses, phone numbers, and contacts for the vendors listed in this section.

APPC Host Platforms • APPC Workstation Platforms

Name of Platform	Environments Supported	Vendor
ACF/NCP (Advanced Communications Function/Network Control Program)	Comten 3600, 5600	NCR Comten
CTIX SNA LU 6.2 APPC Server	Convergent Technologies/CTIX	Unisys Corporation
DECnet/SNA VMS APPC/LU 6.2	DEC VMS	Digital Equipment Corporation (DEC)
ezBRIDGE** Peer-to-Peer	DEC VMS, AS/400, S/36, S/38	System Strategies, Inc.
IBM APPC/MVS	MVS	IBM
IBM Customer Information Control System/Enterprise Systems Architecture (CICS/ESA)	VTAM	IBM
IBM Distributed Processing Programming Executive (DPPX/370)	370/ESA	IBM
IBM Information Management System (IMS)	MVS	IBM
IBM NetView	VTAM	IBM
IBM Operating System/400	OS/400	IBM
IBM Series/1	SNA	IBM
IBM Series/36	SNA/APPN	IBM
IBM Series/38	SNA	IBM
IBM Series/88	SNA	IBM
IBM Virtual Machine (VM)	VM	IBM
IBM Virtual Storage Extended (VSE)	VSE	IBM
IBM Virtual Telecommunications Access Method (VTAM)	DOS/VSE, MVS, VM,	IBM
IBM 3174	SNA	IBM
IBM 4680 Store Systems	SNA	IBM
LU 6.2	HP 3000 Series, HP 9000 Series	Hewlett-Packard Company
Prime SNA Application Program Interface (API)	Prime OS (PRIMOS)	Prime Computer, Inc.
SNAX/APPC	EXT, Tandem NonStop II, TXP/Guardian	Tandem Computer, Inc.
SNA LU 6.2	Prime OS (PRIMOS)	Prime Computer, Inc.
SNS/LU 6.2	DEC (DECnet/SNA), MVS, VM,	Interlink Computer Sciences, Inc.
UTS System	UNIX	Amdahl Corporation
VS LU 6.2 API and VS LU 6.2 Services	IBM host systems	Wang Laboratories

APPC Gateways Summary

This section provides the following information on APPC gateways offered by IBM and other companies:

- Name of gateway
- Operating environments supported
- Connectivity options supported
- Name of vendor.

The entries appear in alphabetical order by the name of the gateway. Appendix A, "Contacts for Vendors" on page 137 contains addresses, phone numbers, and contacts for the vendors listed in this section.

APPC Gateways

Name of Gateway	Environments Supported	Connectivity Supported	Vendor
AdaptSNA	NetBIOS, NetWare, VINES	SDLC, Token-Ring	Network Software Associates
The Connection System	AS/400, S/36, S/38, DEC VMS	DECnet-to-SNA	Forest Computer
CTIX SNA PU 2.1	Convergent S/Series (UNIX)	SDLC	Unisys Corporation
DECnet CT, ST, and SP100	Mainframe gateways for AppleShare and DECnet networks	SDLC	Digital Equipment Corporation
Eicon SNA Gateway Family	DOS OS/2,	SDLC, Token-Ring, X.25	Eicon Technology Corporation
Gupta SQLGateway**/APPC	DOS, Microsoft Windows 3.0, OS/2	LAN-to-WAN (NetBIOS)	Gupta Technologies
LAN-to-LAN Wide Area Network Program	OS/2	NetBIOS	IBM
MacAPPC	Mainframe gateway for AppleShare clients	SDLC, Token-Ring Interface Coupler,	Apple Computer, Inc.
Maxess SNA Gateway	DOS LAN/SNA Gateway	SDLC, Token-Ring	Attachmate Corporation
Micro Decisionware Database Gateway	MVS/CICS, OS/2	SQL server to MVS/CICS/DB2	Micro Decisionware
NCR Commsserver	SNA mainframe gateway for LAN Manager networks	SDLC, Token-Ring	NCR Corporation
NetWare SNA Router, Version 2.15	NetWare server	Channel attached, SDLC, Token-Ring	Phaser Systems
Novell NetWare SNA Gateway	Netware	SDLC, Token-Ring	Novell, Inc.
OpenConnect Server	UNIX	Ethernet, channel-attached, SDLC, TCP/IP, Token-Ring	OpenConnect Systems, Inc.
OpenAdvantage Gateway	AIX, DOS, UNIX, XENIX	Coaxial, SDLC, Token-Ring, X.25	Rabbit Software Corporation
SNS/SNA Gateway	DEC (DECnet/SNA), MVS, VM	Ethernet, Token-Ring, IBM 3172 Interconnect Controller	Interlink Computer Sciences, Inc.
Sun SNA Peer-to-Peer	Sun workstations	SDLC, TCP/IP	Sun Microsystems
Token Ring Link Manager	Stratus XA2000/VOS	Token-Ring	Stratus Computer, Inc.

APPC Development Tools

This section provides the following information on APPC development tools offered by IBM and other companies:

- Name of tool
- Name of vendor
- Description of the functions provided
- Environments supported (both hardware and software)
- Person to contact for more information
- Source of information about the tool.

The entries appear in alphabetical order by the name of the tool. An index in the back of this book contains entries for each tool and vendor listed in this section.

Sources of Information

The following are listed as sources for several entries in this section:

SAA Catalog

The *SAA Catalog* references products that use components of SAA and introduces tools that can be used to build SAA-conforming applications. To order the *SAA Catalog* (IBM order number GC67-0211-01), contact your IBM representative or your local IBM branch office.

AS/400 Cooperative Application Solutions Catalog

The *AS/400 Cooperative Application Solutions Catalog* helps customers locate AS/400 cooperative processing solutions to their business problems. For more information about this catalog, contact:

*IBM Corporation
Client/Server Solution Manager
Department 14A
3605 Highway 52 North
Rochester, Minnesota USA 55901-7829*

National Solution Center Database

The National Solution Center maintains a database used by IBM marketing representatives, agents, and customers to help provide appropriate business solutions for their customers. For additional information about the National Solution Center and other SAA programs, call the Software Vendor Information Line at 800-627-8363.

Abbreviations Used in This Section

Following is a list of abbreviations which appear frequently in this section:

API	Application programming interface
CASE	Computer-assisted software engineering
CUA	Common User Access
DDE	Dynamic Data Exchange
GUI	Graphical user interface
PC	An IBM or IBM-compatible personal computer capable of running the following operating systems: DOS, Microsoft Windows 3.0, or OS/2.
PWS	Programmable workstation
SAA	Systems Application Architecture
SNA	Systems Network Architecture
4GL	Fourth-generation language

Action CASE Tools

Vendor: DevTech Associates

Description: Action CASE (Computer Assisted Software Engineering) Tools enable you to easily build cooperative processing applications featuring graphical user interfaces (GUI). Applications developed in this environment are generally easier to use, more flexible, and more productive. However, the newness and complexity of the environment has slowed acceptance among developers. Action helps you solve this problem by providing a true CASE environment—applications development without programming.

With Action, you define a model of your business applications, data elements, relationships, and rules. The Action product takes this high-level model and builds both your database and application code, including Presentation Manager screens, all database calls, and all APPC communications code necessary for multiprocessor interaction.

You do not need programmers with GUI or APPC coding skills to develop your applications. Once you define an Action model, you can generate application code that operates in the following environments:

- Standalone PS/2
- LAN (PS/2 to PS/2 server)
- Cooperative - PS/2 to AS/400 (APPC/Client-Server)
- Cooperative - System/370 CICS (APPC/Client-Server).

Thus, one development effort—the development of the model—enables you to generate GUI cooperative processing applications across a number of platforms, from a stand-alone workstation to the largest mainframe.

Environment:

- PC: OS/2 EE
- AS/400: OS/400
- 30XX, 43XX, 9370: CICS/DB2

Contact:

Mark Rolfes
DevTech Associates
 305 East Shuman Boulevard, Suite 705
 Naperville, Illinois USA 60563

Phone: 708-251-1093
 Fax: 708-355-2944

Source: *AS/400 Cooperative Application Solutions Catalog*

AD/MAX

Vendor: PAXUS Corporation

Description: AD/MAX is a cross-lifecycle application development tool. It complements AD/Cycle* by addressing the design, test, production, and maintenance aspects of this cross-lifecycle model. With AD/MAX, you can rapidly develop complex applications that comply with SAA standards.

Features include nonprocedural application definition facilities such as CUA standards with specifications supporting both programmable and nonprogrammable workstations. AD/MAX also provides support for LU 6.2, therefore enabling the development of cooperative processing applications in the information systems environment.

Note: AD/MAX is currently available in Europe and Australia only.

Environment:

- PC: OS/2 EE
- 30XX, 43XX, 9370: MVS/ESA, DB2

Contact:

David Smithson
PAXUS Corporation
The PAXUS Building
201 Miller Street
North Sydney, Australia NSW 2060

Phone: 02-959-5166
Fax: 02-959-4566

Source: *SAA Catalog*

Aion Development System

Vendor: Aion Corporation

Description: The Aion** Development System (ADS) uses knowledge-based and expert system technology to create, deliver, and maintain logic-intensive applications. Applications developed on personal computers are portable to mainframe environments.

ADS provides the developer with a rich and flexible development environment. Integrated forward and backward chaining, procedural code, and object-oriented facilities provide versatility and power in solving problems. The Aion Development System/Presentation Manager (ADS/PM) provides an SAA CUA graphical model interface to developers using OS/2 1.2 or 1.3.

Records may be retrieved and updated from VSAM, QSAM, DB2, DL/1, IDMS-DB, and SQL/DS* on the mainframe. A fully customized user environment may be developed with specialized screens and function keys. An explanation system provides users with runtime

guidance. A complete report writing facility is integrated into ADS.

The ADS Cooperative Processing Option uses APPC to provide seamless access from personal computers to data bases and knowledge bases residing on mainframes.

Environment:

- PC: OS/2 EE
- 30XX, 43XX, 9370: VM, MVS, CICS

Contact:

Alan Codkind
Aion Corporation
101 University Avenue
Palo Alto, California USA 94301
Phone: 415-328-9595
Fax: 415-321-7728

Source:

SAA Catalog
National Solution Center Document ID: X88483

AIX VIADUCT

Vendor: IBM

Description: AIX VIADUCT for AS/400 is an interactive data bridge that enables RT* system and RISC System/6000 customers to integrate their AIX applications with AS/400 databases. This bridge gives AIX application users access to information resident on the AS/400 and provides:

- Shared database access for AIX and AS/400 system users
- Minimized duplication of data
- Connection of AIX and OS/400 environments through SQL
- Easy-to-use Application Programming Interface (API)
- Interactive LU 6.2 APPC protocol.

AIX VIADUCT enables applications in the AIX environment to have access to application data in

the AS/400 system database through the use of an SQL API. The API accesses AS/400 VIADUCT functions through subroutine calls. After interpreting these subroutine calls, it uses the SNA LU 6.2 APPC protocol to transfer the SQL request to the AS/400. The AS/400 runs the SQL request against the specified SQL database and table or AS/400 physical file. It formats the results and transfers them to the AIX system. The AIX system completes the formatting of the data, performs any necessary data conversion, and returns a pointer to the data for use by the AIX application.

Environment:

- RS/6000: AIX
- AS/400: OS/400

Contact: Contact your local IBM marketing representative.

Source: *AS/400 Cooperative Application Solutions Catalog*

ALE Laser Forms Print Subsystem

Vendor: ALE Systems

Description: ALE Laser Form Print Subsystem develops special document formats, merges variable data with the format, and prints the merged document on plain paper from the AS/400.

The ALE Laser Print Subsystem enables you to:

- Design your own laser forms quickly and efficiently
- Merge data from your application with those forms without extensive reprogramming
- Print laser documents with user data overlaid on a laser printer
- Maintain version control of laser document formats from the AS/400.

The ALE Laser Forms Print Subsystem is designed to print intricately formatted laser documents with variable user data overlaid directly from the AS/400. You can integrate the Subsystem with almost any application that creates printed output for merge with a preprinted form. The software also includes a comprehensive format generator tool which enables users without extensive programming or DP experience to create a laser format, compile it, and store it on the AS/400. The format may then

be merged with data from the user's application for printing on plain paper with an inexpensive laser printer.

With ALE Laser Forms Print Subsystem, user applications can "call" the various executable modules and seamlessly embed them. Optionally, the module also picks up a properly formatted AS/400 spool file of user data and overlays it with the laser format during the print process.

The software makes extensive use of APPC and IBM-supported extensions of PC Support/400. As a result, you can use an attached personal computer to print the completed document on a typical laser printer. No other specialized software is required.

Environment:

- PC: DOS
- AS/400: OS/400

Contact:

C. Wesley Lucas or Donald S. Cowan
ALE Systems
 3334 Kings Charter Drive
 Ashland, Virginia USA 23005

Phone: 800-550-1370
 Fax: 804-550-1349

Source: *AS/400 Cooperative Application Solutions Catalog*

APPC++

Vendor

Microformatic USA, Inc.
Microformatic S.A.

Description: The APPC++** class library is a simplification of the full APPC protocol defined by IBM. With this package, you can incorporate an APPC conversation into your program within minutes.

The APPC++ package is designed to :

- Reduce the number of APPC verbs to a manageable superset
- Create an intuitive set of verbs to make programming easier
- Make the library accessible from C or C++ programs.

The APPC++ package includes:

- Executable DLL and full source code written in C++
- All required header files for inclusion into your code
- Several examples of source code and compiled code in C and C++

- All "make" files, .DEF files, etc.
- Printed comprehensive documentation
- Binary available.

Environment: PC: OS/2 EE 1.1 or higher

Contact in the US:

Helen Charov
Microformatic USA, Inc.
P.O. Box 571
26 Plains Road
Moodus, Connecticut USA 06469-0571

Phone: 203-873-1950

Fax: 203-873-2171

Contact in Europe:

Microformatic S.A.
2 Rue Navoiseau
93100 Montreuil-Sous-Bois
France

Phone: 4870-1900

Fax: 4870-2729

Source: Microformatic USA marketing materials

Application Manager (AM)

Vendor: Intelligent Environment

Description: Applications Manager (AM) is the leading OS/2-based tool for developing cooperative processing applications that access data on LANs and remote host machines. AM fully supports all of the features of OS/2, including CUA-compliant Presentation Manager screens, SQL database access, multiple threads and windows, interactive graphics, and DDE (Dynamic Data Exchange).

The AM family includes a full development environment, including workbench products for:

- Static (production) SQL
- Terminal emulation (3270/5250)
- Screen scraping
- Communications conversations, including APPC, CICS OS/2, and Named Pipes.

You can use AM to write cooperative processing applications without learning C or OS/2.

CP/Workbench is a high-level transaction/buffer definition toolkit provided as a separate AM program. Using an enhanced set of AM interface functions, CP/Workbench can import and edit basic communications libraries and parameters, such as:

- APPC
- SNA partner and transaction ID

- Synchronization
- EBCDIC/ASCII data conversion
- Security
- Mode and synchronization.

The AM Editor uses a CUA interface to define conversations, including the buffers and the fields within a conversation. The AM Compiler then generates an OS/2 binary program data file, an AM data definition file, and full documentation for programmer reference.

Environment:

- PC: OS/2
- AS/400: OS/400, SQL/400*
- 30XX, 43XX, 9370: VM Release 6

Contact:

Terry Golesworthy or Rhonda Veilleux
Intelligent Environment
 2 Highwood Drive
 Tewksbury, Massachusetts USA 01876

Phone: 508-640-1080

Fax: 508-640-1090

Source:

SAA Catalog
 National Solution Center Document ID: X88554,
 X88555, X07354

Application to Application Interface (AAI)

Vendor: Creative Systems Interface, Inc.

Description: The Application to Application Interface (AAI**) enables an application to execute a remote program using a simple programming call in any language. AAI connects the applications using APPC/LU 6.2 and provides many features to manage the conversation. Because this SAA-compatible product provides a high-level interface, no commands are needed by the programmer. AAI is available on many systems that support APPC.

