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All advertising and other material for publication in North Texas PC NEWS must be received by the NEWS staff by the 10th of the month prior to publication. See deadline information below.

Circulation:

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DEADLINE
Copy deadline for December
North Texas PC NEWS:
Sunday, November 10th

Meeting Dates:

November Meeting - 3rd Sat.(16th)
December Meeting - 2nd Sat.(14th)
January Meeting - 3rd Sat.
(tentative)

Submitting Articles for Publication in North Texas PC NEWS

- 1. Article Style.** Type all copy flush left without justification. This includes headings, bylines, and the first line of each paragraph. Place a credit byline (author's name) between the title and first paragraph. Leave a blank line between paragraphs.
- 2. Media.** All copy exceeding 10 lines should be submitted via the NTPCUG BBS or on floppy diskette(s) - (5.25" or 3.5" DOS formatted). If you want the disk returned please include a self-addressed return-postage-paid mailer. If you submit your article in hardcopy and expect us to transcribe it, bear in mind that we don't type so well. Most times, hardcopy-only-articles get filed in the Void.
- 3. File Formats.** ASCII text files are preferred. Use .TXT extension for ASCII files. If formatting is crucial, Microsoft WORD and WordPerfect files will be accepted. Other word processor file formats may be acceptable but only if the article is accompanied by hardcopy and an ASCII file version of the article. Word processor files create a lot of extraneous work for the editors. If the article can be ASCII-fied, please do so.
- 3. Submitting Articles.** You may use one of three methods.

- a) NTPCUG BBS (Preferred).** Log-on to the BBS and select (U)pload from the main menu. Your default file transfer protocol will be displayed. If you want to change your default protocol, use the (P)rofile option. Once you have set the file transfer protocol, select the (A)rticle option from the upload menu. You will be prompted for the filename to upload. Enter the filename (don't use drive or path name). The BBS will prompt you to begin the file transfer. (Refer to your communications software manual for instructions on transferring files.) After the file transfer has been completed, you will be prompted to, "press any key to continue..." You will then be prompted for a one-line description of the file. Enter the description. To exit the Article Upload Menu press ENTER until you get back to the Main Menu. (OPTIONAL - Send a BBS mail message to Douglas McQuaid regarding your submitted article.)
- b) Snail Mail (a.k.a. U.S. Postal Service).** Put the article on a floppy diskette and mail it to: 10429 N. MacArthur, #360, Irving, TX 75063
- c) SneakerNet.** Track down one of the editors at the monthly meeting and give them a diskette with the article on it.

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Happy Thanksgiving!

Program for November _____ Timothy Carmichael _____

9:00 AM - 10:00 AM **Micrografx Introduces Windows Draw**

Micrografx, Inc.

Darryl Worsham, Central Region Sales Mgr.

Windows Draw has just been released, and it offers a full-featured drawing package at low cost. The interface is very easy to learn and gives continual visual feedback during operations such as rotate and reshape. Windows Draw includes Bezier-curve editing, outline fonts, and special effects such as text on a curve and blending. The Windows Draw ClipArt Manager provides access to more than 2,600 clip art images provided, and is compatible with the other 15,000 Micrografx ClipArt images that are available. There will be a drawing for free products. *

10:00 AM - 11:00 AM **FoxPro Version 2.0**

Fox Software

Walt Kennamer, Chief Executive Officer

FoxPro 2.0 represents the state of the art in event-driven, object oriented Rationale Database Management Systems software. The built-in GUI allows multiple windows, and the code generator makes it easy to build event-driven applications. The new Rushmore query optimization and compound indexing features have won much praise. The capabilities of FoxPro 2.0 will be demonstrated and your questions will be answered regarding using and implementing Fox in your environment. There will be a drawing for free products. *

11:00 AM - 11:30 AM **NTPCUG Business Meeting**

1:00 PM - 2:00 PM **Accounting Vision/32 for OS/2**

Intellisoft, Inc.

Jon R. Barcellona, President

Come see a demonstration of the Intellisoft full suite of high performance accounting software modules for 32-bit OS/2 Presentation Manager. Key features include full support for LAN operation, multi-tasking, Multiple Document Interface (MDI), Dynamic Data Exchange (DDE) with other applications such as spreadsheets and word processors, image storage and retrieval, full implementation of SAA user interface guidelines, and International Language and Currency conversion support.

* Tickets for each drawing will be given out from 10 minutes before until 15 minutes after the start-time of the meeting to attending NTPCUG members who show proof of membership.

PREZ SEZ

Surveys

The North Texas PC User Group's membership will have undergone two demographics surveys by the time this column is published. The first survey is our usual October survey. It is collected by having those members who attend the October meeting fill out a questionnaire sometime during the day.

The second survey is being conducted under the auspices of the Association of PC User Groups. We are one of five user groups selected for the survey. In early October, I selected 600 members at random from our membership database and mailed a set of mailing labels to APCUG.

For those of you who weren't selected, the survey is computer based and comes on a 5 1/4 inch floppy diskette with a return mailer. When the diskettes are analyzed, we will receive the results. It will be interesting to see how the results compare to the survey of those people who attended the October meeting.

