IBM® Personal Software Products (PSP) DSNE-W93G-00

Developer Support News

Issue 7

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Abbreviations

CDN. Canadian

GMT. Greenwich Mean Time

GST. Goods and Services Tax (in Canada)

US$. United States Dollars

Back Issues

The file names, dates, and number of pages for all issues thus far are:

	Date	Zipped	ASCII	INF	Pages
Issue 1	17 May	dsn93a.zip	dsnews.93a		52
Issue 2	15 June	dsn93b.zip	dsnews.93b		50
Issue 3	15 July	dsn93c.zip	dsnews.93c		62
Issue 4	23 July	dsn93d.zip	dsnews.93d		48
Issue 5	16 August	dsn93e.zip	dsnews.93e		29
Issue 6	15 September	dsn93f.zip	dsnews.93f	dsn93f.inf	47
Issue 7	15 October	dsn93g.zip	dsnews.93g		63

Outside IBM, zipped files are found on several e-mail and BBS systems:

America On Line, in the OS/2 forum, in the text/information area

CompuServe, in OS2DF2 forum, *DAP library section 14 and in OS2DF1 forum, OPEN FORUM library section 15

GEnie, in OS/2 Software Library 16

Gopher, in index.almaden.ibm.com, OS/2 Information menu

IBM Canada BBS, in file area 35, OS/2 Programming

IBM Europe/Middle East/Africa (EMEA) BBS, in file area DOCS.PUBS

IBM Personal Computer Company BBS, in file area 11, OS/2 Programming

IBM OS2BBS (TalkLink), in OS/2 Software Library, in Documents and Info

Internet, in anonymous FTP server software.watson.ibm.com, in directory /pub/os2/info

PRODIGY, in the OS/2 Club topic's download library under IBM Files

Note: If you cannot find files named dsn... (in lower case), look for files named DSN... (in upper case).

Within IBM, all the ASCII files and INFBIN files are in DSNEWS PACKAGE in the MKTTOOLS, OS2TOOLS, and PCWIN tools catalogs. To obtain DSNEWS PACKAGE, type

TOOLCAT catalogname GET DSNEWS PACKAGE

or

TOOLS SENDTO catalogdisk GET DSNEWS PACKAGE

where

catalogname MKTTOOLS is on catalogdisk USDIST MKTTOOLS MKTTOOLS

catalogname OS2TOOLS is on catalogdisk KGNVMCB PCTOOLS OS2TOOLS

catalogname PCWIN is on catalogdisk BCRVMMS1 PCWIN PCWIN

Examples:

```
TOOLCAT MKTTOOLS GET DSNEWS PACKAGE
TOOLS SENDTO USDIST MKTTOOLS MKTTOOLS GET DSNEWS PACKAGE
```

or request the package by typing

```
REQUEST DSNEWS FROM V1ENG AT BCRVM1
```

Formats of DSNEWS Other Than ASCII

Within IBM, other formats of DSNEWS are available. Klaus Johannes Rusch, IBM Austria, has produced DSNEWSB PACKAGE, which is in the MKTTOOLS tools catalog. DSNEWSB PACKAGE contains some issues of DSNEWS in BookMaster, PostScript, and LIST3820 formats. Klaus' assistance is greatly appreciated.

Outside IBM, the 15 September DSNEWS (Issue 6) was made available in .INF format, and other issues will be done in .INF format as time and resources permit. The .INF file of Issue 6 was produced by Mike Kaply, IBM Boca Raton Information Development, whose assistance is also very much welcomed.

Notice to Readers Outside the USA

It is possible that the material in this newsletter may contain references to, or information about, IBM products (machines and programs), programming, or services that are not announced in your country. Such references or information must not be construed to mean that IBM intends to announce such products, programming, or services in your country.

Send Us Your Feedback!

Your comments about this newsletter are important to us. Please send your feedback to IBM PSP Developer Support News at:

CompuServe®: 74150,44

Internet®: dsnews@vnet.ibm.com

BIX®: dsnews@bix.com

IBMMAIL: USIB33NP

Fax: 1-407-443-3241

Mail: Newsletter, Internal Zip 2230, IBM Corporation, 1000 N.W. 51st Street, Boca Raton FL 33431, USA

DAPTOOLS Updated on Advantis/IIN + IBMLink

The DAPTOOLS library was compiled to make IBM Internal Use software available exclusively to members of the IBM Developer Assistance Program. Restricted distribution of these files was one of the prerequisites for permission to make these programs available to developers.

Today, the DAPTOOLS library is legally and officially available from only two sources: CompuServe (in the private DAP Library 14 of OS2DF2), and Advantis/IIN plus IBMLink.

CompuServe DAPTOOLS

DAPTOOLS were implemented on CompuServe to accommodate members of the Worldwide Developer Assistance Program. The 15 September issue of this newsletter focused on the CompuServe version of the program. Since then, many new files have been added to the DAPTOOLS Library on CompuServe. Any developer who wishes to join the Worldwide DAP can access the DAP private library and DAPTOOLS. To join, simply type GO IBMDAP at a CompuServe prompt, and fill out the questionnaire. Within 72 hours, your application will be processed and verified.

Advantis/IIN + IBMLink DAPTOOLS

The Advantis/IIN version of DAPTOOLS is available only to U.S. Commercial and Premier DAP members as an additional option in their IBMLink service selections. DAPTOOLS through Advantis/IIN plus IBMLink are NOT available as a part of the Worldwide DAP.

DAPTOOLS License Agreement

When they were accepted into the U.S. Commercial and Premier DAP program, members were given IBMLink access and a diskette called the DAPTOOLS Notebook. On the diskette was an .INF (OS/2-VIEWable) file containing a license agreement for DAPTOOLS. Members were encouraged to send in a signed copy of the agreement for access to DAPTOOLS via Advantis/IIN plus IBMLink. This process is still in place.

Getting Advantis/IIN Access to DAPTOOLS

U.S. Commercial and Premier DAP members who do not have access to DAPTOOLS through Advantis/IIN can request a copy of the DAPTOOLS license agreement by sending e-mail to the DAPTOOLS Coordinator (see below for userids). These members will be given access after their signed license agreements are received. Also, U.S. Commercial and Premier DAP members who are having problems with their DAPTOOLS accounts on Advantis/IIN are encouraged to send e-mail. Your five-character DAP member number will be required to process any accounts. NOTE: DAP member numbers beginning with a zero are for Worldwide DAP members, who are NOT eligible for a DAPTOOLS product selection option on Advantis/IIN. These members should access the DAPTOOLS library on CompuServe.

DAPTOOLS Program Activity

The past several months have brought about many changes to the DAPTOOLS program. The DAPTOOLS program has undergone a change in administration, a port of all significant tools to CompuServe, and a major quest within IBM for new tools.

Last month, the IBM 9370 mainframe that had been the home for DAPTOOLS was retired. The entire program was ported seamlessly (from a user point of view) to an IBM ES/9000 mainframe computer with a different operating system! All plans to update the program were put on hold to facilitate the hardware and software changeover. Now that the changeover is done, the DAPTOOLS on Advantis/IIN plus IBMLink have been refreshed and brought up to the level of the DAPTOOLS on CompuServe. At this point, DAPTOOLS on both repositories are the same.

DAPTOOLS Coordinator Information

E-mail addresses:

CompuServe, 71075,2553
Internet, jpolizzi@vnet.ibm.com
IBMMAIL, userid USIB3VRZ at IBMMAIL

Help for ISVs Through Software Vendor Systems Center

Support for Communications Manager/2, Extended Services 1.0 Database, and Database Manager/2 is now available to IBM Developer Assistance Program members from the IBM Software Vendor Systems Center (SVSC) in Dallas, Texas. Members of the IBM Developer Assistance Program (DAP) can contact the SVSC using any of the means listed below; identify yourself as a member of DAP, and identify which product you need assistance with.

SVSC is offering this support as a result of changes in product content and ownership.

Extended Services 1.0 consisted of

1. Communications Manager, with LAN Adapter and Protocol Support (LAPS) code incorporated,

and

2. Database Manager.

Extended Services 1.0 was split into three separate standalone products: Communications Manager/2, DATABASE/2, and Network Transport Services/2, as follows:

Product	IBM Division	IBM Laboratory
CM/2	Networking Systems	Research Triangle Park NC
DB2/2	Software Solutions	Toronto ON
NTS/2	Personal Software Products	Austin TX

Responsibility for Database and Communications products reverted to their respective labs. Each of those labs, Toronto and Research Triangle Park, have contracted the Software Vendor Systems Center (SVSC) to continue to provide technical support. The SVSC has supported ISVs for almost seven years, primarily providing technical support for beta programs on each of the IBM operating platforms: MVS/VM/VSE, OS/400, AIX, and OS/2. Applications developed on either CM/2 or DB2/2 require support skills beyond just the product itself. Connectivity issues, configuration specifications, and programming ramifications (to name a few) require multiple product skills for addressing cross-platform access, as well as client/server application skills, all of which need to be available to the independent software vendor community.

With these skills and facilities already in place, SVSC provides a single point of contact for independent software vendors to address not only their programming needs, but also to assist them in application design reviews, skills transfer, or a focal contact for other IBM programs. IBM Personal Software Products is still responsible for Network Transport Services/2 (NTS/2), which includes:

LAN Adapter and Protocol Support (LAPS), formerly included in Extended Services/Communications Manager (ES/CM 1.0)

Configuration, Installation, Distribution (CID)

Additional token ring drivers

LAPS is a prerequisite for such products as:

LAN Services 2.0 and 3.0

Communications Manager/2

TCP/IP for OS/2

DB2/2

DB/2 Client Enablers

Contacting the SVSC

SVSC can be contacted in several ways:

Call 1-800-553-1623 in the US and Canada, 7:00 AM – 7:00 PM Central Time (GMT minus 6), then press Option 3 = OS/2 Products

Call 1-800-654-4986 in the US and Canada for our Bulletin Board System

After hours or outside the USA, send a fax to 1-817-961-8410, 24 hours daily

IBMMAIL userid USIB24XT

Internet userid JMOATES@VNET.IBM.COM

Developer Connection (DevCon) for OS/2 in Asia/Pacific

The Developer Connection for OS/2 is now shipping! Avoid the rush ... get your order in early! All members of the IBM Asia/Pacific Developer Assistance Program (DAP) are eligible for the discounted price of 220 Australian dollars for Australian subscribers or 240 Australian dollars for overseas subscribers. These prices include shipping and handling costs. All payment must be made via major credit card or with a cheque made payable to IBM Australia Limited in Australian dollars.

Fax orders IBM Developer Assistance Program, +61-2-354-7766
Phone orders +61-2-354-7684
Mail orders

IBM Developer Assistance Program
Mike Voris
P. O. Box 400
Pennant Hills 2120
Australia

Asia/Pacific Developer Connection for OS/2 Order Form

Use your full business mail address and please print clearly.

Please bill to:
Company Name _____
First Name _____ Surname _____
Street _____
_____
City _____ Postcode _____
Country _____
Phone # _____ Fax # _____
Please tick the appropriate option boxes below:

|_| Australia # ___ 22 Australian dollars

|_| Overseas # ___ 24 Australian dollars

Total Amount Due _____ Australian dollars

Method of payment:

|_| Cheque |_| VISA |_| MasterCard |_| AmEx |_| Bankcard

Card number: |_|_|_|_| |_|_|_|_| |_|_|_|_| |_|_|_|_| |_|_|_|_|

Additional digits for AmEx

Expiry Date: MM ____ YY ____

I certify that the information I have provided is accurate and complete, and the submission of this form is in accordance with the conditions specified within.
Signature _____ Date _____
(Required when ordering by credit card)

Asia/Pacific DAP Christmas Special on VisPro/REXX

IBM Asia/Pacific Developer Assistance Program (DAP) members have rushed to take advantage of the first visual-programming REXX tool for OS/2. This top-selling product, VisPro/REXX, is now available at special prices for Christmas:

139 Australian dollars for Bronze Edition

399 Australian dollars for Premier Edition

Who can resist the opportunity to take charge of developing their own utilities for only 139 Australian dollars? Look at this range of controls:

	Bronze	Premier
Push button	X	X
Radio button	X	X
Check box	X	X
List box	X	X
Combo box	X	X
Entry field	X	X
MLE	X	X
Slider		X
Group box	X	X
Plain text	X	X
Graphics viewer	X	X
Value set	X	X
Spin button	X	X
Notebook		X
Container		X
Free-form window	X	X
Business graphics		X

You don't even need to be a REXX expert, because visual programming means syntactically correct code with a simple point-and-click.

Waddya waitin' for? Call in your order to +61-2-354-7684 or fax it to +61-2-354-7766 while Christmas stocks last.

News from IBM Brazil's Developer Assistance Program

The IBM Brazil Developer Assistance Program announces two new telephone numbers for ordering IBM PC software. The phone numbers for the software distribution center are:

(021) 800-6120, which is an 800 number

and

(021) 271-3562, for local calls in Rio de Janeiro

The available PC software includes OS/2 2.1, C Set++, Device Driver Toolkit, TCP/IP for OS/2, Communications Manager/2, DATABASE 2, and others. In the near future, The Developer Connection for OS/2 will also be available through the distribution center. The Brazil DAP will be present at the Brazilian COMDEX in March 1994, and is working with the major independent software vendors to demonstrate their applications at the show.

Next IBM PSP Technical Interchange: 25 – 29 April 1994, San Francisco

Ride the little cable cars halfway to the stars when you come to San Francisco from 25 to 29 April 1994 for the next IBM Personal Software Products (PSP) Technical Interchange!

Taking a whole business week – Monday through Friday – the third PSP Technical Interchange encompasses all IBM Personal Software Products: PC DOS, OS/2, LAN Systems, Workplace OS, Pen for OS/2, Multimedia, and software tools for these platforms.

More than a hundred independent software vendors and other exhibitors will demonstrate and answer questions about their PSP tools and applications. Plans are under way for many exciting technical presentations and after-hours diversions.

The PSP Technical Interchange will be held at the San Francisco Hilton Hotel and Towers. The keynote address will be held at the Moscone Center; conference attendees will ride chartered buses between the hotel and Moscone Center.

Who Should Attend?

Software designers, independent and corporate developers, technical coordinators, LAN experts, MIS managers, consultants, and training executives will all profit from the information exchange. Join over 2,000 top industry professionals from throughout the world to examine the latest technical breakthroughs from IBM.

Elective Sessions

OS/2, LAN Systems, 32-bit graphics, object-oriented programming, multimedia, pen, database, and communications. You take your pick and select your own schedule.

Over 100 Demos

Visit the extensive exhibit area highlighting both vendor hardware and software products that exploit PSP platforms. Don't miss the latest in innovations and technologies.

OS/2 and LAN Systems Labs Feature Test-Drive Centers

Gain “hands-on” experience at the OS/2 and LAN Systems laboratories. Staffed by expert IBM developers, these labs offer the perfect opportunity to hold one-on-one discussions about how you can productively apply PSP products in today's working environments.

Premiums! Premiums!

You will receive special bonuses, participate in product raffles, and take part in a busy social agenda, including receptions and a special event.

Register Early and Save!

Make plans now to attend this spectacular event. Registration fee is 795 US$ per person if you register by 21 March 1994. After 21 March, the registration fee is 895 US$. Remember, seating is limited, and a sell-out crowd is expected, so register early!

More Information and to Register

Call 1-800-872-7109 within the USA and Canada, or 1-508-443-4990 from elsewhere, or send a fax to 1-508-443-4715.

IBM PSP Software Developer Marketing Programs News

Ready! for OS/2 Certification Program – Begins 19 October 1993

Expand the marketing opportunity for your DOS, Windows, and OS/2 products by including the OS/2 certification mark on your product packages and promotional materials. The mark indicates your application has been successfully tested on OS/2 Version 2. Under the program, first-level support is provided by the licensee. IBM and vendor promotion of the OS/2 certification mark will ensure that the mark and its benefits are quickly recognized by end-users. Upon seeing it on a product, the consumer has confidence that the OS/2, DOS, or Windows software product he or she is buying will work with OS/2 Version 2.

