



# NEWSLETTER

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## See How They Run... Performance Comparisons

By Don Frey

Recently, we ran a series of tests using a program which simulated the behavior of commercial applications. Commercial computer applications tend to be very I/O intensive. That is, they read and write a lot of information but seldom do very intensive calculations. This type of test was a reasonable reflection of a commercial environment. The tests were not very scientific. However, they provided some interesting results.

Tests were run on a variety of different systems that we have in-house. We used an old SCO XENIX (UNIX) system. It has a 50 MHz 486 processor with 8MB of memory. The disk has a 200 MB IDE unit that is very slow.

The PCs were 100 MHz Pentiums with 40 MB memory and 1 GB hard disk drives. We have a NT Server running on a Pentium, 166 MHz with 32 MB memory and a 3 GB hard disk. The network connections were made using a Star network with a 32 bit network interface cards using wire cable.

**Some remarks** are in-order before commenting on the results. **UNIX:** The performance was skewed by the old hardware and dated version of the operating system. If the test had been run on the same hardware as the NT Server, the performance would likely be similar to that of the NT Server.

**PC to NT:** Run in network client/server mode. This reflects the *typical* network environment. **PC to PC** Run in a network peer-to-peer mode. Win 95 peer-to-peer networking was used. The peers were not as fast as the NT server. However, it does reflect the slower performance of peer-to-peer systems. **Win 95 Stand alone:** Single user PC environment. The processor was a 100 MHz Pentium. Its performance would have been similar to that of the NT server if the same machine was used.

**NT Server:** NT allows a user to run an application on the server. This test was run directly on the server with the network software in-operation. This environment would be similar to one found in a NT client/server network. We did not have other client

applications running at the time. We did this to evaluate the performance difference available by just running the same application without the network traffic overhead. The performance clearly indicates that certain programs will perform significantly better when run on the server. The benefiting programs would be file updates and large reports. **MSDOS:** A Win 95 PC was rebooted in MSDOS mode for this test. The performance is pretty poor. I would blame much of the performance on MSDOS drivers that are not *tuned* to take advantage of the new hardware and memory features available on 32 bit machines. **Comment:** We did not have a

**Test Results**  
(Times in seconds)

	Write Seq. File	Sort Seq. File	Load Index #1	Read Index #1	Update Index #1	Load Index #2	Update Index #2	Total Time
UNIX	1.0	11.0	19.0	8.0	2.0	25	4	70.0
PC to NT	.7	4.4	9.6	11.4	1.7	16.2	3.4	47.4
PC to PC	.6	3.6	13.0	13.3	2.4	21.6	4.2	58.7
Win 95 on NT	.5	1.8	3.7	2.6	.8	6.5	1.5	17.4
Win 95 Stand Alone	.4	2.4	1.4	.5	.2	4.5	1.5	10.9
NT Server	.3	.7	1.4	.7	.3	2.2	.5	6.1
MSDOS	.6	2.3	1.7	1.2	.2	47.5	17.8	71.3

Novell client/server system available for testing. However, indications are that Novell seems to perform better than NT in a client/server environment. But, according to information we have received, Novell does not allow the user to run applications on the server. This would seem to be an advantage for NT. Some applications are now being written as *Thin Clients*. Thin clients allow the user to start an application on the client, but perform the processing on the server. This action is transparent to the user. It is handled through programming.

**Conclusions.** These are my opinions. They reflect my experience, but do not include all technical considerations. **UNIX** is a fine viable system for those who seek a functional result. Performance is good, if run in a character mode. If you use it in a graphical mode, performance will begin to suffer. **PC to NT** is the fashion of the day. Client/Server is fine for interactive data entry and simple queries. However, it suffers when file and print intensive programs are processed. PC to PC is an inexpensive solution for those who have a minimal networking requirement. What is saved in cost is offset in lesser performance. Its sharing capabilities are largely limited to files and printers. Performance can be improved by running large updates and reports on the machine that has the files resident. **Win 95 on Networks** demonstrates that a price is to be paid just for being connected to the network. The slower times reflect the overhead associated with having communications in-place with the network and server. **Win 95 stand alone** is the typical single user PC environment today. Performance will be a function of the following in the order named: disk access speed and capacity; memory and processor speed. Printers also have a big bearing on performance. **NT Server** demonstrates both the advantages and disadvantages of client/server systems. You can get a big performance *kick* by running certain programs on the NT server. This is a good practical short term solution to the client/server performance problem. The downside to this is that it can be inconvenient at times. The solution to the convenience problem is the thin client approach to the software. Unfortunately, this requires a considerable programming effort. **MSDOS** is a dead issue. The benchmark just underscored its obsolescence. **Novell** is a difficult issue on which to comment. I hope they survive. I don't want Microsoft to be the only choice available to us. ☐



## 1998 User Conference Plans Underway

The 1998 Frey & Company User's Conference will be held August 9 - 11. It will be conducted at the Regal Cincinnati Hotel located in Cincinnati. The Regal is located in the heart of downtown Cincinnati. It is within walking distance of the major shopping areas, convention center and sports complexes. Several major projects are nearing completion in the downtown area. 1998 will be an exciting time to visit Cincinnati.

The theme of this year's conference is *Polishing Windows*. In 1996, Frey & Company began introducing a new family of applications designed for Microsoft's Windows 95 and NT systems. This year, the final application, CHIPS payroll, will make the transition. Now, we want to review our new family of applications with our users to see how we can refine them even more.