Post COMDEX Announcements & Rumors

The November meeting will follow fall COMDEX. This trade show is where most of the major hardware and software announcements are made. As I write this, Andy Oliver and Reagan and Connie Andrews are planning to attend. The meeting following COMDEX is always interesting because it usually give the

The Adventures of PC Tech

Chapter 8

by Ben Thar

Mary decided to give the computer users a short class in taking care of their hardware. Next month, maybe she could give a lesson on the how software works. The class outline follows:

PC Literacy Class for end users at Freshman Corporation

- 1) A personal computer is a semi-delicate piece of electro-mechanical equipment. If abused, it will fail.
 - a) Do not beat on the keyboard.
 - b) Do not spill drinks on the keyboard.
 - c) Do not bump a p.c. with a hard disk drive in it. This would include moving it while it is on.
 - d) Once you turn it on for the day, it is generally a good idea to leave it on for the rest of the day.
 - e) Do not stick foreign objects in the floppy disk drives.
 - f) A mouse is a pointing device, not a Khrushchev shoe for pounding on a desk.
- 2) Floppy disks are storage media, or a place to keep your data. If you are concerned about having your files when you need them again, then be careful with the floppies.
 - a) When not in the p.c., keep diskettes in their jackets.
 - b) Do not touch the disk surface. This includes putting peanut butter and jelly on them.
 - c) Do not leave the disks close to a color monitor or a telephone.
 - d) Avoid carrying diskettes by themselves when static electricity is high, such as the winter months and in carpeted areas. A good zap to your disk or p.c. could render it unusable.
 - e) Keep diskettes away from dust and smoke.
 - f) Don't fold or bend diskettes.
 - g) Make sure that you are using the correct density, either DOUBLE or HIGH/QUAD for your disk drive.
 - h) AVOID MAGNETS. A magnet can destroy the information stored on your diskette. Watch out for magnetized scissors, and those cute little paper clip holders with magnets in them.
- 3) Save your work often. In case of a failure, power or

computer, you will hopefully only lose what you input since your last save.

- a) If it's very important work (like you'd get fired if you lost it, or at least yelled at) try saving it in two places. If you are working off of a hard drive, save your work to a floppy disk as well. If you are working off of floppy drive, save it to a second floppy. And, if you are on a network, make a second copy on a local disk.

Mechanical equipment will fail. As a PERSONAL computer user, you are responsible for the equipment and for your data produced on the equipment. Networks generally have a timed tape backup so everything can be saved nightly.

- 4) Read your documentation. Most questions are answered there.
- 5) Do not open up the computer to try to fix a problem. The MIS staff is paid and trained to do this. If we make it look easy, it's only from doing it many times. If you have questions, please ask. I am in a service department of the corporation. My job is to make sure that the hardware and software helps you do your job.
- 6) Printers are also delicate devices.
 - a) Do not stick, poke, prod or otherwise abuse your printer.
 - b) If the paper jams and you can not get it out easily, call an MIS technician.
 - c) Don't rip the paper from your dot matrix, you could pull the printer off on the floor.
 - d) Don't feed labels through a laser printer unless the box specifies LASER LABELS. If you do, we have to get out our fishing, sticking, prodding, poking tools and try to get them out.
 - e) If the print starts to fade, becomes uneven, or has streaks on the page, the printer probably needs cleaning. Call a technician.

If you exercise caution and care, the personal computer and all of it's associated peripheral equipment, like the printer, will stay operational so that you can do your job. If it breaks, you will be down for the length of time that it takes to fix, find a spare part, or replace the uncooperative item. We do not have a warehouse of computers, hard drives, or printers, so you could be incapacitated with regard to your computer work for a day or two. Call me with problems, I will be glad to help.

Mary Margaret, PC Tech

class dismissed!

■

Prez Sez continued

entire industry a vision of what will happen in the next year.

Elections are coming

During the month of November, Andy Oliver, President-Elect, and his committee will be considering candidates for the office of President-Elect and Board of Directors for 1992. If you would like to nominate someone, please contact Andy.

Membership

As of the first of October, our membership was exactly 1,600. That's a new record for us. As most of you know, when you membership comes up for renewal, you get a copy of your database record and a letter from the President to renew. With 1,600 members, it is easy to figure out that there are now more than 100 letters going out in any given month.

By the time you read this column, I'll only have December letters to sign, stuff, and stamp. If Andy Oliver seems a little tongue tied at a NTPCUG business meeting; it's all that glue left over from licking those envelopes and stamps.

Jim Hoisington

■

What is Multimedia?

Part III

by Bernard F. Mayoff

Audio

Sound, or audio, can be stored in two basic ways, as an analog signal or in a digital format. The audio on records is stored in an analog format. The signal is stored as a continuous flow of changes in intensity and frequency. Most magnetic tape recordings are also analog. Analog techniques are very efficient at storing a great deal of information in a limited amount of space. Videodiscs use an analog technique for storing two tracks of audio next to the video signal. The disadvantage of analog recording is the way it is reproduced. If you copy a tape, the copying process involves reading the analog signal and rewriting it. Since the signal is a continuous flow of changes a certain amount of crispness is lost in making the copy due to the limits of equipment.

If a copy is made of a copy (known as a third generation), even more crispness is lost. You may have noticed this same phenomenon when you've made a copy of a copy on a xerographic copier.

Just as animation is a technique to make us think that we are seeing full motion, techniques are used to make the most of the sound tracks available on a videodisc. We'll talk more about the video on videodiscs later. For now just remember that a videodisc player can only read from one area of the disc at a time, just as a hard disk can. But a videodisc player can read the video and the sound tracks simultaneously.

Just because all the tracks pass under the videodisc player head, though, doesn't mean that all of the signals must be processed. The video or either of the sound tracks can be selected. For a movie all three tracks would be played. For an interactive video presentation, or a multimedia presentation, the programmer can select just the tracks needed at a particular time. Sound can be recorded on one track in English and on the other track in another language. The user can select the language they will hear while watching the video. The sound also can be used by itself. One sound channel can be recorded with words, phrases, music, sound effects or any kind of sound clip. The sound can then be played while the user is seeing only computer generated graphics. This provides a way to greatly extend the life of a videodisc or to display updated images for portions of a presentation.

