

Basic-2C[®] Connection

News and Information from the Basic-2C Community

Volume III, Issue 7

August 1992

Niakwa Announces Support of NETBIOS

Mundelein, IL - Niakwa announces the support of The Niakwa Development Environment for NETBIOS compatible local area networks. Niakwa will support NETBIOS operating system technology while continuing to support Novell NetWare.

In recognition of the increasing popularity of peer-to-peer networks, the first NETBIOS compatible operating systems to be certified by Niakwa will be NetWare Lite by Novell, and LANtastic by Artisoft.

Peer-to-peer networking technology is designed to be less expensive and easier to use than traditional networks. Peer-to-peer networks are less expensive for the initial licensing, and for the hardware required for operation. As an example, traditional networks require a dedicated file server, while peer-to-peer networks do not need a file server, allowing first time network users to connect existing PCs with minimal expense. Peer-to-peer networks are easier to use because system administration has been reduced.

Although peer-to-peer operating system suppliers such as Artisoft (LANtastic) advertise support for hundreds of users, peer-to-peer networks are usually installed at end-user sites needing less than 10 users. We encourage you to carefully evaluate your end-users' performance requirements when installing peer-to-peer networks. In particular, applications that are very disk intensive may not perform well in a peer-

to-peer environment.

NetWare Lite, one of Niakwa's first NETBIOS offerings, is a peer-to-peer network operating system for two to 25 users who require basic network features and functions. NetWare Lite requires 28K workstation PC RAM and 56K server PC RAM. See Figure 1 for a partial listing of NetWare Lite's features.

NetWare Lite can coexist on the same

However, it is important to note, Niakwa has only tested and certified NetWare Lite and LANtastic at this time. Niakwa will not support other NETBIOS compatible operating systems until they have been officially certified by Niakwa. Please contact us if there is a specific NETBIOS compatible operating system you would like us to test or have had success with on your own.

The NETBIOS implementation of the Niakwa Development Environment will consist of new versions of the Niakwa Programming Language, Niakwa Data Manager (using Novell's Btrieve), and IQ. For NPL and NDM, both standard DOS versions and MS Windows versions will be available. All products will be functionally identical to current DOS/Novell versions of the product.

Questions concerning availability and beta test participation of the NETBIOS versions of Niakwa products should be directed to your Niakwa

Distributor or to the Niakwa Sales Department at (708) 634-8700. BC

NetWare Lite by Novell

- Easy installation and operation
- Simple management of network directories and printers
- On-screen help system
- Each PC can share its resources or the resources of other PCs
- Network management from any PC on the network
- Distributed user accounts
- Security system with passwords and user privileges
- Automatic logging of network activity and network errors
- Message transmission for interoffice communication
- Auto-reconnection between workstation and server PCs

LANtastic by Artisoft

- Smallest RAM overhead of any LAN
- Peer-to-peer resource sharing
- No dedicated server required
- LANcache software boosts network speed
- Unloadable from memory
- Easy installation with option flexibility
- Multiple levels of security
- E-Mail with Chat and pop-up message notification
- De-spools to multiple printers

network as NetWare v2.2 or v3.11. This allows you to take advantage of the Novell compatible third-party network products currently on the market.

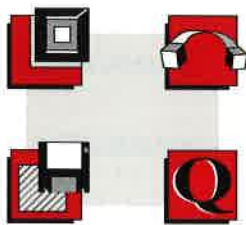
LANtastic is also a peer-to-peer network operating system. LANtastic supports up to 300 users. According to Artisoft, LANtastic is the most RAM-efficient network operating system. LANtastic uses 12K per workstation and 40K per server.

It is anticipated that the Niakwa Development Environment will operate without modification on other NETBIOS based operating systems.

INSIDE...

European Conference
Announced

Niakwa to Support the
HP9000 Series



Basic-2C Connection

News and Information from the Basic-2C Community

Publisher: Dick Drew
Editor: Lesslee Dort
Staff Writers:
 Debbie Benson Debbie O'Brien
 Paul Brown Cyndee Philyaw
 Erik Coleman Dana Schwartz
 Frank Ehrhardt Kurt Skaronea
 Brian Funke Andy Warzecha

Contributors:
 Allan Berger Craig Freeman
 Alan Johnston Robert Matz
 Pete Rasmussen Guy Van de Maele
 Chris Van Loock

Technical Advisor: Harry Cohn

Photographer: Lesslee Dort

Basic-2C Connection (ISSN 1050-8872) is published on a periodic basis by Niakwa, Inc., 23600 North Milwaukee Avenue, Mundelein, IL 60060. Telephone (708) 634-8700, Facsimile (708) 634-8718.

Basic-2C Connection invites Basic-2C users to submit articles for publication regarding commercial successes, technical successes, technical tips, new product releases, and/or other subjects of interest to the Basic-2C community. Niakwa reserves the right to edit or not print articles submitted. Articles contributed to the Basic-2C Connection may contain information on hardware or software products not necessarily tested or endorsed by Niakwa.

Comments, questions, and suggestions can be directed to the Editor, Basic-2C Connection, Niakwa.

Copyright © 1990 by Niakwa Management Services of America, Inc. Printed in the USA. All rights reserved. Basic-2C is a registered trademark of Bluebird Systems. Niakwa is a registered trademark of Niakwa Management Services 1975 Ltd., and is licensed to Bluebird Systems.

Other product names, company names, and/or logos are or may be trademarks of their respective companies.



In This Issue

Volume III, Issue 7

August 1992

News

Niakwa Announces Support of NETBIOS	1
RISC and be SUCCESSFUL	3
Avnet/Niakwa Alliance	3
Bullets	4
Hydratec Invests in NDM	4
SCIA Belgium Incorporates Phar Lap	
DOS Extender/386	5
An End-User Proceeds to Profit...	
with a little help from Basic-2C	6
Action Wholesale: A Picture of Efficiency	7

Platforms

Niakwa to Support Hewlett-Packard 9000,	
RISC-Based Systems Series 700 and 800	8
Niakwa Releases NDM for UNIX, Windows, and	
IBM RISC System/6000	9
Platform Update	9

Announcements

Administration Says Hello! and Good Bye	10
Welcome...	10
Marketing Bulletin	10
Winners of Windows RunTime Contest	
Announced	11
Niakwa Announces New Demonstration	
Diskette Possibilities	11

Tech Corner

Ask Andy	12
Technical Notes	12
SCO UNIX Patch Now Available	12
Niakwa BBS: An Update	13
Using Niakwa RunTime with X Windows	13
A Correction from Craig Freeman	14

The Back Page

European Conference Details Released	15
6 Month Review	1

Profile

ADIFO Systems	16
---------------	----

News

RISC and be SUCCESSFUL

A Letter from Allan Berger

Detroit, MI - CRT Management Company has successfully installed the AIX version of the Niakwa Runtime Programming Language. We were one of the initial companies chosen to work with the newest port from Basic-2C. The AIX environment is quite a bit different than what we have been used to, which raised some difficulty in the transition process.

One of the differences is in working with virtual memory management rather than fixed memory partitions. Other differences are the size of the operating systems on the fixed disk (300MB), dealing with the utilities in SMIT, different cabling, and other protocols that can only be experienced.

Once we gained that experience, it was a simple transition to the RISC/6000 and the AIX Operating System. We used

Kermit to transfer the programs and data files (approximately 1MB/hour at 4800 baud). Every program and data file ran perfectly without any modification.