Over the years, we have relied on annual surveys and periodic input from users to guide improvements. This year we want to emphasize a more proactive dialogue in the form of group discussions. Sessions will be held on all three products to discuss new releases, likes, dislikes and possible improvements.

During the transition to Graphical products, we have discovered many nuances with Windows and NT. We plan to have a session dedicated to tips on how to improve the performance of systems.

Crystal Reports, the report/query tool we offer with our systems has gained wide acceptance. Because of that, we will be offering a session on Crystal Reports again this year.

Make sure to mark your calendar and start gathering your comments and suggestions for the exciting conference. ☐



## CHIPS Payroll For Windows in 98'

The Windows version of CHIPS is now under development. We have great plans for the new CHIPS product. We will be rewriting the system for Windows and adding all kinds of new features.

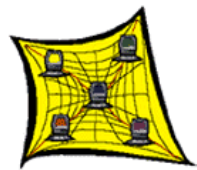
- Full Year 2000 compliance features.
- Ability to process additional pays and deductions. Currently, there is a limit of sixteen per individual. This number will be greatly expanded.
- Fields will be expanded to accommodate larger amounts. Inflation has caught up with us!
- New cost distribution system based on hours worked. Currently, we offer a percentage distribution feature that is set up in a table. The new system will analyze the hours entered and dynamically distribute each payroll. Salaried workers will have their default distribution established, then changed dynamically, as needed.
- General Ledger distribution codes will be set up for rapid allocation of G/L cost. Once a base set is created for one department, it can be used to quickly create others with just a few keystrokes.
- CHIPS will become more tightly integrated with BUCS. It will look directly at the BUCS chart-of-accounts for searches and validation.
- Improved features and calculation methods for sick, vacation and comp time.
- Additional information fields will be added for payroll and human resources purposes.

## Tips From User Support

By Mike Emmerich and Dean Eldridge

- Improved *Notes* processing and a new *Note Alert* feature will be added.
- Provision for numerous user defined fields. These can be used to tailor the system to your specific needs.
- A *Skills Inventory* capability will be added to allow the user to identify employees with special skills. When special skills are needed, those individuals can be quickly located.
- A new *Check Void* function will be added to the Reconciliation module. It will make all of the appropriate reversing entries automatically.
- The stub portion of the paycheck will be redesigned to be free form. This will make the document more versatile and less cluttered.
- ACH processing will be available for direct deposit. This will be much improved over the current direct deposit procedures currently in-use.

The product is planned for release in the fourth quarter of 1998. This is the regularly scheduled update time for this application. ☐



<http://www.drfrrey.com>

Our Internet site continues to expand as more people find it an excellent way to do business. Soon, we will be adding a *download* capability to allow users to get interim updates directly from the World Wide Web. This function will be password protected so only users currently on-support can gain access.

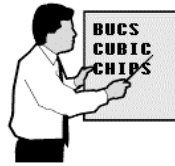
Visits to our site have continued to increase. In February, we had a sixty-percent increase in visits over the previous year. Product presentations are now downloaded at the rate of hundreds per month.

By the time you read this newsletter, we will have created a special information site for our customers who have a support agreement with us. This area will contain information about training schedules, frequently asked questions (FAQs) and software updates. Providing these resources via the Internet is a growing part of our plans for support plans. Passwords are required for access to this site.

We have begun publishing recent copies of the Newsletter on the Internet. They serve to acquaint prospective clients with an overview of our accomplishments and provide them with valuable business *tips*.

If you haven't visited us on the Internet, please do so. You can find us at: <http://www.drfrrey.com> ☐

*Print Screen Program* - It's recommended that you obtain a program that will allow you to use your Print Screen key to copy the image on the screen to your printer. With the introduction of Windows 95, we lost the ability to use the F7 key to print the screen since the screen is now a graphical image.



There are quite a few programs to choose from, many of which are less than \$30. This will enable you to fax a copy of your screen to us, to diagnose any problems and answer any questions you might have.

*Tape Backup Unit* - Many of the customers are getting a tape backup unit to backup the data files for each application they use. This saves time and eliminates the hassle and potential risks associated with multiple diskettes. We recommend tape backups because they present fewer problems than diskettes. If you are using diskettes, we recommend that you periodically replace them with new ones to minimize problems from wear. Frey & Company has an Iomega Ditto 2 GB tape backup unit. These drives are reasonably fast and inexpensive. Users who have these units on their systems can send us tapes in lieu of diskettes when we need to analyze their information. *Remember, keep going forward by backing up!*

*YEAR 2000 Compliance* - With the introduction of BUCS 97, the BUCS system is year 2000 compliant. When running a Posting Journal, you must now key in the century with the year. Before you could key in Year 98 as 98, however 1998 is now required. Note: This is only required in the Posting Journal program. ☐

## Customer Services Coordinator, New Receptionist

Kim Crissinger was recently hired and will be assuming the duties of Customer Services Coordinator. This new position has been created to aid clients with the scheduling of training, renewal of support agreements, assist with contract coordination, procurement of special forms, User Conference planning and other related duties.

Kim is a native of Wisconsin. Before joining Frey & Company, she held a variety of administrative positions. Kim and her husband live in Northern Kentucky with their two sons.

Amy Lynn Childs recently joined Frey & Company as a receptionist. She will be handling telephone, mailing and other duties. Amy is from the Cincinnati, Ohio area. Her interests are physical fitness and running. ☐

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