Playing analog audio as part of a multimedia presentation requires a computer controllable videodisc

player, or a computer controllable VCR, and appropriate amplifiers, speakers and headphones. The player may be controllable through an asynchronous connection (a COM port), through an IEEE-488 interface adapter, or through a higher function card such as the IBM M-Motion card.

Digital Audio

If we could take sound and somehow process it into a string of individual bits, we could make perfect copies every time. After all, a bit is either on or off. Every time we make a copy the output bits are either on or off; no crispness is lost, no matter how many generations are created. If we are transmitting the data, we have the same advantages. The quality is preserved no matter how many intermediate nodes exist. Because of the high quality possible, CDs use a digital recording technique. The high density that laser recording and playback make possible permit the digital signal to be stored in a reasonable amount of space. The new Digital Audio Tape recorders are attractive because they offer these same quality advantages. Interesting editing of digital sound also could be done by modifying, deleting, inserting or copying bit strings.

There are several challenges in digitizing sound. It is normally important to digitize the sound in real time. It must be stored as it occurs if you are recording a live event, or as it is being played back if it is prerecorded. The algorithm used to digitize the sound must be good enough to preserve the quality of the original sound so that it can be played back with acceptable quality. The sound must be recreated fast enough so that it can be heard at normal speed, not too slow and not too fast. And it must be stored in a reasonable amount of space.

Many techniques exist today for digitizing sound, each tied to a particular hardware and/or software approach. MIDI is a technique for encoding music in a highly compressed digital format. The Soundblaster card digitizes sound that can be played back through the card, or, at much lower fidelity, through a PC speaker. The IBM M-Audio Capture and Playback Adapter™ (ACPA) is a very high quality sound digitizing card. The ACPA can also reproduce MIDI music. The ACPA stores sound in a highly compressed format at a choice of qualities. What IBM conservatively calls voice quality sound is stored at about 5,500 bits per second (about twenty-five minutes per megabyte of disc space). Music quality is stored at 11,000 bits per second. Stereo sound takes 22,000 bits per second. An even higher quality is available for unusually demanding applications.

Playing back digitized sound always requires software. Playing back high quality digitized sound

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requires a hardware device, as well, to regenerate the sound, and of course a device with the capacity to store the sound and read it at acceptable speeds is also necessary.

Full motion

Computer generated animation takes advantage of the fact that a series of still images changing as slow as fifteen frames per second could simulate acceptable motion for some applications. This frame rate can be generated, in short bursts, by most computers reading a series of images from a hard disk or even a CD-ROM. That is how the animation is done in the Mammals product mentioned earlier. It is also how the "film" of the squirrel is done in the Storyboard-Live! demonstration that many of you may have seen. No additional hardware is needed to display this type of motion picture, although a CD drive is necessary if that is where the material is stored. We discussed the techniques for creating the images when we discussed scanned images.

Computer based animation isn't comparable to the full-motion video we are used to seeing on television and in movies. Incorporating motion pictures to a presentation can dramatically increase its impact. This discussion started with an introduction to the IBM Infowindow Touch display introduced in 1986. A reason for the success of the Infowindow is the quality of video image that is produced on the display, and the sophisticated control of the videodisc players that it could achieve. The PC or PS/2 graphics took advantage of all of the capabilities of the system, and a video signal could be passed through and shown on the screen simultaneously.

Six years is a very long time in the PC world, and this is true for video technology as well. The Infowindow is being superseded by newer technology with even better resolution and more flexibility such as the IBM M-Motion™ Adapter. The M-Motion card accepts a video signal and displays it on any PS/2 display. The video can be displayed in a window or full screen. Up to three independent video sources can be displayed at the same time through a time slicing technique. The M-Motion card can also digitize images in real time to capture a still or freeze frame, either for temporary display or to save on a storage device. Most of the time, computer generated images and text are viewed on a monitor attached directly to the system, but sometimes it is advantageous to record the output to a VCR or to display it on one or more TV monitors. Although the name hides it, the IBM Video Capture Adapter is also an output device. It has the ability to pass a video signal through to a TV monitor or recorder and can superimpose computer generated or stored graphics and text on the image. Of course, if no video signal

is present, then everything being displayed will be the computer generated material.

To provide full motion video as part of a presentation, it is necessary to install a card that can transform the video signal to one that can be displayed on the computer monitor, and to have a device that provides the video signal. Typically, the video source is a videodisc player that can be controlled by the computer. Most home videodisc players are not equipped with a computer interface. Controllable videodisc players are manufactured by Pioneer, Sony and others. The computer can tell the player when to play, the speed, which audio channels to use, even forward or reverse. And it can tell the disc player what frame on the disc to start with.

If you are watching a movie you expect to watch the entire movie from beginning to end, in sequence. You might fast forward or backup, but you don't expect to jump to a specific location almost instantly. You also would like the movie to be contained on as few discs as possible. With interactive video the requirements are different. If you are looking for information on tuning up a car you expect to be able to go instantly to the right place on the disc, in fact, you expect the program that accompanies the disc to have an index of everything you might be interested in that is on the disc.

Because of these different requirements, different methods of organizing videodiscs exist. Movies are recorded on a disc in a fashion similar to a record, in one long spiral (though the spiral is followed from the inside to the outside). Since the outside of the disc is longer than the distance around the inside, more video can be placed on the outer portions of the disc. The important thing is that the same amount of material always moves past the disc head in a given amount of time. This is known as Constant Linear Velocity. The advantage of this technique is that it maximizes the amount of material that can be stored on a disc. The disadvantage is that it is very difficult to seek to any specific frame since each frame occupies a different amount of space on the disc.