The speed of the system was faster than any other system we had experienced to date; programs seemed to run 10 times faster. Other features of the Niakwa RS/6000 version include:

- The ability to individually identify workstations or terminals on the system under program control.
- Dynamic memory allocation which allows for development of a larger application.
- Security check automatically done daily.
- IBM 3151 terminal support.
- Support of 720K and 1.44MB raw diskette on systems that support these

formats.

- Capability to have Runtime perform external calls to modules and subroutines written in other languages.

One of the greatest selling features for our customers is the ability to run standard software packages. Examples of these packages are: WordPerfect 5.1, Uniplex (The Office Manager) and PC Simulator which allows for all DOS compatible programs to run under a single user mode.

The most significant feature for us is multiple sessioning on a dumb terminal. We can use Faciterm which allows up to 10 sessions to run at one time. It gives our applications the look and feel of the '90s.

We at CRT expect to use the RS/6000 port of Basic-2C as a strategic advantage for the '90s. Thank you NIAKWA. BC

Niakwa/Avnet Alliance

Carlsbad, CA - Bluebird Systems and Avnet Computer, a leading value-added computer supplier, have signed an agreement under which Avnet Computer will supply hardware to Bluebird's family of over 700 value added reseller customers.

The agreement is designed to allow Bluebird to focus more heavily on its software development and marketing efforts, while continuing to provide customers with high quality hardware and technical service, at more competitive pricing.

"We chose to partner with Avnet Computer because of its financial stability, strong supplier relationships and commitment to quality," said Hal Tilbury, Bluebird's president and chief executive officer. "By combining Avnet Computer's

broad hardware product offering and technical expertise with our talents for multi-user software development and VAR channel development, we can offer our customers higher performance and more cost-effective system solutions."

Avnet Computer will supply CPUs, peripherals and mass storage devices to three of Bluebird's business divisions: Bluebird's System Software Division, a business unit providing VARs with languages and operating systems, including SuperDOS, its flagship product; Bluebird's Vertical Applications Division, a provider of turnkey business solutions in niche vertical markets nationwide; as well as Niakwa, Inc.

Avnet Computer and Niakwa are currently evaluating how to implement

the program for Niakwa's North American Resellers.

Avnet/Niakwa hope to mail price lists to all North American Resellers in the near future. These price lists will include offerings from several areas of the Avnet product line, including the popular Intel-based Avnet Works/Vertos PC Computer Workstation Systems. The Vertos systems provide a low-cost, high-quality solution for the VAR needing a bundled PC offering.

With a representative entirely dedicated to the Niakwa effort located in Chicago, Avnet Computer will be ready to respond to any and all VAR inquiries. More information on the Niakwa/Avnet program will be provided to Niakwa Resellers in the near future. BC

Bullets

- **CHILE** - Adana Ltda. has replaced a Wang 2200/CS in Argentina with a Novell 32-User RunTime along with his Expert Software program, which provides support of KFAM and Sort 4 for over 16-Users. This sale to a Public Health Institute represents Adana's second major installation in Argentina and his expansion from the Chile marketplace where he has sold many Basic-2C systems in the past.
- **SWEDEN** - Unitema AB installed their first IBM RISC System 6000, for 16 Users, as a replacement for a Wang 2200 System. Even with a third more users on the system, the performance has jumped from a 5 minute processing time down to 10 seconds for certain operations. According to Unitema, the conversion was very easy, and more sales are anticipated on this high performance platform.
- **AURORA, IL** - Gilmore Research, Inc., recently converted a roofing and insulation company, M. Walter Roofing and Insulation Co., Inc. from a Wang 2200 to a SuperDOS system, running Basic-2C on a Wyse computer. The company reports that file updates that used to take 90 minutes now take 5 to 10 minutes and a payroll post was reduced from 45 down to 5 minutes.
- **DURANGO, CO** - An integral part of Data West's sales strategy is the use of working model demos of their public utility and municipal fund accounting software shipped to a prospect and left for evaluation. Most recently this resulted in the sale of a 4-User Novell system to the City of Holbrook, Arizona.

Hydratec Invests in NDM

by Alan Johnston

Windham, NH - I expect that our company is very much like many other Niakwa vendors. Hydratec develops, markets, installs and supports software for several hundred customers in a very specialized market. In our case, that market is the Fire Protection Sprinkler Industry. We have customers all over the United States and in fact, all around the world. These customers depend on us for the reliable operation of over a dozen different application modules ranging from Hydraulic calculation of pipe sizes to weekly payroll and accounting functions. Our programming efforts started when the company started in 1972.

In the twenty years that Hydratec has been in business, we have had to make some major decisions regarding the platform for our applications. Our first decision, in 1972, was to use Wang Computers. That was easy because we had no experience and very few constraints limiting that decision. In the mid 70's we chose one of three or four available data base systems for the Wang 2200 over further developing our own data bases. That was not as easy a decision because of our natural affinity for developing everything on our own. However, we soon customized that data base system and went on developing our applications.

In the mid 1980's we were forced by computer market pressures to move away from the Wang 2200 toward the PC's. Here the selection of Niakwa Basic-2C was not an easy one for us before the decision was made but was very easy to embrace once the decision had been made. We have recently made another decision of similar importance in selecting Niakwa NDM to replace the data base system that we have been working with since 1975.

In evaluating our priorities for the data base system we felt Reliability, Transportability, Speed and Flexibility

were the key factors. Reliability has not been a major concern with our existing system. However that system has not been "bullet proof" enough for us to take Reliability of the data base system for granted, the way for instance that we take the reliability and quality of Basic-2C itself for granted. Nevertheless, with so many people counting on us every day for the smooth operation of their company's vital accounting functions, we would not even consider changing the data base system without giving first priority to reliability. I doubt that we could be convinced of that reliability with anything less than our excellent experience with Niakwa products.

The second cornerstone to any current or future decisions regarding our platform is Transportability. This was a lesson driven home by over near fatal loyalty to the Wang 2200 and it will not be forgotten. The speed of the data base system is certainly one of the potentially most exciting factors in choosing a data base system. Once the above criteria is met we can rub our hands together and grin and ask "So how fast can this baby go?" I'll talk more about this later, however on the topic of speed I would offer the observation that speed is not so much a statistic as much as it is an experience. So I would relate our initial speed experience with NDM as approaching "Mach 2 with your hair on fire."

Flexibility, like speed, is a far more exciting factor than reliability or transportability. Our existing data base bogs down badly on exceptionally large files so we have avoided them in our applications. Similarly, we've avoided sequencing a file forward and backward or creating new files or fields within files. These are just a few of the new areas we are looking forward to exploring with our conversion to NDM.

(continued on page 5 — see Hydratec)

Hydratec

(continued from page 4)

Once our decision was made to use Niakwa's NDM we developed a plan for converting all of our existing programs. The fourteen application modules constitute well over seven million characters of programming code and typically manage 10 to 30 megabytes of data base. Fortunately, we had adhered reasonably well to the standard of using the data base marked subroutine calls to access the data base from any of our application codes. This allowed us to perform our conversion in three major steps:

1. Create a conversion program to read all existing records from the original data base and write them to the NDM data base.
2. Create a replacement program for the data base marked subroutines that used the NDM function calls and behaved in precisely the same fashion as the original data base.
3. Check and fine tune the remainder of the programming to insure their compatibility with the new subroutines.

However, even before we started Step 1 above we did two things. First, we chose a lead person to handle the conversion and sent him to NIAKWA'S NDM training session.

Second, we played a little bit with selected files just to get a bearing on the possible speed improvements and functionality of the new data base. This initial testing was more subjective than scientific and was driven by the need to know what to expect. Our tests were done on a file with 2000 records and showed various types of reads to be 10 to 100 times faster and writes and deletes to be about the same speed or a little faster.