There is no charge to license the OS/2 certification mark. The three requirements are that your product pass an IBM-provided test suite, you sign a license agreement to use the mark according to the IBM guidelines, and you submit a copy of your software application. The OS/2 certification mark can be added to your OS/2, DOS, and Windows product packages and promotional material. Contact: Call the IBM Software Developer Marketing Programs Center. In the USA and Canada, call 1-800-285-2936; from elsewhere, call 1-407-982-6408, menu option 3.

IBM intends to announce this program for Europe, the Middle East, and Africa. If you wish to register your early interest in this program, send a fax to the IBM OS/2 Developer Assistance Program at +44 256 844683. Please furnish your company's name and address, and indicate whether you need a test suite for DOS, Windows, or OS/2 products.

Ready! for LAN Server Certification Program

News

Certify your application no later than 29 October 1993 to be included in the COMDEX/Fall '93 list of Ready! for LAN Server applications. In order to ensure that your product is included in the next certified listing, IBM must receive by 29 October:

- Your product listing form
- Your signed license agreement
- A copy of your certified software application

Similar to the Ready! for OS/2 compatibility mark, a self-certification mark is now available for products that are compatible with OS/2 LAN Server 3.0. By placing the mark on your LAN Server-compatible product, you show the marketplace that your product has been self-tested, and runs on LAN Server.

There is no charge to license the LAN Server self-certification mark. Requirements include: completing a self-certification process; providing IBM with information regarding the testing procedures; and signing a license agreement to use the mark in your advertising and on your shrink-wrap products. IBM will then provide camera-ready artwork and forms for ordering stickers as needed.

The LAN Server certification mark can be added to your LAN Server, OS/2, and Windows products that successfully run on LAN Server 3.0. For more information, call the IBM Software Developer Marketing

Programs Center. In the USA and Canada, call 1-800-285-2936; from elsewhere, call 1-407-982-6408, menu option 3.

New Newsletter for Team OS/2 Members

Team OS/2 consists of people who are OS/2 enthusiasts and who actively share their knowledge and enthusiasm with others. Teamers include IBM employees and non-IBMers worldwide. Membership is open to anyone who is willing to spend his or her own time helping other OS/2 users and promoting OS/2.

Finding Our Electronic Newsletter

The Team OS/2 support group is now publishing an electronic newsletter in .IPF format, which can be viewed using the OS/2 VIEW command. Team OS/2 News will come out every month or two, and is available from these e-mail systems:

America On Line: Select the Computing Icon, then search in the OS/2 libraries

CompuServe: Type GO OS2USER, and look in section 9, Team OS/2

Delphi: in custom forum 41

Fidonet: in file TEAM1093.ZIP

GEnie: in the OS/2 Roundtable library

Internet: Site ftp-os2.cdrom.com (or shadow site ftp-os2.nmsu.edu), directory /pub/os2/all/teamos2, file name TEAM1093.ZIP

OS/2 BBS: In OS/2 Software Support Library, under option 3, OS/2 Documents and Information

PRODIGY, in the OS/2 Club library

Contents of First Issue

The first issue of Team OS/2 News has file name TNEW01.ZIP except on Fidonet and Internet, where its file name is TEAM1093.ZIP. The first issue has these contents:

Hello Team OS/2!

- What is Team OS/2?
- IBM Team OS/2 Support

Team OS/2 Calendar of Activities

- Currently Scheduled Activities
- Past Activities
- Event Reports
- ONE BBSCON
- University of North Texas – Denton
- CompUSA Demo Day, Houston TX
- CompUSA Demo Day, Rochester NY

Team OS/2 Profiles

- TEAM NC – North Carolina

Team OS/2 Logo Status

Appendices

- How do I Contact IBM Team OS/2 Support?
- How Can I Join Team OS/2?
- Where Can I Find Team OS/2 Members?
- Team OS/2 Support
  - Support for Public OS/2 Demos
  - Team OS/2 Support for Local Retailers Selling OS/2
  - OS/2 Posters for University Computer Labs
- But I'm not in the USA. Now what?
- Support for OS/2 demos at user groups
  - User Group and SIG registration information

Joining Team OS/2

The Team OS/2 support group keeps a database of members. This file is posted periodically on the same e-mail systems as the newsletter. Its file name is TEAMOS.ZIP except on Fidonet, where its name is TEAMLIST.Z10, and Internet, where its name is TEAMLIST.ZIP.

If you actively support OS/2 and its users, just let us know about you to be added to the member list. Here's all we need to know:

1. Your name
2. Mailing address (only your city, state, and country will be published)

   May we release your address to vendors who wish to do mailings to Team OS/2 members? Yes No
3. E-mail userids and networks
4. Optional: Include a short (one- or two-line) description to be included with your name. Sometimes software developers like to mention which products they have written, or BBS operators include how to reach their BBSs.
5. For our private records (this information will NOT be published), please include your phone numbers at home and work, and your fax number if you have one.
6. Please let us know what you have been doing so that you feel you qualify for membership in Team OS/2.

Contacting IBM Team OS/2 Support

You can send your enrollment information to any of the following. We prefer electronic notes, but if necessary, contact us by phone or fax.

America On Line: TEAMOS2VAC (Vicci Conway)

CompuServe: 76711,1123 (Vicci Conway)

Delphi: VICCICONWAY

Fidonet: 1:109/347.3479 (Janet Gobeille)

GEnie: V.CONWAY

IBMMAIL: USIB45RN at IBMMAIL (Janet Gobeille)

IBM internal PROFS: LUVOS2 at AUSVM1 (Jeff Mallon, Team OS/2 support)

Internet: luvos2@vnet.ibm.com (Jeff Mallon, Team OS/2 support)

OS/2 BBS: USIB55J9 at IBMMAIL (Vicci Conway)

Voice phone: Jeff Mallon, Team OS/2 support, 1-512-823-1682

Fax phone: Send your request to Janet Gobeille, 1-512-823-3252

Mail: Janet Gobeille, Internal Zip 2996, IBM Corporation, 11100 Metric Blvd., Austin TX 78758 USA

Professional Certification Program from IBM

Technical software professionals can now become certified by IBM to service and support software programs for workstations and networks through the Professional Certification Program from IBM. To certify, individuals must demonstrate proficiency in supporting selected products from IBM's Personal Software Products (PSP) Division by passing a series of tests.

The Professional Certification Program provides certification for the following roles within IBM's OS/2 and OS/2 LAN Server product areas:

Certified OS/2 Engineer

Certified LAN Server Engineer

Certified LAN Server Administrator

Certified OS/2 Instructor

Certified LAN Server Instructor.

Testing is administered through Drake Training and Technologies, and certification education courses and student kits are available through Skill Dynamics, an IBM Company.

IBM will provide support to certified individuals by offering benefits such as ongoing technical support.

In today's competitive environment, customers want to ensure that individuals who service and support their workstations and networks are qualified to do so. The Professional Certification Program from IBM provides worldwide industry recognition for OS/2 and LAN Server technical professionals. It enables these individuals to demonstrate their professional skills and proficiency on selected PSP products to their customers.

It is important for certified individuals to keep their knowledge and information current. To keep current, recertification may be required; IBM will notify certified individuals when recertification is necessary.

Roles and Tasks

The roles and the tasks for each certifiable role are:

Certified OS/2 Engineer: Supports OS/2 installations. Tasks include:

- Performance tuning
- System customization
- Technical support for problem resolution.

Certified LAN Server Administrator: Responsible for the day-to-day operation of a network. Tasks include:

- Adding and deleting users
- Backing up server/gateways
- Loading applications
- Maintaining security
- Designing and implementing procedures.

Certified LAN Server Engineer: Provides support for networks. Tasks include:

- System design
- Installation
- Performance tuning
- Problem resolution
- Maintenance.

The Certified LAN Server Engineer is also able to perform the tasks designated for the LAN Server Administrator.

Certified OS/2 Instructor or Certified LAN Server Instructor: Teaches certification education. Tasks and characteristics include:

- Setting up classroom laboratories
- Teaching skills
- Technical expertise in OS/2 or LAN Server.

Testing

Individuals, rather than organizations, are certified for a specific role by passing a series of tests designed to measure their knowledge of the tasks of that role.

One or more tests may be required for certification. The certification process is completed after all tests have been passed, and a legal agreement, supplied by IBM, is signed by the applicant and returned to IBM.

It is not necessary for a certification applicant to attend education courses to pass the tests. Tests can be taken if the applicant has equivalent knowledge. Individuals seeking certification can obtain and review the test objectives to determine whether they already have the knowledge and experience necessary to pass each test.

The required number of tests and test credits for each role are:

Certified OS/2 Engineer	4 tests, 9 test credits
Certified LAN Server Administrator	1 test, 3 test credits
Certified LAN Server Engineer	6 tests, 20 test credits
Certified OS/2 Instructor	Varies by course
Certified LAN Server Instructor	Varies by course

Each test costs 100 US$ each time it is taken. Therefore, if an applicant takes only tests but no education courses, certification of a LAN Server Administrator costs 100 US$, certification of an OS/2 Engineer costs 400 US$, and certification of a LAN Server Engineer costs 600 US$. (See below for an introductory special price for tests.) Tests for each role are divided into three categories: prerequisite, required, and elective. The following charts show this breakdown and the number of test credits issued.

For Certified OS/2 Engineer, 4 tests, 9 test credits needed

Test	Subject	Credits
	Prerequisites	5 credits needed
000-010	Using and Customizing OS/2 2.1	2 credits
000-009	Installing and Supporting OS/2 2.1	3 credits
	Required	2 credits needed
000-012	OS/2 2.1 Advanced Support	2 credits
	Electives	2 credits needed
000-013	OS/2 2.1 Performance and Tuning	2 credits
000-014	OS/2 2.1 Problem Determination/ Problem Source Identification (Hang/Trap)	5 credits
	Total credits	9 credits needed

For Certified LAN Server Administrator, 1 test, 3 test credits needed

Test	Subject	Credits
	Required	3 credits needed
000-003	OS/2 LAN Server Administration, Part 1	3 credits

For Certified LAN Server Engineer, 6 tests, 20 test credits needed

Test	Subject	Credits
	Prerequisites	6 credits needed
000-009	Installing and Supporting OS/2	3 credits
000-003	OS/2 LAN Server Administration, Part 1	3 credits
	Required	11 credits needed
000-004	OS/2 LAN Server Administration, Part 2	5 credits
000-006	OS/2 LAN Server Installation and Planning	2 credits
000-007	OS/2 LAN Server Performance	4 credits
	Electives	3 credits needed
000-005	Introduction to Integrated Networks	3 credits
000-002	OS/2 LAN Server NetWare Integration	3 credits
000-001	Token-Ring Network Implementation and Management	
000-008	Ethernet Implementation and Problem Determination	3 credits
000-016	Workstation Software Installation Using CID	4 credits
000-018	TCP/IP for Workstations	3 credits
000-017	Planning, Installing, and Customizing LAN NetView	5 credits

Test	Subject	Credits
Total credits		20 credits needed

Certification criteria for all roles must be completed within one year from the time the first test is taken. A migration or upgrade path allows the application of credits earned in one certification role to be applied to another. This is a time and cost savings to individuals who want to be certified in more than one role. For example, the 3 test credits earned by a Certified LAN Server Administrator will satisfy 3 test credits toward certification as a LAN Server Engineer. Testing is administered by Drake Training and Technologies, a recognized leader in certification testing with over 300 training centers. Within the USA and Canada, contact Drake Training and Technologies at 1-800-959-EXAM (1-800-959-3926) for program brochures, catalogs, and registration and testing information.

Education

Education courses are delivered and administered by Skill Dynamics and their network of IBM Licensed Education Centers. For program brochures, catalogs, education course enrollment, and class scheduling, call Skill Dynamics at 1-800-IBM-TEACh (1-800-426-8322) within the USA.

Courses and Student Kits are available to anyone interested in preparing for the certification tests. Skill Dynamics, an IBM Company, has developed the curriculum and is responsible for delivery of OS/2 and LAN Server courses. Taught only by certified instructors, the courses are available at Skill Dynamics' locations and IBM Licensed Education Centers. Individuals who are unable to attend courses may purchase the Student Kits for review or independent learning.

The education and test roadmap, published in the certification program catalog, outlines the certification tests that must be completed, and suggests some preparatory courses.

The general rule (although it can vary) is that one day of coursework gives an individual the information necessary for obtaining one test credit. Therefore, the education for becoming certified as a LAN Server Administrator takes up to three days; for OS/2 Engineer, up to nine days; and for LAN Server Engineer, up to 20 days.

Course fees are charged by the day, at an average rate of about 300 US$ per day. See “Cost Estimates for Certification” for complete costs of tests plus any necessary courses.

For program brochures, catalogs, education course enrollment, and class scheduling, call Skill Dynamics at 1-800-IBM-TEACh (1-800-426-8322) within the USA.

Student Kits

Student Kits offer some individuals an alternative to education courses. Available for all education certification courses, Student Kits consist of the handout materials for each education course. These materials can be used for review or independent learning. The cost of the Student Kit is approximately 50 percent of the cost of taking the classroom version of the certification education course.

Information about obtaining Student Kits is available by calling Drake Training and Technologies at 1-800-959-EXAM (1-800-959-3926) within the USA and Canada.

Test Credit for Novell Certification

Individuals already certified as Novell Certified NetWare Engineers will receive test credit for specific elements of the Professional Certification Program from IBM. Candidates for Certified LAN Server Engineer will receive 3 test credits for having passed Novell's test number 50-80, in lieu of IBM's equivalent test, number 000-005. This test credit represents a potential savings of approximately 15 percent off the test cost of the Certified LAN Server Engineer certification.

Test Credit for OS/2 Accredited

Individuals who are OS/2 Accredited by IBM's Independent Vendor League will be given 5 test credits toward certification as a Certified OS/2 Engineer, and 3 test credits toward certification as a Certified LAN Server Engineer. If you are OS/2 Accredited as of 21 September 1993, you will also receive two vouchers, worth 40 US$ each, that can be applied to Professional Certification Program tests administered by Drake Training and Technologies.

Cost Estimates for Certification

Exact costs for certification will depend on an individual's previous experience and knowledge of the products, and whether the individual requires education courses. The current cost for a test is 100 US$, and education courses will average about 300 US$ per day. Therefore, the cost of becoming a Certified LAN Server Administrator could be as little as 100 US$ for the test alone, to approximately 1000 US$ if the individual requires all three course days (which cost up to 900 US$). For a Certified OS/2 Engineer, the costs range from 400 US$ for the four tests to approximately 3100 US$, which includes up to 2700 US$ for nine course days. For a Certified LAN Server Engineer, the costs range from 600 US$ for the six tests to approximately 6600 US$, which includes up to 6000 US$ for 20 course days.

Benefits of Certification

Benefits for individuals completing certification requirements vary, based on the role for which they are certified, and are subject to change from time to time.

The Certified OS/2 Engineer and Certified LAN Server Engineer receive a greater number of benefits than the Certified LAN Server Administrator due to the complexity of the engineer role.

Benefits for the Certified LAN Server Administrator include a welcome package and subscription to a monthly newsletter from the Personal Software Products Division.

Benefits for certified engineers include a welcome package, easier access to IBM support through certification registration, one free CD-ROM technical library, and subscriptions to technical journals. Certified instructors receive the welcome package, one free CD-ROM technical library, and subscriptions to technical journals. Certified engineers and instructors also receive a camera-ready logo for inclusion in advertising or business literature.

Publications

The following publications and brochures will be available:

Title	Order Number	Available
Professional Certification Program Catalog	GR28-5110	Oct 1993
Professional Certification Program Brochure	GR28-5111	Sep 1993
OS/2 Professional Certification Brochure	GR28-5112	Nov 1993
LAN Server Professional Certification Brochure	GR28-5113	Nov 1993
Instructor Professional Certification Program Description	pending	Nov 1993

To order these publications, customers in the USA and Canada should contact Drake Training and Technologies at 1-800-959-EXAM (1-800-959-3926).