The other technique for recording on videodisc is similar to the way information is stored on a magnetic disc. The disc is divided into concentric circles and each circle is divided into sectors. This makes it possible to seek directly to any specific frame and to play until a specific end frame is reached. Since the same amount of information is stored on the short, inner tracks as on the long, outer tracks, it is not possible to store as much information in this technique, which is known as Constant Angular Velocity. Most programmable videodisc players will handle both CLV and CAV discs.

There are some programmable videotape players on the market, and even some that place indexing information on the tape so that a computer can direct the

player to move to a certain location. The advantage is the ease with which tapes can be created and duplicated. The disadvantage is that tape is not a direct access device. It is still necessary to pass all of the intervening tape past the head to get where you want to be.

If we digitize video we can realize the same advantages as digitized sound, better reproduction and better editing, and the same disadvantages, greater storage requirements. The challenges of digitizing in a reasonable amount of time and playing back in real time are even more formidable than for sound, and the storage requirements can be huge. For digitized video to become feasible, compression techniques must be developed. The most well known technique today is Digital Video Interactive (DVI). DVI requires hardware assists for both the compression and decompression. Cards, known as ActionMedia, are available from Intel and IBM to provide these hardware assists. Even more advanced techniques are being developed by the International Standards Organization, and versions of the ActionMedia cards should be able to support these algorithms. The advantage of an ISO standard is that material should be usable across a variety of manufacturers, and manufacturers will be able to produce a variety of products optimized to different market segments. The ISO standard is being developed by the Motion Picture Expert Group within ISO and is known as the MPEG standard. First, the MPEG technique takes a frame and determines the difference between it and the next frame. Only the difference must be saved in order to reproduce the second frame. Then the difference between the second and third frame is determined and saved in order to be able to reproduce the third frame, and so on. Full frames are stored frequently so that you can seek any place within a presentation and see a whole picture without any significant delay. More advanced techniques within the MPEG standard allow for minimizing the difference information that must be stored, and still permit all of the functions you are used to on a VCR such as fast forward and reverse, and for keeping sound in sync with the pictures. For a very readable and complete explanation of the MPEG standard see the April, 1991 issue of Communications of the ACM.

Touch

We've all come to take the keyboard for granted as the natural way to interact with a computer, and for many of us a mouse has become just as natural. We don't think about the effort that went into learning how to use them until we have to teach someone new how to use a keyboard or a mouse. Pointing and touching are among the first things we learned to do as children and we really don't remember ever

Painting with the PC

Another in a series.

by Neil Berkowitz

Publisher's Paintbrush

For the ultimate in paint programs, Publisher's Paintbrush by ZSoft is in a class by itself. It has more capabilities than any other PC paint program currently on the market. A Windows based program, it takes advantage of all of Windows features as well as adding new features to the ones ZSoft includes in their non-window paint programs.

This program is designed for more than the casual artist. Publisher's Paintbrush has the basic drawing tools, but goes far beyond this. There are tools to process scanned images, tools to compensate for individual printer variations, and tools to adjust the display for monitor differences. The overall effect is

learning how to point. For some applications, especially multimedia applications, pointing and touching may be the ideal computer interface.

The Infowindow was one of the first successful touchscreen devices. It has a real glass screen, not a plastic overlay, so clarity is preserved whether you point with a finger, a stylus, or a ballpoint pen. It can detect where you are touching the glass to within a quarter of an inch. It can provide visual and audio feedback to let you know that your desires have been recognized. The next generation of touch devices must meet all of these same requirements and it would be nice if it could do it on a standard display.

Two new touch display techniques are available today. Companies like Elographics can take almost any existing display and modify it to be touch sensitive. With the addition of an adapter and software, the display can be an alternative or a complement to a mouse. The other alternative is the brand new IBM 8516 Touchscreen display that IBM has shown at COMDEX and PS/2 Forums for the last year or two. The product was finally announced in June. It plugs into the mouse connector on a PS/2 and a mouse can plug into the display. Not only can the display detect where you are touching it, it also can detect how hard you are touching it.

Bernard

▲

to achieve as perfect as possible means to insure that there are no surprises at any level of image processing. ZSoft has even included a test pattern to insure that the movement of data between scanner, monitor, and printer series does not produce distortions in pictures. This test pattern can be scanned in to calibrate the scanner. The test pattern can then be printed and the printed copy rescanned to calibrate the printer. The compensation parameters can then be saved in files for future reference. ZSoft is dedicated to superior reproduction. They show this by offering advice like warning the user to recalibrate scanners and printers at periodic intervals as they warm up.

Being Window's-based gives Publisher's Paintbrush the advantage of the Window's environment. Window's memory management provides access to large files which is not available using DOS. This makes it possible to manipulate even the larger files of 5, 10, or even 15 megabytes even when the hardware only has a fraction of the memory. Problems of hardware support are also reduced. If a Window's driver exists for the particular piece of hardware then Publisher's Paintbrush has access to the hardware. There is no problem about whether or not a monitor is supported, since all the user has to be concerned about is whether or not a Window's display driver exists. Other features of Windows are well utilized. Multiple images can be simultaneously viewed by opening multiple windows. Different perspectives of the same picture can also be viewed in the multiple windows. The palette, toolbox, and brush size all occupy windows, all are moveable and can be resized.

ZSoft also provides an abundance of non-window features. The standard functions exist to draw shapes, lines, and text. The basic abilities to cut, delete, and copy shapes also exists as do the basic filtering capabilities of smoothing, blending and tinting parts or all of a picture.