Needless to say we were jazzed but forced ourselves to put the stopwatch away until the conversion was complete.

The conversion program involved retyping the description of each record

description in each file into the new data dictionary. This involved about 200 files with an average of 15 fields per file. The program itself identifies each existing data file and record and subsequently writes it to the new data file using the NDM routines. This program also provided for eliminating disk space required by the old files as it created the new files to avoid the need for excessive disk space to create the new data base.

NDM files tend to use more space per record than the previous data base (partially due to our choice to not compress the data) but will probably not require more disk space overall. This is because NDM only occupies space for records used. This will also eliminate a lot of inconvenient file enlargements required by the old data base. This program took several weeks to complete and will typically require overnight to run at a customer's site.

As mentioned above, our application programs consist of more than seven megabytes of code. The data base subroutines are eighteen kilobytes of that total. The user documentation of the original data base utilities and our experience made it a relatively simple job to create the NDM version of those utilities. This was also facilitated by the fact that the NDM routines were more powerful than the routines they needed to replace.

The final step in the NDM conversion included fine tuning of the remainder of our coding. For most of our programs this was a trivial matter but we did need to make some noticeable changes to the initial programs for each module necessary for opening the new files. We also had to deal with certain memory constraints at this stage since the full implementation of NDM requires roughly 181K.

The entire conversion process required two or three months of programming effort and was well worth the investment. We feel that this is one of the first major platform decisions that we were able to make and implement prior to a crisis. This will allow us to further convince our existing 2200 users to move into the hardware platforms of the future and will

provide the speed and flexibility we need for our program development of the future. We feel that this step represents a first phase where maintaining complete compatibility with our existing systems is the primary goal.

We are very much looking forward to the next phase where we will be able to begin implementing program changes that capitalize on the new power and flexibility that we've gained through the use of Niakwa's NDM. BC

SCIA Belgium Incorporates Phar Lap DOS Extender/386

Herk-De-Stad, Belgium -When Niakwa introduced the external calls in the Niakwa RunTime Package, a wide range of possibilities became available to use non-Basic-2C functions. Soon the conclusion followed that memory restrictions were incorporated in this possibility. Prior to Release 3.20 of Basic-2C, the 640K DOS limitation was the restricting factor.

Niakwa's Release 3.20 offered the possibility to use more programming lines and more variables. Here again, the memory could be a restricting factor for optimal use, especially in the case of co-function with the mentioned external calls.

The memory limitation imposed by DOS is at last broken through by Niakwa's version for Phar Lap DOS Extender/386. Through this, it became possible to make optimal use of the external call facilities. This, linked with the possibility to use larger partitions (more variables, more programming lines) and a good improvement of the performance, gives an extra dimension to the Basic-2C software.

Presently, SCIA is adapting its structural analysis software by use of C-functions for graphics and interactive inputting with windows, C- routines for fast calculations, and is taking full advantage of the larger memory capability. This gradual modernization of the software has an optimal impact on SCIA's large customer base. BC

An End-User Proceeds to Profit... with a little help from Basic-2C

Wiesbaden, Germany - Niakwa's Basic-2C language has been able to service the needs of a very large base of customers. To date, there have been 47,000+ installations of Basic-2C, representing an estimated 200,000 End-Users worldwide. In the first years that Basic-2C was available, the primary source of these sales were generated as a result of the large amount of Wang 2200/CS users looking for a conversion path to the newer and lower cost systems introduced in the mid 1980s. Many End-Users made substantial investments in their original software and developed highly customized applications which met the very complex and specific needs of their businesses.

One of these specialized users is Procedo, located in Wiesbaden, Germany, which is the largest German factoring company. Factoring is the process of purchasing and administrating the accounts receivable of another firm.

The factoring company pays cash on an immediate basis as required daily for other company's sales, and Procedo protects companies 100% against credit risks. Procedo has a strong emphasis (79%) on export factoring.

Procedo manages more than 12,200 accounts for their clients in more than 30 countries of the world, and takes care of collection and related correspondence in most local languages as well as legal proceedings, wherever and whenever required. Most of Procedo's clients are German companies, but there are also companies from other European countries, most of them exporting to various parts of the world. In 1991, the total turnover of Procedo was DM 2.4

Billion, equivalent to 1.5 Billion US\$.

Of course, this important monetary business needs to be carefully coordinated with a reliable computer system and Distributor. Through a process of gradual computer expansion and continual software enhancements by its Basic-2C Distributor, GFA, Procedo has been able to do more transactions from an increasing base of customers, and in less time. (GFA is also a Niakwa Master



Procedo's new Headquarters constructed in 1991.

Distributor in Germany.) Their original computer system, in the 1970's, was a Wang MVP with 3 active users, using a customized Speed I based application. Procedo's expanded computer needs resulted in a total of four mini-computers (two Wang MVPs, and two Wang CS machines) supporting up to 28 users. By 1988, they were ready to eliminate the high cost of hardware maintenance and the user limitations which they were rapidly outgrowing. It was at this time that GFA was able to use the portability of Basic-2C to move Procedo's software to the popular lower cost PC systems, with the ability to expand as needed.

At present, Procedo has a total of three Novell Networks to serve specific

functions of the company, but also connected together so that they can share information. The individual network functions are:

- Customer Transactions
- Legal and Customer Correspondence
- Research and Development

There are about 45 total users on all three systems. On the R & D network, Microsoft Windows 3.1, supported by Basic-2C, is being utilized to run up to four tasks at each terminal, providing a more efficient way of handling some of the larger print and backup jobs at Procedo. This change alone has had a dramatic impact on increasing the efficiency of this department, since time is of such a high importance in this business focused on the timely processing of other people's money.

Procedo recently completed a modern office building in Wiesbaden which houses themselves and additional companies. It is in this same building that GFA is located to provide immediate assistance and support, as well as ongoing system and software enhancements.

Procedo will mark its 22nd birthday in 1992, and one may guess where the name "Procedo" came from: the company's founder and President, Mr. Dieter Klindworth, thought it would be an appropriate name for a small company willing to "proceed." It seems he foresaw his company's progress - it proceeded to be Europe's leading export factoring house today. BC

Action Wholesale: A Picture of Efficiency

Grand Rapids, MI - With customers demanding lower prices and high service levels, the spoils go to the efficient in wholesale distribution. Niakwa's Basic-2C is an important part of keeping Action Wholesale Service, Inc. competitive.

By 1988, Action had outgrown its Wang 2200, and purchased a Novell Network and a Niakwa Basic-2C license. The cost was a fraction of what a minicomputer and new software would have been. But that proved to be only the first benefit.

By retaining their software, Action eliminated the cost of customizing new applications, and retraining employees. These "soft dollars" were impossible to measure, but may have exceeded the cost of the system. "Ironically, the largest long term benefit was - and continues to be - how Basic-2C facilitates changes in procedures," reports Peter Rasmussen, Action's Computer Services Manager.

By simplifying the transition from a proprietary to a standard environment like Basic-2C, Action's mature applications could tap into low cost hardware advances. For example, as new processors become available, a major file server upgrade is a small incremental cost.

The ability to continuously upgrade their system has been an important part of Action's continued growth and profitability.

Until recently, Action used multi-part preprinted forms - copies went to the customer, customer file, and a numeric file. In January 1992, Action switched to using a laser printer for customer documents, and printing internal copies on plain paper continuous forms. This change resulted in annual savings of about \$24,000 in forms costs. As a bonus, customer service was improved, as each copy was tailored for its intended function. There was also substantial productivity benefits.