By using AAI, you can eliminate all APPC coding and all communications testing. In addition, AAI helps ensure that applications are easy to maintain after installation. AAI also provides an online Administration System that lets you globally administer all AAI resources, including timings of all cooperative transactions, and produce statistical reports.

In short, with the AAI Family of Products, connecting cooperative applications on IBM systems is as easy as calling a subroutine.

Environment:

- PC: OS/2 EE, DOS; support for Microsoft Windows 3.0 available 8/91
- AS/400: OS/400
- 30XX, 43XX, 9370: All versions of CICS, MVS Batch, and TSO
- RS/6000: AIX

Contact:

Thomas C. Miller
Creative Systems Interface, Inc.
26 Hancock Street
Lexington, Massachusetts USA 02173

Phone: 800-321-2744
Fax: 508-879-7423

Source:

Enterprise Systems Journal, January 1991
National Solution Center Document ID: X84862

Application Software Expert (ASE) Rapid Application Development Tool

Vendor: Software Artistry

Description: Application Software Expert (ASE) is a cross-platform development tool that enables you to build applications that can run on the IBM 4680, RS/6000, AS/400, and PC or PS/2. ASE combines such elements as a traditional block structured programming language, integrated database management facilities, an object-oriented design approach, and an expert system inference engine.

ASE represents a new wave in software development—Rapid Application Development Tools which enable you to create applications faster than ever before. ASE is the first general purpose prototyping and delivery vehicle with expert systems technology for the AS/400, 4680, and RS/6000. ASE has an integrated development environment (IDE) you can use to create, edit, compile, run, and debug your applications. ASE also provides an Application Programming Interface (API), so that programs developed in ASE can be seamlessly embedded into RPG COBOL programs on the AS/400, or into

C programs on the PS/2 and 4680. ASE contains a powerful expert system inference engine that enables you to add artificial intelligence (AI) features to any application.

Some of the features of ASE include dynamic windows, hypertext screen buttons, pop-up menus, and complex data entry forms. The PS/2 adds support for graphic images, animation, and "point-and-click" icon-driven interfaces. Even the AS/400 version can display graphics, images, and animation sequences on attached PS/2s.

Environment:

- PC: OS/2, DOS
- AS/400: OS/400
- RS/6000: AIX

Contact:

Doug Taylor
Software Artistry
 3500 DePauw Boulevard, Suite 1100
 Indianapolis, Indiana USA 46268

Phone: 317-876-3042
 Fax: 317-876-3258

Source: *AS/400 Cooperative Application Solutions Catalog*

ARDIS LU 6.2/CICS Interface

Vendor: ARDIS

Description: ARDIS LU 6.2/CICS interface streamlines the process of connecting CICS host applications and the ARDIS nationwide radio data network. This interface provides easy access to the ARDIS network, while significantly minimizing development effort. ARDIS LU 6.2/CICS Interface also provides automatic error recovery and robust diagnostic capabilities.

ARDIS LU 6.2/CICS Interface works as a router, sending and receiving messages to and from the ARDIS network, thereby eliminating the need to understand details of the ARDIS LU 6.2 implementation. This interface also:

- Simplifies application development. Using the emulation mode provided by ARDIS LU 6.2/CICS Interface, you can test ARDIS applications before establishing ARDIS connectivity.
- Minimizes the development and implementation cycle
- Provides connectivity between ARDIS network and host applications with few modifications to the host system
- Supports a virtually unlimited number of terminals
- Reduces internal CICS resource demands for handling a large number of terminals
- Implements an LU 6.2 wireless solution with low risk and high reliability

- Minimizes potential downtime, ensures connectivity, and improves troubleshooting.

This package is fully tested and supported by ARDIS. ARDIS provides complete documentation, assistance during installation, and ongoing support as required.

ARDIS operates the first nationwide radio data information service enabling in-building and on-street data communications between hand-held terminals and host computers. ARDIS provides comprehensive coverage in the top 400 metropolitan areas in all 50 states as well as Puerto Rico and the Virgin Islands. The service enables executives and mobile workers to access their computers or communicate with their peers from practically any location in these metropolitan areas. The ARDIS goal is to provide seamless, worldwide access to any information needed by people who require an alternative to wire-based communications.

Environment: 30XX, 43XX, 9370: CICS

Contact:

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ARDIS
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Lincolnshire, Illinois USA 60069

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Fax: 708-913-4700

Source:

ARDIS news release

AS/SET

Vendor: System Software Associates, Inc.

Description: AS/SET is an AD/Cycle integrated case product line. Although AS/SET spans the entire development life cycle, it works like a single product. Seamless integration lets the developer operate efficiently and effectively across the life cycle. AS/SET products include:

- AS/SET ADK
- AS/SET INT (KnowledgeWare** interface)
- AS/SET REV (Reverse Engineering)
- AS/SET ESF (ESF Interface)
- AS/SET AIM (Methodology)
- AS/SET UCI (Upper case integration)
- AS/SET IWS (Case workstation)
- AS/NET (AS/400 networking).

AS/SET operates on programmable workstations, either detached, semi-attached, or attached to the AS/400 host, and on the AS/400 as a cooperative application using APPC.

AS/SET products support application development on the AS/400 or PS/2, together or independently. AS/SET excels in its use of existing information. Its data modeling facility easily includes existing

database information. Existing CASE constructs can be retrieved through IBM's External Source Format or through an interface to KnowledgeWare's design workstation. AS/SET reverse engineering converts existing source to CASE constructs. AS/SET provides communications support for networks. AS/SET is available in nine national languages.

Environment:

- PC: OS/2
- AS/400: OS/400

Contact:

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System Software Associates, Inc.
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 Chicago, Illinois USA 60601

Phone: 312-641-2900

Fax: 312-641-3737

Source:

SAA Catalog
 National Solution Center Document ID: X88558

Choreographer

Vendor: GUIDance Technologies**, Inc

Description: Choreographer** vastly simplifies the development of graphic user interfaces (GUIs) for applications under Presentation Manager and Microsoft Windows 3.0. Because Choreographer interfaces are easier to build, test, and maintain, this development tool significantly reduces development time and increases productivity.

Choreographer is designed for mainstream application development. It provides tools to manage the work of project teams.

Features of Choreographer include:

Standard language support

Choreographer can call out to C, COBOL, and other standard languages. Furthermore, it provides an API (an SAA CPI) to call all Choreographer facilities from these standard languages. Choreographer can share C structures, COBOL records, and similar data structures with other programs.

Connectivity

Choreographer simplifies key communication protocols including DDE, SQL, 3270, and LU 6.2 APPC.

Enforcement of GUI standards

For each standard, Choreographer provides a comprehensive set of standard interface elements. Choreographer promotes the use of CUA standards while providing access to low-level details. It also supports the application-specific aspects of user interfaces.

Choreographer also provides a full interactive, object-oriented development environment.

Environment: PC: OS/2 SE and EE, Microsoft Windows 3.0

Contact:

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Pittsburgh, Pennsylvania USA 15212

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Source:

SAA Catalog
National Solution Center Document ID: X07345
PC Magazine, March 1990
MIS Week, March 1990
Gartner Group Report, November 15, 1990
IBM Personal Developers Journal, Winter 1990
Personal Workstation Developer

CICS OS/2

Vendor: IBM

Description: CICS OS/2 Version 1.2 is a major enhancement of the CICS family member for the programmable workstation (PWS) and a key component of the transaction processing strategy for CICS customers within SAA. CICS OS/2 provides significant new support for cooperative processing and extends SAA support so that applications can provide CUA screen interfaces and can fully conform to SAA in the OS/2 environment.

Enhancements in CICS OS/2 Version 1.2 include:

Cooperative processing support

CICS OS/2 Version 1.2 expands earlier communications support by adding communications capabilities to provide transparent host-to-PWS and PWS-to-PWS communications. CICS Distributed Transaction Processing (DTP) commands enable transactions running in a PWS to initiate and communicate synchronously with transactions in another PWS or a host using APPC protocols. CICS OS/2 also provides LAN support for communications via APPC protocols and NetBIOS protocols.

SAA conformance

CICS OS/2 extends the support provided for SAA, so that you can further develop your investment in OS/2.

New debugging facilities

The CICS application debugging aid, Execution Diagnostic Facility (EDF) helps you with problem determination.

Other enhancements include:

- A new external call interface (ECI)
- Extended support for the CICS command-level API
- Additions to the distributed program link (DPL) function
- Additional communications support, including communications between CICS OS/2 applications and both IMS and APPC/MVS applications.

Environment:

- PC: OS/2 EE, DOS
- 30XX, 43XX, 9370: CICS/ESA, CICS/MVS, CICS/VSE, CICS/VM*

Contact: Contact your local IBM marketing representative.

Source:

IBM marketing materials

Commander EIS/SQL

Vendor: Comshare, Inc.

Description: The LAN capabilities of the AS/400 coupled with the ease-of-use of Commander** EIS/SQL make a powerful executive information system for distributing and displaying the information from AS/400 applications to executive users. Packaged access to key information is automatically delivered to:

- Personal computer workstations
- Off-desk, touch-sensitive monitors
- Large screen projectors for conference rooms and board rooms.

Commander EIS delivers critical business data to executives with no need for additional training or documentation. Using individualized PC workstation menus, you can access intelligent, highly analyzed, refined, and summarized information drawn from diverse sources, both internal and external to a company's organization. You can select any number, title, graphic component, or text phrase to request more details.

Commander EIS facilitates effective analysis, planning, control, and decision making. It also enables geographically dispersed management teams to communicate via reports, charts, memos, and spread sheets.

Environment:

- PC: OS/2, DOS
- AS/400: OS/400
- 30XX, 43XX, 9370: VM, MVS/TSO

Contact:

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Comshare, Inc.
3001 South State Street
Ann Arbor, Michigan USA 48108

Phone: 313-994-4800
Fax: 313-769-6943

Source:

SAA Catalog
AS/400 Cooperative Application Solutions Catalog
National Solution Center Document ID: X87317,
X06496

Distributed Automation Edition Tools/2

Vendor: IBM

Description: Distributed Automation Edition* is the key IBM plant floor system enabler. This family of products helps improve productivity by providing the capability to develop and use plant operations applications and to integrate these applications with other business management functions. Distributed Automation Edition Tools/2 enables Communications System/2 application programmers to interactively define application panels using Presentation Manager.

Tools/2 helps improve productivity by providing a simple, high-function program interface. Using this interactive WYSIWYG panel creation tool, you can create panels quickly by directly manipulating icons, which represent panel objects. Tools/2 also provides dynamic assistance with panel layout, so that you can concentrate on the content of the

panel instead of formatting details. As a result, Tools/2 helps reduce the cost of application programming by reducing the level of knowledge required to develop easy-to-use applications.

Using the user interface component of Communications System/2, you can run Communications System/2 applications using interface panels created with Tools/2. A single application program can interact with multiple users concurrently. You can display multiple panels concurrently on one workstation, which provides significant growth opportunity in a distributed environment.

Environment: PC: OS/2

Contact: Contact your local IBM marketing representative.

Source:

IBM marketing materials

EASEL

EASEL

Vendor: IBM

Description: EASEL for OS/2 EE is a full-function OS/2 application development tool. It enables you to develop full-color, graphical user interfaces which help your workstation users productively use a wide range of local and host applications.

Both versatile and flexible, EASEL provides an array of facilities for creating highly visual, sophisticated applications quickly. These applications help you benefit from OS/2 Database Manager access, cooperative processing, terminal emulation, and even audio playback.

Other features include APPC support, which enables you to develop cooperative processing applications with IBM hosts. With OS/2

Communications Manager support, multiple host sessions can be active concurrently within each EASEL application. Using Asynchronous Communications Device Interface (ACDI), you can develop interfaces for IBM or non-IBM ASCII host applications, so workstations can operate more easily in multivendor environments. Fourteen business graphics routines, available for graphic presentation of data, help you and your users work more productively.

Environment: PC: OS/2 EE

Contact: Contact your local IBM marketing representative.

Source:

SAA Catalog
PC Week, May 22, 1990, pp. 49, 51
National Solution Center Document ID: X00491

EASEL Workbench

Vendor: Easel Corporation

Description: EASEL Workbench is an OS/2-based set of development tools for building graphical applications. It includes:

- The high-level EASEL language
- Production compilers for OS/2, Microsoft Windows 3.0, and DOS
- EASEL application runtime software.

EASEL Workbench helps you develop PC-based client/server and cooperative processing graphical applications. It also enables you to enhance existing terminal-based business applications with graphical user interfaces.

EASEL Workbench provides the following graphical application development tools:

- Layout editor
- Drawing editor
- Attribute editor
- Text editor
- Parts catalog
- Incremental compiler
- Debugging facilities
- Trace facilities.

EASEL Workbench provides support for Microsoft's SQL Server, IBM's Database Manager, various mainframe communications protocols, CICS OS/2, OfficeVision*, APPC, and the Dynamic Data Exchange (DDE).

Environment:

Development environment:
PC: OS/2

Production environment:
PC: OS/2, DOS, Microsoft Windows 3.0

Contact:

Chip LeBlanc
Easel Corporation
25 Corporate Drive
Burlington, Massachusetts USA 01803

Phone: 617-221-2100

Fax: 617-221-2199

Source:

SAA Catalog
PC Week, May 22, 1990, pp. 49, 51
National Solution Center Document ID: X00491

ENFIN/2

Vendor: Enfin Software Corporation

Description: ENFIN/2 is an object-oriented application development system. It includes a number of fourth-generation language (4GL) tools which help you:

- Design CUA-conforming user interfaces easily. ENFIN/2 removes developers from the details of the windowing system's API. With ENFIN/2, all CUA elements are predefined and supported. It also includes support for the workplace model.
- Define database queries for database engines such as the OS/2 EE Database Manager, MS SQL Server, and ORACLE**
- Design reports interactively
- Create mathematical models for applications.

ENFIN/2 automatically generates source code from these interactive sessions.

ENFIN/2 supports APPC by providing the functionality in a framework which can be used to simplify the details of remote connections. It also supports DDE and DLLs.

The ENFIN/2 object-oriented development environment includes:

- An object-oriented programming language. This language, based on the Smalltalk paradigm, includes enhancements that improve readability.
- Development tools such as a class repository, a set of reusable classes, a debugger, an inspector, and a profiler. Source is stored in ASCII files to support version control systems.

ENFIN/2 is marketed by IBM Germany as a vendor logo product.

Environment: PC: OS/2 EE 1.2 or higher, Microsoft Windows 3.0

Contact:

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Enfin Software Corporation
6920 Miramar Road, Suite 307
San Diego, California USA 92121

Phone: 619-549-6606

Fax: 619-549-6798

Source:

National Solution Center Document ID: X07781
Enfin Software Corporation marketing materials

EXPRESS/APPC

Vendor: Horizon Strategies

Description: EXPRESS/APPC provides a layer of "insulation" between the standard vendor LU 6.2 API and the business application. As a result, EXPRESS/APPC helps reduce the time required to develop, test, and integrate applications in the enterprise network.

The EXPRESS/APPC product suite is composed of two basic families:

message EXPRESS/APPC

This product enables message and conversational modes of interoperability between two peer processes. message EXPRESS/APPC combines comprehensive message routing and error management technologies, yielding a robust mechanism for application connectivity.

file EXPRESS/APPC

This product enables file level interoperability between two peer processes. As with conversational mode in message EXPRESS/APPC, accessibility of the peer is assumed, and the application is provided comprehensive routing and error management capabilities. File transfer rates are greatly enhanced due to the capabilities of the LU 6.2 protocol.

The EXPRESS/APPC product family provides:

- Simplified programming interfaces
- Integrity of data transmission
- Error-free data delivery assurance
- Controlled receipt tracking
- Accounting and auditability
- Flexible multilevel synchronization
- Comprehensive network management utilities
- Application-level insulation from any network-related error condition.