All of the basic features are easy to use and are intuitively obvious. But this is just the start. For the more experienced operator, capabilities are provided to customize the filtering parameters. This is beyond the needs of the basic user. As ZSoft states in their manual, "To get the results you expect you should have knowledge of digital image processing and mathematics." Publisher's Paintbrush has a few unique features worthy of mention. The most unique feature is the ability to copy from one picture to a second. Like other paint programs, the operator can cut out a shape and save it. The shape can then be pasted onto a second drawing or back into the first or used as a tile pattern as in Deluxe Paint. Publisher's Paintbrush provides an additional feature called cloning. By marking two points in the same or in different pictures, the user can use the brush to paint

everything under the brush in the original location to the second. This is the easiest method I have ever seen to copy parts of one picture into another. Using pictures of President Bush and Sylvester Stallone as Rambo, it was simple to mark points on the necks of both individuals then paint Bush's head on Rambo's body. Another nice feature was the use of 24 bit color. Since Publisher's Paintbrush can work in a 24 bit palette, the complications of using colors not common to both images was all but eliminated.

The second extremely useful feature unique to Publisher's Paintbrush is the ability to view multiple copies of an image in different sizes. A small window can be constructed at very high resolution for fine manipulation while a larger window at normal resolution can be viewed to see the overall effects of the operation.

The program has one minor deficiency, the limited ability to rotate the picture. A tool exists to grab part of the image and stretch it, rotate it along the axes, and to tilt it, but an angular rotation is impossible. While not enough to make this product undesirable, it is interesting that with all the other capabilities in the program, this limitation exists. It is all that much more interesting since DeluxePaint has had this feature for years.

The only major problem with Publisher's Paintbrush is a direct consequence of its versatility. The program will gregariously consume whatever resources exists. For a large 24 bit per pixel picture it is possible to need 25 meg or more of memory. In Windows terminology this translates to eight meg of internal memory plus a very fast hard disk. Rotations, blending, and palette conversions require large amounts of processing power. Even running on a 20 megahertz 386 with five meg of memory, the sluggishness of this program is definitely noticeable. The speed is more reminiscent of an old XT class machine processing a large spreadsheet than it is of a 386 class machine. The program begs for a 33 MHz 486 with 32 meg internal memory and a very fast video driver.

At the present time Publisher's Paintbrush is the Cadillac of paint programs. If you have the processing capabilities to use this program, there is nothing better currently on the market for picture manipulation on the PC. It is easy to use, makes manipulation of existing pictures an easy task, will not outgrow the user, and currently has no equal in the field of picture manipulation. The only program that compares is Photoshop, which can only be found on the Macintosh.

Neil

■

PacificPage PE and XL combo delivers speed, Slashes waiting in PostScript on H-P IIP & III's

by Reagan Andrews

Instant popularity of Hewlett-Packard's LaserJet IIP probably surprised even Hewlett-Packard. Discounted prices below \$1,000 put the IIP well within reach of small businesses and serious home users. Sales of the inexpensive laser printer zoomed after its introduction in 1989.

One major, and quite pleasant, surprise for users was the "low-end" Canon-powered LaserJet's output quality — excellent and somewhat sharper than the original LaserJet II series.

As good as the IIP was, though, there was lots of room for improvement.

First thing I did after opening the H-P IIP shipping box, installing a toner cartridge and running some prints was start shopping for additional memory to supplement the H-P's delivered 512K. Had to — found I couldn't print a full-page bitmapped graphic (even slowly) without more memory. Bought a Pacific Data Products 2M board. Next was realizing that I didn't have a large enough hard disk to hold all the printer fonts I thought I needed. Wanted PostScript. Pacific Data Products' PacificPage PE PostScript interpreter cartridge solved that problem. Excellent. That was a year ago.

What more could I ask?

Anyone who has ever sat just killing time, reading, doodling, pacing, twiddling their thumbs, etc., etc., etc., while waiting for a full-page PCX or TIF graphic to come out of their laser printer knows the answer. Speed. Even with a good print spooler, Graphics on a typical laser printer can test anyone's ability to sit and do nothing patiently.

Enter Pacific Data Products yet a third time — with the PacificPage XL.

The PacificPage XL is a RISC-based accelerator board that works in conjunction with the PacificPage PE PostScript interpreter cartridge. Heart of the XL is an Intel i960 RISC processor that is optimized for PostScript graphical calculations and comes with 2M of additional printer memory. It slips easily into one of the H-P's two memory slots and speeds graphics considerably while remaining quite "transparent" to the user. Pacific Data Products says it is designed to speed graphics printing in H-P LaserJet IIP, III, IIID and IIIP printers.

PacificPage XL works as advertised.

The PacificPage XL I reviewed for this article came with the latest PacificPage PE cartridge (Version 4.1) and was essentially a plug & play installation. Remove the back of the IIP, slide the PacificPage XL board into the upper memory-board slot, close the back cover, plug in the PacificPage 4.1 cartridge and print. That easy.

Combination has some very nice improvements aside from speed, however. Users with Bitstream's "Speedo" font outlines can download them to the printer for use just as with Type 1 and Type 3 PostScript scalable font outlines. The package I received also came with a modified version of Bitstream's FaceLift package and the font outlines corresponding to the Bitstream fonts included in the PacificPage PE cartridge. This allows production of screen fonts for Windows and (now) WordPerfect 5.1.

This is a matter of some contention for me. I prefer the quality of the Bitstream printed fonts over a number of the Adobe PostScript fonts, but equally prefer Adobe Type Manager to FaceLift which is harder to make work well and has some unpleasant surprises for the unwary.