Services Available from 800 Numbers

Requests for the Certification Program catalog, brochures, test information and registration, should be directed to Drake Training and Technologies at 1-800-959-EXAM (1-800-959-3926) within the USA and Canada.

Contact Skill Dynamics at 1-800-IBM-TEACh (1-800-426-8322) within the USA for course information, schedules, and locations of education facilities. Program information and education roadmaps can also be obtained from Skill Dynamics.

Program information, test objectives, and course descriptions are available at all times from the IBM FAX Information Service, 1-800-IBM-4FAX (1-800-426-4329) within the USA. When calling IBM FAX, select the Personal Systems category.

Introductory Special Price

While the normal price of a certification test is 100 US$, during an introductory validation period, IBM is offering each test for 50 US$. Validation tests count toward certification.

When candidates enroll for the tests, they will be told if the half-price validation tests are available. After taking a validation test, the candidate will notified by letter, within four to six weeks after the conclusion of the validation, as to whether the candidate has passed or failed the test.

Charter Member Program

A charter member program has been established for the first 100 individuals who qualify as Certified OS/2 Engineers or Certified LAN Server Engineers. Charter members will receive additional benefits and recognition above the normal Certified Engineer benefits. Some of the extra benefits are a one-year subscription to a new technical library on CD ROM (available in 1994), and a membership plaque. These charter member benefits will be effective until 31 December 1994, at which time the normal benefits will continue.

USA Rollout

The majority of the education courses for the Professional Certification Program from IBM are available today. Some tests are available today; others will become available during the fourth quarter of 1993. During the test validation period, tests will cost 50 US$ rather than 100 US$. To determine when tests or courses are available, contact Drake Training and Technologies at 1-800-959-EXAM (1-800-959-3926) within the USA and Canada.

Canadian Rollout

In Canada, the Professional Certification Program from IBM is planned for availability in January 1994. Pilot opportunities begin in October 1993. For information about the Canadian program, or to participate in the pilot program, contact Skill Dynamics Canada at 1-800-661-2131 or the IBM Canada Certification Support Line at 1-416-513-3355.

LAN Systems Product Certification Program

IBM announces a program to certify products for interoperability and compatibility in a multi-vendor LAN environment.

The LAN Systems Product Certification Program is conducted by Personal Software Products at its Integration Test Lab in Austin, Texas. Certification ensures that products can coexist in a multi-vendor LAN environment.

Through the program, vendors can submit software and hardware products for testing in a LAN Systems environment with products from IBM and other vendors, such as Novell, Lotus, and WordPerfect. WordPerfect Corporation will be the first customer to certify products through the lab.

The testing program is designed to exercise products in a customer environment.

Elements of the program include:

Installation – To verify smooth installation, reinstallation, and deinstallation.

Function – To verify dynamic compatibilities by exercising a set of the product's functions under busy, real-life conditions.

Testing – To verify execution of functional tests.

Testing is performed with more than 200 IBM and non-IBM hardware systems running OS/2, DOS, Windows, LAN Server, and Novell NetWare. PCs from AST, Compaq, CompuAdd, Digital, Dell, Gateway, NCR, NEC, Olivetti, and Packard Bell are used in the integration test lab.

The test environments have been configured based on customer feedback from a wide range of industries including banking, retail, insurance, manufacturing, and finance.

Once a software or hardware product is certified, it receives the official certification mark – Tested and Approved for LAN Systems – which vendors can choose to display on product packaging and in advertising programs.

In addition to receiving the Tested and Approved for LAN Systems certification mark, certified products will be listed on CompuServe and TalkLink, the OS/2 BBS. The test reports will be included in the listing. This information will also appear in the IBM National Solutions Center Database and Ziff-Davis' Support On Site for Networks on CD-ROM. The fee for participating in the program ranges 3,000 US$ to 10,095 US$, depending on the test product's complexity. Vendors can call 1-800-992-4777 within the USA, or fax requests to 1-512-838-8989, for a free estimate and additional information.

Opportunities for LAN NetView-Based Applications

This article is aimed at application developers, with the intent of justifying the IBM LAN NetView platform as a framework for development and implementation of systems and network management applications. It answers the basic question: “Why invest in LAN NetView offerings?”

Introduction

Today, LAN-based systems are providing an increasing number of business solutions, and the need for effective management of the hardware and software resources that comprise these systems. Keeping them operational and controlling administrative costs has become more important than ever. Couple this with the need to reduce people costs while at the same time trying to provide a responsive information system, and you can see that management has a strong challenge to meet.

Coincidentally, there has been a greater focus on LAN (and WAN) management over the past few years. However, this focus has been primarily in the area of the communications components: adapters, wire, hubs, bridges, routers, etc., with little attention being paid to managing the workstations and the software operating on them. This has become a problem in today's networking environment, where software errors can cause severe bottlenecks and result in system and network downtimes.

Defining the Problem: The Downside of Downsizing

The shift from a centralized mainframe environment to the distributed systems environment has resulted in a number of benefits related to improvement of user productivity and cost savings, such as more efficient development of applications, local autonomy, and sharing of resources. However, as these benefits were being realized, the benefits of managing system resources from a central point was lessened.

Providing asset control and security, backup and recovery, problem management, performance management, et al, has become more difficult because of the remoteness of the systems that need to be managed. Whereas in the past an I/S organization provided these functions in an end-to-end systems management paradigm, in many cases these functions are now being left to the end-user, or remote LAN administrator.

With this in mind, it's apparent that the need exists for a comprehensive systems management solution to the problem of managing I/S resources in a distributed environment. A distributed systems management approach to monitor and control the I/S components helps meet the challenge of managing both the hardware and software resources by providing functions for the management disciplines mentioned above (such as asset management, backup/restore, change control, performance monitoring, and problem determination) in a client/server environment.

The next logical question would be: What solutions are out there today? While there are several systems and network management applications available today which implement these management disciplines, many provide partial solutions; data often cannot be shared, the end-user interfaces are inconsistent in their presentation, management services rely on proprietary connections, and in general, the integration of such applications is left to the customer.

Defining the Solution: An OPEN Approach

How does IBM LAN NetView address these shortcomings? By providing an “open” approach to distributed systems management. The major factors that contribute to this approach are:

1. Comprehensive management services, in terms of topology/discovery, object management, communications services, event management, and metadata services. The management services are based on the HP OpenView Network Management Server 3.1. By providing the underlying management services, application developers can concentrate on application function rather than the access mechanism for managing system resources.
2. An industry-standard “open” (API) that provides transparent access to these underlying management services. The API used for accessing the services is the X/Open Management Protocol (XMP), which was selected by the OSF for the Distributed Management Environment (DME). The openness afforded by using an industry-standard API adds value to the application, providing a measure of portability to other operating system platforms. The portability can be extended within the range of IBM products to include the AIX SystemView NetView/6000 platform, which also implements the XMP API.

The LAN NetView product also provides a common graphical end-user interface in the LAN NetView Manage product that is referred to as View. View uses an object-oriented approach to managing graphical objects; using OS/2 and implementing System Object Model (SOM), an object-oriented library technology. One of the advantages of this SOM-based approach from an application development perspective is that it provides a seamless integration of the management applications. This results in consistency for both the application user and the management application.

Why OS/2?

To multitask or not multitask – that is the question. Whether or not a multitasking operating system is really needed in cases where the end-users are typically “single-tasking” workers has been questioned in the past. However, as a true pre-emptive multitasking operating system, OS/2 has been well received as an operating system for “critical” applications. What is more critical than controlling the operation and assets on your Information System network? Systems management can be more effectively provided through the use of the multitasking capabilities inherent in OS/2. Do you want to report a problem automatically to a managing system while the workstation continues to perform normal activities? Do you want to apply changes to the software on the workstation while other workstation operations continue? Do you want to analyze the performance on the workstation, its DASD, memory, storage, etc., while processing critical transactions? A multitasking operating system is best suited for non-intrusively performing such systems and network management tasks. Development benefits of using OS/2 can also be realized. The IBM PSP Developer Assistance Program offers a broad range of services, including:

Technical assistance through OS/2 forums on CompuServe

Access to early code

OS/2 application migration workshops and seminars

Online technical support

OS/2 marketing programs

Consideration for participation in trade shows

Access to OS/2 development tools

Hardware/software rebates and loaner equipment

IBM Direct Marketing Center

It is IBM's objective to make OS/2 the best-managed workstation platform in the industry. The LAN NetView product, through its open-architected platform; CMIP agents for the OS/2 operating system; and LAN Server 3.0, LAN Requester, Database Manager, and Communications Manager products comprise the vehicle for achieving this objective.

LAN NetView Applications: The Opportunity

Integration

Was it George Washington who said “Though the first step in providing a solution for distributed systems management is delivering a solid platform, it's the applications running on that platform that provide the total solution.”? Well, maybe not George Washington, but it's still a true statement. LAN NetView applications from IBM and ISVs will deliver this solution by integrating network management, performance analysis, problem management, configuration management, asset management, and related functions with the NetView platform.

Cost Containment

At a time when more and more enterprises are downsizing, or considering downsizing, the cost of managing their LANs and WANs is a major factor. The LAN NetView product provides a comprehensive management platform, using an OS/2 2.x 32-bit multitasking operating system, at a cost significantly less than that of a UNIX-based platform.

Workstation Management

When you consider than SNMP is supported on the platform to accommodate a wide variety of device management, and add to that the capability that the LAN NetView CMIP agents offer (that is, the ability to manage the workstations themselves), a significant advantage is provided to the applications that use the LAN NetView platform.

DOS and Windows Support

DOS systems and DOS systems using Microsoft Windows also need to be managed. The LAN NetView family of products includes agents to manage IBM DOS 5.0 and 6.1, Microsoft DOS 5.0 and 6.0, and DOS + Windows 3.0 and 3.1. These agents can be utilized by management applications on a managing system, using CMOL to request data about the resource managers, and manage the resource managers by setting and changing values.

Host Gateway Support

Is it important for your application or agent to communicate to NetView on the host? This provision is accommodated through the LAN NetView Tie application, which acts as a gateway to and from NetView. Thus, in addition to managing interconnected workgroup LANs, LAN NetView applications can prosper in a large enterprise where a manager-of-managers system is the controlling point.

Application Developer Decisions

For application developers, the choice of a systems/network management platform needs to be based, of course, on return on investment. Let's look at some of the decision points that an ISV would need to consider in choosing the right platform to support.

Q: What market does the platform address? Will applications on this platform sell in the workgroup LAN environment as well as in a large enterprise?

Q: The LAN NetView product is targeted at the LAN workgroup segment, yet plays a significant role in large enterprises where NetView on a mainframe can manage LAN NetView-attached resources via the LAN NetView Tie application.

Q: Does the platform afford portability to other platforms? Is an open architecture implemented, using industry standards?

Q: Using an "open system" approach was key to the LAN NetView framework development. The LAN NetView platform uses an open API (XMP, endorsed by the Open Software Foundation (OSF) and by the IBM SystemView strategy); components from the OSF Distributed Management Environment (DME); standard management and transport protocols (CMIP, SNMP, TCP/IP, and 802.2); and ISO Guidelines for the Definition of Managed Objects (GDMO). This facilitates easier porting to other platforms using these standards.

Q: Does it provide the basis for total systems management? Does it provide the capability to manage workstations as well as network connections?

Q: One of the major salient points of the LAN NetView product is its ability to manage workstations with either OS/2 2.x, DOS, or DOS with the Microsoft Windows product installed, using agents that are included in the LAN NetView family of products. In addition, the LAN NetView product also supports SNMP, which is used primarily for network device management.

Q: Is it easy to work with? Does the development environment use object-oriented technology, which generally involves less coding? Is transparency provided to the developer for access to the management services? Are development tools provided? Are the APIs standard?

Q: The View component of LAN NetView Manage version 1.0 uses a System Object Model- (SOM-) based Graphical User Interface (GUI), which provides an object-oriented mechanism for applications to interoperate with objects and other applications. This, along with an open API and the facilities of OS/2 2.x with its flat memory model and powerful 32-bit multitasking capabilities, provides an excellent development environment.

Q: Is it a strategic offering? Is it part of a reliable company's overall systems management strategy, or is it a tactical offering?

Q: SystemView is the structure that represents IBM's systems management strategy, and has been well received by customers as a comprehensive model for implementing systems management solutions across all IBM platforms. The LAN NetView product is the OS/2 implementation of IBM's SystemView strategy, and is compliant across all the SystemView dimensions: End-Use, Data, and Application. The LAN NetView product is IBM's strategic systems management platform on the personal workstation.

Q: Is it cost-effective? How does it compare to other platforms in terms of price/performance?

Q: When compared to UNIX-based systems management offerings, the LAN NetView family of products offers a lower-cost alternative to managing systems and network resources, from a lower-cost hardware base.

Q: What type of ISV support is offered? Is there a support program in place that can help with problems and marketing support, or is it simply "Here's the code and documentation"?

Q: Since LAN NetView is an OS/2-based platform, developers can take advantage of the many OS/2 marketing and technical assistance offerings through the IBM PSP Developer Assistance Program.

Q: What applications are on the platform? Are the base applications competitive? Will my application complement them?

Q: Included in the IBM LAN NetView family of products are: LAN NetView Monitor, a comprehensive performance monitor for systems with OS/2; LAN NetView Fix, a problem-management application capable of handling both OSI alarms and SNMP trap conditions, with various alarm/event notification functions; LAN NetView Scan, an application for asset management of workstation vital product data; and LAN NetView Tie, a gateway to NetView on the mainframe, converting alarms to NetView alerts and forwarding them on to NetView for further processing.

Q: Is this a platform for growth? Is there a commitment to provide enhancements in terms of additional management capabilities?

Q: The LAN NetView product is IBM's strategic systems management platform on OS/2. Therefore, it is expected that it will be enhanced based on improvements in technology and standards that are developed within the systems and network management arena.

Q: Is there a strong marketing force behind this platform? Are all marketing channels fully exploited for this platform?

Q: The LAN NetView family of products comprise a solution for LAN workgroups in all types of enterprises, functioning as a self-contained management system in small enterprises, and as management segments interoperating with a manager-of-managers system such as NetView on the host in a large enterprise environment. This broadens the marketing opportunity to all segments where LAN-based systems are used. (end of Q&A) This, of course, is not an all-inclusive list; other considerations include the skill levels of the developers, resource constraints, specific application target areas, marketing objectives, training and education requirements, etc. The point is that there are a number of factors to ponder when choosing where to make the investment, and how much of an investment ot make in developing or porting an application to a platform.

LAN NetView and ISV Applications: The Right Stuff

IBM's leadership role in network management can clearly be seen through the success of both the NetView and NetView/6000 products. The LAN NetView product builds on these successful management platforms, providing distributed systems management on the personal workstation. Now, in addition to providing centralized and distributed management of network components from host- and RISC-based systems, LAN administrators can manage the personal workstations themselves, from a lower-cost, Intel-based, LAN NetView product.

The success of the LAN NetView platform can only be achieved with the support of ISVs through their systems and network management applications, integrated with the LAN NetView platform. There is an interdependence here – the LAN NetView platform providing the basis for managing the system resources, and the applications carrying out the management functions.

As a LAN NetView application provider, you are helping to extend the platform function, and in turn, your application can broaden its market reach through IBM promotions, such as those offered through the PSP Developer Assistance Program.

In addition, remember this is not simply a development platform. LAN NetView Manage and Enabler provide significant management capabilities through the management services, APIs, user interface, topology/discovery, and agent functionality. Together with applications from IBM and ISVs, this

functionality will enable customers to enhance availability of their network, increase their productivity, and accomplish this with a cost-effective solution.

LAN NetView ISV Support Program: Need Help?

In order to encourage ISVs to port existing applications and/or develop new applications on the LAN NetView platform, IBM provides assistance in the form of:

- Early code and documentation
- Tutorials and workshops
- Online support through the CompuServe information service and IBM forums
- Toll-free hotline support for technical assistance
- OS/2 marketing program support through the Developer Assistance Program

Note: These things are in addition to the support provided through the Developer Assistance Program.