Environment:

- PC: DOS, OS/2, Microsoft Windows 3.0
- AS/400: OS/400
- UNIX workstations: UNIX, AIX
- 30XX, 43XX, 9370: CICS, MVS, VTAM
- LAN: LAN Server, Novell

Contact:

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Horizon Strategies
 75 Second Avenue, 4th Floor
 Needham, Massachusetts USA 02194

Phone: 617-444-7575
 Fax: 617-444-7375

Source: Horizon Strategies marketing materials

ezBRIDGE Peer-to-Peer

Vendor: Systems Strategies, Inc. (SSI), a NYNEX Company

Description: ezBRIDGE Peer-to-Peer is a complete communications software package that enables VAX/VMS systems and AS/400s to share data easily and efficiently in real time. With ezBRIDGE, you can perform bidirectional terminal access, send and fetch files, and print documents on both AS/400 and VAX printers. You can also submit batch jobs from the VAX to an AS/400 and receive job output.

This package also includes a native OS/400 and VMS interface that helps you easily develop, maintain, and modify LU 6.2 program-to-program applications. Because ezBRIDGE insulates you from complicated communications and configuration issues, LU 6.2 becomes easier to use, support, and debug. Since applications can be developed faster, your company benefits by getting the application into production quickly.

Highlights of ezBRIDGE Peer-to-Peer include:

- AS/400 to VAX interoperability
- High performance, real-time software solution

- SNA/APPN and DECnet become one peer-to-peer network
- Easy LU 6.2 programming; no knowledge of LU 6.2 required for your VAX or AS/400 users
- Bidirectional terminal access, file transfer, print
- Transport independent: SDLC, token-ring, X.25
- Direction communications—no gateway box needed.

Environment:

- AS/400: OS/400
- DEC VAX: VMS

Contact:

Bob Gold
Systems Strategies, Inc. (SSI)
225 West 34th Street
New York, New York USA 10001

Phone: 212-279-8400
Fax: 212-967-8368

ezBRIDGE OLTP

Vendor: System Strategies, Inc. (SSI), a NYNEX Company

Description: ezBRIDGE OLTP provides real-time distributed processing between multivendor platforms, providing assured end-to-end data delivery between systems.

ezBRIDGE OLTP offers a standard way of distributing messages across multivendor computing environments. Residing on LU 6.2, this message queuing software package ensures that no messages are lost or duplicated.

With ezBRIDGE OLTP, you develop applications using a simple programming interface common to all of the multivendor platforms. Therefore, you can create and maintain applications without knowledge of the underlying system. In addition, this package isolates you from the complexities of LU 6.2 communications and eliminates the need

to build error recovery into your applications. As a result, you can focus on developing the application and delivering it to your user community quickly.

A number of leading banking, brokerage, and retail organizations currently use ezBRIDGE OLTP.

Environment:

- 30XX, 43XX, 9370: CICS
- DEC VAX: VMS
- Stratus
- Tandem
- PC LAN networks: IBM, Novell, Eicon, 3Com

Contact:

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Fax: 212-967-8368

FOUNDATION

Vendor: Andersen Consulting

Description: FOUNDATION** is an integrated set of CASE methodologies and software tools used to support the entire systems development lifecycle. FOUNDATION supports SAA with five key components:

PLAN/1**

Consists of four integrated tools used during information planning to model conceptual data entities and to analyze functional and organizational structures and interrelationships.

DESIGN/1 for OS/2**

Refines the planning object into the functional, technical, and detailed design of a centralized or cooperative application system. You can design and view windows, diagram the flow of data through the system, and refine the data models.

INSTALL/1**

Supports the development and implementation of transaction processing systems for an IBM DB2 mainframe environment.

FOUNDATION for Cooperative Processing

Provides presentation, distribution, and context management for Presentation Manager client applications and OS/2 or CICS server applications.

METHOD/1.**

Provides a structured development methodology for the overall planning and management of the systems development process.

Environment:

- PC: OS/2 EE
- 30XX, 43XX, 9370: CICS/MVS

Contact:

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Chicago, Illinois USA 60602

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Source:

SAA Catalog
National Solution Center Document ID: X07365,
X07356, X88561, X88567, X07352

Information Engineering Facility (IEF)

Vendor: Texas Instruments, Inc.

Description: Information Engineering Facility** (IEF**) is a computer-aided software engineering (CASE) product. IEF is a fully integrated set of tools implementing the Information Engineering Methodology. IEF automates the entire system life cycle, from initial planning through code generation and maintenance.

With IEF, the system developer works with model diagrams for the entire system life cycle, never the code. The IEF consists of Planning, Analysis, Design, and Construction toolsets. For OS/2 workstations, the Construction toolset generates applications at the workstation level, whereas DOS workstations rely on the mainframe for Construction. The Construction toolset consists of code generation, data base generation, and diagram testing. The Central Encyclopedia on the mainframe links the toolsets and acts as the

central repository for detailed business and systems information from which full source code can automatically be generated. OS/2 and DOS models are interchangeable and the graphical interfaces are identical for both workstations.

Environment:

- PC: OS/2, DOS
- 30XX, 43XX, 9370: MVS/ESA, MVS/XA*, CICS, IMS

Contact:

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Plano, Texas USA 75023

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Source:

SAA Catalog
National Solution Center Document ID: X88443, X07286

InfoSpan/CaseSpan

Vendor: InfoSpan

Description: CaseSpan is an IRDS repository-based CASE tool integration and bridging framework—supporting your ability to choose the best-of-breed CASE, reverse engineering, dictionary and code generation tools. CaseSpan integrates a variety of reverse engineering tools and offers new opportunities and techniques to maintain and rejuvenate existing applications and standardize data elements.

InfoSpan/CaseSpan:

- Offers a cost-effective CASE tool integration and bridging environment directly to the workgroup software development team.
- Consolidates design information across tools, methodologies, users, projects and information life-cycle in an OPEN repository.
- Supports exchange of information contained in logical data models, entity relationship data and flow diagrams, and a host of other design representations.
- Offers versioning, lifecycle phase partitioning, audit, view, and access control services.

CaseSpan is an ideal choice for a department or project level server-based software development environment. It complements AD/Cycle Repository Manager* and Information Model with workgroup services, supporting subsets of the Information Model. Software designs and specifications in CaseSpan can be loaded into the AD/Cycle RM/MVS repository using the SAA Repository Manager Common Programming Interface. PC/AT-and OS/2-based applications use Dynamic Data Exchange (DDE) to work with AIX- or OS/2-based CaseSpan Manager software.

CaseSpan consists of a core CaseSpan Manager and a complementary set of optional tools, utilities and transformers which can:

- Import from reverse engineering and CASE tools, and Data Dictionary/Catalogs
- Maintain and rejuvenate the specifications

- Export the clean and verified specifications to a variety of "downstream" CASE and code generation tools.

Casespan offers design exchange facilities when you wish to use more than one CASE tool, AD/Cycle or non-AD/Cycle, or Reverse Engineering tool for a design activity. You can also integrate designs from subprojects where team members use dissimilar tools. The project team can use the right tool for the right job -- matching skills and knowledge bases to tools.

CaseSpan supports tools from KnowledgeWare, INTERSOLV, Oracle, ADPAC, and InfoSpan's COBOL Reverser and Loader. Information supported includes entity relationship and data flow diagrams, along with processes, data stores, externals; and structure charts, data and record structures, screen data, business planning information, etc.

Design information from COBOL programs and associated Copy Libraries can be extracted and loaded for design exchange and integration services. The design information extracted includes File and Working Storage section, module calling trees, action diagrams/program logic, CICS, data base, record and screen layout, and more.

Environment:

- PS/2: OS/2 or DOS
- RS/6000: AIX

Contact:

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Edina, Minnesota USA 55439

Phone: 612-941-2829

Fax: 612-941-8494

Source:

SAA Catalog
National Solution Center Document ID: X90139

KBMS Knowledge Base Management System

Vendor: AICorp, Inc.

Description: KBMS** is a knowledge base application development tool that is totally integrated with leading database management systems. It supports all four of the major AI programming methodologies: forward chaining, backward chaining, object-oriented programming, and hypothetical reasoning. Knowledge is represented in the forms of rules and objects.

KBMS offers a complete development environment. You can define rules using ordinary English phrases. Objects are the only data structures; they can be stored locally or on a remote DBMS. Rules can be attached to objects that execute when the object is created, modified, or deleted. You can either exit to an external program or imbed KBMS in a conventional program.

KBMS has automatic interfaces to the following databases:

- DB2
- SQL/DS
- DL/1
- ADABAS
- IDMS
- CA-IDMS
- KDB

- IMS VSAM
- DBC/1012 (Teradata)
- Oracle (VMS)
- RDB (VMS)
- OS/2 Database Manager
- Sequential.

KBMS incorporates a central server architecture for multiple users to share the same copy of KBMS, even through different teleprocessing monitors at the same time.

Environment:

- PC: OS/2 EE
- DEC VAX: VMS
- 30XX, 43XX, 9370: MVS/ESA, MVS/XA, MVS, VM, CICS, IMS

Contact:

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 138 Technology Drive
 Waltham, Massachusetts USA 02254

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Source:

SAA Catalog
 AICorp marketing materials
 National Solution Center Document ID: X85256

LANSA

Vendor: Summit Technologies, Inc.

Description: LANSAs is a CASE tool you can use over the life cycle of your entire system. LANSAs provides an application development and maintenance environment for the AS/400. This package features a 4GL that feeds a code generator. LANSAs also offers the following functions:

- An integrated active data dictionary to control data definitions and validations, and to enable ready access to existing databases
- A screen and report painter to help you prototype applications
- A data modeling facility to enable logical database design and to subsequently handle the transformation into a physical database definition within the active data dictionary.

LANSA supports variations in methodologies and tools. Using LANSAs does not require expertise in RPG or COBOL.

The LANSAs Co-operative Interface (LCOI) provides the communications interface for

LANSA-generated applications cooperating with remote PC applications over an APPC/LU 6.2 network. Based on application program interface (API) technology, the LCOI facilitates the development of client/server applications on AS/400 and PC systems linked to IBM APPC/LU 6.2 networks.

Environment:

- PC: OS/2 EE, Microsoft Windows 3.0
- AS/400: OS/400

Contact:

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Phone: 708-323-7779

Fax: 708-789-2176

Source:

SAA Catalog
AS/400 Cooperative Application Solutions Catalog
National Solution Center Document ID: X83704

MetaNet Architecture

Vendor: LEGENT Corporation

Description: MetaNet** Architecture supports communications across heterogeneous platforms, operating systems, and networks. It is designed to support proprietary network services such as SNA and DECnet, as well as standards-compliant network services such as TCP/IP and OSI.

MetaNet Architecture consists of five primary components:

MetaNet Directory Services

Associates a MetaNet Application with its fully qualified network address.

MetaNet Event Management

Provides a common, system-independent interface to manage multiple asynchronous events. It provides comprehensive event management, handling not only network events, but also terminal and disk I/O.

MetaNet Network Services

Provides a common, system-independent interface to a variety of network services. It works in conjunction with IBM's SAA, Digital's NAS, and OSI network services.

MetaNet Connection Services

Handles session establishment, logical unit (LU) processing, and activation of applications on demand.

MetaNet Presentation Services

Provides the appropriate translation of data structures between heterogeneous computing environments.

The initial MetaNet implementation uses LU 6.2 and the DECnet/SNA gateway family of interconnect products to support interoperability between SNA and DECnet environments. Currently, MetaNet supports a suite of interoperability applications, including:

- TransQueue** redirects VMS print output to MVS SYSOUT devices
- FacillTape** stores VMS files directly onto IBM tape drives
- FullView**/VT enables 3270-terminal users to access VMS applications
- FileExchange provides for bidirectional file transfer and remote job activation.

Environment:

- 30XX, 43XX, 9370: MVS/XA, MVS/ESA
- DEC VAX: VMS

Contact:

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LEGENT Corporation
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 Renton, Washington USA 98055

Phone: 206-228-8980
 Fax: 206-235-7560

Source:

Computergram International, Jan 7, 1991 (n1584)
Computing Canada, Jan 17, 1991 (v17, n2), p. 26
Digital Review, Jan 14, 1991 (v8, n2), p. 11

Metaview Developers Workbench

Vendor: Metafile Information Systems, Inc.

Description: Metaview** is a single interface to integrated information management, including document image processing, access to host applications and facilities, extensions to PC applications, and application development.

Metaview provides developers with a high-level, object-driven application environment and delivery language. The Metaview Developer's Workbench provides the facilities to access and manipulate the objects and data needed for an application. It is a highly productive, modular approach to developing and maintaining applications that permits faster application turnaround and quicker system design and analysis.

The greatest strength of the Metaview Developer's Workbench is the environment which provides developers with a common interface to information resource and functions. It insulates the application and the developer from hardware and operating system details. The power of the mainframe, midrange, and special purpose servers are all managed through the friendly and responsive programmable workstation.

Applications can be developed, delivered, and maintained in a fraction of the time required in traditional programming environments. Metaview is designed with an open architecture so that it coexists or communicates with existing applications, adding value and protecting your investment in your current system.

Environment:

- PC: DOS
- AS/400: OS/400

Contact:

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Fax: 507-286-9065

Source:

MIDRANGE System, August 6, 1991, p. 11.
Software Magazine, April 1991, p. 43.
PC Week, March 18, 1991, p. 13.

MLINK APPC Communications System (MACS)

Vendor: Corporate Microsystems, Inc. (CMI)

Description: The MLINK APPC Communications System** (MACS) is a powerful LU 6.2 application for high-speed, bulk file transfer and remote command execution. MACS is designed for automated communications applications in which either end of the link can initiate a session, transfer files, and submit commands for execution by the remote system.

MACS uses the LU 6.2 protocol to achieve very high throughput and reliability. It is designed for automated, unattended communications activities.

MACS also provides:

- Master and slave transaction programs at both ends of the connection to allow for session initiation at either end
- Flexible options for file transfer and command execution
- Unattended operation using a sequence of commands stored in a control file
- Automatic record reformatting and ASCII/EBCDIC translation

- A high-level API to the internal LU 6.2 interface. The API reduces the LU 6.2 verb set to three essential commands.

Environment:

- PC: OS/2 EE
- AS/400: OS/400
- 30XX, 43XX, 9370: VTAM, MVS, DOS/VSE
- RS/6000 and RT PC: AIX
- AT&T 486: UNIX V.4
- NCR 3000: UNIX V.4
- Bull DPX/2: UNIX V.3

Contact:

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Mt. Support Road
P.O. Box 2059
Lebanon, New Hampshire USA 03766

Phone: 603-448-5193
Fax: 603-448-4836

Source:

ComputerWorld, April 15, 1991, p. 53
CMI marketing materials

Netwise System for Mainframes

Vendor: Netwise, Inc.

Description: Netwise System for Mainframes** is a software development package that enables you to distribute the storage, computation, and presentation components of an application between IBM-compatible mainframes and PCs, workstations, and minicomputers. Based on remote procedure call (RPC) technology, the Netwise System for Mainframes facilitates client/server application design and development on mainframes and other systems linked to IBM APPC/LU 6.2 networks.

The Netwise System for Mainframes package provides 100% of the communications interface software required to extend a conventional procedure call over an APPC/LU 6.2 network in a completely transparent manner. This system uses the standard syntax of the COBOL programming language as the interface to the RPC support software on the mainframe. You can use the Netwise System without making major adjustments to your development environment or methodology. In fact, this package provides you with unmatched flexibility for designing and implementing distributed applications.

The Netwise System for Mainframes enables you to:

- Support both client and server application components on mainframes
- Integrate components running on a variety of IBM and non-IBM platforms

- Distribute existing applications to new environments.