Speed is the main thing, though, in the XL

It does speed graphics printing. I used two items for speed comparisons -- a stock Arts & Letters clipart sample illustration, ARTMAN, and the Ventura Publisher sample page SCOOP. The A&L illustration was printed via the Windows 3.0 A&L program in native GED format to the H-P IIP in PCL (native) mode and to PostScript mode (PacificPage PE) without the XL board installed.

The ARTMAN file was also exported as an encapsulated PostScript file (.EPS), a .TIF bitmap file, and as a .CGM file. These latter examples were printed via Ventura Publisher 3.0 (GEM) in DOS both with and without the XL board, and in Microsoft Word 5.0 both with and without the XL board.



ARTMAN, shown here for illustration, wasn't chosen for its artistic merits. It appears reproducible in this newsletter, is complex enough to be a good test, yet simple enough to quickly display significant flaws in interpretation. Other than very quirky CGM output, the PacificPage combo did a very nice job in terms of quality and reproduction of the graphic file. Don't think the strange CGM output was a function of possible PacificPage flaws. Really think its a problem with *Ventura* and *Arts & Letters'* CGM export/import filters.

Results were very interesting

An initial "confession" – all I tested were single-page files, so program and printer overhead may actually diminish impact of the XL's potential for graphics printing acceleration in the tests I did. I've never liked waiting for printer output and the thought of multi-page bitmapped tests was more than I could tolerate.

My first "experiment" was with a full-page .TIF bitmap of the *ARTMAN* file. I remembered my shock the first time I tried a full-page bitmap on a H-P LaserJet II and thought something was wrong with the printer. *ARTMAN* was no different. I knew that I'd have to wait quite a while for the page to print

(see "experiment" above) and wasn't too surprised when it took 16 minutes and 48 seconds to emerge from the IIP without the PacificPage XL installed.

After installation of the XL board, this time dropped to six minutes and three seconds. Impressive.

A series of *ARTMAN* versions were printed without the XL. Fastest was *ARTMAN* in its native .GED format printed in HPGL (native Hewlett-Packard mode) through Windows 3.0 at 150 seconds. A CGM version finished in 194 seconds in *Ventura* 3.0, and a standard .EPS version in 258 seconds. Since the XL board doesn't affect the IIP in native H-P mode, I wasn't surprised to see the HPGL mode at 152 seconds after the XL was installed, as advertised.

Printing of the .EPS and .CGM files showed most improvement after the XL was installed and the PacificPage PE 4.1 cartridge inserted to put the IIP in PostScript mode. *ARTMAN.EPS* came through in 95 seconds in *Ventura* and 89 seconds in A&L through Windows. *ARTMAN.CGM* blasted through in 75 seconds, and just as in HPGL, was totally unlike the original file in A&L.

Last set of tests were *SCOOP* running in *Ventura* 3.0. In HPGL, *SCOOP* printed in 135 seconds, and in PostScript, 253 seconds without the XL. *SCOOP* zipped through with the XL installed in 64 seconds.

Printed graphics quality was excellent. I was unable, with the samples above, to see significant differences between the output from the PacificPage PE 3.1 cartridge and the new version (4.1) from Pacific Data other than a slightly better rendition of shading in the newer cartridge.

Speed comes at a price

Combination of the new cartridge and PacificPage XL board lists at about \$995. I'm sure that local discounting will drop that price somewhat. Remembering that the XL board contains 2M of printer memory in addition to the i960 accelerator CPU makes the price a little less steep than it might seem.

Is it worth it? It does do what it advertises and gave me a roughly 3:1 speedup over the PostScript cartridge alone on graphics. Pacific Data doesn't say that it will speed up text printing appreciably, and it doesn't. But, for a user with regular need to do a lot of graphics printing it probably is well worth the cost.

If you aren't pushed for time, you'll probably decide on the cartridge alone. Either way, I'm sure you'll find benefits of sharp, well-executed PostScript from the LaserJet IIP and III series a welcome addition.

Reagan

▲

The Variety Store



Reagan Andrews, Ph.D.

(A personal view of new or unusual hardware, software, and applications for IBM small computers and compatibles.)

Sitting on pens, CPU chips & GUI's Waiting for the big show to start --

This is supposed to be the year of the LAN. Also, the year of the Pen-based notebook PC. It hasn't been called the year of UNIX, yet.

By the time you read this, we'll know what the year was at COMDEX/Fall '91, but it won't be in this column.

Why? I'm writing this well before COMDEX and all the attending glitter and marketing hype that pervades Las Vegas, Nevada, during the giant computer show. There are some major questions about the show itself.

First question is how many will attend COMDEX this year in the middle of a recession, industry consolidations, layoffs and other cutbacks. Almost every room in Las Vegas has been booked for months in advance of the October 21 - 25 meeting, but that doesn't mean they'll be full. Attendance may be a good indication of the PC industry's health and we'll be looking for real crowds -- or absence of crowds -- and long queues for shuttle buses and taxis.

CPU wars may be biggest news at this year's show.

Intel is sweating now with some real competition at the 386 level. AMD refused to "announce" (publicly) their 386 clone chip last year, but all the media were claiming the AMD chip was "only days away" during COMDEX.

This year, Chips & Technologies announced their 386 and super 386 chips a couple of weeks before COMDEX, blunting the edge somewhat. C&T announced a full line, including 387 coprocessors and a series of non-pin compatible 38605SX and DX chips claimed to have 30% - 50% greater performance

at equivalent clock frequencies. These latter chips may take some wind out of the 486 sails being set by Intel.

C&T looks like they are doing for the 386 what NEC, AMD and Harris did for the 8088 some time ago. That is, C&T is able, with much newer semiconductor technology, to make faster and/or more efficient CPU chips than Intel's original designs, using older technology, allowed.