Summary: Points of Light

Let's look at some of the salient points of the LAN NetView product in the context of providing application developers with the means for contributing to the total solution referred to above.

The Market

The LAN NetView family of products focuses on the workgroup LANs and interconnected LANs. However, because of the capabilities offered that allow control of LAN NetView systems by a NetView console operator on the host, there is significant area of opportunity for LAN NetView applications in the large enterprise environments. The LAN NetView product offers a low-cost solution to managing LAN-based systems.

Portability

The LAN NetView platform uses selected portions of the DME technology, and the XMP API for access to the underlying management services, and SOM. This facilitates an easier porting effort from the LAN NetView platform to systems such as AIX SystemView NetView/6000 product from IBM, and the OpenView system from Hewlett-Packard.

Strategic Offering

The LAN NetView product is part of the NetView family of products from IBM, and is the OS/2 implementation of major components of IBM SAA SystemView, IBM's strategy for enterprise-wide systems management.

Development/Runtime Environment

OS/2, with its flat memory model and powerful 32-bit multitasking capabilities, provides an excellent development and runtime environment. This, along with the transparency to either CMIP or SNMP objects provided through the XMP API, and an object-oriented user interface (View), provide tools that aid developers.

ISV Support

Access to early code and documentation, as well as education and marketing programs, is provided, with toll-free technical help available from the development organization.

In review, we've looked at some of the problems associated with maintaining the operation and controlling the costs of LAN-based information systems. This problem is heightened with the trend toward downsizing and distributed processing on personal systems. In general, the opportunity exists for a comprehensive systems management platform and applications which, together, can manage both the hardware and software components comprising the information system.

Notice once again the reference to systems management rather than just network management. The importance of this, particularly in a distributed environment, cannot be overemphasized. When you consider the value of the software assets in an enterprise, and the need for accountability for those assets, as well as functions such as capacity planning, configuration management, and problem management, you can see how a system that only manages the network devices and connectivity falls short of providing a total solution.

Ultimedia Manager/2 Beta Program Seeks Qualified Candidates

IBM Personal Software Products is looking for qualified candidates in the United States to participate in a beta-test program for the new IBM OS/2 Ultimedia Tools Series product, Ultimedia Manager/2. We would like you to install the product, actively use it, and give us your comments, suggestions and any other feedback. Your feedback will be evaluated and considered for inclusion in the product.

Feedback

Several avenues for feedback have been established:

UMMBETA CFORUM, on the OS2BBS (TalkLink), under OS/2 Q**Q: bulletin** board.

CompuServe forum Ultiatools, section IBM Beta

CompuServe userid 73354,763

Internet userid mgr2beta@ibmpa.awdpa.ibm.com

Fax phone 1-415-694-3073, Attention: Manager/2 Beta Coordinator

Software and Hardware Requirements

386 or 486 system, 25MHz

8 MB RAM (minimum)

Math co-processor recommended

12 MB hard disk (minimum), 22 MB recommended

CD-ROM player

XGA, XGA2, or SVGA display adapter

OS/2 2.1

More Information

Call Ultimedia Tools Series at 1-800-887-7771 for more information about the Ultimedia Manager/2 beta program.

SOMobjects Developer Toolkit Workshop 9 through 11 November, New York City

If you're designing and implementing applications in either AIX or OS/2, this hands-on lab workshop is for you! You'll explore the components of the System Object Model (SOM) Version 2.0 toolkit, and learn how to use the toolkit.

Agenda

In this workshop, you will learn how to:

Build OS/2 and AIX object-oriented applications using SOM

Implement and use SOM classes in C or C++

Use and extend the SOM compiler and tools

Add persistence and replication capabilities to SOM objects

Construct a CORBA-standard Object Request Broker with Distributed SOM

Time, Place, Fee

The SOMobjects Developer Toolkit Workshop will be held Tuesday through Thursday, 9 through 11 November, in New York City. The workshop tuition is 1,250 US$.

Enrollment

U.S. customers should call Skill Dynamics at 1-800-IBM-TEACh (1-800-426-8322) and enroll in course N1602. Non-U.S. customers should contact their local IBM office. U.S. IBM employees should enroll via MSE using course code ATD4365C. Non-U.S. IBM employees should enroll through their education coordinators:

Asia/Pacific and Latin America	Helen Symonds, SYMONDS at RHQVM15
Europe/Middle East/Africa	Carol Dixon, EDCAROL at WTSCPOK
Canada and the Caribbean	Jean Bresse, GETSMART at TORVM3

For More Information

Contact Bob Rohr, 1-914-742-5653 or IBM tie line 770-5653. Internet: ROHR@DALVM1.VNET.IBM.COM. IBM PROFS: ROHR at DALVM1.

IBM Distributed Computing Environment for OS/2

The IBM Distributed Computing Environment (DCE) Runtime Client for OS/2 and the IBM DCE Software Developer's Kit (SDK) for OS/2 and Windows are now available. Also, an IBM DCE Runtime Client for Windows is available via a beta program (covered in the 15 September issue of this newsletter).

IBM DCE Runtime Client for OS/2

The IBM DCE Runtime Client for OS/2 is a production-level, industrial-strength DCE runtime client for the Intel market. It is designed to interoperate with IBM AIX DCE/6000 and other OSF DCE-compliant server implementations. The OS/2 DCE runtime client is based on DCE Version 1.0.2, as provided by OSF, and enables execution of both the client and server portions of remote procedure call, as well as providing access to the Cell Directory and Security Services as needed for distributed computing.

Order Number	Feature	Part Number	Program Name
5871-AAA	6203	96F8691	IBM DCE Client for OS/2 Version 1.0 with User Data Privacy

IBM DCE SDK for OS/2 and Windows

The IBM DCE SDK for OS/2 and Windows provides Independent Software Vendors (ISVs) and corporate developers in the PC-LAN market with the base facilities necessary to shift from single operating system environments to distributed, multi-operating system environments. In the USA, this product has a User Data Privacy feature that allows users to access the U.S. Government Data Encryption Standard (DES) algorithms for user data encryption via remote procedure call. Features of the IBM DCE SDK are:

- OS/2 Security Services
- OS/2 Cell Directory Services
- Time Service
- Five (5) DCE Clients for OS/2
- Five (5) DCE Clients for Windows
- Remote Procedure Call (RPC)
- Threads Interface
- Sample Source Programs
- OS/2 and Windows Application Development Tools

Order Number	Feature	Part Number	Program Name
5871-AAA	6199	96F8690	IBM DCE SDK for OS/2 and Windows Version 1.0 with User Data Privacy

Prices	Single License	Additional License
DCE SDK for OS/2 and Windows	1095 US$	995 US$ each
DCE Runtime Client for OS/2	65 US$	55 US$ each

IBM VisualAge for OS/2 Version 1.0

VisualAge is an integrated, application development environment designed especially for client/server, mission-critical, line-of-business applications through visual programming and construction-from-components technologies. VisualAge provides a series of high-productivity, OS/2-based power tools for the development of applications targeting OS/2 execution systems. IBM plans to make VisualAge for Windows and VisualAge System Object Model (SOM) support for OS/2 available during the first half of 1994.

There are two base products in the VisualAge family:

- VisualAge for the individual user
- VisualAge Team for team development.

VisualAge Team provides all the functionality of VisualAge plus support for team programming.

Using popular relational databases, VisualAge enables customers to develop client/server database applications. In a server-based development environment, VisualAge can produce complete online transaction processing (OLTP) client/server applications for OS/2. This functionality enables customers to build workstation applications that access remote transaction programs through a variety of network protocols and access data in remote and local relational databases.

In addition, VisualAge provides:

- Visual programming
- Support for team programming
- Library services
- Support for reusing programs developed in C, COBOL or any language that creates dynamic link libraries (DLLs)
- Advanced graphical user interface (GUI) capability
- Communications and transaction processing
- Database components
- Access to other applications such as IMS Client Server/2
- Visual SQL query builder capability
- Multimedia capability
- Performance tuning and packaging tools
- Complete application development environment.

The VisualAge open architecture enables developers of GUI tools, database and communications support products, and class libraries to write to published application programming interfaces (APIs). One-Time Charge for Program Package:

VisualAge	2,495 US$
VisualAge Team	4,995 US$
VisualAge COBOL Component	1,495 US$
VisualAge Multi-Database Component	995 US$
VisualAge Communications/Transaction Component	1,750 US$
VisualAge Multimedia Component	495 US$

In brief... Features include:

- Visual programming
- Construction-from-components
- Visual GUI design capability
- Client/server application development
- Open extensible architecture
- Extensive code reuse
- Access to a range of communication protocols, databases and legacy code reuse
- Multimedia support
- Team programming

Benefits include:

- Improved responsiveness to end users
- Increased developer productivity
- Increased application usability
- Reduced maintenance

First customer shipment begins immediately, to a selected set of customers. These customers are participating in a program designed to validate that IBM has achieved the quality objectives for VisualAge in a variety of production environments. When these customers confirm that IBM has achieved its quality objectives, IBM will announce the planned availability date and ordering information.

For additional product information, access CompuServe or IBM TalkLine under IBM Software Solutions, or call 800-IBM-CARY.

Skill Dynamics will provide classroom courses on IBM premises or at the customer's site. These courses will provide varying levels of exposure to object-oriented technology and its unique design and development paradigms using the Smalltalk language.

These educational offerings will be provided to address the unique needs of managers, application builders, systems analysts, designers and component builders.

The offerings will include:

- Product education describing how to use VisualAge
- Concept education for object-oriented technology
- Apprenticeship training

Open classes available to the general public and IBM employees.

More specifically, the education offerings will provide:

Executive overview of the key concepts and benefits of the VisualAge environment

Operational overview of application development in an object-oriented, client/server, visual programming environment

Introduction to the VisualAge product and its installation

Introduction to object-oriented development in Smalltalk

Object-oriented software engineering with Smalltalk

Object-oriented analysis, design, and programming

Application builder workshops

Client/server application design and implementation

Component builder courses.

Overview

VisualAge is an application development environment and suite of power tools that introduce technologies that unlock the complex world of application development in a client/server environment. These technologies are based on a visual construction-from-components architecture, and enable the development of the client portion of client/server applications with very complex GUIs.

Developers are confronted by ever-changing user requirements and a growing user base. This combination necessitates an integrated development environment with a robust suite of tools so that applications can be developed rapidly. Within its object-oriented development environment, VisualAge provides visual programming. This technology enables developers to work with end users in an iterative manner to develop user interfaces and accurately capture changing user requirements.

The reuse of proven designs and stable code is one element of object-oriented programming that puts real power in the user's hands, and VisualAge provides many opportunities for reuse. VisualAge was developed using VisualAge itself. This assures that the design and code supplied with VisualAge have been tested and optimized. The ability to reuse existing code reduces development cycle time, and because many of the components can be reused without change, drastically reduces errors. Object-oriented technology is emerging as the most promising avenue to solve the rightsizing and client/server challenges of the future.

VisualAge utilizes this technology to simplify the development of applications for OS/2 in a graphical environment using construction from components. Additionally, more experienced developers have the benefit of the underlying Smalltalk language, including an integrated suite of productivity tools (editors, browsers, debuggers and inspectors).

VisualAge Team adds team programming capabilities to the environment, multiplying the value derived from the technologies. These two products enable developers of various skill and experience levels to create mission-critical, client/server applications. VisualAge opens the door to these technologies, and over time, IBM plans to address additional development environments and expand its communications and database access capabilities.

Description

VisualAge supports an iterative application development approach for dealing with today's complex, mission-critical, GUI, client/server workstation applications.

The VisualAge product set provides an architecture and a rich set of application-enabling functions that support application construction from reusable components, including legacy third generation language (3GL) and fourth generation language (4GL) elements. VisualAge provides visual GUI development capabilities, so that complex CUA-compliant screens can be built quickly and easily. VisualAge also provides the protocols that enable the GUI front-ends to run with newly created object-oriented applications or with pre-existing applications.

Graphical user interfaces and line-of-business applications can be developed with VisualAge in a highly productive environment, using the rapid prototyping, prototyping-to-production, and code reuse capabilities of object-oriented programming. The applications developed with VisualAge provide end users with easy-to-use graphical displays for their workstations.

Smalltalk, the language used to write VisualAge, can be used as a scripting language or a complete programming language. The developer can then choose the level that supports the desired development effort. For example, existing components can be combined through the visual programming interface, existing components can be modified through the scripting language, or completely new components can be created in native Smalltalk.

VisualAge provides an open architecture via published interfaces. Through this approach, components created by customers can easily be added to the development environment. Additionally, this approach encourages others to create GUI development tools and support tools (communications, database access, legacy code access and class libraries) that work with VisualAge.

Enable Customer's Competitive Advantage

VisualAge provides value to the customer by enabling developers to be more productive through ease of use, providing improved quality and maintainability through reuse of code and facilitating the development of complex graphical user interfaces. VisualAge also provides a natural evolution from prototyping into production.

Less experienced users can become productive very quickly, because the levels of abstraction in VisualAge remove the need to understand databases and communication protocols. Users who are not literate in object-oriented programming can develop significant applications without moving into the underlying code. With this capability, users can develop the client portion of very sophisticated client/server applications much more quickly than with traditional application development tools, with higher quality and lower maintenance costs. More experienced users may choose to access the underlying object-oriented code and create components that may be reused.

Time to Market

VisualAge supports logical separation of the client from the server, simplifying interface design and implementation, and provides high-level abstractions that completely hide the interface to the network protocols. This functionality results in the client portion of client/server applications being built in less time with higher quality and lower cost. Customers will be able to respond more quickly to changes in the marketplace due to shorter lead times for application development. This responsiveness is a key factor in the choice of developers for many applications.

Application Developer Productivity

VisualAge provides significant customer value in application development by enabling developers to improve their productivity in work effort and elapsed time, from the use of graphical screen generation functions and reuse of existing components. VisualAge also enables easy development of the client portion of a client/server application. Prototyping and evolution of the user interface can occur without requiring changes to the programming of the underlying business objects or full development of the business logic.

The productivity achievable by the developer encourages the reimplementation of applications, particularly those that can benefit most from a CUA '91 user interface.

Improved Application Quality

Design via prototyping enables developers to work iteratively with end users to ensure the application meets requirements, avoiding misunderstanding and rework. The reuse of components is encouraged in this methodology, resulting in applications based on previously tested code.

The iterative design and development approach leads to synergy and creativity within the customer/developer team and higher customer satisfaction with the resulting application than is typical with traditional development paradigms. This interaction also ensures that the resulting application is what the customer wants and needs, dramatically reducing fixes and rework, and therefore, end-user false starts and inefficient use of the application.

Visual Programming

VisualAge enables application development based on a construction-from-components architecture. This approach provides an integrated “what you see is what you get” (WYSIWYG) user-interface tool that permits the user to select interface components from a palette, size and align components as appropriate, and iteratively view the results as the interface is built. Either during or after this brief development process, developers may build the application by selecting from a palette the sources and targets to populate or receive information from the interface. The information may come from, or be targeted for, a database, a communications link or some external source such as another application program. VisualAge will generate the code to support the links established between sources and targets and the user interface. Also, visual construction enables people with widely varying skill levels to develop applications. Those with little, or no, programming skills can easily create applications using existing components. Programmers with more experience have the additional option of creating new components.

Smalltalk Development Environment

In addition to using the set of interactive tools and application support functions that VisualAge provides, developers may also write application code in Smalltalk, the native scripting language in which VisualAge is implemented. Smalltalk benefits application developers by:

Enabling portability across platforms

Eliminating low-level programming skills requirements (pointers, memory management)

Facilitating reuse.

Library Support and Team Programming

VisualAge Team provides version control, change management and library functions while enabling multiple developers to work on the same application simultaneously. This capability enables the division of function among developers, code reuse optimization and faster development cycles.

In addition, sharing components helps ensure that all developers are working on a single, common base, facilitates the integration of change into the development process and promotes reuse of pretested stable code, rather than rewriting it. VisualAge also provides value in:

Legacy code reuse: VisualAge enables the customer to protect investments in legacy applications and data. VisualAge parses C and COBOL source files to create object representations for the existing data structures. VisualAge also supports accessing any language that supports native operating system DLLs. Existing code may be integrated into a new application's development environment and subsequent client/server applications, protecting the investment in the old applications and data. Repeated reuse decreases the cost of each successive application, thereby increasing the value of the reusable code.