The cost of decollating and bursting the customer forms was eliminated.

Sorting prior to filing retained copies was eliminated. And, because a laser starts with a blank page, other forms - such as delivery receipts and past due notices - can be merged with the original forms. Action was later able to change phone numbers that would have been impossible to do, because the phone numbers were pre-printed on the forms previously, without the performance increases of Basic-2C.

Since converting to NetWare/Basic-2C, the number of line items processed per day has nearly doubled due to business growth and industry changes, changing from one big order per day to frequent small orders. Also, lead times have become razor thin. Over 50% of

"The largest long term benefit was — and continues to be — how Basic-2C facilitates changes in procedures."

daily orders arrive between 3PM and 6PM, and the first truck leaves at 7:30PM. The packing slips and invoices are delivered with the merchandise. With the new paperwork system, Action has to generate three times the number of forms prior to the truck's departure.

Yet the system has easily handled the increased load. Before the changes, drivers with loaded trucks were often sipping coffee as the final invoices were coming off the printer. Today, trucks never leave late because of delayed paperwork! But cheaper/better/faster forms are only a small part of the benefits from Basic-2C.

Over the next few years, Basic-2C's continuing integration into host environments will allow rapid increase in the use of new and inexpensive technology. Already in use is an

inexpensive fax board in a surplus PC. Because of the ease of printing to a file, which is then processed by the fax server, daily credit reporting has been reduced from hours to minutes. Action developed a standard credit report, and now inquiries are answered by keying in a customer number and a phone number!

Future uses of new technology will include radio frequency terminals in the warehouse. Using the 227/MXE emulation software, interfacing to RF controllers via a PC's serial port will be trivial. At the present, Action is working on adapting their SPEED based system to Niakwa's NDM software. With NDM's ability to store billions of records, Action may never need to purge customer history files again!

In conclusion, Niakwa's Basic-2C and other software has allowed Action the best of both worlds. By keeping the best of the old, Action's computer department is able to seamlessly adapt to the new. Rather than learning new languages and training users on new procedures, the D.P. staff can focus on improving the business - which is really the only thing that matters. BC

Niakwa to Support Hewlett-Packard 9000, RISC-Based Systems Series 700 and 800

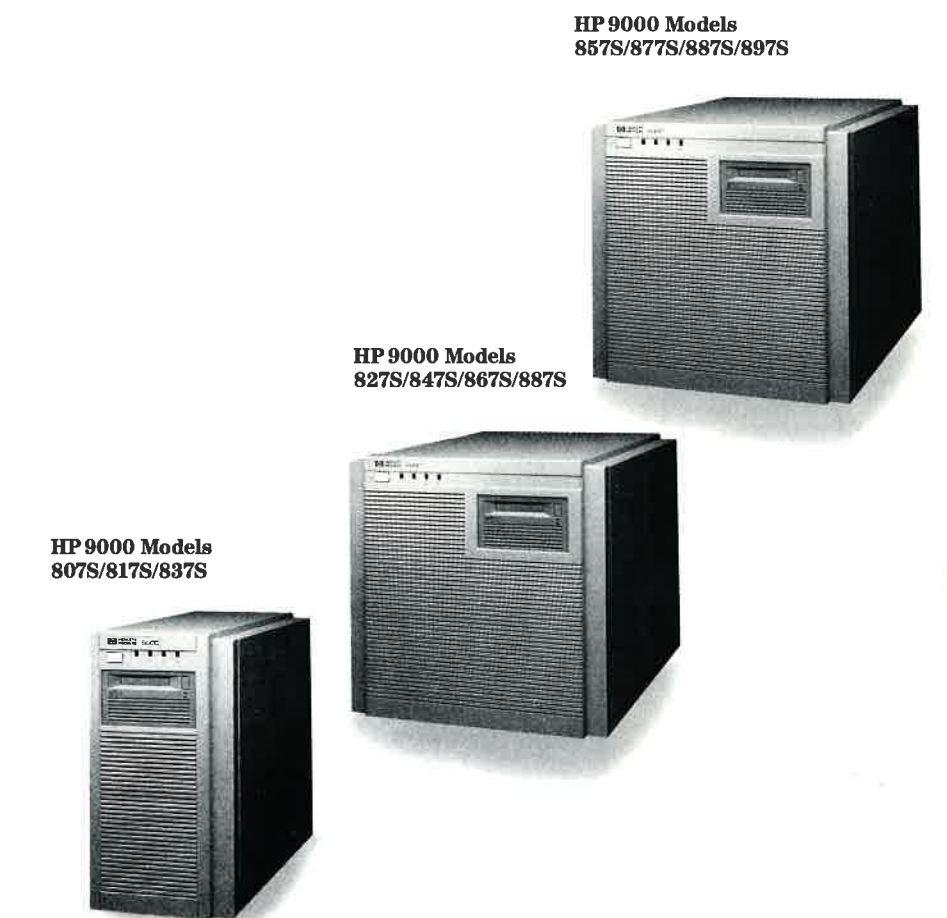
Mundelein, IL - Niakwa is pleased to announce our second addition of a RISC based platform. The port currently underway will make available Hewlett Packard's System 9000 Series 700 workstations and Series 800 business family of computers operating under the HP-UX operating system. (Hewlett-Packard's OEM version of AT & T UNIX.)

The HP 9000, Series 800 Business Server family features an open systems design, leading-edge RISC architecture, and robust business functionality. It is considered a premier commercial UNIX server, providing industry-leading transaction performance for commercial, multi-user environments.

The HP 800 Series has been specifically designed for commercial applications. HP was the first major vendor to deliver a RISC (Reduced Instructions Set Computing) based system to the marketplace, and HP is the leading manufacturer of RISC-based computers today. HP designed their PA-RISC from the beginning for commercial as well as technical applications. To deliver very high and balanced system performance, their design approach combines very high-performance chips with a high-speed, dedicated memory bus with high speed SIMM memory, and adds to it large, high-speed caches, which minimize CPU

requests for data stored in memory or on disk. The end result is Series 800 Integrated Business Servers deliver industry-leading performance - from 30.4 TPS to over 100 TPS, with a new four-processor Business Server 890 planned for fall which could reach as high as 336 TPS.

The HP Apollo Series 700 family RISC-based line of workstations are Hewlett-Packard's answer to the user who is searching for a powerful, yet cost-effective desktop system. All HP workstations include a high performance processor, a memory management unit, a



HP 9000, Series 800 Models shown. Series 700 also supported.

local area network interface and an integrated high resolution bit-mapped graphics display with detachable keyboard. HP Apollos Series 700 Workstations range in size from the Model 710 PA-RISC Workstation, a high performing entry-level color workstation, offered in a small quiet desktop package, to the advanced Model 730, which can be configured as a server, offers industry-leading performance of 76.7 MIPS, with outstanding graphics, superior networking, and standards-based operating systems. The HP Apollo Series

400 workstations are also supported under the HP-UX operating environment.

Hewlett-Packard Series 700 workstations and servers are compatible with the Series 800 family which provides a broad spectrum of business solutions. As a leading hardware manufacturer, HP has formed strategic alliances with the foremost software suppliers, systems integrators, and resellers.

HP also offers financial alternatives to help customers obtain the equipment they need now, and to upgrade in the future. BC

Niakwa Releases NDM for UNIX, Windows, and IBM RISC System/6000

Mundelein, IL - Niakwa is pleased to announce availability of the Niakwa Data Manager for Intel UNIX, Microsoft Windows, and the IBM RISC System/6000.