Environment:

- PC: OS/2 EE, DOS, Microsoft Windows 3.0
- Macintosh: Mac/OS
- 30XX, 43XX, 9370: CICS/MVS
- DEC VAX: VMS
- Sun 3, Sun 4, Sun 386i: Sun/OS, UNIX
- UNIX platforms: UNIX
- HP 3000, HP 9000: MPE
- Apollo 3500: Domain/ix
- Data General AViiON: DG-UX
- Wang: Wang VS
- Others

Contact:

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Netwise, Inc.
2477 55th Street
Boulder, Colorado USA 80301

Phone: 303-442-8280
Fax: 303-442-3798

Source:

Network Monitor (Seybold Office Computing Group),
May 1991
ComputerWorld, April 15, 1991,
"Distributed Computing Arises"
Clarke-Burton report, March 1991
Network Computing, March 1991
Communications Week, September 3, 1990
Guide Survey, March 1991

PassPort Application Development Kit

Vendor: The Indus Group, Inc.

Description: The PassPort Application Development Kit is a set of tools for generating SAA-compliant CICS/DB2 applications. The tools consist of:

- PS/2-based CASE tools for application design and definition
- A host-based code generation workbench that produces standard VS COBOL II source code.

The PassPort Application Development Kit supports an application architecture that complies with SAA and CUA and uses IBM's DB2 Database Management System.

Applications produced with the PassPort tools can be processed in a cooperative processing mode using the Indus Portal. The Indus Portal supports LU 6.2 peer-to-peer processing on IBM PS/2. In both 3270 and LU 6.2 communications

environments, applications developed with PassPort fully implement such CUA features as pull-down menus, pop-up prompts, modeless user interfaces, and flexible navigation.

Environment:

- PC: OS/2 EE
- 30XX, 43XX, 9370: MVS, MVS/XA, MVS/ESA, CICS, DB2

Contact:

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Source:

SAA Catalog
National Solution Center Document ID: X88734

PeerXchange Server

Vendor: The PeerCom GROUP ApS

Description: The PeerXchange Server provides general purpose, transparent peer-to-peer communications to users of UNIX, OS/2, and DOS computers. Based on LU 6.2, the industry standard, this product enables multiple application programs on a LAN or within a single system to exchange information with authorized remote applications that use the LU 6.2 protocol.

You can easily integrate The PeerXchange Server with other application enablers, including interactive 4GL database packages. Its simplified application interface hides details of the LU 6.2 protocol and the underlying network from its users. Network management events can be reported to host systems using IBM NetView-compatible messages and responses. Comprehensive security, data integrity, and operational reliability features are built into The PeerXchange Server.

Benefits of The PeerXchange Server are:

- While users see no change to interactive terminal procedures, PeerXchange extends the reach of their local applications to multiple remote locations.
- You can change user security profiles, service priorities, network configuration definitions, and remote program initialization parameters while PeerXchange is operating.
- PeerXchange dynamically adjusts the user of communication options to network conditions and to changing user workloads.

- One standard user interface for peer-to-peer communications replaces the implementation-dependent APPC interface that vendor platforms provide.
- PeerXchange provides automatic recovery from errors and unexpected transaction interruptions.
- To support network management activities, PeerXchange maintains server performance history, fault information, and records of configuration modifications.
- PeerXchange increases transaction throughput by maximizing use of available communication links as a function of application priority.

Environment:

- PC: OS/2, DOS
- UNIX platforms: UNIX
- RS/6000: AIX

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Source:

PeerCom marketing materials

PIPES Platform

Vendor: PeerLogic, Inc.

Description: PIPES Platform** Base System (Version 3.0) is an enabling technology for distributed computing that support both client-server and true peer-to-peer applications. Using PIPES, nonprogrammers can easily build fast, robust distributed applications that communicate seamlessly over heterogeneous networks.

PIPES Platform consists of two major components, the PIPES Application Programmer's Interface** (PAPI**) and the Communications Management System.

The PIPES Application Programmer's Interface (PAPI) gives you a purely logical view of an arbitrarily complex physical network, a view that is independent of operating systems, protocols, and physical topologies. This easy-to-use API consists of twelve verbs which remain the same whatever the platform. Thus, PAPI enables you to build distributed applications which can be ported to new environments easily and quickly.

Since the library of PIPES function calls used in PAPI is the only element of the system bound to the application when it is compiled and linked, PIPES enables the application to locate and use different transport protocols at run-time. For example, applications written today for one protocol stack can run unchanged tomorrow over OSI stacks. PIPES can support an unlimited number of nodes.

The core of the product is the Communications Management System, a kernel which resides in any machine using PIPES. This system handles all of the resource and session management functions required for distributed computing. The

kernel also provides a consistent error-handling mechanism; it automatically retries on errors and, if alternate routes exist, reroutes communications after network failures. In addition, the kernel handles routing of PIPES messages from one protocol stack to another, so that applications running in machines using different protocols can communicate with one another—without knowing that they do not share a common communications protocol.

Environment:

- PC: OS/2, DOS, Microsoft Windows 3.0
- 30XX, 43XX, 9370: MVS
- UNIX platforms: UNIX V.4, Sun/OS, AIX
- NetWare 386
- Vines
- Macintosh: Mac/OS
- DEC VAX: VMS

Contact:

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PeerLogic, Inc.
 555 DeHaro Street
 San Francisco, California USA 94107

Phone: 415-626-4545

Fax: 415-626-4710

Source:

IBM Personal Systems Developer, Spring 1991, pp. 127-136
Network Monitor, May 1991 (v6, n5)
Computer Technology Review, Spring 1991
Clarke Burton News Analysis, December 12, 1990
LAN Times, April 1990, pp. 121-122
Data Communications, March 1990, pp. 58-60
SQL Server Environment, January/February 1990, pp. 15-17
NetWare Technical Journal, January 1990
 Peer Logic marketing materials

PM/FOCUS

Vendor: Information Builders, Inc.

Description: PM/FOCUS** is a 4GL database application development system. Using the combination of the world famous FOCUS 4GL and Presentation Manager's graphical capabilities, PM/FOCUS enables you to develop fully functional, graphical database applications that can work with most of the popular database servers available today, including SQL/Server and OS/2 Database Manager.

PM/FOCUS includes graphical painting tools for database design, data forms design, report design, and front-end design. These tools allow your applications to incorporate radio buttons, list boxes, check boxes, multiline entry fields, multirecord fields, scanned or drawn images (PCX, TIF, and BMP), graphical buttons, and invisible button regions.

PM/FOCUS also contains capabilities for developing distributed processing applications. Using PM/FOCUS and Information Builder's

FOCNET product, you can design graphical applications to work directly with mainframe databases such as DB2, SQL/DS, IMS, FOCUS, and others. PM/FOCUS also works with Information Builder's own FOCUS database server, so that you can design multiuser applications for OS/2 LAN Manager or Novell Networks.

Environment:

- PC: OS/2, DOS, Microsoft Windows 3.0
- Macintosh: Mac/OS
- AS/400: OS/400

Contact:

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Fax: 212-695-3247

Source: *SAA Catalog AS/400 Cooperative Application Solutions Catalog* National Solution Center Document ID: X07452

Process Operations Management System (POMS)

Vendor: IBM

Description: Process Operations Management System (POMS) is a distributed architecture software system developed by INCODE and IBM along with five major Fortune 500 companies to solve specific problems on the process plant floor.

POMS operates on a network of IBM PS/2 or Industrial Computers in cooperation with a central host such as an IBM 9370 or AS/400. The host computer normally runs the company's business systems, including manufacturing resource planning and scheduling systems (MRP), financial and accounting, and inventory control. POMS links to these systems to extract information for delivery of the full POMS Order Packet to the plant floor. The Order Packet contains all information and manufacturing procedures or instructions for making a particular product. At the plant floor level, POMS also can be linked to programmable logic controllers (PLCs), sensors, and other plant operations systems via a data acquisition package.

POMS consists of five modules:

Host Interface

This module resides on the plant host computer and provides a communications path for transaction coming from both the

plant manufacturing resources planning system and from the plant floor. The host computer can be any platform which supports APPC.

Order Server

This module, which runs on a PS/2, matches the current manufacturing procedures to the specific production order being manufactured.

Manufacturing Procedures Author

This module builds and maintains the sets of procedures and automatic event analysis criteria used to guide manufacturing.

Operations Supervisor

This module enables the supervisor to view the manufacturing schedule and release production orders to the manufacturing operators.

Operator Station

This module provides the operator with all the information required to manufacture the product and to capture the pertinent process and product information.

Environment: PC: OS/2

Contact: Contact your local IBM marketing representative.

Source:

IBM marketing materials

ProCycle

Vendor: Systemhaus GEI

Description: ProCycle is an analysis and design tool in the AD/Cycle environment. ProCycle provides graphical support for the following methodologies:

- Structured Analysis (Yourdon/DeMarco)
- Enhanced Entity Relationship Modeling (Chen)
- Modular Design, comprising structure design with object-oriented enhancements and Program Design Language (PDL).

The user interface supports Presentation Manager and is fully compliant with CUA standards. All tools are integrated through a central repository, which resides on a PS/2 server and can simultaneously be accessed by multiple users.

The ProCycle repository has open interfaces and can be enhanced for integrating external tools with ProCycle. Upload and download facilities to and

from the IBM repository are provided. Using build-in desktop publishing functions, ProCycle automatically generates requirement and design documents.

ProCycle emphasizes checking capabilities in a multiuser environment. ProCycle ensures that interfaces between all the different portions of a specification match.

Environment: PC: OS/2

Contact:

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Systemhaus GEI
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Aachen, Germany 5100

Phone: 49-2408-13-0

Source:

SAA Catalog
National Solution Center Document ID: X08181

Realtime Communication Toolkit

Vendor: CIMATIC A/S

Description: Realtime Communication Toolkit (RCT) is a software product developed to help application designers and programmers create distributed applications within the framework of IBM's Systems Application Architecture (SAA).

RCT, an interface that resides between APPC and the application program, shields the program from the complexities of communication. With RCT, application programmers do not have to deal with communication terminology or protocols. Instead, they can concentrate on the logic of the programs and how to distribute the various functions.

The ability to distribute the functions of an application is highly dependent on the techniques available to the programmer through an Application Programming Interface (API). RCT has a defined API with the following key elements:

- Asynchronous message transfer
- Remote or local program load

- Remote or local program status
- Globally known data variables
- Global serialization techniques
- Global synchronization techniques.

Environment: PC: OS/2

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Source:

CIMATIC marketing materials

ROCHADE

Vendor: R & O Software-Technik GmbH

Description: ROCHADE supports a wide range of tasks in an application development environment. Using either an enterprise-wide or a project-specific repository, you can use the work management in AUTOPILOT for several process models, project management, data dictionary, functionality, documentation, re-engineering, and the integration of PC-based CASE tools.

The project management function is an integrated part of the work management and controls the activities of project leaders and software developers. The data dictionary is available for DBS, IMS, COBOL, and PL/1. Re-engineering tools with a direct import interface to the ROCHADE repository support COBOL, PL/1 Assembler, CSP, C, MVS-JCL, and other languages and databases.

With ROCHADEgraphic, you can edit the structures and contents of the repository with windowing techniques. The client/server architecture combines the ROCHADE environments under MVS, VM/CMS, UNIX, DEC VMS, BS2000, OS/2 and DOS using APPC.

Environment:

- PC: OS/2, DOS
- 30XX, 43XX, 9370: MVS, VM
- DEC VAX: VMS
- UNIX

Contact:

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R & O Software-Technik GmbH
8034 Germering
Germany

Phone: 089-840-0830

Source: SAA Catalog

SequeLink

Vendor: TechGnosis, Inc.

Description: SequeLink is a comprehensive software environment which provides both host and client code for direct access to the AS/400 relational database from OS/2, Microsoft Windows 3.0, and Macintosh clients. SequeLink supports the following client applications:

Application	Platform
Microsoft Excel	OS/2, Windows, Mac/OS
Informix Wingx**	OS/2, Windows, Mac/OS
4th Dimension**	Mac/OS
HyperCard**	Mac/OS
ToolBook**	Windows

In addition, object libraries enable you to incorporate SequeLink functionality into any application written in third-generation languages such as C and COBOL.

Using SequeLink, you can access the AS/400, generate queries, and update the host database—all without leaving the client application. By offloading application processing to the desktop, SequeLink maximizes the productivity of the host platform while taking full

advantage of workstation graphical user interfaces (GUIs).

On the AS/400, SequeLink interfaces directly with the AS/400 relational database. In addition, you can use the same SequeLink client software with RS/6000, OS/2 EE Database Manager, as well as several OEM server platforms. SequeLink also provides links to most major networking protocols, including NetBIOS, APPC/LU 6.2, AppleTalk**, and DECnet.

Environment:

- PC: OS/2 EE, DOS, Microsoft Windows 3.0
- AS/400: OS/400
- Macintosh: Mac/OS

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 Fax: 407-241-6143

Source: *AS/400 Cooperative Application Solutions Catalog*

ShowCase

Vendor: Rochester Software Connection

Description: ShowCase is a cooperative processing tool integrating Microsoft Windows 3.0 and Excel on an intelligent workstation into an AS/400 database. ShowCase provides the capability to develop applications, queries, and reports without writing conventional programming code. ShowCase runs on the PC/AT and the PS/2 (both 80286 and 80386). In combination with Microsoft Windows 3.0, ShowCase provides a total solution for intelligent workstations attached to the AS/400.

ShowCase consists of the following components:

ShowCase Platform

Contains the ShowCase server technology. ShowCase Platform is a prerequisite for other ShowCase components. Because ShowCase Platform provides Dynamic Data Exchange (DDE), you can link PC-based applications supporting DDE to the AS/400 database. You can also use this component to issue AS/400, SQL, and file transfer commands on the AS/400.

ShowCase Data Entry Development

Provides the tools required to develop applications. Based on Excel, this

component enables you to add or update data on the AS/400. Other functions provided include record locking, commitment control, and field validation.

ShowCase Report Development

Provides report query and formatting functions. Using this component, you can query data from the AS/400, bring the data directly into an Excel spread sheet, manipulate and format the data, and save the report. You can also integrate text, formulas, and inquiries into reports.

Environment:

- PC: Microsoft Windows 3.0
- AS/400: OS/400

Contact:

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Source: *AS/400 Cooperative Application Solutions Catalog*

SNA Development and Test Facility (SDTF)

Vendor: Applied Computer Technology

Description: SNA Development and Test Facility (SDTF**) is a consistent and economical PC-based TestTool** for developing and testing SNA, SDLC, Token-Ring, or X.25 QLLC software and hardware products.

You can use SDTF to:

- Validate that an SNA product or implementation under test (IUT) conforms to its functional specifications
- Place a load on a system and measure its performance characteristics.

The SDTF LU 6.2 Validation Test Cases (LU 6.2 VTC**) help validate that a product conforms to the LU Type 6.2 and T2.0/T2.1 Node specifications. You can also use these cases to evaluate the performance of the product. The LU 6.2 implementation under test (IUT) must provide an open Application Programming Interface (API).

SDTF provides a menu-driven user interface and produces test results in several formats. The SDTF LU 6.2 VTC package contains:

- An LU 6.2 software toolkit with APPC and APPN functions
- Performance tests with automatic report/results generation
- SAA CPI-C compliance testing
- Reference transaction programs for the IUT in C for OS/2 and Pascal for APPC/PC
- Test case result analysis for OS/2, Networking Services/2, and APPC/PC.

- Pascal test case source coding and validation test case specifications

The test cases cover the following SNA layers, elements, and capabilities:

- DCL: Primary, secondary, and negotiable
- PC: Routing, segmentation/assembly, T2.0/T2.1 Node, subarea/peripheral nodes, TH formats
- TC: Sequence checking, pacing, normal/expedited flows
- DFC: Message format checking, chaining, request/response correlation, request/response mode, brackets
- Resource Manager: Presentation services and conversation management
- Session Manager: Bind/unbind protocols and checking
- Control Operator: Verbs and functions
- Series A: Performance testing
- Series B: SAA compliance testing
- Error free flow: All basic-function-set verb sequences in both confirm and non-confirm protocols.