Improved code stability: A library of pretested, stable code modules leads to more stable applications initially and therefore, less risk in extending those applications in the future. Applications and systems become far less volatile, resulting in less maintenance and a more stable environment for growth.

Additional Product Information

VisualAge functionality provides an integrated, application development environment:

Visual programming and construction-from-components enable the development of complete applications from pre-existing or custom-built components with little or no knowledge of the underlying language.

Support for team programming enables multi-users complete access to the development environment and suite of productivity tools.

Library services, including versioning and release control, provide complete library code management so that large complex development efforts can be successful.

Support for reusing programs developed in C, COBOL or any language that creates DLLs promotes the reuse of existing code, reducing development cycle time and future maintenance requirements. C support is included in the base VisualAge and VisualAge Team products. COBOL support may be ordered separately.

Advanced graphical user interface (GUI) capability includes support to implement CUA '91 user interface controls.

Communications and transaction processing components provide a diverse menu of protocols with a simplified common access, including TCP/IP, APPC, and CICS OS/2 ECI.

Database components for interfacing with IBM and non-IBM databases provide a menu of databases with a simplified common access, including DB2/2, ORACLE, and Microsoft SQL Server. DB2/2 support is provided in the base VisualAge and VisualAge Team products. The additional database support may be ordered separately.

Access to other applications, such as IMS Client Server/2, allows development of applications for open distributed environments.

Visual SQL query builder capability

Multimedia capability provides a library of predefined, reusable and extensible components to build multimedia applications without manual coding.

Performance tuning and packaging tools

A complete application development environment integrates Smalltalk editors, browsers, debuggers, inspectors, performance profiler, and DLL builder.

Statement of General Direction

IBM plans to make VisualAge for Windows and VisualAge System Object Model (SOM) support for OS/2 available during the first half of 1994.

Publications

The following publications will be provided on the program CD-ROM. Publications will not be separately orderable.

Installation and Maintenance Guide

Tutorial

VisualAge User's Guide

VisualAge Scripting Guide and Reference

VisualAge Team Programming Guide

Programming for IBM Relational Databases with VisualAge

Programming for Multiple Threads with VisualAge

Programming for Communications with VisualAge

Programming for VisualAge's Legacy Systems Interface

Construction From Parts

Displayable Softcopy Publications

Information regarding publications in displayable softcopy form will be provided at planned availability.

Source File Publications

Information regarding publications in source file form will be provided at planned availability.

Machine Requirements

Complete development and execution requirements will be provided at planned availability. However, general requirements will be a 486, 25MHz processor with 16MB of RAM for development, and a 386 processor for execution. RAM and hard file requirements at execution will depend on the application being run.

Programming Requirements

OS/2 Version 2.1.

Installability

VisualAge will be CID (configuration, installation and distribution) enabled for installation on local area networks.

Packaging

All products will be distributed on CD-ROM. All publications will be online. A “read-me” document will be included.

Charges

Program Number	Program Name/Order Type	One-Time Charce
	VisualAge	
87G7044	VisualAge	2,495 US$
87G7094	Additional Licenses	2,495 US$
87G7048	Proof of Additional License Certificate	2,495 US$
	VisualAge Team	
87G7049	VisualAge Team	4,995 US$
87G7095	Additional Licenses	4,995 US$
87G7053	Proof of Additional License Certificate	4,995 US$
	VisualAge COBOL Component	
87G7054	VisualAge COBOL Component	1,495 US$
87G7096	Additional Licenses	1,495 US$
87G7058	Proof of Additional License Certificate	1,495 US$
	VisualAge Multi-Database Component	
87G7059	VisualAge Multi-Database Component	995 US$
87G7097	Additional Licenses	995 US$

Program Number	Program Name/Order Type	One-Time Charce
87G7063	Proof of Additional License Certificate	995 US$
VisualAge Communications/Transaction Component		
87G7064	VisualAge Communications/Transaction Component	1,750
87G7098	Additional Licenses	1,750 US$
87G7068	Proof of Additional License Certificate	1,750 US$
VisualAge Multimedia Component		
87G7069	VisualAge Multimedia Component	495 US$
87G7099	Additional Licenses	495 US$
87G7073	Proof of Additional License Certificate	495 US$

Additional Licenses Charge

Customers who pay a one-time charge for additional licenses may copy machine-readable program materials previously acquired from IBM in a program package. One copy may be made for each additional license ordered.

Software Trade Mission to China and Hong Kong

(This information was furnished by the United States Department of Commerce.) The U.S. Department of Commerce will hold a computer software trade mission to China and Hong Kong from 2 through 11 December 1993. There are three ways to participate; companies may select one, two, or all three options.

China

The first option allows companies to learn first-hand about the fast-growing, potentially huge Chinese market. According to International Data Corporation, the Chinese packaged software market increased 23 percent in 1992, and is expected to grow more than 20 percent annually over the next few years. Companies selecting this option will receive intensive market briefings, attend individualized meetings with prospective Chinese partners in Beijing (2 through 5 December) and Shenzhen (5 through 7 December), and benefit from the knowledge of industry and market specialists in China and Washington. The participation fee is 2,995 US$.

Exhibition in Hong Kong

The second option enables companies to demonstrate their products in a 4.5-square-meter turnkey booth at the Software Exhibition '93, held in Hong Kong from 8 through 11 December. Participating companies will also have the opportunity to hold a seminar on their products, and to be included in the official event Exhibition Guide. The participation fee is 2,750 US$ per booth.

Gold Key Service in Hong Kong

The third option gives companies the opportunity to meet with prospective Hong Kong partners in individualized meetings scheduled by the U.S. Embassy/Hong Kong's “Gold Key” Service. This option may be selected in conjunction with Option II, or on its own. The participation fee is 500 US$ for two days of meetings and 250 for each additional day. The application deadline is Friday 22 October 1993. Space is limited, so interested firms are encouraged to apply early. Companies that submit completed applications and meet basic eligibility and other requirements will be accepted on a first-come, first-served basis. To receive an application kit, contact Pat Johnson at 1-202-482-0571 (phone) or 1-202-482-0952 (fax). Questions about the event should be addressed to Heidi Hijikata at the same numbers.

Software Trade Mission to Europe

(This information was furnished by the United States Department of Commerce.) Western Europe is an attractive market for U.S. packaged software suppliers. It is:

similar in size and composition to the U.S. market

expected to grow 11 percent annually through 1997

receptive to foreign products because domestic production meets less than 50 percent of the European demand for packaged software.

To help U.S. firms enter or expand their presence in Europe, the U.S. Department of Commerce is sponsoring a software trade mission to London, Paris, and Rome from 24 February through 3 March 1994. Collectively, these countries account for nearly 50 percent of the total Western European packaged software market. This event offers firms a unique opportunity:

to gain first-hand knowledge about three sizeable software markets

to meet the company's individual needs in Europe

to receive extensive company and product promotion and in-depth market briefings

to attend prearranged business meetings with potential agents and distributors, based on each company's objectives

to benefit from the prestige of a U.S. Government-sponsored event.

Schedule:

London	Thursday and Friday, 24 and 25 February
Paris	Monday and Tuesday, 28 February and 1 March
Rome	Wednesday and Thursday, 2 and 3 March

Application deadline: Friday, 5 November 1993 Participation fee:

One stop	2,000 US$
Two stops	3,500 US$
Three stops	4,500 US$

Hotel and travel are not included in this fee.

For more information, contact Mary Smolenski, U.S. Department of Commerce, Office of Computers and Business Equipment, phone 1-202-482-0551, fax 1-202-482-0952.

Software Market Brief – United Kingdom

Market Assessment

According to International Data Corporation (IDC), the software and services market in the United Kingdom grew 8.2 percent in 1991, to 9.4 billion US$. The packaged software market, worth 3.9 billion US$ in 1991, is expected to grow 9.8 percent annually between 1991 and 1994. Packaged software for PCs and workstations was the fastest-growing segment, rising 28.3 percent in 1991. Over the next few years, software for PCs, workstations, and small-scale systems will post the highest gains, increasing 10 percent annually.

In 1991, application solutions was the largest component of the packaged software market, at 40 percent, followed by tools and systems-level software, both at 30 percent. The market share of systems-level software is expected to decline over the next few years as tools and applications increase more rapidly.

The U.K. custom software market was worth 1.5 billion US$ in 1991, a little more than one-third of the packaged software market. This market is expected to increase 10.8 percent annually between 1991 and 1994.

Competitive Situation

Between 1991 and 1994, the import market for PC software is estimated to increase 10 percent annually; U.S. firms are expected to account for almost all of this growth. Indeed, U.S. vendors dominate the U.K. market for personal productivity software, supplying 90 percent of imports. Local producers, however, continue to dominate the general business application software sector.

Best Prospects

While opportunities exist for most software products in the U.K., the best prospects include software for small-scale systems, such as PCs, laptops, portable computers, and LANs. The U.K. market for PC software is expected to grow 20 percent over the next year, fueled by the higher performance of portable and laptop computers, and a decline in hardware prices. The demand in the United Kingdom for LAN hardware is currently high, with 7 percent annual growth projected between 1993 and 1996. Imports from the United States hold a sizeable share in the U.K. LAN market, and are expected to grow 10 percent annually over the next three years.

International Property Rights

In the United Kingdom, intellectual property rights for computer programs are governed by the European Community Software Directive. This directive protects computer programs as literary works for the life of the author plus 50 years. However, ideas and principles are not protected. Decompilation is permitted only to determine interoperability. The United Kingdom is a member of Berne Convention for the Protection of Literary and Artistic Works and the Universal Copyright Convention.

Market Access

Market access to the United Kingdom is generally good for U.S. software products. There is no tariff on imports to the United Kingdom of computer software bearing data or instructions; imports of software bearing sound or vision recordings, however, and subject to a 5.1 percent tariff on the value of the media only. In addition, all products are subject to a 17.5 percent value-added tax.

Software Market Brief – France

Market Assessment

According to International Data Corporation (IDC), the French software and services market is the second largest in Europe, having increased 8.7 percent to 10.7 billion US$ in 1991. Packaged software, especially application tools and solutions, is one of the fastest-growing categories, rising 12.7 percent in 1991 to 3.4 billion US$. Packaged software for PCs and workstations, which represented a little over one-third of the French packaged software market in 1991, is expected to increase to a 50 percent share in 1994, with an expected growth rate of 21 percent. The custom software market is also strong in France. In 1991, the French custom software market was worth 2.1 billion US$, about two-thirds the size of the packaged software market.

Competitive Situation

Industry analysts estimate that U.S. vendors dominate the French software market, supplying 60 percent of French packaged software imports, or 43 percent of the total French market. French firms, such as CAP Gemini Sogeti and Sligos, generally specialize in custom software and services, such as high-level maintenance and training programs.

Best Prospects

While opportunities exist for most software products in France, prospects are particularly favorable in several areas: PC software, CAD/CAM software, CD-ROM equipment, and electronic games. Sophisticated software options are preferred to expensive new hardware systems. PC Software: In line with the current downsizing trend, the French market for PCs is expected to increase from 3.9 billion US$ in 1992 to 5.3 billion US$ in 1996, according to IDC. As a result, the demand for PC software should increase considerably. According to a recent survey, the most popular packaged software products are spreadsheets, database management software, word-processing programs, and graphical user interfaces.

CAD/CAM Software: The European CAD/CAM software market, valued at 2.38 billion US$ in 1990, is the largest in the world. The French market ranks third among European nations, after Germany and the United Kingdom, but is soon expected to be second. Indeed, some analysts consider the French manufacturing industry to be the world's largest user of CAD/CAM techniques. Industry analysts expect the French CAD/CAM market to grow faster than that in the United States, especially as workstation prices decline and more engineers use their own systems. Imports from the United States are estimated to grow 11 percent annually between 1991 and 1994.

CD-ROM Equipment: After growing 50 percent in 1991, the CD-ROM equipment market is expected to explode in the near future. Experts say that it is the most widely used piece of software among professionals in France. American importers, who supplied 70 percent of the market in 1991, are poised to take advantage of this growth. American CD-ROM producers are ahead of their French competitors in product development, cost, and market share.

Electronic Games: The electronic games market is another good prospect, as French children become increasingly interested in these products. Industry analysts estimate that the total French market demand increased 115 percent from 1989 to 1992, with imports increasing 107 percent. The import market is estimated to grow 80 percent annually between 1991 and 1994. The Japanese firms of Sega and Nintendo are competing for leadership in the French market, followed closely by Mattel, Texas Instruments, and the French company Nathan, all specializing in electronic educational games.

International Property Rights

Intellectual property rights protection in France is generally good. Under the Law of Literary and Artistic Property, most recently amended in 1985, computer programs (source and object code) are explicitly protected. Creators hold exclusive rights of reproduction, distribution, and adaptation for 25 years from the date of creation. As of July 1993, France has not yet implemented the European Community Software Directive, which was developed to clarify and to harmonize copyright regulations across the European Community. France is a member of the Berne Convention for the Protection of Literary and Artistic Works, the Paris Convention on Patents, and the Madrid Convention on Trademarks.

Market Access

There is no tariff on imports to France of computer software bearing data or instructions; imports of software bearing sound or vision recordings, however, are subject to a 5.1 percent tariff on the value of the media only. In addition, all products are subject to an 18.6 percent value-added tax.

Software Market Brief – Italy

Market Assessment

According to International Data Corporation (IDC), the Italian software and services market is the fastest-growing market in Europe, increasing 14.9 percent in 1991, to 7.8 billion US$. Italy's packaged software market grew 13.2 percent in 1991, to 3.0 billion US$. The services sector grew even faster. Custom software grew 17.7 percent in 1991, to 1.7 billion US$.

The packaged software market is expected to increase 12.9 percent annually between 1991 and 1994. This growth stems in part from the increased demand of small businesses in the retail and distribution sectors, who prefer software packages to custom software. Packaged software for PCs and workstations was the fastest-growing platform category in 1991, increasing 25.5 percent. This trend will continue, as PC software is predicted to grow 33.2 percent annually between 1991 and 1994.

Application solutions was the fastest-growing horizontal category in 1991, increasing 14.7 percent to 1.1 billion US$. Through 1997, application solutions will continue to increase faster than application tools and system-level software.

Competitive Situation

Due to the technical sophistication and high quality of U.S. software, the bulk of Italy's software imports comes from the United States. With 4,900 mostly small- or medium-sized vendors in the fragmented Italian software and services market, few local firms are large enough to play a significant role. The largest Italian companies are Finsiel (IRI Group), OIS (Olivetti), and Enidata.

Best Prospects

While opportunities exist for most software products in Italy, LAN products and accessories, artificial intelligence, and CAM/CAM/CAE software are particularly good prospects.

LAN Products and Accessories: The Italian market for LAN products and operating software was worth 350 million US$ in 1991 and is expected to grow 24 percent annually over the next three years, making it the most dynamic market in Europe. U.S. vendors supply 86 percent of the import market, which is expected to increase 17 percent annually through 1994.

Artificial Intelligence: Industry analysts consider expert systems to be the most promising segment of Italy's artificial intelligence market. This market has grown considerably since 1988, and there are signs that the pace is quickening. The market is forecasted to grow 49 percent annually through 1994, reaching

280 million US$. U.S. vendors are the dominant suppliers, with 87 percent of the import market. Good sales opportunities exist for both PC and mainframe tools.

CAD/CAM/CAE: Italy's mature CAD/CAM/CAE market is coming out of a period of rapid expansion and entering a new cycle of stability and dynamism, but with reduced growth rates. U.S. firms are key players in the Italian CAD/CAM/CAE market, controlling 56 percent of the total market. Small- and medium-sized firms, which constitute the bulk of the Italian economy, are expected to be the most important consumers by 1994.