The Niakwa Data Manager is an Application Program Interface (API) that allows Basic-2C applications to utilize state-of-the-art native ISAM products to store data, while retaining full portability. This API consists of a set of subroutines that can be called by the application program by use of simple GOSUB' statements. The API offers the following features:

- Multiple indices
- File and record locking
- All data is stored in stand alone native files
- Transaction Start, End, Abort
- Data conversion functions are provided
- Series of data dictionary files
- Utility programs
- Special API functions

Included in the Data Manager is: The Data Manager Program Guide, the Data Manager Platform Specific Development Package, Data Manager RunTime Package, and the Data Manager Starter Kit. The Starter Kit includes everything you need to begin using the Data Manager with the exception of the native ISAM, which may be purchased directly from the respective author.

The Intel UNIX version shipped June 26th, 1992. The Microsoft Windows version, which also contains the MS-DOS version of the NDM shipped in July, followed by the IBM RS/6000 version's release in August. BC

Platform Update - Multi-User

Shared Logic Systems

Computer	Operating System
ALDOS 686, 886, 1086, 2086, 3086	XENIX 3
ALDOS SERIES 2000	XENIX V
ALDOS 400, 500, 600, 700	SYSTEM V 1000, 2000, 5000
BLUEBIRD SL/DH/TW SERIES	SUPERDOS
BULL XPS 100	UNIX V
BULL DPX/2 200	BOS
BULL DPX/2 300	BOS
BULL MICRAL 600/ix	BOS 386
DEC MICROVAX II	VMS
DEC VAX SERIES	VMS
IBM AT & 100% COMPATIBLE* 286	SCO XENIX V 286
IBM PC, XT, AT	SUPERDOS
IBM PS/2 SERIES	SUPERDOS
IBM PS/2 SERIES	SCO XENIX V
IBM 100% COMPATIBLE* 386+	SCO UNIX V/386, 486
IBM 100% COMPATIBLE* 386+	INTERACTIVE 386/ix UNIX
IBM RISC SYSTEM/6000 SERIES	AIX
NCR SYSTEM 3000 SERIES	AT&T UNIX (NCR)
NCR TOWER 32	SCO UNIX V
NEC ASTRA-XL SERIES	ASTR-IX
WANG 280	SCO XENIX V 286
WANG 380	SCO XENIX V 386
WANG APC	XENIX 3.0
WANG APC	XENIX V
WANG DX 2000 (DYNAMIX)	SCO UNIX V/386
WANG PC 300/33C SERIES	SCO UNIX V/386
WANG PC 480/25C	SCO UNIX V/386
WYSE PC 286 SERIES	SUPERDOS
WYSE PC 386 SERIES	SUPERDOS
WYSE 5000	AT&T UNIX (WYSE)

Distributed Logic Systems - Client/Server (Networking)

IBM & 100% COMPATIBLE*	NOVELL NETWARE ELS I
IBM & 100% COMPATIBLE* with MS-WINDOWS	NOVELL NETWARE ELS II
IBM & 100% COMPATIBLE* with PHAR LAP 386	NOVELL NETWARE 386
	NOVELL ADVANCED NETWARE
	NOVELL E/TI NETWORKING
	SPERRY USERNET

Single User MS-DOS

IBM & 100% COMPATIBLE*	MS-DOS
IBM & 100% COMPATIBLE* with MS-WINDOWS	PC-DOS
IBM & 100% COMPATIBLE* with PHAR LAP 386	DR-DOS

*Niakwa no longer performs testing on PC compatible systems due to the high level of compatibility of the Niakwa Programming Language in the PC compatible marketplace and the tremendous infusion of compatibles on the market.

Announcements

Administration Says Hello! and Good Bye

You may have noticed a new voice in Order Administration when placing your orders.

Michelle, a familiar voice to many of you, has left us to join forces in a new venture with her husband. In the interim, Debbie O'Brien, our Office Manager, has been manning the order desk.



Now, a new Debbie has joined our team. She is **Debbie Benson**, who is the new Order Administrator.

Debbie comes to us with extensive order processing experience. Most recently, she acted as a coordinator of fund raising activities for Ducks Unlimited, a conservation organization for water fowl and wetlands. Debbie has been on board since June 30 and is very excited to talk to all of you personally to get to know you.

The only thing she asks is that you be gentle with her until she becomes accustomed to your account. In a very short period of time she will be fully up to speed and able to handle your needs in the same manner in which you have become accustomed.

Should you have any special requirements or needs, please feel free to contact your Sales Representative, Paul Brown for Domestic Accounts or Cyndee Philyaw for International Accounts.

Thank you in advance for your patience and understanding, and join us in welcoming Debbie to the Niakwa team. BC

Editor's Note: We, at Niakwa, would like to extend our good wishes to Gary Rapp. He accepted another position within Bluebird Systems. Gary is now a Sales Representative with Record Data - a company Bluebird recently acquired. BC

Welcome...



Brian Funke joined Niakwa this past May as a Product Analyst. Brian is a 1986 graduate of Illinois State University with a Bachelor of Science

degree in Business Administration. His previous work experience includes positions at the College of Business at ISU and Pivar Computing Services, which brought him a vast array of technical experience on a variety of platforms.

As a Product Analyst, Brian is responsible for technical support, production setup, documentation, as well as other projects. Brian is looking forward to challenges for himself at Niakwa.



Frank Ehrhardt joined Niakwa as Sales Manager on May 18, 1992. With sixteen years of sales and marketing experience, and twelve years

experience in the computer field, Frank is bringing a lot to Niakwa. Under previous employment, Frank sold system solutions in a variety of markets, including distribution, manufacturing, not-for-profit, local government, and document imaging.



Niakwa is pleased to announce the promotion of **Paul O. Brown** to North American Sales Representative. Paul has been with Niakwa since November 1990,

working in the Technical Support Department, as a Senior Product Analyst.

Paul has a Bachelor of Science in Computer Science from the University of Illinois, and over 10 years of computer industry experience, helping small business and VAR's.

Feel free to contact Paul with concerns and needs, and ideas for new platforms and products. BC

Marketing Bulletin

North American

- 36 March 16, 1992
Open House At Niakwa
- 37 March 16, 1992
Niakwa Supports the RS/6000
- 38 March 31, 1992
Niakwa Announces MS-Windows Promotion
- 39 July 3, 1992
Demonstration Diskettes For MS-DOS And Microsoft Windows
- 40 July 3, 1992
Niakwa Data Manager For Intel UNIX, Microsoft Windows & IBM RS/6000

International

- 36 March 16, 1992
Open House At Niakwa
- 37 March 16, 1992
Niakwa Supports the RS/6000
- 38 Oops! We missed this number
- 39 July 3, 1992
Demonstration Diskettes For MS-DOS And Microsoft Windows
- 40 July 3, 1992
Niakwa Data Manager For Intel UNIX, Microsoft Windows & IBM RS/6000

Marketing Bulletins are mailed to Resellers of Basic-2C. If you are not a Reseller of Basic-2C, but would like to receive a specific Marketing Bulletin, please contact an authorized Niakwa Reseller, or Niakwa directly.

Winners of Windows RunTime Contest Announced

Niakwa is pleased to announce the winners of the Windows RunTime contest and promotion. Between April 6, 1992 and June 5, 1992 all Niakwa North American Developers were able to purchase a Basic-2C MS-Windows RunTime package for the price of an ordinary Basic-2C MS-DOS RunTime package.

In addition each developer who ordered a RunTime package got a Basic-2C MS-Windows development package for FREE. But that was not all, because for just ordering the Windows package, each developer was entered into two special contests.