Environment: PC: DOS, OS/2

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SNADS-PC Developers Toolkit

Vendor: David Goodenough & Associates Ltd.
(DGA)

Description: SNADS-PC is a "store and forward" distribution system for OS/2 which implements IBM's SNA messaging standard. SNADS-PC for OS/2 is designed to make an OS/2 machine a full SNA/DS node. The SNADS-PC Developers Toolkit enables you to use SNADS-PC to develop your own applications. These applications use SNA/DS services for sending and receiving all types of data on IBM networks.

With SNADS-PC, you can connect a PC-LAN into the same network used by the corporate IBM-based electronic mail system. Using the Toolkit, you can write your own mail transactions to make the OS/2 system a full participant in IBM host mail systems. Alternatively, you can use the Toolkit to build a gateway from other e-mail environments into IBM systems.

You can also use the Developers Toolkit to build your own "store and forward" transaction programs. These types of programs can continue submitting requests even when the information provider or the physical connections are not available. Examples of applications that do not require immediate responses include:

Application	Examples
Banking	Ordering check books, requesting customer status
Distribution	Ordering, submitting status inquiries, submitting stock level inquiries
Insurance	Submitting automatic proposals or claims

The SNADS-PC Developers Toolkit includes:

- Sample transaction programs
- DLL libraries
- Full C language bindings
- Complete SNA/DS API documentation.

The Developers Toolkit requires SNADS-PC for application development and as a runtime component.

Environment: PC: OS/2

Contact:

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Fax: 44-71-490-2343

Source: DGA marketing materials

SQL System Programmer's Toolkit

Vendor: Gupta Technologies, Inc.

Description: The SQL System** Programmer's Toolkit provides a quick and reliable method for C and COBOL programmers to design, prototype, code, and test complete DB2 SQL database applications on the PC, independently from the mainframe. By freeing up mainframe scheduling and response time dilemmas, this package accelerates DB2 application delivery by up to 50%. The Toolkit provides LOAD/UNLOAD capability, full backup and recovery for existing development databases, and full dynamic link library compatibility.

The SQL System Programmer's Toolkit includes the following components:

SQLBase

A single-user engine that runs in extended memory. SQLBase frees up real memory for the Microsoft C compiler. It is compatible with XM from Micro Focus.

SQLTalk

An interactive data manager for creating and accessing SQL databases. SQLTalk provides a command-line SQL interface to your database to test the results of your

COBOL program. It has a facility for creating tables, views, synonyms, and indexes used by DB2 COBOL applications.

SQLTalk also enables you to grant and revoke user authority, and provides a facility for entering test data into tables of an SQL database.

SQLPrecompiler

An interface which supports multiple cursors. This interface allows host variables in queries and data manipulation statements.

Environment: PC: OS/2 EE, DOS, Microsoft Windows 3.0

Contact:

Dan Berkowitz
Linda Roos
Gupta Technologies, Inc.
1040 March Road, Suite 200
Menlo Park, California USA 94025

Phone: 415-321-9599
Fax: 415-688-0295

Source:

SAA Catalog
National Solution Center Document ID: X02289

SQL*TextRetrieval

Vendor: Oracle Corporation

Description: SQL*TextRetrieval** is a portable application development tool that adds full-function text retrieval capabilities to ORACLE applications. It lets you store and retrieve both structured data and free text together in all applications.

Based on the ORACLE relational database management system, SQL*TextRetrieval extends SQL, the industry-standard language for data handling, to manage textual information as well. The result is a common language for the retrieval of data and text.

Because SQL*TextRetrieval stores all data, including the original text, indexes, and retrieved "hitlists" in standard ORACLE tables, all data is accessible to users, yet fully serviced under ORACLE's control.

By using SQL*TextRetrieval with the comprehensive set of Oracle tools, you can now add valuable text retrieval capability to all your applications, either by extending existing ones or building new ones. You can access SQL*TextRetrieval software tools from SQL*Forms** or 3GL programs using your familiar terminology and mode of working.

Features of SQL*TextRetrieval include:

Powerful search options

With SQL*TextRetrieval, your query can combine words, concepts, and structured data fields. This unique combination gives

you the capability to retrieve all information relevant to your search.

Flexible data input

SQL*TextRetrieval lets you use text from any standard source—an external file, screen input, or another ORACLE-based application.

Comprehensive indexing

Text indexing is key to flexible and fast retrieval. SQL*TextRetrieval includes utilities that carry out bulk loading/indexing or incremental indexing for small-volume additions or changes.

SQL*TextRetrieval is portable across a wide range of hardware platforms—from PCs and minicomputers to mainframes.

Environment: ORACLE V5.1 or V6.0

Contact:

Brian Perry or Craig Bittner
Oracle Corporation
500 Oracle Parkway
Redwood Shores, California USA 94065

Phone: 800-633-0580 or 415-506-7000
Fax: 415-506-7150

International Inquiries
Phone: 415-506-6001
Fax: 415-506-7101

Source:

SAA Catalog
National Solution Center Document ID: X08182

SUPRe/DAISys

Vendor: S/Cubed, Inc.

Description: SUPRe/DAISys** is a PC-based advanced application development tool which assists developers during the full development cycle: from gathering business requirements, through design and modeling and finally code generation. This fully integrated product delivers application code to the exact specification of end-users on a wide variety of client/server or cooperative processing-based hardware and software environments.

SUPRe/DAISys delivers client/server or cooperative processing-based applications by utilizing an expert system and object-oriented design methods to automatically split the application into server and client components. System requirements are defined in ordinary business terms and automatically transformed into working code. SUPRe/DAISys is particularly advanced in its ability to ensure the integrity of data and enforcement of critical business policies and procedures while at the same time providing PC users with the ability to customize their client workstations to suit their preferences. Used in conjunction with DAISys, a developer can generate either a mainframe-based system or a cooperative processing application from the same business requirements.

SUPRe/DAISys takes full advantage of, and is fully compliant with, IBM's SAA and CUA standards. SUPRe/DAISys creates (generates) distributed applications across all three tiers of SAA: mainframe, AS/400, and PS/2.

SUPRe/DAISys produces COBOL with imbedded SQL for the S/370 and AS/400 and C or COBOL for the PS/2 running OS/2 Version 2.0. SUPRe, the client empowerment and support facility, runs under Presentation Manager or Windows 3.0. In addition to generating SAA compliant applications, DAISys also produces cooperative applications for AIX environments.

Environment: PC: OS/2, DOS

Contact:

John A. Rade
S/Cubed, Inc.
1010 Washington Boulevard
Stamford, Connecticut USA 06901

Phone: 203-323-0760

Fax: 203-323-2007

Source:

SAA Catalog
National Solution Center Document ID: X08182

SYNERGIST

Vendor: Gateway Systems Corporation

Description: SYNERGIST** is a cooperative processing development tool that integrates PCs with host/server computers. Using SYNERGIST, you can develop, test, compile, and run a transactional-based application on a PC.

All SYNERGIST applications run on the PC, accessing databases on the host, PC, or both as needed. SYNERGIST's synchronized processing environment performs the bidirectional transfer of data between the host and PC. SYNERGIST also supports other environments, such as cooperative, stand-alone, and networked processing.

Modules such as the Data Dictionary, Forms Generator, and Forms Compiler make it easier to develop applications. You can use SYNERGIST to generate reports from the PC, regardless of

whether you store the data on the PC or download the data to the PC from the host.

SYNERGIST provides several features which enhance usability, including pop-up windows, lists, tables, conditional displays, and redefinable function keys.

Environment:

- PC: DOS
- AS/400: OS/400

Contact:

John Griggs
Gateway Systems Corporation
2400 Science Parkway
Okemos, Michigan USA 48864

Phone: 517-337-8960
Fax: 517-337-2868

Source: *AS/400 Cooperative Application Solutions Catalog*

Synon

Vendor: Synon, Inc.

Description: Synon provides an integrated set of application development tools for the AS/400 environment. These tools include:

Synon/2E

A comprehensive, flexible software development tools that lets you tailor applications to your present needs and has built-in assurances for future needs.

Synon/Entry

A low-cost, easy-to-use AD/Cycle application development environment for low-end IBM AS/400 developers. Synon/Entry is a subset versions of Synon/2E, providing access to the majority of Synon's powerful functions.

Synon/2G

The computer set of Synon CASE tools for the AS/400 accessed through a PS/2-based DOS Graphical User Interface (GUI).

Synon AD/Interface

Enables the AS/400 developer to take advantage of the power of PS/2 Design and Analysis tools that are enabled for external source format (ESF).

Synon/CSP Enablement Facility

A Synon generator option that enables Synon design specifications to be generated in ESF.

Synon/CSG (Client/Server Generator)

An option to Synon/2E or Synon/2G that enables a Synon developer to generate distributed function cooperative processing applications for an OS/2 client and an OS/400 server.

Environment:

- PC: OS/2, DOS
- AS/400: OS/400

Contact:

Mike Harper
Synon, Inc.
1100 Larkspur Landing Circle
Larkspur, California USA 94939

Phone: 415-461-5000

Fax: 415-461-2171

Source:

SAA Catalog
National Solution Center Document ID: X90022

VIS/TP Transaction Processing System

Vendor: VISystems Inc.

Description: VIS/TP** (CICS on AIX) is a proven distributed online transaction processing (OLTP) system that provides the functionality of CICS and COBOL on UNIX platforms.

VIS/TP is highly compatible with existing CICS/COBOL/VSAM applications and data. VIS/TP provides the facilities needed for downsizing mission-critical applications, including online, batch, development, migration, maintenance, communication, and security facilities.

New distributed applications can be developed and executed under VIS/TP or CICS with one portable version of SAA compatible source code. CICS applications executing under VIS/TP can access local and mainframe VSAM data, mainframe DL/1 data, and DB2 data (planned for 1992).

VIS includes the following components:

- VIS/EXECUTIVE
- VIS/BATCH

- VIS/COBOL
- VIS/CICS
- VIS/SCREENMAKER
- VIS/ASYNCR
- VIS/TCP/IP
- VIS/LINK CICS.

VIS/LINK CICS provides VIS/TP applications on UNIX access to VSAM and DL/1 (IMS/DB) databases that reside on IBM CICS mainframes (MVS and VSE). VIS/LINK CICS connects to IBM's SNA LU 6.2 hardware and software using the protocols to expand the capability of both CICS and VIS/TP, allowing data resources to be shared. VIS/LINK CICS requires CICS Release 1.7 or higher.

Environment: RS/6000: AIX

Contact:

John Phillips
VISystems Inc.
14755 Preston Road, Suite 200
Dallas, Texas USA 75240

Phone: 214-960-8649

Fax: 214-458-1116

XCOM 6.2

Vendor: Spectrum Concepts, Inc.

Description: XCOM 6.2** is a facility for transferring data, including reports, jobs, and files, between the following systems:

- IBM mainframe
- System 3X
- AS/400
- DEC VAX
- PC (both DOS and OS/2)
- Stratus S/88
- Macintosh
- Token-Ring LANs
- LAN gateways
- UNIX-based systems.

XCOM 6.2 provides a consistent user interface regardless of the computer on which it is installed. By using APPC/LU 6.2, XCOM 6.2 permits peer-to-peer transfers to be initiated, unattended, at either end. XCOM 6.2 also offers extensive error checking and automatic error recovery.

XCOM 6.2 supports communications at the level of the operating system, without terminal emulation. XCOM 6.2 typically allows record lengths of up to 32KB and supports dial-up or dedicated lines, CPU channels, coax, and Token-Ring LAN. It handles both binary and character data transparently in either ASCII or

EBCDIC. XCOM 6.2 provides any-to-any communications between all supported devices and it is fully compatible with PU 2.1. XCOM 6.2 is currently the fastest file transfer product across the industry.

Environment:

- PC: OS/2, DOS
- Macintosh: Mac/OS
- AS/400: OS/400
- 30XX, 43XX, 9370: MVS, VM, VSE
- UNIX platforms: UNIX
- DEC VAX: VMS
- Data General: AOS/VS
- RS/6000.

Contact:

Pamela Meola
Spectrum Concepts, Inc.
 150 Broadway
 New York, New York USA 10038

Phone: 212-766-4400
 Fax: 212-571-6077

Source:

LAN Magazine, December 1990, pp. 119-20
MIS Week, February 12, 1990
Communications Week, December 18, 1989, p. 279
MIS Week, October 23, 1989
 Spectrum Concepts marketing materials

APPC Applications Summary

This section provides the following information on APPC applications offered by IBM and other companies:

- Name of application
- Purpose of the application
- Operating environments supported
- Name of vendor.

The entries appear in alphabetical order by the name of the application. Appendix A, "Contacts for Vendors" on page 137 contains addresses, phone numbers, and contacts for the vendors listed in this section.

Accounts Payable Management (AP) • AUTOPILOT

Name of Application	Purpose	Environments and Configurations Supported	Vendor
Accounts Payable Management (AP)	Invoice authorization, processing, and payment	CICS, DOS, IMS, MVS, OS/2, VM	Walker Interactive Systems
The Administrator	Integrated new business policy and agency administration system	AIX, CICS, MVS, VSE	Life Insurance Data Processing (LIDP)
ADT Lab Test Tracking System	Graphical and text based reporting system for lab staff	OS/2, OS/400	Advanced Institutional Management Software
AIX/RT Distributed Services	Transparent access to files and devices	AIX	IBM
AIX VIADUCT for AS/400	Interactive data bridge	AIX, OS/400	IBM
AIX VIADUCT for MVS	Interactive data bridge	AIX, MVS	IBM
ALE Image Document Processing System	Document processing	DOS, OS/400	ALE Systems
AMSOFT** Accounts Payable, Employee Expense	Debit management system	CICS, DOS, IMS, MVS, OS/2, OS/400	American Software, USA
AMSOFT Accounts Receivable System	Credit management system	CICS, DOS, MVS, OS/2, OS/400, VSE	American Software, USA
AMSOFT Inventory Planning System	Distribution and inventory management	OS/2, OS/400	American Software, USA
AMSOFT Purchasing and Materials Management System	Procurement management	CICS, DOS, IMS, MVS, OS/2, OS/400, VSE	American Software, USA
AMSOFT Warehouse Management	Advanced warehouse management	OS/2	American Software, USA
Amtrak	Transfers two AS/400 screens to a third session	OS/2, OS/400	MTI Vacations
Answer/SQL	Report generating software for DB2	DOS, MVS	Sterling Software, Inc., Answer Systems Division
APaCS Administrative Information System	Graphical display of operating statistics and financial trends for hospitals	OS/2, OS/400	First Coast Systems, Inc.
Application System/400* Systems Management Utilities	System management utilities	OS/400	IBM
AS/Hub	APPN network management software for multiple AS/400's	OS/400	The Systems Center, Inc.
Assets Management	Manages physical assets, performs financial and tax accounting	CICS, DOS/VSE, IMS, OS/2 MVS, VM, VSE	Walker Interactive Systems
AUTOPILOT	Navigation functions for PWS front-end	MVS, OS/2	IBM

Banking Customer Information • CICS Application File Control

Name of Application	Purpose	Environments and Configurations Supported	Vendor
Banking Customer Information System	Bank account and customer history	OS/400 SSP	Arkansas Systems, Inc.
BANKTRADE Collection	Automates all documentary and clean collections	MVS, OS/2, OS/400, VM	Complex Systems, Inc.
BANKTRADE Letter of Credit	Automates all letter of credit functions	MVS, OS/2, OS/400, VM	Complex Systems, Inc.
BANKTRADE Reimbursement	Automates reimbursement functions	CICS, MVS, OS/2, VM	Complex Systems, Inc.
BCOM-FS 6.2	File transfer, software distribution, remote printing, backup/restore	AS/400, IBM hosts, PCs, Tandem, VAX	E.T.I.
BIAS	Online access to credit/underwriting data	CICS, MVS, OS/2	System Consulting Services, Inc.
Billing and Collection Management System** (BCMS**)	Stores and manages billing data in a relational database	CICS, MVS, OS/2	Policy Management Systems Corporation (PMSC)
Cabin Report System	Cabin report system for airlines	IBM host, OS/2	Scandinavian Airlines System
CableCad	Automation system for telephone, power utilities, and CATV	AIX, DOS	Enghouse Systems Ltd.
CA-DB: STAR	Distributed database management	MVS, VSE	Computer Associates International, Inc.
CA-IDMS/APPC	Database/file management	MVS, VM, VSE	Computer Associates International, Inc.
CallPath*	Tracking system and management for telephone calls	MVS, OS/2, OS/400	IBM
CallPath Host	Tracking system for telephone calls	DOS, MVS, VSE	IBM
CA-MASTERPIECE** Series	General ledger, accounts payable, accounts receivable, purchasing	MVS, OS/400, VSE	Computer Associates International, Inc.
Cambar Warehouse Management System	Warehouse space control	OS/2	Cambar Software
CardPac Bureau Access System	Online credit reports based upon zipcode	MVS	CCS Commercial Credit Systems
CardPac Transaction Management System	Online credit report system	DOS, MVS	CCS Commercial Credit Systems
CBU Premium Series	Applications for the beverage industry	OS/400	California Business Utilities
CEO/Profile	Information retrieval support and graphic display	OS/2, OS/400	California Business Utilities
CICS Application File Control (CAFC)	Manage batch jobs via LU 6.2 link	CICS	NETEC International, Inc.