International Property Rights

Although software piracy, especially for PC software, has been a problem in Italy in the past, Italian authorities have taken efforts to remedy the situation. Indeed, Italy has implemented the European Community Software Directive, which protects software as a literary work for the life of the author plus 50 years and permits decompilation only to ensure interoperability. Italy is a member of the Berne Convention for the Protection of Literary and Artistic Works and the Universal Copyright Convention.

Market Access

The Italian market is open to software imports. There is no legislation limiting imports, and technical standards are usually less restrictive than in the United States. There is no tariff on imports to Italy of computer software bearing data or instructions; imports of software bearing sound or vision recordings, however, are subject to a 5.1 percent tariff on the value of the media only. In addition, all products are subject to a 19 percent value-added tax.

OS/2 2.1 Now Available in Japan

OS/2 J2.1 is now available in Japan! The Japanese version of OS/2 2.1 was announced in Tokyo on Monday 20 September and in Osaka on Tuesday 21 September. It was made available for distribution on 28 September 1993. Over 1,500 copies of OS/2 J2.1 were sold during the first three days it was on the market. Currently, about 100,000 copies of OS/2 J1.x are installed in Japan, and about the same number of copies of OS/2 J2.x are anticipated to be installed before the end of this year.

However, there are currently very few OS/2 32-bit shrink-wrapped applications available in Japan. Software vendors and developers in Japan are eager to identify ISVs with off-the-shelf, 32-bit applications for OS/2 2.x. The specific applications they are most interested in are:

Word Processing

Database Front End

Bulletin Board Systems

Development Tools

Objects

In May 1993, an OS/2 Consortium was formed to promote OS/2 in Japan as a premier PC platform, and to enrich the application software running on it. The Consortium, an independent group of companies, started with 78 members, and has now expanded to 107 companies. Its membership consists of 10 PC manufacturers, 37 systems integrators, 30 independent software vendors, 8 independent hardware vendors, 18 users, and 4 others. The Consortium has many influential companies on its board, such as IBM, Lotus-Japan, Fuji Software, Borland, Toshiba, Fujitsu, and Hitachi. The OS/2 Consortium is very active, and has sponsored several events since May:

May	General meeting and technical seminar
June	Technical seminar
July	First OS/2 Consortium report to members; OS/2 J2.1 beta test
September	Technical seminar
October	OS/2 symposium (over 1,000 attended); OS/2 J2.1 test and monitoring
November	COMDEX tour; second OS/2 Consortium report to members
December	Technical seminar

On 1 October 1993, an Asia/Pacific office of IBM Personal Software Products was established. This office will concentrate on starting an OEM business in Japan. Their motto is “Sell a Million Copies of OS/2 in Japan”! Japan has demonstrated its support and enthusiasm for OS/2. There is tremendous momentum there to make OS/2 a key operating system. It presents an opportunity for ISVs with OS/2 2.1 32-bit applications to take their products into the Japanese market.

PC Software in Japan

(This information was furnished by the United States Department of Commerce.)

PC software, as defined in this report, covers packaged PC software, excluding application software packages developed for in-house use. The most commonly utilized PC operating system software in Japan are MS-DOS and Windows, followed by UNIX and OS/2.

With the introduction of notebook computers in Japan, the Japanese PC market has been growing rapidly. Currently, the PC market in Japan is estimated at approximately 800 million US$ with 2.2 million units. There are an estimated 6 to 8 million PCs already in use in Japan. The current PC software market size in Japan is estimated at approximately 1.7 billion US$.

The PC software market is expected to grow 10 to 20 percent annually, and should reach 2.2 billion US$ by 1996. However, the current economic stagnation in Japan may reduce investment in information-processing systems by Japanese industries, hence the PC market may not grow as rapidly as expected. Such a decline would serve to moderate the growth rate for packaged software.

Statistics

As official production and trade statistics are not available for this particular sector, data used in this report are based on the best estimates of the Software Information Center, the Japan PC Software Association, and the U.S. & Foreign Commercial Service, Tokyo.

	(Millions US$)			(Percent Gain/Loss)
	1990	1991	1992	Estimated Average Annual Real Growth – Next 3 Years
Import Market	300	360	370	15 percent
Local Production	1,050	1,100	1,300	
Exports	0	0	0	
Total Market	1,350	1,500	1,700	13 percent
Imports from US	280	320	370	15 percent
Exchange Rates	145	136	136	

Future Inflation Rate Assumed: 3 percent

Last Year's Import Market Share (Percent for USA and major competitors)

USA 90 percent
England 4 percent
Germany 3 percent

Receptivity Score (1-5): 3

In Japan, the PC software market has been driven by the PC hardware market. The recent advancements made in PC technology have been remarkable; for example, adaptation of 32-megabit microprocessors,

one-megabit RAM, large capacity hard disks, and portable and laptop PCs. However, software development has failed to keep pace with the rapid progress being made in PC hardware.

Unlike PC standards in the other markets where IBM and Apple dominate, the Japanese market is different. While the same MS-DOS has been utilized as an operating system, NEC, Fujitsu, IBM Japan, and AX Council members use their own modified version of MS-DOS. Due to the modifications in the operating systems, it is not possible to run the same application software on different PCs despite their having the same operating system. To overcome compatibility problems IBM Japan introduced in 1991 DOS/V as a "strategic standard" to the Japanese market. This initiative has been followed by Hitachi, Mitsubishi Electric, Matsushita Electric, and other major electronics companies.

U.S. PC manufacturers AST Research and Compaq Computer have begun DOS/V computer shipments to Japan. In 1987, Mitsubishi Electric, Sanyo Electric, Sharp, and other companies formed the AX Council, adopting AX specifications which are compatible with the IBM PC/AT. The Japanese PC software market has been changing gradually; however, a standardization of PC software may have to wait a while, since changing the operating system is equivalent to changing one's very own language.

To estimate the PC software market in Japan, the market size of personal computers can be used as an indicator. The PC market outlook shows continued growth, with annual average growth of 15 percent for the period 1992 through 1997. Accordingly, the PC software market is expected to grow 10 to 15 percent annually, and it is expected to reach 2.5 billion US$ by 1995.

The volume of imported software products is difficult to ascertain, because no statistics are available which pertain to imported software. According to the Software Information Center, which conducted a survey of 550 establishments chiefly engaged in software development, 700 packaged software programs, of which 85 percent were imported from the United States, were utilized by 112 users. Accordingly, the size of the import market for personal computer software is estimated as 370 million US$ in 1992. Of the 1.7 billion US$ total market, the imported software market represents less than 25 percent. U.S. suppliers dominate the imported market. An estimated 90 percent of imported PC software comes from the United States.

According to the latest data available from the Japan Personal Computer Software Technical Laboratory, the top ten uses of application PC software (as of 1989) are for CAD (17 million US$), vertical market (15 million US$), games (12 million US$), word processing (11 million US$), language (8 million US$), telecommunication (8 million US$), database (7 million US$), business management (7 million US$), OS (7 million US$), and spread-sheets (6 million US$).

Best Sales Prospects

1. Spreadsheets
2. Telecommunication Software
3. Utility Software
4. CAD software

Competitive Situation

Although the Japanese PC software market is growing rapidly, competition is very keen. Sales strength is obviously the major key of competitiveness. The main factors determining sales strength are price and distribution. The introduction of notebook-type computers has resulted in a price war in Japan. Regarding price, the introduction of low-price software by Ashisuto made a major impact on the PC software market. For example, Ashisuto introduced word-processing software and data-processing software at the Yen

equivalent to 75 US$ each, whereas other comparable software is sold at the range of 300 to 450 US$, and 300 to 750 US$, respectively.

As for distribution, NEC, the number one PC supplier in Japan, owns approximately 300 specialty stores The repeated number of outlets handling NEC products is around 3,000. These stores sell not only PC hardware, but also software written for the NEC machines. Because of the number of outlets, the number of software packages available for its products, and the number of NEC PC users, making a substantial cut in the NEC market share is inconceivable at present.

There are many software packages available in Japan, and competition is keen. In order to access the market, it is critical to have products with Japanese-language capability for use on Japanese-language-only PCs. Japanization of software has been said to be a must for participation in this market. However, it demands more than simple Japanization in the highly competitive environment. Japanese users are most concerned about operability and functions. Therefore, software developers are always trying to respond to users' needs by adding new improvements, offering numerous upgraded versions, etc.

Market Access

Software products for medium and large mainframe computers are mainly sold directly to the users. Software packages for smaller systems and personal computers are sold through computer retailers who are supplied by software wholesalers. As in the U.S., Japanese software vendors usually take the following steps to promote sales:

- Personal Sales
- Direct Mailings
- Educational sales meetings
- Organizing users' meetings
- Advertising in trade papers and magazines
- Utilizing exhibitions

Taxes Imposed on Imported Computer Software

When computer software products are imported into the Japanese market or are licensed for production in Japan, royalties are collected. Both the exporter (the software company in the U.S.) and the importer (the agent/distributor in Japan) should notify the Bank of Japan of the facts in advance of entering into a sales or licensing agreement. The simple payment of import and other taxes does not fulfill Government of Japan requirements and could result in administrative and criminal problems.

Article 14, paragraph 2 of the income-tax convention between the United States and Japan states that a U.S. recipient of royalties must file an application to be relieved from Japanese income tax on royalties. The form is to be used by the recipient of royalties in claiming relief from Japanese Income Tax under the provisions of the Income Tax Convention. The form must be submitted in duplicate to the payer of royalties, who must file the original with the Chief of the District Tax Office where the payer resides, prior to the payment of royalties.

Through application of this law, a U.S. company is entitled to receive 90 percent of the royalties. This is the amount remaining after payment of a withholding tax imposed by the Japanese law on all licensing transactions. The 10-percent withholding tax is paid by the Japanese agent/distributor, or by users of soft-

ware products, on behalf of the U.S. company. The U.S. company may make use of this 10 percent, and deduct the amount from its U.S. tax calculations.

There are some importers of computer software products who pay import taxes, but do not make any notification to the Bank of Japan regarding the business contracts. This failure to make a notification is illegal, and is subject to punishment by imprisonment with hard labor for a maximum of 3 years, and a fine under the amount of 3 times of the value of the transactions concerned. The law applies to not only Japanese importers and users, but also U.S. counterparts. Both parties are obliged to make notification, otherwise both of them are punished. The controlling law on foreign exchange and foreign trade normally does not apply to a sale, i.e., a simple import of foreign-made software products into Japan. The importer should at most pay only import tax and sales tax to the Japanese government.

The import tax and sales tax are calculated on the value of the media, i.e., tapes, disks, etc., and not on the value of the intellectual property. The import tax and consumption tax on computer software, valued at 100 million US$, may be few dollars on the media alone.

Business Protocol, Courtesies, and Local Customs

Although many Japanese executives speak and understand English, it is better to hire a translator, and to have your business correspondence and business cards translated into Japanese.

The traditional Japanese bow should be observed carefully. Return the bow, but only bend forward as far as the person has bowed to you. When bowing, keep your hands on your thighs, and your heels together. Body language and gestures have different meanings in Japan that they do in the West. For example, if someone laughs during negotiations, it may mean that the person is embarrassed or shocked, not necessarily that something was funny.

The Japanese are a polite, reserved people. Their culture dictates that direct assertions are not acceptable. Therefore, your Japanese associates are unlikely to give you a direct “yes” or “no” during business negotiations. Indeed, getting them to commit to a position right then and there on the spot is unlikely. The group decision process is very important to the Japanese. They actively avoid direct and open conflict. Helping their associates save face is of the utmost importance. Bring your patience with you to Japan. Be punctual for both business and social appointments. Call ahead if you are running late.

When taking a Japanese executive's business card, look it over carefully. Comment on it; nod your head at the person who gave it to you to acknowledge you have received it; place it carefully in your business-card case or wallet. If placing the card in your wallet, men should NOT place the wallet in the back pocket of their pants. Do not shove the card in your pocket, or write on it.

Industry Association Contacts

Japan Personal Computer Software Association
2-D Kioi Royal-Heights
3-29 Kioicho
Chiyoda-ku, Tokyo 102, Japan
Tel: 3-3221-7481, Fax: 3-3221-7143

UNIX Business Association
101 COSMO CESSION
4-1-13 Mejiro

Toshima-ku, Tokyo 171, Japan
Tel: 3-5996-0819, Fax: 3-5996-0922

Nippon Computer Graphics Association
Ogawa Bldg.
1-2-2 Uchikanda
Chiyoda-ku, Tokyo 101
Tel: 3-3233-3475, Fax: 3-3233-3450

AX Conference
AiOS Annex
1-7-11 Higashi-Gotanda
Shinagawa-ku, Tokyo 141, Japan
Tel: 3-3440-9100, Fax: 3-3440-9104

Software Information Center
Toto Bldg.
5-1-4 Toranomon
Minato-ku, Tokyo 105, Japan
Tel: 3-3437-3071, Fax: 3-3437-3398

American Electronics Association, Japan Office
11-4 Yonbancho
Chiyoda-ku, Tokyo 102
Tel: 3-3237-7195, Fax: 3-3237-1237

Possible contacts for Agent/Distributors:

Ashisuto
Shinyurigaoka City Bldg.
1-1-1 Manpukuji, Asao-ku
Kawasaki-chi 215
Tel: 44095105611, Fax: 44-951-5610
Contact: Mr. Bill Totten

Software Japan International, Inc.
3-3-6 Iwamotocho
Chiyoda-ku, Tokyo 101, Japan
Tel: 3-3862-2361, Fax: 3-3862-2379
Contact: Mr. Haruki Konno

CREO Co., Ltd.
Shibaura Square Bldg.
4-9-25 Shibaura
Minato-ku, Tokyo 108, Japan
Tel: 3-3456-4625, Fax: 3-3456-4733
Contact: Mr. Masahiko Kano

Rikei Corporation
Shinjuku Nomura Bldg.
1-26-2 Nishi-Shinjuku
Shinjuku-ku, Tokyo 163, Japan
Tel: 3-3345-1411, Fax: 3-3345-7969
Contact: Mr. Michihiro Aoshima

K.K. Computer Plaza
Tokyo Bldg.
2-7-3 Marunouchi
Chiyoda-ku, Tokyo 100, Japan
Tel: 3-3213-0481, Fax: 3-3213-0508
Contact: Mr. Shinichiro Kakizawa

K.K. Terilogy
Aoki Bispork Bldg. 2F.
3-2 Kanda-Jinbocho
Chiyoda-ku, Tokyo 101, Japan
Tel: 3-3237-3291, Fax: 3-3237-3293
Contact: Mr. Norio Tsubuki

Tact Systems, Inc.
2-5-11 Iwamotocho
Chiyoda-ku, Tokyo 101, Japan
Tel: 3-3865-7100, Fax: 3-3865-7101
Contact: Mr. Nobuo Katsumura

Publications

Title	Frequency	Publisher	Phone
Computopia (Japanese)	Bi-weekly	Computer Age Co., Ltd. 3-2-5 Kasumigaseki Chiyoda-ku, Tokyo 100	3-3581-5201
Nikkei Computer (Japanese)	Bi-weekly	Nikkei Business Publications, Inc. 3-3-23 Misaki-cho Chiyoda-ku, Tokyo 101	3-5696-1111
OEP (English)	Monthly	Dempa Publications, Inc. 1-11-15 Higashi Gotanda Shinagawa-ku, Tokyo 141	3-3445-6111
Computer Tokyo (English)	Bi-weekly	Intercontinental Marketing Corp. C.P.O. Box 971, Tokyo 100-91	3-3661-8373
Japan Computer Quarterly (English)	Quarterly	Japan Information Processing Development Center, sales agent: ODS Corporation Dai-ni Kuyo Bldg., 5-10-2, Minami Aoyama, Minato-ku, Tokyo 107	3-3486-7090
Soft Landing in Japan (English)	1990 97p.	American Electronics Assn. Japan Office 11-4 Yonbancho, Chiyoda-ku, Tokyo 102	3-3237-7195 1-408-987-4200, AEA Infonet in the U.S.

Asia/Pacific Computer Hardware and Software Trade Events

(This information was furnished by the United States Department of Commerce.) The following is a list of some of the computer hardware and software trade promotion events in Asia/Pacific.