First, a free MS-DOS MS-Windows RunTime was awarded for every 20th order placed. That means that a prize was awarded for the 20th, 40th, 60th orders placed.

Second, at the end of the contest ALL orders placed were placed in a hat for a drawing. One entry was placed in for each user of the RunTime ordered. So a developer placing an order for a 64 user MS-Windows RunTime, got 64 entries for

the contest. The winner of this contest received a 8 User MS-Windows RunTime for FREE!

The first winner of a free MS-Windows RunTime was John Cooney of Data



Frank Ehrhardt and Paul Brown selecting the lucky windows winner.

Processing Associates. When he found out that he had won he said, "Really, I have never won anything before in my life". Congratulations John, and keep selling

those RunTimes.

The winner of the 8 User MS-Windows RunTime was Max Stalnaker of Astar Computer. When notified that he was the winner he said, "I will have immediate use for it." Congratulations, Max.

Actually everyone who ordered MS-Windows were winners in this contest, because by ordering, promoting, and selling the Windows RunTime we all got the opportunity to ride on the coattails of a MultiMillion Dollar advertising campaign. Over the first few months after the release of Microsoft Windows 3.1, Microsoft will spend \$8,000,000 on prime time advertising for MS-Windows. Over the next year, Microsoft will spend a total of \$31,000,000 promoting MS-Windows. So, by just ordering the Windows RunTime you were able to cash in on a great promotion.

Even if you didn't order a MS-Windows RunTime during the contest you can still cash in on the Microsoft advertising blitz. To do so you have to do one thing, order a MS-Windows RunTime today. BC

Niakwa Announces New Demonstration Diskette Possibilities

We picked up a great idea from Data West a few months ago. The idea is this: lower the cost of sales and increase the effectiveness of your most accomplished sales people. Pretty hard to dispute an idea like that. The problem is, "How do I do that?"

If you really want the answer to that question, pay attention to this article, and open up your mind to a new way of finding and qualifying your prospects.

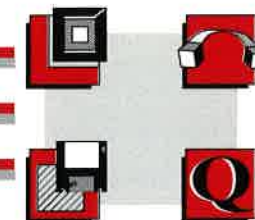
What is the most perplexing problem in sales? The answer to this question is easy, it is another question every person must ask themselves everyday. "What do I do now?" The question is often preceded by "I don't have any prospects, what do I do now?" or "I have two hot prospects, they both want to see

me the same day, they are at opposite ends of the country, what do I do now?" or "This prospect is highly technical, wants an extremely detailed demonstration and explanation, our technical support/demonstration system/whatever is already committed to something else, what do I do now?"

This question has one common underlying cause and that is the limitations we suffer as human beings. We can only be in one place at a time. We are limited in our own knowledge and capacity and frequently need assistance. Nothing, absolutely nothing gets done or happens as quickly as we want it to. This is particularly true with conditions beyond our control such as whether or not the prospect feels an urgent need to act.

The purpose of all of this preliminary discussion is to get you to open up your mind to one new idea and make the effort to make this idea work for you.

This idea is so deceptively simple that we know it can't work. But before you discard this idea, please keep this in mind, it is working for Data West, a Niakwa Reseller. Niakwa helps you achieve this goal by offering demonstration diskettes for our MS-DOS product and for the MS Windows product. We offer these diskettes with either 11 uses per diskette or 40 uses per diskette. These offerings are available at a very reasonable cost as presented in a Marketing Bulletin on the subject. If you have any questions, contact your Niakwa representative. BC



SCO UNIX Patch Now Available

Ask Andy

Q Does Niakwa support Wang 2236 terminals on the IBM RS/6000?

A: No. The hardware of the RS/6000 does not handle the native flow control sequences of the Wang 2236 terminals. Although not currently supported, DigiBOARD has informed us that a future release of their DigiCHANNEL products for the RS/6000 will provide support for these terminals.

DigiBOARD already provides support for these terminals on their DigiCHANNEL ISA C/X Host Adapters installed in Intel UNIX based platforms (refer to Tech Note #47.)

Q I am currently in the development process of updating my application to take advantage of many of the Niakwa Release III enhancements. To help me maintain a distinction from my current routines I plan to extensively use the extended number of DEFFN's available for all of my new routines. Are there any recommended range usages as was noted for the extended line number and variable ranges implemented in Release 3.20?

A: Yes. The following summarizes Niakwa's recommended guidelines for DEFFN', LINE NUMBER and VARIABLE range usage. BC

RESERVED FOR	DEFFN' USAGE	LINE USAGE	VARIABLE USAGE
Horizontal Products	'256 - '19999		
Developer Use	'20000 - '29999	0000 - 27999	A - A49 All Variable Classes
Niakwa Products	'30000 - '39999	28000 - 32117	A50 - A62 All Variables Classes
Future Products	'40000 - '65535		

The Santa Cruz Operation has recently addressed a problem experienced by some of our developers operating the Niakwa RunTime under SCO UNIX Release 3.2 version 4.0. Attempts to print "boxes" or other extended characters will result in alphabetic characters being displayed. This happens because of a change in SCO's console driver in an effort to become X/Open compliant.

A patch has been provided by SCO which contains modified console drivers to correct the display problem. Niakwa is distributing this patch with installation instructions. It is available via the Niakwa BBS, or at the developers request, via mail. The installation process involves saving the original driver, copying the new driver, and re-linking the kernel.

To download the files from the Niakwa BBS, simply follow these steps...

1. Dial (708) 634-6227
2. Enter your first and last name.
3. Enter your password.
4. Enter: "J 4" (to join conf. #4).
5. Enter: "F" (to show file menu).
6. Enter: "1" (for Menu).
7. Enter: "D" (to Download).
8. Enter filespec "SCOPATCH.*".
9. Enter the appropriate protocol information to complete the download.

The patch, SCOPATCH.TAR, is in UNIX tar format. To transfer this file from DOS to UNIX, use doscp. To extract files use the command... tar xvf ./scopatch.tar Refer to the text file 324con.txt for further installation instructions.

This patch is provided by The Santa Cruz Operation "as is." Niakwa is providing this solely as a temporary solution. SCO will address this problem in future releases of their product. BC

Technical Notes

- 42 May 1, 1992
NetWare Print Patch for DOS Tasks Under MS-Windows
- 43 May 1, 1992
Unique Network Wide #PART Values Under MS-Windows
- 44 May 1, 1992
Exception 13 Error Update
- 45 May 1, 1992
Viruses
- 46 May 1, 1992
Niakwa BBS Update
- 47 May 7, 1992
Wang 2236DE/DW Terminal Support Under SCO UNIX
- 48 May 11, 1992
MS-Windows 3.1 and the Niakwa RunTime for MS-Windows

Technical Notes are mailed to Resellers of Basic-2C. If you are not a Reseller of Basic-2C, but would like to receive a specific Technical Notes, please contact an authorized Niakwa Reseller, or Niakwa directly.

Niakwa BBS: An Update

The NBBS was designed to provide our developers with the most recent news from Niakwa on a timely basis as well as provide a method for developers to exchange information with each other. The Niakwa BBS has been on-line for over 4 months and many developers have already taken advantage of its use. The feedback we have received from you has allowed us to make the NBBS even better. Recent enhancements to the NBBS include the following:

- Availability of a series of very useful utility programs developed by Northwest Source Group (NSG) for the Niakwa Programming Language.

A solution to bring programs from the Wang 2200 to the Niakwa Programming Language that use SORT4 utility developed by Wang for use with KFAM is provided by Mellon Software.