CICS Playback • COPICS Plant Operations

Name of Application	Purpose	Environments and Configurations Supported	Vendor
CICS Playback	Testing tools for CICS and VTAM applications	MVS	Compuware Corporation
CIM Series/400	Data integration for manufacturing	OS/2, OS/400	IBM
The Claims Management System** (CMS**)	Centralized database that stores claims information	CICS, MVS, OS/2	Policy Management Systems Corporation (PMSC)
CLIENT/CONTRACT ADMINISTRATION (CCA)	Develop and manage client data base	CICS, MVS, OS/2	The Continuum Company
The Client Information System** (CIS**)	Master index and common storage facility for client information	CICS, MVS, OS/2	Policy Management Systems Corporation (PMSC)
CLOSE Marketing and Sales Productivity System	Enterprise-wide marketing automation tool	MVS, UNIX	Adelie Corporation
CMMS Plus	Maintenance management system for inventory and purchasing	CICS, DOS, MVS, OS/2, OS/400, VSE	Fluor Daniel, Inc.
COGEN	Full function property and casualty system	CICS, OS/2	The Continuum Company
College and University Financial System (CUFS)	Financial management system for colleges and universities	CICS, IMS, MVS, OS/2, VSE	American Management Systems, Inc.
Connection System	Gateway to DEC computers	AS/400, System/36, System/38 to DEC VAX	Forest Computer Inc.
Continuum Workstation Platform	Interface numerous administrative systems between companies	CICS, MVS, OS/2	The Continuum Company
CONTROL-D	Output management system for report processing and distribution	CICS, MVS, OS/2, VM	4th Dimension Software, Ltd.
CONTROL-M	Data center production control system	CICS, MVS, OS/2, VM	4th Dimension Software, Ltd.
CONTROL-O	Automated console operation system	CICS, MVS, OS/2, VM	4th Dimension Software, Ltd.
CONTROL-R	Automated restart management and control system	CICS, MVS, OS/2, VM	4th Dimension Software, Ltd.
CO-OP Comprehensive Occupational Health Program Comprehensive Occupational Health Program	Applications for occupational medicine, industrial hygiene, and safety	VM	Medical Development Systems, Inc.
COPICS Plant Operations Interface	Computer-aided manufacturing: link between DAE-based system and COPICS host system	MVS	IBM

Name of Application	Purpose	Environments and Configurations Supported	Vendor
The Corporate Tie	File transfer	DOS, IBM host, MVS	Pansophic Systems
Crew Flex System	System for airlines	IBM host, OS/2	Scandinavian Airlines System
Criminal Justice Information System (CJIS)	Multifunction criminal justice software package	CICS, MVS, VSE	Atkisson and Associates, Inc.
Cross Access	Access to mainframe databases	CICS, DEC VMS, MVS, VM	Cross Access Corporation
CS/Pipeline	Communications access method	MVS, VM	Citisystems, Inc.
CTI Commercial Property Management System	Applications for commercial property management	OS/400	CTI Limited, Inc.
CTI Financial Systems	Financial applications system, includes general ledger and financial reporting	OS/400	CTI Limited, Inc.
CTI Job Cost System	Tracks short term and multiyear jobs	OS/400	CTI Limited, Inc.
CTI Real Estate System	Property management for leased properties and construction projects	OS/400	CTI Limited, Inc.
CTOS SNA Distribution Services (SNADS)	Implements IBM's SNADS architecture for store-and-forward data delivery	CTOS	Unisys Corporation
CTOS SNA/NM Distribution Manager packages	Works with IBM's NetView Distribution Manager to support software distribution and change management	CTOS	Unisys Corporation
CTOS SNA/NM Entry Point Services	Lets NetView users execute CTOS commands on any remote CTOS workstation for problem diagnosis	CTOS	Unisys Corporation
Customer Order Processing (COPS)	Customer record keeping	CICS, DOS, MVS, OS/2, OS/400, VSE	American Software, USA
Database Gateway	Direct access to DB2 from DOS, Windows, or OS/2 applications	BULL, CICS, MVS, OS/2, Tandem, Teradata	Micro Decisionware, Inc.
Data Collection Control/2	Supports IBM 7525 and 7527 data collection terminals	OS/2	IBM
Data Collector for Distributed Automation Edition	Data collection and control from IBM 7525 and 7527 data collection terminals	OS/2	IBM
DataInterchange/MVS - CICS	Electronic data interchange (EDI)	MVS	IBM
DATALENS-4XX	Links Lotus 1-2-3 directly to AS/400, S/36 or S/38	DOS, OS/2	California Software Products, Inc.

Data Interpretation System • DYI-IQ Express

Name of Application	Purpose	Environments and Configurations Supported	Vendor
Data Interpretation System	Business system for decision makers	MVS, VM	IBM
dBug-AID	Debugging for COBOL, PL/1, Assembler	MVS	Compuware Corporation
DBS Financial Series	Integrated accounting and financial applications	CICS, MVS, OS/2	Dun & Bradstreet Software Services, Inc.
DBS General Ledger System	General ledger	MVS	Dun & Bradstreet Software Services, Inc.
DBS Human Resource Series	Payroll, accounting, and personnel applications	CICS, MVS OS/2	Dun & Bradstreet Software Services, Inc.
DBS Material Management Series	Inventory management	MVS, OS/2	Dun & Bradstreet Software Services, Inc.
DB2-DDS	Distributed document support	DB2 hosts	ViewStar Corporation
DCS: Dealer Communication System	Automobile dealer communication system	CICS, OS/400, VM	EDS Corporation
DCS2000 - Buyer's Workstation	On-line inventory control, freight scheduling, labor control, etc.	CICS, MVS OS/2	B.A.C.G.
DFM Target Server	File and record access	DOS, OS/2, OS/400, 4680	IBM
DFSMS*VM	System managed storage	VM	IBM
DISOSS/370	Distribution and library services	MVS	IBM
Distributed Automation Edition (DAE) Plant Floor Series*	Computer-aided manufacturing software	VM, OS/2, OS/400	IBM
Distributed Console Access Facility (DCAF), Version 1.0	Remote console function	DOS, OS/2	IBM
Distributed Print	Distributed print management	MVS, OS/2, OS/400, VM, VSE	IBM
distributeR!	Data storage, retrieval, and distribution	AIX, DOS, OS/2, OS/400, SSP, XENIX	Corrigan and Colville, Inc.
Distribution/Integrated Business Application Solutions (D/IBAS)	Handles business requirements of distributors	OS/400	Intelligent Business Systems, Inc.
DRSM/V2	Banking application for check processing	OS/2, OS/400	IBM
DSM/SNAView	Network management software	NetView, Tandem	Tandem Computers, Inc.
DYL-AUDIT** Excel	Auditing tool	CICS, IMS, TSO	Sterling Software, Inc., Dylakor Division
DYL-IQ Express**	Online query system	CICS, IMS, TSO	Sterling Software, inc., Dylakor Division

Name of Application	Purpose	Environments and Configurations Supported	Vendor
DYL-VLINK**	Combines communications and link capabilities	CICS, IMS, TSO, VM	Sterling Software, Inc., Dylakor Division
DYL-280 II**	Information management system	MVS, VM, VSE	Sterling Software, Inc., Dylakor Division
DYL-280 II Relational**	Information management system	MVS, VM, VSE	Sterling Software, Inc., Dylakor Division
EasySQL	Provides access to Oracle DBMS	Most IBM and non-IBM operating systems	Oracle Corporation
ECLIPS: Electronic Commercial Lines Insurance Processing System	Insurance processing system	MVS, OS/2	ISI Systems, Inc.
EDA/Link LU 6.2	Communications link between SQL databases	DOS, Microsoft Windows 3.0, MVS, OS/2	Information Builders, Inc.
EiconAPPC Developer's Toolkit	Toolkit for developing APPC applications	AIX, DOS, OS/2, UNIX, XENIX	Eicon Technology Corporation
EIS	Database and presentation tool for operations management	OS/2, OS/400	Management Data, Inc.
EMC2: Electronic Mail Communication Center	Electronic mail	CICS, VM, IMS	Fischer International Systems Corporation
EMS: The MetaMail System for CICS	Electronic mail	CICS	Computer Applications Services, Inc.
Emulator Transfer Utility (ETU)	Transfers data between IBM S/3X and AS/400 to PCs, PS/2s, UNIX, and Macintosh	CPF, IBM S/3X, OS/400	Andrew Corporation
ENTIRE APPC Server**	Enables the ENTIRE OFS Open Network Component to use APPC to communicate with DBMS on any APPC platform	MVS, VSE	SOFTWARE AG
ESP: Execution Scheduling Processor	Automates job scheduling	MVS	Cybermation, Inc.
ESP Encore	Restarts jobs that fail	MVS	Cybermation, Inc.
EXTEND/CCM: Change Control Manager	Restricts and monitors access to production objects and source	CPF, OS/400	Redmond Technologies, Inc.
F & L Advertising Management System	Tracking and billing insertion orders for advertising	OS/2, OS/400	Funaro-Lufrano Associates, Inc.
FacillTape	Stores VMS files directly onto IBM tape drives.	DEC VMS, MVS	LEGENT Corporation
Facility Integrator	Provides multi-user access to DMS building environmental control system	OS/2	Robertshaw Controls Company

Name of Application	Purpose	Environments and Configurations Supported	Vendor
FactoryLink**	Application builder for manufacturing and process applications	DOS, OS/2	US Data Corporation
File-AID	File and data editors	MVS	Compuware Corporation
FILEARCH	Optical file archival and interactive optical storage support	OS/400, SSP	Infinite Options, Inc.
FileExchange	Provides for bidirectional file transfer and remote job activation.	DEC VMS, MVS	LEGENT Corporation
Financial Branch Systems Service (FBSS)	Services and server functions for general and financial purposes	DOS, OS/2	IBM
Flight Report System	Flight report system for airlines	IBM host, OS/2	Scandinavian Airlines System
FullView/VT	Enables 3270-terminal users to access VMS applications.	DEC VMS, MVS	LEGENT Corporation
GENAC General Accounting Management System	Integrated multicompany accounting system	OS/2, OS/400	KIM Computers, Inc.
GENESYS HUMAN RESOURCE MANAGEMENT SYSTEM	Family of applications for human resource planning and management	CICS, MVS, VSE	GENESYS Software Systems, Inc.
geoManager* Enabler	Database support for Geographic Facilities Information System (GFIS)	AIX, MVS	IBM
Global Accounts Payable	Financial management for disbursement activities	CICS, DOS, DOS/VSE, OS/400, MVS	Global Software, Inc.
Global Accounts Receivable and Credit Management System	Online system that improves credit and accounts receivable operations	OS/400	Global Software, Inc.
Global General Ledger and Financial Reporting	Financial management system	CICS, IMS, MVS, OS/400, VSE	Global Software, Inc.
Global Information Manager	Automated information access	OS/2, OS/400	Global Software, Inc.
Global Order Processing, Inventory, Billing and Sales Analysis	Order processing and billing	CICS DOS, DOS/VSE, MVS, OS/400,	Global Software, Inc.
Government Financial Systems** (GFS**)	Supports GAAP-based reporting	CICS, DOS, IMS, MVS, OS/2, VSE,	American Management Systems, Inc.
Government Human Resource System** (GHRS**)	Payroll and personnel management system	CICS, DOS IMS, MVS, OS/2	American Management Systems, Inc.
Grouptalk	Electronic conferencing	DOS, VM	Andersen Consulting

Name of Application	Purpose	Environments and Configurations Supported	Vendor
HORIZON**	4GL, application development	MVS, VM	Computer Corporation of America
Host-OSI**	Enables APPC applications to run over OSI networks	MVS/ESA	Proginet Corporation
HPTS* Application Library Services	Provides document processing system for financial institutions	MVS, OS/2	IBM
HPTS Statements Application	Produces image-based statements	MVS, OS/2	IBM
HR Timekeeper	Payroll processing on the workstation	DOS, MVS, OS/2, VSE,	Integral Systems, Inc.
HR VISION	Management of employee events, payroll, time keeping, and benefits	MVS, OS/2	Integral Systems, Inc.
Human Resource System (HRS/LEGEND)	Payroll/personnel system for higher education	IMS, MVS, OS/2	American Management Systems, Inc.
IBM DataTrade*	Application programming interface for data transfer	MVS, OS/2, OS/400	IBM
IDIOM: Interactive Database for Insurance Operations Management Management (IDIOM)	Organizes, analyzes, summarizes, and presents insurance management information	OS/2	Management Data, Inc.
Image and Records Management System (IRM)	Image processing and library system	MVS, OS/2	IBM
INFOPOINT: SuperMICR, Version 4.0	Banking processing application	MVS, VSE	Newtrend
InPerspective	Provides easy access to data on mainframe and AS/400	DOS, MVS, OS/2, VSE,	Integral Systems, Inc.
Integrated Application Platform (IAP)	Cooperative processing platform	MVS, OS/2	Policy Management Systems Corporation (PMSC)
Integrated Interface Facility	Automates data center operations	OS/2	Westbridge Computer Corporation
INTERNODE 6.2	Bridges remote networks and systems	OS/2	Ralph Kirkley Associates, Inc.
Inventory Control and Accounting	Inventory management	MVS, OS/2	American Software, USA
Inventory Management	Control system for purchased inventory	MVS, OS/2, VM	Walker Interactive Systems
Inventory Management and Control System (IMACS)	Automates stock rooms of Fortune 500 companies	DOS	Midak International, Inc.
IPLAT	Image platform for VM	OS/2, VM	IBM

IS/2 • MANAGER

Name of Application	Purpose	Environments and Configurations Supported	Vendor
IS/2	Application facilities for the insurance and finance industries	CICS, MVS	PAXUS Corporation
JDE Remote Resupply	Purchasing and inventory management	OS/2, OS/400	J.D. Edwards, & Co. Inc.
Lawson Accounting System	Modular account management system	OS/400	Lawson Associates, Inc.
Lawson Distribution System	Inventory control tool	OS/400	Lawson Associates, Inc.
Lawson Human Resource System	Employee administration, payroll and benefits	OS/400	Lawson Associates, Inc.
Lawson Retail Management System	Flexible access to information for retailers	OS/400	Lawson Associates, Inc.
LegalIMS	Legal management system	OS/2	Human-Technical Systems, Inc./LegalIMS
Liberty Executive Information System (LEIS)	Business tool for managing liberty automated banks	OS/2, OS/400	Broadway and Seymour, Inc.
The Life Administration System	Centrally stores and manages functions for new business and underwriting	CICS, MVS, OS/2	Policy Management Systems Corporation (PMSC)
LIFE-COMM	Fully integrated administrative system	DOS, DOS/VSE, MVS	The Continuum Company
LIFE/70	Full function administration system for life, health and annuity products	DOS/VSE, MVS, OS/2	The Continuum Company
Local Education Agency Financial System (LEAFS**)	Financial management for local school districts	CICS, MVS, OS/2	American Management Systems, Inc.
Local Government Financial System (LGFS**)	Online financial management system for local and state governments	CICS, IMS, MVS, OS/2	American Management Systems, Inc.
Lotus Notes Gateway	Gateway to Soft-Switch Electronic Mail Network	OS/2	Soft-Switch, Inc.
Lotus Notes SNA Connect	Office automation, groupware	OS/2	Lotus Development Corporation
Lynx APPC Development System	Toolkit for developing APPC applications	SCO Open Desktop, SCO XENIX 386, UNIX	Computone Corporation
Management, Budgeting, and Accounting (MBA)	Financial management and reporting system	CICS, IMS, MVS, OS/2, VM	Walker Interactive Systems
The Management Information System** (MIS**)	Data generation and data manipulation tools	CICS, MVS, OS/2	Policy Management Systems Corporation (PMSC)
MANAGER Family of Products	CASE applications	DOS, MVS	Manager Software Products, Inc.