Australia

GOVERNMENT TECHNOLOGY EVENT – February

Location Canberra
Contact Technology in Government Committee, P.O. Box 255, Redfern NSW 2016. Tel 61-2-552-1166; fax 61-2-660-3813.

PC COMMUNICATIONS – March
Location Sydney
Contact Commercial Section, U.S. Consulate General, Sydney, Unit 11026, APO AP 96554-0002. Tel 61-2-261-9200; fax 61-2-261-8148.

CAT – May

Location New South Wales
Contact Computer Society, 149 Castlereagh St., 6th Floor. Sydney NSW 2000. Tel 61-2-283-5544; fax 61-2-283-5543.

CALS AUSTRALIA – June

Description Show featuring defense acquisition and logistical support systems
Location Sydney
Contact National Convention and Management Service; Suite 2/7, Tobin Place, Holder ACT 2611.

PC COMMUNICATIONS – August
Location Melbourne
Contact Australian Exhibition Services, Illoura Plaza, 424 St. Kilda Road, Melbourne VIC 3004. Tel 61-3-267-4500; fax 61-3-267-7981.

TECHNOLOGY/COMMUNICATIONS – August 1994

Location Melbourne
Contact JeNelle Matheson, U.S. Department of Commerce, Room 1229, 14th Street and Constitution Avenue NW, Washington DC 20230. Tel 202-482-8422.

QUEENSLAND COMPUTER EXPOSITION – October

Description Show featuring mainframes, minicomputers, workstations, and storage systems
Location Brisbane
Contact Queensland Exhibition Service, P.O. Box 280, Sunnybank QLD 4109. Tel 61-7-345-8800; fax 61-7-345-4221.

SUPERCOMPUTER CONFERENCE – December

Location Queensland
Contact Intermedia Group, P.O Box 1280, Milton QLD 4064. Tel 61-7-369-0477; fax 61-7-369-1512.

China

SOC PETRO ENGINEERS SPE--CHINA – March/Even Years

Description Show featuring computer technology
Location Beijing
Contact Susan Bell Events. Tel 1-214-669-3377.

COMPUTER SOFTWARE EXHIBITION – November

Description Show featuring computer software
Location Guangzhou
Contact Commercial Section, U.S. Consulate General, Guangzhou, PSC 461, Box 100, FPO AP 96521-0002. Tel 86-20-888-8911; fax 86-20-666-6409.

EXPO COMM CHINA – November/Annual

Location Beijing
Contact Commercial Section, U.S. Embassy, Beijing, PSC 461, Box 50, FPO AP 96521-0002. Tel 86-1-532-3831; fax 86-1-532-3178.

SOFTWARE TRADE MISSION TO CHINA & HONG KONG – December 1993

Description Trade mission for U.S. computer software firms interested in these important markets
Location Beijing and Shenzhen (and Hong Kong)
Contact Heidi Hijikata, U.S. Department of Commerce, Office of Computers and Business Equipment, Room 2806, 14th St. and Constitution Ave. NW, Washington DC 20230. Tel 1-202-482-0569; fax 1-202-482-0952.

Hong Kong

SOFTWARE VILLAGE – May

Location Hong Kong
Contact Trade Development Council. Tel 1-212-838-8441; fax 1-212-838-8688.

HONG KONG INTL COMPUTER SHOW – May/Annual

Description Show featuring mini and micro computers, software, CAD/CAM, printers, and peripherals
Location Hong Kong
Size 300 booths
Contact Trade Development Council. Tel 1-212-838-8441; fax 1-212-838-8688.

COMPUTER EXPO – May

Location Hong Kong
Contact Trade Development Council. Tel 1-212-838-8441; fax 1-212-838-8688.

CENIT ASIA – Sept. or October/Annual

Description International show featuring information and telecommunications technology
Location Hong Kong
Contact Trade Development Council. Tel 1-212-838-8441; fax 1-212-838-8688.

HONG KONG ELECTRONICS FAIR – October/Annual

Location Hong Kong
Contact Trade Development Council. Tel 1-212-838-8441; fax 1-212-838-8688.

SOFTWARE EXHIBITION – November

Description Show featuring computer software
Location Hong Kong
Contact Trade Development Council. Tel 1-212-838-8441; fax 1-212-838-8688.

SOFTWARE TRADE MISSION TO CHINA &G KONG – December 1993

Description Trade mission for U.S. computer software firms interested in these important markets
Location Beijing and Shenzhen (and Hong Kong)
Contact Heidi Hijikata, U.S. Department of Commerce, Office of Computers and Business Equipment, Room 2806, 14th St. and Constitution Ave. NW, Washington DC 20230. Tel 1-202-482-0569; fax 1-202-482-0952.

Japan

MAC WORLD EXPO – February/Annual

Location Tokyo
Contact Nihon Kogyo Shimbun, 1-28-5 Kanda-Jimbocho, Chiyoda-ku, Tokyo 101. Fax: 03-3292-6137.

PUBLIC SECTOR COMPUTER TRADE MISSION – March 1994

Description Seminar mission to Japan that will allow high-level executives of U.S. computer hardware, software, and services firms to meet Japanese public sector procurement officials and to learn about doing business with Japanese Government agencies
Location Tokyo
Contact Tim Miles, U.S. Department of Commerce, Office of Computers and Business Equipment, Room 2806, 14th St. and Constitution Ave. NW, Washington DC 20230. Tel 1-202-482-2990; fax 1-202-482-0952.

MICROCOMPUTER SHOW – April/Annual

Description Show featuring personal computers
Location Tokyo
Contact Japan Electronic Industry Development Association (JEIDA), Kikai Shinko Kaikan, 3-5-8 Shibakoen, Minato-ku, Tokyo 105. Fax 03-3433-2003.

SUPERCOMPUTING JAPAN – April/Annual

Description Show featuring supercomputers certified by the U.S. Department of Commerce
Location Tokyo
Contact Meridian Pacific Group. Tel 1-800-879-4454.

CADMEC – May

Description Show featuring CAD/CAM/CAE products
Location Kitakyushu
Contact West Japan Industry and Trade Exhibition Association, 3-7-1 Asano, Kokurakita-ku, Kitakyushu City, Fukuoka Prefecture 802. Fax 093-521-8845.

BUSINESS MACHINE SHOW – June/Annual

Description Show featuring office computers, PCs, software, and related products
Location Nagoya
Contact Chubu Office Management Association, Chukei building, 4-4-12 Meieki, Nakamura-ku, Nagoya 450. Fax 052-581-1928.

COMPUTER GRAPHICS – June/Annual

Description Show featuring computer graphics products
Location Osaka
Contact Japan Management Association, Osaka Kokusai Building, 2-3-13 Azuchimachi, Chuo-ku, Osaka 541. Fax 06-261-5852. U.S.-JAPAN SOFTWARE CONFERENCE June 1994
Description Seminar where U.S. software firms cna learn about opportunities in Japan from Japanese hardware manufacturers
Location Selected U.S. cities
Contact Heidi Hijikata, U.S. Department of Commerce, Office of Computers and Business Equipment, Room 2806, 14th St. and Constitution Ave. NW, Washington DC 20230. Tel 1-202-482-0569; fax 1-202-482-0952.

ARTIFICIAL INTELLIGENCE EXHIBITION – July/Annual

Description Show featuring artificial intelligence applications, image processing, and related products
Location Tokyo
Contact Nihon Keizai Shimbun, Inc., 1-9-5 Otemachi, Chiyoda-ku, Tokyo 100-66. Fax: 03-3243-9086.

CASE JAPAN – July/Annual

Description Largest show in Asia for producers and users of CASE products
Location Tokyo, JAPAN
Size 80 booths (18,000 visitors)
Contact Laura Krouse. Tel 1-203-352-8357.

DATA SHOW – September/Annual

Description Show featuring computers, workstations, and related products
Location Tokyo
Contact Japan Electronic Industry Development Association (JEIDA), Kikai Shinko Kaikan, 3-5-8 Shibakoen, Minato-ku, Tokyo 105. Fax 03-3433-2003.

DATABASE TOKYO – September/Annual

Location Tokyo
Contact Japan Database Industry Association, 2-7 Kagurazaka, Shinjuku-ku, Tokyo 162. Fax 03-3235-5976.

SOFTWARE SYSTEMS USA – Sept. or October/Annual

Description Trade mission for new-to-market U.S. packaged software suppliers to Japan featuring intensive briefings and prearranged meetings with prospective agents and representatives
Location Tokyo
Contact Heidi Hijikata, U.S. Department of Commerce, Office of Computers and Business Equipment, Room 2806, 14th St. and Constitution Ave. NW, Washington DC 20230. Tel 1-202-482-0569; fax 1-202-482-0952.

DATABASE FAIR – October

Location Sapporo
Contact Commercial Section, U.S. Embassy, Tokyo, Unit 45004, Box 258, APO AP 96337-0001. Tel 81-3-3224-5000; fax 81-3-3589-4235.

NICOGRAPH – November/Annual

Description Show featuring CAD/CAM and other computer graphics products.
Location Tokyo
Contact Nihon Keizai Shimbun, Inc., 1-9-5 Otemachi, Chiyoda-ku, Tokyo 100-66; fax: 03-3243-9086

Korea

SW TRADE MISSION TO KOREA & TAIWAN – May 1994

Description Trade mission for U.S. computer software firms interested in Asian markets
Location Seoul (and Taipei, Taiwan)
Contact Heidi Hijikata, U.S. Department of Commerce, Office of Computers and Business Equipment, Room 2806, 14th St. and Constitution Ave. NW, Washington DC 20230. Tel 1-202-482-0569; fax 1-202-482-0952.

SOFTWARE EXHIBITION OF KOREA – June/Annual

Description Show featuring computer software
Location Seoul
Contact Commercial Section, U.S. Embassy, Seoul, Unit 15550, APO AP 96205-0001. Tel 82-2-397-4114; fax 82-2-739-1628.

COMNET SHOW – September/Annual

Location Seoul
Contact Commercial Section, U.S. Embassy, Seoul, Unit 15550, APO AP 96205-0001. Tel 82-2-397-4114; fax 82-2-739-1628.

CONTACT KOREA – October

Description Show featuring computer hardware, software, and peripherals
Location Seoul
Contact Commercial Section, U.S. Embassy, Seoul, Unit 15550, APO AP 96205-0001. Tel 82-2-397-4114; fax 82-2-739-1628.

Malaysia

SOFTWARE TRADE MISSION TO MALAYSIA & SINGAPORE – March 1994

Description Trade mission for computer software firms interested in the ASEAN markets
Location Kuala Lumpur (and Singapore)
Contact Heidi Hijikata, U.S. Department of Commerce, Office of Computers and Business Equipment, Room 2806, 14th St. and Constitution Ave. NW, Washington DC 20230. Tel 1-202-482-0569; fax 1-202-482-0952.

COMPUTERTECH – March/Annual

Description Exhibition and conference featuring computers and information technology
Location Kuala Lumpur
Contact Commercial Section, U.S. Embassy, Kuala Lumpur, 376 Jalan Tun Razak, 50400 Kuala Lumpur, P.O. Box No. 10035, 50700 Kuala Lumpur. Tel 60-3-242-2207; fax 60-3-242-1866.

ASIA ELECOMS EXHIBITION – May

Location Kuala Lumpur
Contact Commercial Section, U.S. Embassy, Kuala Lumpur, 376 Jalan Tun Razak, 50400 Kuala Lumpur, P.O. Box No. 10035, 50700 Kuala Lumpur. Tel 60-3-242-2207; fax 60-3-242-1866.

MALAYSIA COMPUTER COMMUNICATIONS TECHNICAL EXHIBIT – November/Even Years

Location Kuala Lumpur
Contact Commercial Section, U.S. Embassy, Kuala Lumpur, 376 Jalan Tun Razak, 50400 Kuala Lumpur, P.O. Box No. 10035, 50700 Kuala Lumpur. Tel 60-3-242-2207; fax 60-3-242-1866.

ITX COMPUTER & SOFTWARE EXHIBIT – November or December

Location Kuala Lumpur
Contact Commercial Section, U.S. Embassy, Kuala Lumpur, 376 Jalan Tun Razak, 50400 Kuala Lumpur, P.O. Box No. 10035, 50700 Kuala Lumpur. Tel 60-3-242-2207; fax 60-3-242-1866.

New Zealand

COMPUTER – May

Location Wellington
Contact Economic Section, U.S. Embassy Wellington, PSC 467, Box 1, FPO AP 96531-1001. Tel 64-4-472-2068; fax 64-4-472-3537.

COMPUTER – September

Location Auckland
Contact Commercial Section, U.S. Consulate General, Auckland, 4th Floor, Yorkshire General Building, CNR Shortland and O'Connell Sts., Auckland. Tel 64-9-303-2724; fax 64-9-366-0870.

COMPUTER – November

Location Christchurch
Contact Economic Section, U.S. Embassy, Wellington, PSC 467, Box 1, FPO AP 96531-1001. tel 64-4-472-2068; fax 64-4-472-3537.

Philippines

MANILA OFFICE WORLD INTL EXHIBIT – September/Annual

Location Manila
Contact Commercial Section, U.S. Embassy Manila, 395 Buendia Avenue Extension Makati. Tel 63-2-818-6674; fax 63-2-818-2684.

COMPUTER DISTRIBUTORS AND DEALERS ASSOCIATION – October

Location Manila
Contact Commercial Section, U.S. Embassy Manila, 395 Buendia Avenue Extension Makati. Tel 63-2-818-6674; fax 63-2-818-2684.

Singapore

SOFTWARE TRADE MISSION TO SINGAPORE & MALAYSIA – March 1994

Description Trade mission for U.S. computer software firms interested in ASEAN markets
Location Singapore (and Kuala Lumpur, Malaysia)
Contact Heidi Hijikata, U.S. Department of Commerce, Office of Computers and Business Equipment, Room 2806, 14th St. and Constitution Ave. NW, Washington DC 20230. Tel 1-202-482-0569; fax 1-202-482-0952.

SINGAPORE INTERNATIONAL HARDWARE AND SOFTWARE SHOWCASE – June/Annual

Description Show featuring PC hardware and software
Location Singapore
Contact Commercial Section, U.S. Embassy, Singapore, 30 Hill St., Singapore 0617. Tel 65-338-0251; fax 65-338-4550.

COMTEC – August or September/Annual

Description Show featuring microcomputers
Location Singapore
Size 220 booths
Contact ITP Services, 994 Bendeweek Rd. 30403, Singapore 1233. Tel 65-291-3273; fax 65-296-5389.

GLOBAL TRONICS – September

Location Singapore
Contact Cahners Exposition Group, 1 Maritime Square, #12-01 World Trade Centre. Tel 65-271-1013; fax 65-274-4666.

SINGAPORE INFORMATICS – October

Description Show featuring computers and related products
Location Singapore
Contact Commercial Section, U.S. Embassy, Singapore, 30 Hill St., Singapore 0617. Tel 65-338-0251; fax 65-338-4550.

SINGAPORE INTERNATIONAL INFORMATION TECHNOLOGY EXHIBIT – December/Annual

Description Show featuring microcomputer hardware and software products
Location Singapore
Size 1,100 booths
Contact Technofairs Corp. Ptd., 1 Colombo Court, Suite 06-01, Singapore, Singapore. Tel 65-337-6265; fax: 65-336-0718.

Taiwan

SOFTWARE TRADE MISSION TO KOREA & TAIWAN – May 1994

Description Trade mission for U.S. computer software firms interested in Asian markets
Location Taipei (and Seoul, Korea)
Contact Heidi Hijikata, U.S. Department of Commerce, Office of Computers and Business Equipment, Room 2806, 14th St. and Constitution Ave. NW, Washington DC 20230. Tel 1-202-482-0569; fax 1-202-482-0952.

COMPUTEX – June/Annual

Description Show featuring computer hardware, software, peripherals, and related services
Location Taipei
Contact China External Trade Development Council, 333 Keelung Road, Sect. 1, Taipei 10548. Tel 886-02-738-2345; fax 886-02-757-6653.