Also added to the BBS is a new conference that contains the latest information about Niakwa Programming Language bugs and their current status or correction.

Developers are encouraged to use the NBBS. Please feel free to leave public messages to other developers on topics or issues that you feel are important.

We feel the new enhancements will allow the NBBS to become more valuable to all of our developers and give you access to the latest information from Niakwa on a 24 hour a day basis.

Please continue to use the Niakwa BBS. If you have not done so, refer to Marketing Bulletin No. 35 for instructions on using our newest support tool. BC

Using Niakwa RunTime with X Windows

Microsoft Windows has long been a popular graphical user interface (GUI) available to users in the MS-DOS world, but when it comes to UNIX, the X Window System is quickly becoming the GUI of choice for those wishing a more graphical "windowed" environment. With the release of the AIX version of Basic-2C for the IBM RS/6000, the demand for use of the Niakwa Programming Language within an X Window System has become more apparent. Although the X Window System is not supported directly by Niakwa, there are ways of operating the RunTime successfully within this powerful GUI.

The X Window System, commonly known as "X", was developed by a group of researchers at the Massachusetts Institute of Technology as an experiment in windowing systems. It has quickly grown from being a laboratory experiment into a widely accepted menuing and mouse-pointing environment, and is the basis for a wide variety of new applications, forming an entirely new market. The most current version is X version 11 Release 5, (X11R5). References and techniques mentioned below are using AIX 3.2 for the IBM RS/6000 and X11R4 with OSF/Motif Window Manager. This is not an issue, considering that the Niakwa Programming Language is character-based under AIX, and not graphic dependent.

One of the useful functions of X in terms of the Niakwa RunTime is its ability to support multiple terminal emulation windows. X accomplishes this with the program aixterm, an ansi "pseudo-terminal" emulator. When a terminal window is opened, a new shell is invoked, and a unique tty device name is assigned. For example, the first window opened has a tty name of "/dev/pts/0", a subsequent window has "/dev/pts/1", etc. This requires these names to be added to the /usr/BASIC2C/ttys file for the RunTime to determine the terminal number.

A typical ttys file should look as follows...

```

xxhft/0      {HFT screens}
xxhft/1      "      "
xxhft/2      "      "
.
.
.
xxtty0      {Serial ASCII Terminals}
xxtty1      "      "
.
.
.
xxpts/0      {X Window Terminals}
xxpts/1      "      "
xxpts/2      "      "
.
.
.
    
```

Be sure enough pseudo-terminal entries exist for as many windows that may be active at any one time. To allow 16 windows, there should be entries for pts/0 through pts/15.

Once the /usr/BASIC2C/ttys file is complete, the next step is to determine the terminal type that will be used by the RunTime. The aixterm terminal emulator can emulate two types of terminals: IBM's High Function Terminal (HFT), or a DEC VT102. Aixterm falls into the realm of using any emulators with the Niakwa Programming Language: you won't get everything to work quite right at first.

By default, aixterm closely emulates an HFT terminal, and is the easiest to configure to work with the Niakwa Programming Language. To accomplish this, set the BASIC2C_TERM environment variable as follows...

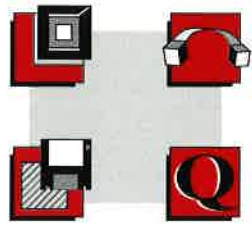
```

BASIC2C_TERM=hft
export BASIC2C_TERM
    
```

This can be entered at the prompt, or added to the global /etc/profile, or the user's \$HOME/.profile.

Almost everything coded into the SCREEN.hft and KEYBOARD.hft files will work, but there are a few minor exceptions: The default mapping of Niakwa key SF'15 is Alt-F4. Under X Windows with the Motif Window Manager, this key sequence instantly

(continued on page 14 — see X Windows)



X Windows

(continued from page 13)

terminates the active window, shell, and everything running within it. This is very undesirable for applications that might use SF15. Use the Niakwa Utilities to correct SF15 to some key other than Alt-F4. Also, certain character attributes are not available using the HFT terminal type. Only the normal and underline attributes work correctly. There is no way of displaying blinking, reverse or bright characters. Certain colors cannot be displayed either. All other characteristics function as described in Section 7.4.4 and Release Notes of the Niakwa Programming Language Platform Specific Supplement for the RS/6000.

Multiple windows can be started either by mouse, or program control. Clicking with the mouse on the root (background) window brings up a menu. The following AIX command can also be entered from an existing window or within a program:

aixterm &

The ampersand "&" is necessary and is used to launch the aixterm program as a background task, essentially freeing up the "parent" window, so that both windows are accessible. Other options are available, such as specifying colors, borders, fonts, and scroll bars. Refer to AIX Commands Reference for more details. Some options may produce undesirable results when used with the Niakwa Programming Language. For example, changing fonts will lose the box graphics characters used by the RunTime to display box tables.

An alternative RunTime terminal type is to use the Niakwa "vt100" type in conjunction with the compatible VT102 emulation mode in aixterm. To start a VT102 window, use the syntax:

aixterm =80x24 -v &

The "=80x24" parameter sets the columns and lines, as the Niakwa Programming Language only supports 24 lines on the VT100 type terminals. The "-v" option invokes VT102 emulation within aixterm.

The only advantage to using aixterm's VT102 emulation is to obtain relatively better screen attributes. Normal, reverse, and underline characters can be displayed, but bright does not work reliably. 132 column mode is supported, but the font does not change size. If 132 column mode is set, the window has to be "stretched" to 132 columns across, otherwise, data beyond column 80 will not wrap and appear to be missing. The screen font that is used is much smaller than the default "Roman-14" font used in HFT mode. The font can be modified, but box graphics characters will potentially be lost.

Keys will initially be a problem, as aixterm completely remaps the keyboard. This requires remapping most special keys with the help of Niakwa's Utilities. All other terminal characteristics for the

VT100 series are supported as described in Section 5.7 of the Niakwa Programming Language Operations Manual.

Depending on exactly how you want your Niakwa program to look, either the VT102 emulation (using Niakwa's VT100 terminal type) or standard HFT emulation should be chosen. VT102 emulation provides better attributes, but a less pleasing font, and requires remapping many keys. The HFT emulation uses a more readable font, and an already supported keyboard translation. With a little experimenting and clever programming techniques, an otherwise antiquated program can be turned into a more exciting and commercially acceptable multi-windowed application. Combined with the power of X Windows and AIX, the possibilities are endless. BC

A Correction from Craig Freeman

MEMORANDUM

TO: Harry Cohn, Niakwa
FROM: Craig Freeman, SSC
DATE: April 27, 1992
SUBJECT: DR DOS 6 Correction

My article which appeared in your April, 1992 issue of Basic-2C Connection stated that I regretted two sessions of Basic-2C were not possible using TASKMAX. That has proven to be incorrect.

The DOS SHARE command protects us against share violations and most B2C software writes as well as reads at some point in its operation. Thus, you can not have two simultaneous sessions using the same data files.

What IS possible is to share any number files that are used read-only (as with program platters) and to use separate data files for each session. Thus, I am able to have SSC's internal accounting up as a task, a copy of a vertical market package as another and a system in development as a third, etc.

Further experimentation is in order. However, the fast and easy way out I found was to make a copy of any files you need in 2+ sessions and simply redirect the BOOT file accordingly. This proved very handy when I wanted to enter live data in one task and do file look-up of reference data on another.

Thought you might want to know.