Name of Application	Purpose	Environments and Configurations Supported	Vendor
Manager/2 Series	Plant floor control, labor management and tracking, sales order shipping system	CPF, OS/400, VM	Teledyne Microelectronics
Masterstation	Accounting solution	MVS, OS/2, OS/400, VM	Computer Associates International, Inc.
MDS/CiIntrol	Screen and report painter	DOS, VM	Medical Development Systems, Inc.
Messenger 400 OS/2	Electronic mail	OS/2	OSIware, Inc.
Metafile	Application development environment for building distributed applications	DOS	Metafile Information Systems, Inc.
Metaview Developers Workbench	Application development and productivity tools	DOS, OS/400, S/370	Metafile Information Systems, Inc.
MHS Gateway	Gateway to Soft•Switch Electronic Mail Network	DOS, MVS, VM	Soft•Switch, Inc.
MicroTradeline	Letter of credit and collection processing system	CICS, IMS, MVS, OS/2	American Management Systems, Inc.
MIMIX	High systems availability and recovery	OS/400, S/38 CPF	Lakeview Technology, Inc.
Mobile Digital Exchange	Maintain information on gas customers using mobile hand-held terminals	MVS, OS/2, OS/400	TECO Technologies, Inc.
Modular Management System for Schools (MMS)	Files, sorts, and displays student information	AIX, DOS, OS/2, OS/400, XENIX	Computer Resources, Inc.
MOSAIC	Document imaging	DOS, Microsoft Windows 3.0, OS/2, VM	SAIC
MR/401	Simplifies access to applications in the network	OS/400	Kentech Systems, Inc.
Multisort	Bank filing and sorting (find sorting, exception outsourcing, cycle sorting, statement sorting)	MVS, VSE	Newtrend
Multivendor Automated eXpert Management (MAXM)	Non-SN	OS/2, RS/6000	International TeleManagement Corporation (ITM)
MVS CO-PILOT	Automates routine operations, including message handling	MVS	Cybermation, Inc.
NAVIGATOR	Source code analysis for COBOL	MVS	Compuware Corporation
Net/Master, Version 2.2	Network management software	DOS/VSE, MVS, VM,	The Systems Center, Inc.
NetTester/1	Simulates a VTAM user for testing	MVS	Phoenix Software International

NetView DM • The OSRM2 System

Name of Application	Purpose	Environments and Configurations Supported	Vendor
NetView Distribution Manager (NDM)	Software distribution	MVS, OS/2	IBM
NetView GMF	Graphic interface for monitoring network resources	OS/2	IBM
Network Banker	Manages transaction instructions for corporate customers	CICS, IMS, MVS, OS/2	Stockholder Systems, Inc.
Network DataMover (NDM)	Automated data transfer	MVS, OS/400	The Systems Center, Inc.
Network Navigator	Automated software distribution	DOS, Microsoft Windows 3.0, OS/2 to MVS or VM	Annatek Systems, Inc.
NEVISYS	Unifies data and communication domains	OS/2	Nevis Technologies, Inc.
ODDS/MVS (Operator Dynamic Dialog Subsystem)	Automates operations and master console management	CICS, IMS, MVS	Software Engineering of America
Officer Workbench	Integration of commercial lending applications	MVS, OS/2	IBM
Omegacenter	Status management, performance analysis, automation, and remote control	MVS	Candle Corporation
OmniDesk	Distributed image processing system	DOS, MVS, OS/2	Sigma Imaging Systems, Inc.
ONSPEC** CIE	Connects enterprise-wide applications through the AS/400	OS/400	Heuristics, Inc.
ONSPEC ES	Management Execution System for manufacturing	OS/2	Heuristics, Inc.
ONSPEC 4000	Supervisory control software for manufacturing	OS/2	Heuristics, Inc.
OpenConnect/IP Router	Routes and transfers data packets from TCP/IP networks over an SNA backbone	DOS, UNIX	OpenConnect Systems, Inc.
OpenConnect Presentation Services, Version 3.0	Terminal emulation	AS/400, DEC VMS, DOS, host, S/36, S/38, UNIX	OpenConnect Systems, Inc.
OPS/MVS	Automated systems operation	MVS	Goal Systems International, Inc.
Oracle Mail	Enterprise-wide e-mail system	AOS/VS, DEC VMS, DG, DOS, MVS, UNIX, VM	Oracle Corporation
Origin**	Tracking system and management for telephone calls	DEC VMS, OS/2	BellSouth Information Systems, Inc.
The OSRM2 System	Monitors key system resources under OS/2	OS/2	COL Consulting, Ltd.

Name of Application	Purpose	Environments and Configurations Supported	Vendor
OSS Data Server	Database inquiry for stock brokerage industry	MVS, OS/2, OS/400	IBM Canada Securities Industry Services
OSS Transaction Interface	Client name and address file update	MVS, OS/2, OS/400	IBM Canada Securities Industry Services
overSNA	Run Telnet to remote UNIX machines over LU 6.2 sessions	UNIX	Century Analysis, Inc.
PC/SQL-link	Relational database access tool	CICS, DOS, MVS, OS/2, OS/400, VM, Microsoft Windows 3.0	Micro Decisionware, Inc.
Personal AS	Decision support software products	OS/2	IBM
Physician's Aide	Practice management of patient data	MVS/CICS, OS/2, OS/400, VM	Spectrum Healthcare Solutions
Plan 1000 Print Server	Printer spooler and file transfer	HP	DSC Communications Corporation
Plant Floor Series PlantWorks*	Distributed plant floor supervisory and control system	OS/2	IBM
PMSC Series III	Insurance applications and decision support	OS/2	Policy Management Systems Corporation (PMSC)
Policy Application Entry System	Enter and edit insurance applications from field	OS/2, OS/400	PDA, Inc.
PREMIER Series Laboratory Information System	Applications for private and hospital laboratories	OS/400	Dynacor, Inc.
Prestige	Project management software	DOS, Macintosh, Sun, UNIX, VAX,	Lucas Management Systems
PRISM**/CP	Manufacturing planning and control system	OS/2, OS/400	Marcam Corporation
The Product Development Support System	Workstation-based support for product development	CICS, MVS, OS/2	Policy Management Systems Corporation (PMSC)
Purchase Order Management	Purchasing management and control system	CICS, DOS, IMS, MVS, OS/2, VM	Walker Interactive Systems
Q+E Server Database Edition	Integrates data from multiple databases	DOS, MVS, OS/2, VM	Pioneer Software
Radiological Access Control	Automated capture of dosimetry information at nuclear power plants	MVS, OS/2	Pro-Tem, Inc.
RE-FLECTIONS	High systems availability (mirroring)	CPF, OS/400	Business Partner Solutions
Relish Net	Electronic distribution, calendar management, and scheduling	OS/2	Sundia Systems Corporation

RPM6.2 • SequeLink Engine

Name of Application	Purpose	Environments and Configurations Supported	Vendor
Remote Process Manager LU 6.2 (RPM6.2)	Network operating system and remote management services	OS/2	Ralph Kirkley Associates, Inc.
RemoteVision	Extends token-ring networks to remote workstations over asynchronous modems	DOS, OS/2	Token Technology, Inc.
Retirement Plan Manager	Benefit plan administration	MVS	Tesseract
RKSYS	Connects OS/2 applications to host IMS	MVS, OS/2	Service Provider in Banking Account in Germany
The RobotOperator System	Automated telephone operator: answers phone, routes calls	OS/2	InterVoice, Inc.
RS/6000 MVS FTP	File transfer	AIX, MVS	IBM
R/2 System	Integrated business software	AIX, DEC VMS, MVS, OS/2	SAP America
R/3 System	Integrated business software	CICS, MVS, OS/2	SAP AG
SAA Application Connection Services	Cooperative processing services	MVS, OS/2, VM	IBM
SAA Delivery Manager	Software distribution	DOS, MVS, OS/2, VM	IBM
SAA ImagePlus* MVS/ESA	Image processing	MVS, OS/2	IBM
SAA ImagePlus Workstation Program/2	Image processing	MVS, OS/2, OS/400	IBM
SAA ImagePlus/400	Image processing	OS/2, OS/400	IBM
SAA OfficeVision/MVS Enterprise Address Book	DB2-based directory services	MVS	IBM
SAA OfficeVision/MVS Series	Comprehensive office functions	MVS	IBM
SAA OfficeVision/VM Series	Comprehensive office functions	VM	IBM
SAA OfficeVision/2 LAN	Comprehensive office functions on LAN	OS/2	IBM
SAA OfficeVision/400	Comprehensive office functions	OS/400	IBM
SAA SystemView System Manager/400	Central site management services	OS/400	IBM
SAS/Connect	Controls and runs mainframe SAS session from PWS	MVS, OS/2	SAS Institute, Inc.
The SAS System for OS/2	Data access, management, analysis, and presentation	MVS, OS/2, VM	SAS Institute, Inc.
SAS/Vista	Uploads rendering process from workstation to MVS	AIX, MVS	SAS Institute, Inc.
SDM/PeerNet, Version 1.0	Electronic Data Interchange (EDI) software	CICS, IMS	SDM International, Inc.
select-COOP OS/2	Cooperative processing report writer and data integrator	DOS, OS/2	California Software Products, Inc.
SequeLink Engine	Relational database interface	DEC VMS, OS/2	TechGnosis Inc.

Name of Application	Purpose	Environments and Configurations Supported	Vendor
Showcase Vista	Data exchange between PC spreadsheets and AS/400	OS/400, Microsoft Windows 3.0	Rochester Software Connection, Inc.
SNA Distribution Service Print Facility	Print facility	OS/400, S/38 CPF,	Pro-Systems, Inc.
SNADS Gateway/VM	Gateway between Soft-Switch network users and SNADS network users	VM	Soft-Switch, Inc.
SNADS-PC	Store-and-forward file transfer	OS/2	David Goodenough & Associates, Ltd.
SNAPI Server	Interface to mail distribution and directory services	MVS, VM	Soft-Switch, Inc.
Soft-Switch Family of Products	Library services, directory services, distributed print services, document translation services	MVS, VM	Soft-Switch, Inc.
Speedview	Automates report management and distribution	MVS	Cybermation, Inc.
Spool File Transfer Facility	File transfer	MVS	Pro-Systems, Inc.
SQL*Calc	Creates, accesses, and updates tables in relational database	DEC VMS, DG AOS/VS, DOS, UNIX	Oracle Corporation
SQLHost**/DB2	Translates SQL requests from PCs and PC LANs into SQL requests that can be processed by DB2 on mainframes	IBM 370s	Gupta Technologies, Inc.
SQL*QMX	Query and report writer	DEC VMS, DG AOS/VS, DOS, MVS, UNIX, VM, Wang	Oracle Corporation
STAR	Complete service management system for repair service organizations	OS/2	Active Software Corporation
Store Systems Applications for the 4680	Retail applications for file transfer, remote execution, data conversion, relational database access	AIX, 4680 OS	IBM
Student Information System (SIS)	Supports student management functions	CICS, IMS, MVS, VSE	American Management Systems, Inc.
STX	Provides transparent access to non-SNA sources	MVS, VM	LEGENT Corporation
Switch	Coordinates requests from UNIX through IBM 3090* with CICS into a Tandem processor	MVS, Tandem, UNIX	Summit Information Systems
Synchrony, Version 2.2	Software distribution management	CICS, DOS, MVS, OS/2, VTAM,	Telepartner International

Syntax Distribution Management • Vector 3000

Name of Application	Purpose	Environments and Configurations Supported	Vendor
Syntax Distribution Management (SDM)	Order processing, inventory management, financial management for wholesale distribution and manufacturing distribution	AIX, OS/400	Syntax Software Corporation
Syntax Financial System (SF)	Detailed online access to accounts receivable and payable	AIX, OS/400	Syntax Software Corporation
Syntax Manufacturing System (SMS)	Multiple company or department access from material requirements to finished goods inventory	AIX, OS/400	Syntax Software Corporation
Syntax Retail System (SRS)	Provides point-of-sale capture information and cash register functions	AIX, OS/400	Syntax Software Corporation
Syntax Software Solution (SWR)	Fashion industry applications, including order entry and processing, invoices, accounting, inventory control, material requirements	OS/400	Syntax Software Corporation
Syntax Welding Products and Gas Distribution System (SGD) (SGD)	Gas and hard goods functions (inventory control to pricing)	OS/400	Syntax Software Corporation
System/88 International Funds Transfer System, Version 2	Funds transfer system	S/88 OS	IBM
Task Management System	Workflow monitor system	CICS, MVS, OS/2	Automated Financial Systems, Inc.
TextBOOK	Online access to documents	CICS, MVS	Data Retrieval Corporation
TextDBMS**	Text database management, search and retrieval	CICS, MVS	Data Retrieval Corporation
TextGEN	Document assembly and contract management	CICS, MVS	Data Retrieval Corporation
TieLine Bill Design	Customized telephone bill design	CICS, IMS, MVS, OS/2	American Management Systems, Inc.
TransQueue	Redirects VMS print output to MVS SYSOUT devices	DEC VMS, MVS	LEGENT Corporation
Underneath	Automation and productivity tool	DOS	Core Technology Corporation
Underwriting Management System** (UMS**)	Repository for storing and managing policy information	CICS, MVS, OS/2	Policy Management Systems Corporation (PMSC)
Upstream	Backup and restore software	DOS, MVS, OS/2	Enterprise Data, Inc.
Vector 3000 Extended Bulkfiling/On-Line Fine Sort System	Banking: filing, sorting, vaulting, image matching	MVS, 3890/XP sorter	Sterling Software, Inc., Directions Division

Name of Application	Purpose	Environments and Configurations Supported	Vendor
VIDA for DB2, Version 1.0	DB2 database access from VAX applications	VAX to IBM host	Digital Equipment Corporation (DEC)
VISION21 Retail Credit Portfolio Management System	Online credit reporting system	DOS	CCS Commercial Credit Systems
VIS/LINK CICS	Connect remote VIS/TP systems (CICS emulator) to host CICS for VSAM and DL/1 (IMS/DB) data access	AIX	VISystems Inc.
Visualization Application (IBM Cern)	Visualization of parallel processing	OS/2, VM	IBM
Wang Office/DISOSS Gateway, Version 3.0	Electronic mail gateway, from DISOSS into Wang Office directory	Wang VS	Wang Laboratories, Inc.
Wireable Securities Clearance System (WISC)	Interface between clearing banks and the Federal Reserve SHARE system	OS/400	Cytrol, Inc.
Work Management	Automates handling of documents and related information	OS/400	Management Data, Inc.
Workstation PrintManager	Print service program	DOS, MVS	IBM
XCOM/SDS	Software distribution	OS/2	Spectrum Concepts, Inc. (now owned by LEGENT Corporation)
XDB-LINK	Communications gateway	CICS, DOS, OS/2	XDB Systems, Inc.
Xpediter	Debugging support for COBOL, PL/1, Assembler	MVS	Compuware Corporation
Yard Manager	In-plant tracking facility	OS/2	SID, Inc.
Zip Mail	Electronic mail on LAN	Novell	Attachmate Corporation
5210/VM Print Support	Print RFT documents on PC-based printer	OS/2, VM	IBM

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Appendix A. Contacts for Vendors

Note: For more information on IBM applications, contact your local IBM branch office.