Not heard from, but rumored to be waiting in the wings for the right time to announce are Cyrix and NewGen. "Super" 386 chip sets from NewGen have been rumored for at least

a year and were described as extremely high-speed sets that will also threaten the 486 performance claims from Intel.

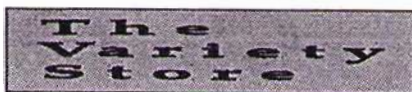
Intel a moving target, though

Intel cranked up the speed game a couple of notches with announcement this month of their dual-speed line of CPU chips, including the 33/66 486 chip that runs at 33 MHz on the outside, and 66 MHz on the inside. Intel also announced that they have solved the testing problems with the "true" 50 MHz 486 chips, and these are shipping now.

If you haven't been watching over the past month or so, let me remind that Intel has become very price conscious of late and has dropped their prices across the line. Might have worked -- *Wall Street Journal* reported that Intel's profits rose 17% during the quarter.

Just to keep their OEM customers rattled, Intel has also announced plans for direct sales of upgrade chips. Coupled with very loud rumors that Intel will shortly announce their own nameplate PC line in direct competition with those same OEM's, Intel would appear determined to alienate that customer base.

Don't know how all this will fly at COMDEX -- or with the ongoing FTC investigation of Intel for that matter.



Workstations are coming!

RISC Power may give UNIX a prayer after all. "Darling" OS of the academic and workstation nerds, UNIX (or XENIX, or AIX, etc.) is the standard OS for the increasingly popular workstations appearing in corporate settings. Formerly restricted to engineering and CAD/CAM applications, these RISC-powered machines have been subject of intense scrutiny by both power-hungry users and traditional PC makers.

Along these lines, MIPS Computer Systems, Inc., announced a 64-bit RISC processor, the R4000, which is touted as heart of the new ACE standard proposed by Compaq, Microsoft, SCO, et al. The new chips will be manufactured by LSI Logic Corp., Integrated Device Technology, NEC Electronics, Inc., Performance Semiconductor Corp., and Siemens Components, Inc., according to the October 7, 1991, issue of *InfoWorld*.

So why is this important? For the same reasons that the 8086/88 was important to the S100, CP/M world. It stands a good chance of supplanting the XXX86 CPU (our beloved PC's) at the high performance levels, and may become a new standard.

Microsoft is betting that it might just do that and is feverishly working to finish *Windows NT* before the chip(s) are delivered. Redmond would like to see a powerful, Microsoft OS become the dominant force across all hardware platforms.

Strange for Microsoft, IBM and Apple to come in this late...

Ink is dry on the IBM - Apple deal(s) by this time, but impact of the agreements between Armonk and Cupertino won't be realized for years - if ever (according to some media cynics.) Upshot is that Apple really wants into the corporate spheres they've been unable to penetrate alone, and IBM apparently wants a real operating system for the future.

In the future, IBM dreams for IBM-designed RISC hardware and IBM-Apple software to become the standards users endorse.

For the present, IBM is said to be aiming at patching up OS/2 2.X with code from DRI's DR DOS 6.0 (remember the slogan "OS/2 will run DOS better than DOS"?) if they can solidify an agreement with Novell/DRI. In the midst of all this, IBM and Apple formed two new companies, Taligent and Kaleida, with spiffy new logos, charged with marching forward to "bring a new renaissance" (yes, that's redundant) to the computer industry. Latter quote is from Apple's John Sculley.

Hear a lot about "Pink", but don't hear a lot about OS/2 in this crowd's projections for the future. Maybe Microsoft was right.

Microsoft, on the other hand has been unusually quiet for awhile

May be impact of a 64% increase in profits for the past quarter. Microsoft has a few crosses to bear though, not least of which is the ongoing FTC in-

vestigation. May also be looking across the way at the apparent solidification of various PC consortiums with aims at those profitable business areas. (See above.)

The Redmond crowd will be showing the new *Windows 3.1*, and the new *Word for Windows 2.0* release at COMDEX along with a number of other new Windows products. Don't know if they will openly preview *Windows NT* at COMDEX, but it's rumored that this will be running for the elite private showroom crowd somewhere in the complex.

Microsoft may be sitting back, and quietly laughing, at prospect of a lot of competitors showing new products, bugs and all, long before they are ready. Symantec and Central Point Software are best recent examples of too soon to market, with *WordPerfect for Windows* (last year) a close second.

Has WordPerfect gotten all the bugs out?

Late rumors of 2,000+ bugs in the *WordPerfect for Windows* Beta version released last month may make the WordPerfect display one of the more suspense-filled demo areas at COMDEX this year.

Will be a lot of people going by there just to see if the rumors were true - and if the Orem people have been able to tame the new word processor. Tried last year, but the show and music were just too loud to hang around and really absorb the program. Just as well, since what they did show for *WordPerfect for Windows* wasn't very exciting. ▶

The Variety Store

Early reviews of the latest *WordPerfect for Windows* beta version are glowing. In fact, they are such "rave" reviews, one might suspect they were written by WordPerfect PR staffers.

Haven't been any COMDEX rumors about the anticipated 6.0 version of *WordPerfect for DOS* so far. If they have a preview of this version, and if it's as good as early media leaks have indicated, it could be the real star of the WordPerfect display.

Other ends of the PC may be as interesting IBM pushes PQET, huge bins

Printers don't tend to have the glamour that CPU's and operating systems flaunt at COMDEX. This year may be different.

Looks like IBM is aiming squarely at Hewlett-Packard with introduction of their new laser line -- 600 DPI resolution, PostScript and models (Laser-Printer 10 and 10L) with capacities of 700 pages. Sharp-eyed readers may have spotted a very large question mark in the recent flurry of ad inserts, though.