Software Systems Company
Excellence In Software Since 1975

The Back Page

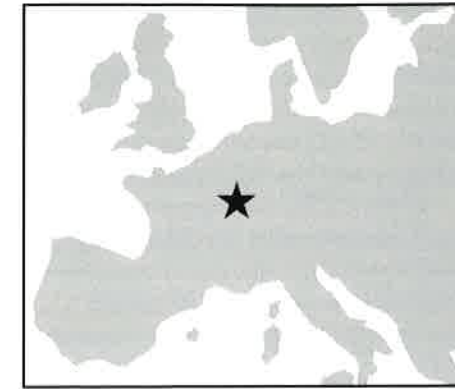
European Conference Details Released

This October, Niakwa is going to take Strasbourg, France by storm.

The annual European Conference will be held at the Strasbourg Hilton and is set for October 11 through October 13. There are many events scheduled during these three days. The schedule is as follows:

On the evening of Sunday, October 11, there is a canal cruise and welcoming cocktail reception planned.

There are events scheduled throughout the whole day on Monday, October 12, from 8:30am to 5:00pm. From 8:30am to noon, there is a General Session planned. Following that, from noon to 1:00pm, is lunch. From 1:00pm to 5:00pm, the Exhibit Hall will be open. Also during that time, there will be breakout sessions on special topics. There are three different time slots for these sessions: 1:30pm to



2:30pm, 2:30pm to 3:30pm, and 3:30pm to 4:30pm. The schedule for Tuesday, October 13, is the same format as Monday's.

There is still some exhibit space available. If you are interested in being part of this unique experience, contact

Lesslee Dort at Niakwa at (708) 634-8700. The FAX number is (708) 634-8718, and the BBS number is (708) 634-6227 (NBBS).

This conference marks the first time that Niakwa has opened the European Conference exhibit area to outside vendors.

This conference will provide you the opportunity to discuss what's on your mind with Niakwa in person. In addition, the conference is a great opportunity to network with other resellers and vendors.

For Registration information, contact Niakwa's Cyndee Philyaw. For Exhibit Area and Conference information, contact Lesslee Dort at Niakwa. Both can be reached at (708) 634-8700. The FAX number is (708) 634-8718, and the BBS number is (708) 634-6227 (NBBS). BC

6 Month Review

We speculate that it is because of the lower interest rates and the subsequent rush of real estate transactions. VARs servicing other industries are still showing generally flat sales from last year.

European Economy

It is safe to say that the recession of 1991 has hit western European countries head-on in 1992. With few exceptions, our European resellers are experiencing longer lead times to close deals, delayed decisions and generally rough going so far this year. Yet, the business is coming in, leaving Niakwa's international sales only slightly below last year.

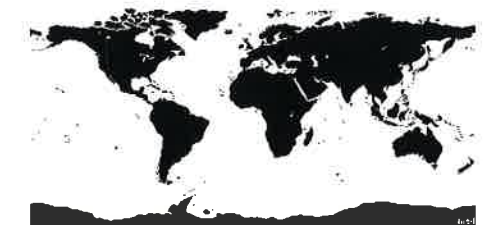
MS Windows

Few products have had the impact that MS Windows has had on the Intel-based software business. Since its introduction in 1990, MS Windows 3.0 has captured

Niakwa is at the half way point of our fiscal year, a time when we step back and evaluate how things are going. We are pleased to report overall things are going well. Our revenue and profit was on budget for the first six months, and our forecast is we will be on plan for the balance of the year. As we reviewed the first six months, we noticed several interesting trends that we wanted to share with you in random sequence.

United States Economy

Our fiscal year 1992 North American sales are well ahead of last year for the same period, leading us to believe that the U.S. economy is lifting itself out of the recession. But upon closer examination, we realized that it was only in isolated pockets. Those Niakwa resellers servicing the financial community, banks, S&Ls, etc., show strong sales, ahead of last year.



33% of our software sales and half of our Novell sales volume. We predict that it will continue to grow in market share and even heard rumblings the Microsoft may simply combine MS-DOS and MS Windows into a single product.

NDM

NDM, a product that provides interoperability between database engines, is picking up steam. An increasing number of developers are incorporating NDM with their applications, setting up a series of new releases later this year. BC

Profile

ADIFO Systems

Introducing ADIFO Systems

ADIFO, a Belgian company, was founded in 1974 by Mr. Pieter De Lille, with a handful of employees, and has developed into an internationally recognized software house with over 60 employees and more than 900 customers worldwide.

A specialized sales company, OFIDA, was established in the Netherlands and an extensive dealer network carries out the worldwide distribution of ADIFO products.

Belgium and Holland are well known for their intensive modern agriculture and animal production. So it is natural that ADIFO specialized in agrarian software.

ADIFO has developed a large library of software under BASIC-2C. Originally, most of this software was intended to run on the WANG 2200. Once Niakwa's compiler and development language came about, the same software became portable to MS-DOS, Novell, SuperDOS, and is now primarily sold under SCO UNIX systems. With the release of the latest IBM RS 6000 Port from Niakwa, this may bring new business opportunities to ADIFO.

Agrarian Software

ADIFO offers four comprehensive software packages for the agrarian field:

- APROS, an animal production software for poultry (layers, broilers, parent stock and hatcheries), pigs (sows and fattening pigs), calves, and ration calculation;
- MILAS, an integrated administration for the compound feed industry and raw materials trade, which extends from general accounting to logistics, order entry, stockkeeping and the purchase of raw materials (long and short term contracts);
- BESTMIX, a powerful feed optimization software which is a most effective support to purchase planning, quality control and production management;
- LABORAS, a software package for the management and processing of feed mill laboratory information.

Initially, BESTMIX and LABORAS were developed by SCIA, the Belgian Master Distributor of Niakwa. When SCIA decided in 1988 to withdraw from this market, ADIFO was obviously the right partner to take the SCIA products over.

All the ADIFO packages are completely tuned into each other (modular construction) in order to realize highly competitive total solutions, adapted to the specific agrarian structure abroad where necessary, and are available in several languages.



Mr. & Mrs. Pieter De Lille of ADIFO.

ADIFO is now a leading softwarehouse in the agrarian sector. This achievement results from the continuity of the software development which is largely owed to the portability of the Niakwa software.

Other Packages

ADIFO also developed other packages with Basic-2C:

- ISYBUILD for the administration of building companies (main contractors and subcontractors), metal constructors, architects and consultants;
- SIPRES for all classic administrative tasks such as bookkeeping, invoicing, purchasing management, stock control, wages administration...

ADIFO's Philosophy

The thorough specialization in a vertical market, particularly in the agrarian market, is seen by ADIFO as its master card. Therefore, ADIFO engaged many specialists with agro education or experience able to provide detailed and specialized advice and guidance to customers. Packages and organization are constantly adapted to the always evolving needs of the agrarian business on the home market as well as abroad.

Internationalization is also considered a necessity to remain competitive, as it is the only way to write-off the software development costs over a broader base.

For the same reason, ADIFO thinks that it is necessary to take advantage of the complementation of the markets of big and smaller projects. The portability of the Niakwa software is very important on that point as it offers the possibility to implement software for single user purposes on a PC, as well as for multi-user use under Novell and UNIX.

New Product Development

ADIFO continues to do new product development under the Niakwa language, which has enabled its programming resources to be dedicated to continual product enhancements and new program offerings. The ease of programming of the Niakwa language is very good compared to other programming languages. The overall quality of the programs and documentation is excellent, and the response time to support questions is quite astounding.

ADIFO's development goals are now to provide a more open system to allow for sharing of data with a wide variety of commonly used programs. For this reason, ADIFO is conducting a capability study of the Niakwa Data Manager as a way to reach the next step in their ladder to maintaining progressive software. BC