COMPUTER APPLICATIONS SHOW – August

Description Show featuring CAD/CAM/CAE/CIM products
Location Taipei
Contact Taipei Computer Association, 3F, 2 Pa-The Road, Sect. 3, Taipei. Tel 886-02-776-4249; fax 886-02-776-4210.

TAIPEI INTERNATIONAL INFORMATION SERVICES SHOW – September

Location Taipei
Contact International Service Industry Association, 8F, 111 Chung Shan N. Road, Section 2, Taipei. Tel 886-02-522-1350; fax 886-02-511-8234.

Thailand

ASIACOMM – February/Annual

Description International telecommunications and information technology trade exhibition for Thailand and Indochina
Location Bangkok
Contact Reed Tradex Co. Ltd., 1611-1613, 16th Floor, BB Building, 54 Asoke Rd., Sukhumvit 21, Bangkok 10110. Tel 66-2-260-7103/8; fax 66-2-260-7109.

COMPUTER AND INFOASIA – February

Description Show featuring computers and information technology
Location Bangkok
Contact Reed Tradex Co. Ltd., 1611-1613, 16th Floor, BB Building, 54 Asoke Rd., Sukhumvit 21, Bangkok 10110. Tel 66-2-260-7103/8; fax 66-2-260-7109.

COMPUTER THAI – June/Annual

Description Show featuring computers and peripherals
Location Bangkok
Contact Reed Tradex Co. Ltd., 1611-1613, 16th Floor, BB Building, 54 Asoke Rd., Sukhumvit 21, Bangkok 10110. Tel 66-2-260-7103/8; fax 66-2-260-7109.

CATT – August

Description Show featuring CAD/CAM/CAE/CIM products
Location Bangkok
Contact Thailand Exhibitions & Management Co. (TEM), 300/30-31 Vibhavadee-Rangsit Road; Dindaeng, Huay-Khwang, Bangkok 10400. Tel 66-2-275-5313/4; fax 66-2-277-6075.

INFORMATIC & TELEMATIC – September/Annual

Description Show featuring computers, office automation, and information technology
Location Bangkok
Size 17,820 sq. feet
Contact Reed Tradex Co. Ltd., 1611-1613, 16th Floor, BB Building, 54 Asoke Rd., Sukhumvit 21, Bangkok 10110. Tel 66-2-260-7103/8; fax 66-2-260-7109.

Latest Information About OS/2 2.1 Books

Here is the latest list of published and planned books about OS/2 2.1. In response to many requests for author names and ISBN numbers, the list now includes these items wherever possible. As we acquire more of this information, we will add it to the list.

We are pleased to announce that Using OS/2 2.1 has sold over 100,000 copies, and OS/2 2.1 Unleashed continues on the best-seller list!

Released

Title	**Author**	
	Publisher	**ISBN**
Advanced OS/2 Presentation Manager Programming	Thomas Burge and Joseph Celi	
	John Wiley & Sons	0-471-59198-X
The Art of OS/2 C Programming	Kathleen Panov, Arthur Panov, and Larry Salomon	
	QED	0-89435-446-9
Client/Server Programming with OS/2 2.1, Third Edition	Robert Orfali and Dan Harkey	
	Van Nostrand Reinhold	0-442-01833-9
Designing OS/2 Applications	David Reich	
	John Wiley & Sons	0-471-58889-X
Dvorak's Guide to OS/2	John Dvorak, David Whittle, and Martin McElroy	
	Random House	0-679-74648-X
Easy OS/2	Shelley O'Hara	
	Que	1-56529-145-X
Inside OS/2 2.1, Third Edition	Mark Minasi, John Little, Marlene Semple, Bill Camarda, Bill Schindler, and Esther Schindler	
	New Riders	1-56205-206-3
Learn OS/2 in a Day	Brian Dooley	
	Wordware	1-55622-361-7
The Little OS/2 Book	Kay Y. Nelson	
	Peachpit Press	1-56609-047-4
Micro Focus CICS Option 3.0: Developing CICS Applications on the PC		
	QED	
Micro Focus COBOL/2 Workbench for the Application Developer		
	QED	

Title	Author	
	Publisher	**ISBN**
OS/2 2.1 Complete	Peter Franken	
	Abacus	1-55755-184-7
The OS/2 2.1 Corporate Programmer's Handbook	Nora Scholin, Martin Sullivan, and Robin Scragg	
	Van Nostrand Reinhold	0-442-01598-4
OS/2 2.1 Unleashed	David Moskowitz and David Kerr	
	Sams	0-672-30240-3
The OS/2 2.1 User's Bible	Robert Albrecht and Michael Plura	
	Abacus	1-55755-174-X
OS/2 2.X Notebook: Best of OS/2 Developer	Dick Conklin, editor	
	Van Nostrand Reinhold	0-442-01522-4
OS/2 Extra		
	TAB	
OS/2 for Dummies	Andy Rathbone	
	IDG	1-878058-76-2
OS/2 for Non-Nerds	Bruce Hallberg	
	New Riders	1-56205-153-9
OS/2 Inside & Out	Kathy Ivena	
	Osborne	0-07-881871-0
OS/2 Instant Reference	Peter Dyson	
	Sybex	0-7821-1179-3
OS/2 Programming	Herbert Schildt and Robert Goosey	
	Osborne	0-07-881910-5
OS/2 Secrets and Solutions	Peter Dyson	
	Sybex	0-7821-1281-1
PC Learning Labs Teaches OS/2 2.1	by Logical Operations	
	Ziff-Davis	1-56276-148-X
Quick Reference Guide for OS/2 2.1	George T. Lynch	
	DDC	1-56243-119-6
Real-World Programming in OS/2 2.1	Derrel R. Blain, Kurt R. Delimon, and Jeff English	
	Sams	0-672-30300-0
REXX Reference Summary Handbook	Dick Goran	
	CFS Nevada	
The Shell Collection: OS/2 2.1 Utilities	Steven Levenson	
	Van Nostrand Reinhold	0-442-01585-2

Title	Author	
	Publisher	**ISBN**
Stepping Up to OS/2 2.1	Robert Albrecht and Michael Plura	
	Abacus	1-55755-185-5
Teach Yourself OS/2 2.1	by MIS Press Staff	
	MIS Press	1-55828-282-3
Teach Yourself OS/2 2.1 in a Week	Carol Thomas	
	Sams	0-672-30360-4
10-Minute Guide to OS/2 2.1	Herb Tyson	
	Alpha	1-56761-185-0
Thinking Person's Guide to OS/2 2.1	Maria Tyne	
	QED	0-89435-467-1
Using OS/2 2.1 Special Edition	Barry Nance and Caroline Halliday	
	Que	1-56529-118-2
Using Workplace OS/2	Lori Brown and Jeff Howard	
	Van Nostrand Reinhold	0-442-01590-9
Van Wolverton's Guide to OS/2	Van Wolverton and Jim Meade	
	Random House	0-679-74877-6
Voodoo OS/2	Allen G. Taylor	
	Ventana	1-566-04066-3
Writing OS/2 Device Drivers in C, Second Edition	Steve Mastrianni	
	Van Nostrand Reinhold	0-442-01729-4
Your OS/2 2.1 Consultant	Herb Tyson	
	Sams	0-672-30317-5

October

Title	Author	
	Publisher	**ISBN**
Instant OS/2	Len Dorfman	
	TAB	0-8306-4522-5
The OS/2 2.1 REXX Handbook	Hallette German	
	Van Nostrand Reinhold	0-442-01734-0
Now That I Have OS/2 2.1 On My Computer, What Do I Do Next?	Steve Levenson and Eli Hertz	
	Van Nostrand Reinhold	0-442-01832-0
OS/2 2.1 Workplace Shell Programming	Random House	

November

Title	Author	
	Publisher	**ISBN**
OS/2 Batch Files to Go		
	TAB	

December

Title	Author	
	Publisher	**ISBN**
OS/2 2.1 Red Book for Developers		
	Que	
OS/2 2.1 Red Book for Power Users		
	Que	
OS/2 and Networking		
	Wiley-QED	
OS/2 Presentation Manager Programming		
	Ziff-Davis	
The Ultimate OS/2 Programmer's Manual		
	TAB	

January 1994

Title	Author	
	Publisher	**ISBN**
Application Development Using OS/2 REXX		
	Wiley-QED	
A Client/Server Survival Guide with OS/2	Robert Orfali and Dan Harkey	
	Van Nostrand Reinhold	0-442-01798-7
The Design of OS/2 2.1		
	Addison-Wesley	
Mastering OS/2 REXX		
	Wiley-QED	

Title	Author	
	Publisher	ISBN
The OS/2 2.1 Application Developer's Guide		
	Van Nostrand Reinhold	
OS/2 Database Manager's Handbook		
	Wiley-QED	
OS/2 Remote Communications: Asynchronous to Synchronous T&T	Ken Stonecipher	
	Van Nostrand Reinhold	
OS/2 V2 C++ Class Library: Power GUI Programming with C Set++	William Law, Kevin Leong, Robert Love, and Hiroshi Tsuji	
	Van Nostrand Reinhold	0-442-01795-2

February 1994

Title	Author	
	Publisher	ISBN
Objects for OS/2 2.1	Bruce Tate, Scott Danforth, Paul ?	
	Van Nostrand Reinhold	0-442-01738-3
Using OS/2 2.1, Third Edition		
	Que	

March 1994

Title	Author	
	Publisher	ISBN
C Programming in the OS/2 Environment	Mitra Gopaul	
	Van Nostrand Reinhold	
Downsizing to OS/2 2.1		
	New Riders	
OS/2 Secrets		
	IDG	
OS/2 2.1 and NetWare Programming		
	Van Nostrand Reinhold	

1995

Title	Author	
	Publisher	ISBN
OS/2 for the Impatient (January 1995)		
	Addison-Wesley	
OS/2 Connectivity (early 1995)		
	Wordware	

Date to be Determined

Title	Author	
	Publisher	ISBN
Advanced OS/2 Workplace Shell		
	Wiley-QED	
Effective Multithreading in OS/2	Len Dorfman	
	TAB	
Independent Platform Coding		
	IBM	
Object Vision for OS/2 2.1		
	Wiley-QED	
The OS/2 2.1 Application Developer's Guide	Jody Kelly, Craig Swearingen, et al	
	Van Nostrand Reinhold	
OS/2 2.1 Developing, Porting, and Testing Applications		
	Wiley-QED	
OS/2 Communications Manager 2.0		
	Wiley-QED	
OS/2 Connectivity		
	Wiley-QED	
OS/2 Demystified		
	TAB	
OS/2 in the Fast Lane (2.1 edition)		
	New Riders	
OS/2 and Netware Programming: Using the Netware Client API for C	Lori Gauthier	
	Van Nostrand Reinhold	
OS/2 Presentation Manager Programming with IBM C++		
	Wiley-QED	

Title	Author	
	Publisher	**ISBN**
OS/2 User's Guide to Installation, Configuration, and Use		
	Wiley-QED	
Platform-Independent: Migrating from Character-Mode DOS to OS/2	Len Dorfman	
	TAB	

Dial Your International Access Code First!

In the 15 September issue of this newsletter, in the article about The Developer Connection for OS/2, the following notice appeared:

> Here are some phone and fax numbers to use for ordering The Developer Connection for OS/2 in other countries.
>
> | | **Voice** | **Fax** |
> |---|---|---|
> | Canada | 1-800-561-5293 | 1-416-946-5700 |
> | France | 45-3-252-7411 | 45-3-252-8203 |
> | Germany | 45-3-252-6711 | 45-3-252-8203 |
> | Italy | 45-3-252-7622 | 45-3-252-8203 |
> | Netherlands | 45-3-252-7088 | 45-3-252-8203 |
> | Spain | 45-3-252-6311 | 45-3-252-8203 |
> | United Kingdom | 45-3-252-6588 | 45-3-252-8203 |
> | Asia/Pacific | 61-2-354-7684 | 61-2-354-7766 |
> | United States | 1-800-633-8266 | 1-800-494-3045 |

Please note that 45 is the country code for Denmark, and 61 for Australia. Before you dial the country code, you must first dial your own country's international access code. For example, the international access code within the USA is 011. Therefore, if someone in the USA wants to call the voice number shown for the United Kingdom, the dialing sequence would be 011-45-3-252-6588. International access codes vary by country, so please be sure to find out what your country's international access code is.

800 Phone Numbers

The 800 phone numbers below come from two sources:

1. This issue and preceding issues of PSP Developer Support News
2. Information posted on IBM internal forums.

Common Desktop Environment Developers Conference	1-800-225-4698
OS/2 Multimedia Tools	1-800-228-8584
OS/2 2.0 Customer Support (Defect Reporting)	1-800-237-5511
IBM PSP Developer Support Marketing Center	1-800-285-2936[1]
OS/2 Tour '93 Professional Overview Session	1-800-285-7577
OS/2 2.0 Software Support	1-800-288-8737
OS/2 Sales (in Canada, 1-800-465-1234)	1-800-342-6672
IBM National Telesales Marketing (IBMCALL)	1-800-426-2255
IBM Software Installer 1.2 for OS/2	1-800-426-2279
Boca Raton Technical Services Software System Test	1-800-426-2622
IBM Direct	1-800-426-2968
DCE Client for Windows Beta Program (in Canada, 1-800-561-5293)	1-800-426-3040
LAN NetView Extended Beta Test (in Canada, 1-800-561-5293)	1-800-426-3040
IBM Business Partner Locator (PS/2 Dealers)	1-800-426-3377
IBM FAX Information Service (in Canada, 1-800-465-3299)	1-800-426-4329
OEM Sales	1-800-426-4579
Skill Dynamics (Education) (in Canada, 1-800-661-2131)	1-800-426-8322
Ultimedia Developer Assistance Program	1-800-426-9402
The Corner Store	1-800-428-9672
Programmer's Paradise	1-800-445-7899
Integrated Systems Solutions Corporation	1-800-472-4772
ATI Travel Management (for DB2 Technical Conference)	1-800-477-8920[1]
CompuServe Membership	1-800-524-3388
Travel Reservations for ColoradOS/2 Conference	1-800-544-2432
OS/2 Application Assistance Center + TalkLink (OS2BBS)	1-800-547-1283
Personal Systems Technical Solutions magazine	1-800-551-2832
Software Vendor Systems Center	1-800-553-1623
several Developer Assistance Programs	1-800-627-8363[1]
Berlitz Translation Services (in Canada, 1-800-387-5500)	1-800-628-4808
IBM Developer Connection for OS/2 (in Canada, 1-800-561-5293)	1-800-633-8266
IBM Direct Response Marketing (in Canada, 1-800-561-5293)	1-800-633-8266
GEnie	1-800-638-8369
ColoradOS/2 Conference Registration	1-800-648-5717
IBM Redemption Center (OS/2 2.0 Upgrade)	1-800-677-2581
IBM Porting and Technical Consulting Workshops	1-800-678-31UP
Delphi	1-800-695-4005
OS/2 Tour '93 General Overview and Technical Sessions	1-800-766-4344
Personal Systems HelpCenter	1-800-772-2227
PRODIGY	1-800-776-3449
Indelible Blue, Inc.	1-800-776-8284
America On Line	1-800-827-6364
Business Depot, Inc.	1-800-844-8448
CompuServe	1-800-848-8199
IBM PSP Technical Interchange Registration	1-800-872-7109[1]
IBM Publications	1-800-879-2755

IBM Ultimedia Tools Series	1-800-887-7771
PenDOS Software Developer Kit	1-800-888-8242
OS/2 Developer magazine	1-800-926-8672
OS/2 Tour '93 Developer Seminar	1-800-934-6566
OS/2 Free Seminar Enrollment	1-800-937-3737
OS/2 Tour '93 Space Registration	1-800-947-8688
DB2 Technical Conference	1-800-955-1238
Drake Training and Technologies (for Professional Certification Program from IBM)	1-800-959-3926[1]
IBM Customer Support Center	1-800-967-7882
Personal Software Products Support Center (Defect report)	1-800-992-4777

[1] Number works in Canada also

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