Active Software Corporation
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Sunnyvale, California USA 94086
Phone: 408-732-1740
Contact: Thomas Kent

Adelle Corporation
125 Cambridge Park Drive
Cambridge, Massachusetts USA 02140
Phone: 617-354-0400

Advanced Institutional Management Software
485 Underhill Boulevard
Syosset, New York USA 11791
Phone: 516-496-7700
Contact: Ann Elbirt

Aion Corporation
101 University Avenue
Palo Alto, California USA 94301
Phone: 415-328-9595
Fax: 415-321-7728
Contact: Alan Codkind

AICorp, Inc.
138 Technology Drive
Waltham, Massachusetts USA 02254
Phone: 800-677-2400 or 617-891-6500
Fax: 617-893-5681
Contact: Dennis Merritt

ALE Systems
3334 Kings Charter Drive
Ashland, Virginia USA 23005
Phone: 800-550-1370
Fax: 804-550-1349
Contact: C. Wesley Lucas or Donald S. Cowan

Amdahl Corporation
1250 East Arques Avenue
P.O. Box 3470
Sunnyvale, California USA 94088-3470
Phone: 800-538-8460 or 408-746-6000
Fax: 408-738-1051

American Data Group, Inc. (ADG)
P.O. Box 920697
Norcross, Georgia USA 30092
Phone: 800-521-0935 or 404-921-1123
Contact: Judith Anderson

American Eagle
440 N. Mountain Avenue, Suite 305
Upland, California USA 91786
Phone: 714-985-0809
Contact: Chuck Wright

American Institute Consulting Group
437 Madison Avenue, 23rd floor
New York, New York USA 10022
Phone: 800-345-8016 or 212-826-1260
Attn: Stewart Abowitz

American Management Systems, Inc.
1777 North Kent Street
Arlington, Virginia USA 22209
Phone: 800-255-8888
Contact: K. Todd Ashworth

American Software, USA
470 East Paces Ferry Road, NE
Atlanta, Georgia USA 30305
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Contact: Mel Richardson

Andersen Consulting
69 West Washington Street
Chicago, Illinois USA 60602
Phone: 800-458-8851 or 312-507-8856
Fax: 312-507-2548
Contact: Ellen Ryske

Andrew Corporation
Network Products Group
19021 120th Avenue NE
Bothell, Washington USA 98011
Phone: 800-776-6174 or 206-485-8200
Fax: 206-487-1065
Contact: Michael Harris

Annatek Systems, Inc.

1655 Walnut Street, Suite 200
Boulder, Colorado USA 80302
Phone: 800-821-0528 or 303-444-6675
Fax: 303-444-3494

Apollo Computer, Inc.

A Division of Hewlett-Packard Co.
300 Apollo Drive
Chelmsford, Massachusetts USA 01824
Phone: 508-256-6600
Fax: 508-256-9374
Sales Center: 303-229-2200

Apple Computer, Inc.

20525 Mariani Avenue
Cupertino, California USA 95014-6299
Phone: 408-996-1010

Applied Computer Technology

3200 Broadway Boulevard, Suite 410 LB17
P.O. Box 47006
Garland, Texas USA 75047-7006
Phone: 214-271-6550
Fax: 214-240-6813
Contact: Burt Gearhart

Applied Learning

1751 West Diehl Road
Naperville, Illinois USA 60563
Phone: 800-433-5825 or 708-369-3000

Architecture Technology Corporation

P.O. Box 24344
Minneapolis, Minnesota USA 55424
Phone: 612-935-2035

ARDIS

300 Knightbridge Parkway
Lincolnshire, Illinois USA 60069
Phone: 708-913-1215
Fax: 708-913-4700
Contact: Rob Euler

Arkansas Systems, Inc.

8901 Kanis Road, Suite 202
Little Rock, Arkansas USA 72205
Phone: 501-227-8471

AT&T Computer Systems, Inc.

1776 On The Green
Morristown, New Jersey USA 07960
Phone: 800-247-1212 or 908-898-8000
Fax: 908-644-9768

Atkisson and Associates, Inc.

1830 Truxtun Avenue, Suite 100
Bakersfield, California USA 93301
Phone: 805-325-4828
Contact: G.P. Atkisson

Attachmate Corporation

13231 S.E. 36th Street
Bellevue, Washington USA 98006
Phone: 800-426-6283 or 206-644-4010
Fax: 206-747-9924

Automated Financial Systems, Inc.

123 Summit Drive
Exton, Pennsylvania USA 19341
Phone: 215-524-9300
Contact: Janet Roenne

Automated Training Systems (ATS)

21250 Califa Street, Suite 107
Woodland Hills, California USA 91367
Phone: 818-999-5753 or 800-426-8737

B.A.C.G.

180 Crossways Park Drive
Woodbury, New York USA 11797
Phone: 516-364-3630
Contact: Donald Francis

BellSouth Information Systems

1967 Lakeside Parkway, Suite 412
Tucker, Georgia USA 30004
Phone: 800-621-4736
Fax: 404-621-3195
Contact: Lee Marlin or Judy Shaw

Brixton Systems, Inc.

185 Alewife Brook Parkway, Suite 4200
Cambridge, Massachusetts USA 02138-9608
Phone: 617-497-2938
Fax: 617-876-2523
Contact: Donna White

Broadway & Seymour, Inc.

128 South Tryon Street
Charlotte, North Carolina USA 28202
Phone: 704-372-4281
Contact: John Williams

Business Partner Solutions

Two Salt Creek Lane, Suite 214
Hinsdale, Illinois USA 60521
Phone: 708-323-9292

California Business Utilities

3087 Solano Avenue
Napa, California USA 94558
Phone: 408-424-9950
Contact: Steve Davis

California Software Products, Inc.

515 North Cabrillo Park Drive
Santa Ana, California USA 92701-5017
Phone: 714-973-0440
Fax: 714-558-9341
Contact: Liz Richell

Cambar Software

4975 La Cross Road
P.O. Box 10266
Charleston, South Carolina USA 29411
Phone: 803-747-4539
Fax: 803-554-2970
Contact: Roger K. Davis

Candle Corporation

1999 Bundy Drive
Los Angeles, California USA 90025
Phone: 213-207-1400

Cap Gemini Logic Monitor

Rådmansgatan 49
S-113 60 Stockholm Sweden
Phone: 46 8 300710
Contact: Tibor Karaszi

CCS Commercial Credit Systems

Vision21 Systems
900 Winderley Place
P.O. Box 5575
Maitland, Florida USA 32751-7214
Phone: 407-660-0343
Fax: 407-660-8246

Center for Advanced Professional Development

1820 E. Garry St., Suite 110
Santa Ana, California USA 92705
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Contact: Barbara Stern

Century Analysis

114 Center Avenue
Pacheco, California USA 94553
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CIMATIC A/S

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Postboks 57
1414 Trollåsen
Norway
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Fax: 47-2-426561
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Citisystems, Inc.

111 John Street, Suite 1250
New York, New York USA 10038
Phone: 212-513-7535,

CLEO Communications

A Division of Interface Systems, Inc.
3796 Plaza Drive
Ann Arbor, Michigan USA 48108
Phone: 313-662-2002
Fax: 313-662-1965
Contact: Chris Kochmanski

COL Consulting, Ltd.

RR1 265 Overlook Way
Purdys, New York USA 10578
Phone: 914-277-4312

Communications Solutions, Inc. (CSI)

2071 Hamilton Avenue
San Jose, California USA 95125
Phone: 408-371-5790
Fax: 408-371-5779

Complex Systems, Inc.

130 Cedar Street
New York, New York USA 10006
Phone: 212-766-4568
Contact: Martha Avila

Computer Applications Services • Cytrol

Computer Applications Services, Inc.

15560 Rockfield Boulevard, Suite B2
Irvine, California USA 92718
Phone: 714-859-2274
Fax: 714-859-0353

Computer Associates International, Inc.

711 Stewart Avenue
Garden City, New York USA 11530-4787
Phone: 800-654-3003 or 516-227-3300
Fax: 516-227-3937
Contact: Dana Williams

Computer Corporation of America

Four Cambridge Center
Cambridge, Massachusetts USA 02142
Phone: 617-492-8860
Fax: 617-497-1072
Contact: Joan Kaminski

Computer Resources, Inc.

Route 125, P.O. Box 60
Barrington, New Hampshire USA 03825
Phone: 603-664-5811
Contact: Raymond J. Perreault

Computone Corporation

Box 100040
1100 Northmeadow Parkway, Suite 510
Roswell, Georgia USA 30076
Phone: 800-241-3946 or 404-475-2725
Fax: 404-664-1510

Compuware Corporation

31440 Northwestern Highway
Farmington Hills, Michigan USA 48018
Phone: 313-737-7433

Comshare, Inc.

3001 South State Street
Ann Arbor, Michigan USA 48108
Phone: 313-994-4800
Fax: 313-769-6943
Contact: Chris Kelly

The Continuum Company

9500 Arboretum Boulevard
Austin, Texas USA 78759
Phone: 512-345-5700
Contact: Craig Parks

Core Technology Corporation

7335 Westshire Drive
Lansing, Michigan USA 48917
Phone: 517-627-1521

Corporate Microsystems, Inc. (CMI)

Mt. Support Road
P.O. Box 2059
Lebanon, New Hampshire USA 03766
Phone: 603-448-5193
Fax: 603-448-4836
Contact: Gerry Hunt

Corrigan and Colville, Inc.

175 E Main Street, Suite 208
Huntington, New York USA 11743
Phone: 516-424-4970

Creative Systems Interface, Inc.

26 Hancock Street
Lexington, Massachusetts USA 02173
Phone: 800-321-2744
Fax: 508-879-7423
Contact: Thomas C. Miller

Cross Access Corporation

2900 Gordon Avenue, Suite 100
Santa Clara, California USA 95051
Phone: 408-735-7545

CTI Limited, Inc.

14135 Midway Road, Suite 230
Dallas, Texas USA 75244
Phone: 214-233-7575
Contact: Craig C. Lofton

Cybermation, Inc.

16 Esna Park Drive, Suite 106
Markham, Ontario Canada L3R 5X1
Phone: 416-479-4611
Contact: Ron Nakagawa

Cytrol, Inc.

4620 West 77th Street
Minneapolis, Minnesota USA 55435
Phone: 612-835-4884
Contact: J. Nik Kirkeng

Data General Corporation

4400 Computer Drive
Westboro, Massachusetts USA 01580
Phone: 800-328-2436 or 508-366-8911
Fax: 508-366-1299

Data Retrieval Corporation

11801 West Silver Spring Drive
Milwaukee, Wisconsin USA 53225
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Contact: Edward B. MacGuire

David Goodenough & Associates, Ltd.

283 City Road
London, United Kingdom EC1V 1LA
Phone: 44-71-490-2266
Fax: 44-71-490-2343
Contact: Steve Laphorn

DevTech Associates

305 East Shuman Boulevard, Suite 705
Naperville, Illinois USA 60563
Phone: 708-251-1093
Fax: 708-355-2944
Contact: Mark Rolfes

Digital Communications Associates (DCA)

1000 Alderman Drive
Alpharetta, Georgia USA 30202-4199
Phone: 800-241-4762 or 414-442-4000
Fax: 404-442-4361

Digital Equipment Corporation (DEC)

146 Main Street
Maynard, Massachusetts USA 01754-2571
Phone: 800-344-4825 or 508-493-5111
Fax: 508-493-8780

DSC Communications Corporation.

1000 Coit Road
Plano, Texas USA 75075
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Dun & Bradstreet Software Services, Inc. (DBS)

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EDS Corporation

Dealer Systems Division
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Eicon Technology Corporation

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Enfin Software Corporation

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First Coast Systems, Inc.

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Phone: 508-685-5400
Contact: Jayna Smith

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Global Software, Inc.

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Goal Systems International, Inc.

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GUIDance Technologies, Inc.

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Appendix B. SNA Network Registry

IBM has established the SNA Network Registry, a worldwide clearinghouse for registering Network Identifiers (netids). This registry is available at no charge to customers who are licensed for the following networking products:

- Advanced Communications Function/VTAM (ACF/VTAM)
- Operating System/400.

The SNA Network Registry is a repository for information related to SNA networks. IBM established this registry to help SNA network owners create and maintain unique netids.

What Is an SNA Netid?

In SNA, a network is an interconnected group of nodes logically associated by a common identifier called a *netid*. To communicate among SNA networks, each netid involved must be unique.

SNA defines the netid as a one- to eight- character field consisting of alphanumeric characters. The SNA Network Registry adds a hierarchical structure to this definition. This new structure enables the netid to identify the country in which the network is managed, the enterprise that owns the network, and the suffix of the associated network. In the new structure, the format of the netid is **cc₁eeeenn**, where:

- cc** = country code
- eee** = enterprise code
- nn** = network suffix code

A country code specification is limited to those characters defined by ISO Standard 3166. You may choose enterprise codes and network suffixes from any of the allowable characters of Character Set 1134. For example, the netid **USABCD01** indicates that the country code is US, the enterprise code is ABCD, and the network suffix code is 01.

How Do You Register a Netid?

To register a netid, contact your local IBM branch office. You must supply the following information:

- Your enterprise name and address
- The name of the resident country
- Up to three choices for an enterprise code.

The requested enterprise code must be different from all other enterprise codes for the same country code. If the enterprise code passes this test, IBM will register 1296 netids for you, using all of the network suffix combinations.

Why Register Your Netid?

Registering a netid in the SNA Network Registry ensures that your netid is different from all other netids within the registry.

By registering your netid, you help protect the time and effort invested in defining the netid throughout the network. You also help avoid future connectivity problems when adding new networks to an interconnected community.

Why Use a Structured Netid?

A hierarchical structure enables the netid to convey additional information about the network, such as the country in which the network is managed. This information can be used by applications involved in routing decisions, like network management applications or distributed services applications that do connectionless routing.

After IBM validates a unique enterprise code for you, you can register up to 1296 netids. As a result, you can grow your networks using preregistered netids. In addition, you enjoy the administrative advantage of using the same country code and enterprise code for all netids in your networks.

How Is the Registry Related to OSI?

The SNA Network Registry and the structured netid play an important part in efforts toward OSI/SNA interoperability. This registry is now part of the OSI registration process, thereby providing a registration vehicle that enables the SNA addressing token to be used as part of a Network Service Access Point (NSAP) in the OSI environment.

When Should You Register Your Netid?

The SNA Network Registry is available today. Because requests are accepted on a "first come, first served" basis, IBM recommends that you register your netids early.

If you have already established an SNA network, you should submit requests as soon as possible. If you have a selected networking product that is not part of an existing network, you should also request a registered netid.

What about Existing Netids?

What if you have already established a netid for your network? Before you change your netid to a registered netid, review the following considerations:

- Is the netid unique within the community of networks to which it may connect?

You may need to change an existing netid if:

- The network you want to connect to "knows" another network by the same netid.
- A directly connected network needs to change its netid.
- A network that is in the interconnected community but not directly connected needs to change its netid.

- Do the benefits of using a structured netid outweigh the impact of changing the current netid?

Benefits: By changing the current netid, you:

- Protect your investment in the network
- Avoid future connectivity problems.

Impact: Changing the netid requires you to:

- Change the use of the netid in all nodes in your network
- Notify connection partners of the change.

Can You Register an Unstructured Netid?

To register an unstructured netid, contact your local IBM branch office. Your IBM representative will consult *Registration Process for SNA Netids: User's Guide for SNA Network Registry, ZZ27-7425*.

You must supply the following information:

- Your enterprise name and address
- Netid to be registered.

IBM recommends that you obtain a registered netid for each of your networks and that you use structured netids. However, IBM recognizes that you may need to continue using an existing unstructured netid in certain situations.

You should not use an unstructured netid if the first two characters coincide with an ISO country code. Registration of an unstructured netid follows the "first come, first served" rule for registering structured netids.

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