IBM claims "true 600 dots per inch" resolution that "gives you up to *four times* the resolution of PostScript on any HP LaserJet." Later, they describe PQET (Print Quality Enhancement Technology) -- a similar method to that used by Hewlett-Packard in the LaserJet III series printers.

Interesting. Mostly because neither is "true" 600 DPI resolution. "Apparent" is the preferred adjective.

Hewlett-Packard goes Macintosh

Hewlett-Packard counters with RET, built-in Adobe PostScript and Macintosh interfaces for their new printers. H-P, perhaps a bit more honest, claims RET (Resolution Enhancement Technology) gives an apparent 600 DPI from their 300 DPI Canon engines.

Big H-P news is the Macintosh port. Recognizing the growing Mac market, H-P would like to take a share of it themselves with enhanced PostScript capabilities and direct Macintosh links.

LaserJets have been capable of PostScript output via add-on cartridges from Adobe, Pacific Data Products and Hewlett-Packard for some time. The Pacific Data *PacificPage* cartridges have also worked with H-P's RET, and, I would imagine the other PostScript cartridges would as well.

This may be a very interesting area for the next several months as other makers' laser printers incorporate the various enhancement technology chips and improved engines. Several makers already have 480 DPI (true) capabilities, and enhancement could push apparent resolution toward 1000 DPI.

PostScript really arrives -- EGGHEAD Adobe cartridge deal

Nothing to do with COMDEX, but couldn't let it pass. LaserJet II owners aren't left out of the PostScript race after all.

EGGHEAD Software recently sent out a flyer advertising the Adobe PostScript Cartridge for H-P's LaserJet printers, coupled with an Adobe Type Cartridge for \$229.99. This is the same cartridge I reviewed earlier this year and liked -- at \$499.

What really sweetens the deal is the type cartridge addition. Egghead will include the Adobe Type Cartridge I or II with the PostScript interpreter. The Type I cartridge is mostly display faces such as Bodoni Poster, Cooper Black, Stencil, etc. The Type II cartridge is primarily additional body fonts and includes a full Garamond face set, Bodoni face set and additional Helvetica faces.

You'll need at least 1M of printer memory, but owners of H-P LaserJet II's probably won't find a better upgrade path any time soon.

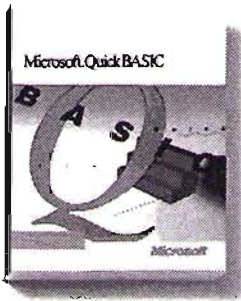
Reagan

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Writing four or more articles of at least 400 words during a single membership year, entitles you to a one-year extension of your membership in the Group. At the end of your membership year simply forward a listing or your published articles and the month they were published to the Membership Chairman in lieu of dues.

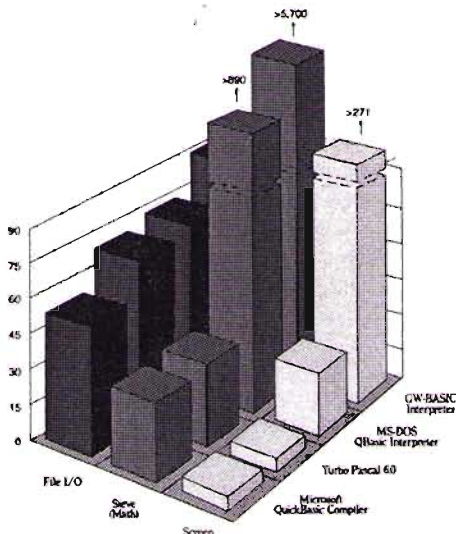
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PROGRAMMER'S TIPS

Key Features

- High speed native 80x86 compiler
- Max DOS capacity
- Multiple Modules
- Run/Edit/Continue w/o recompiling
- PROCEDURES & FUNCTIONS w/ local variables & parameter passing
- User Definable data types/structures
- SELECT CASE & DO/WHILE
- Line Numbers & GOTO/GOSUB
- Watch Variables

More powerful than QBasic Interpreter or GW-BASIC. Microsoft QuickBasic is as structured as Pascal, yet surpasses it in productivity.

	Microsoft QuickBasic Compiler	MS-DOS QBasic Interpreter	GW-BASIC [®] Interpreter	Turbo Pascal [®] 6.0
Yes	Yes	No	No	Yes
640K	640K	160K	64K	640K
Yes	Yes	No	No	Yes
Yes	Yes	Yes	No	No
Yes	Yes	Yes	No	Yes
Yes	Yes	Yes	No	Yes
Allowed	Allowed	Allowed	Required	Allowed
Yes	Yes	No	No	Yes

- Use the exclusive QuickLib's to add new commands and functions. For instance, specialized math, file I/O, database, and graphics.
- You can use hundreds of 3rd party/shareware libraries. Or make your own QuickLib's by compiling a Microsoft QuickBasic module.

Microsoft

Ask and ye shall receive

by Fred Williams

Well, Kent finally did it. All I wanted to do was write a little God's Language, and pass on some knowledge to others who are just beginning to understand the one true language. But, no. Kent Cobb just couldn't stand it! I ignored the first attack on ASK.ASM. I just figured it was only the rambling of a Jolt Cola crazed "C" code freak.

I did point out to him that my articles truly were intended to be useful code snippets that were also designed to instruct. I have no intention or hope of changing the course of computer language history. I'm even starting to pay some bills with "C" software development cash flow.

I thought the poor misguided soul accepted my explanation. As an additional incentive to discourage further outrages, I threatened to retaliate with a write of ASK.ASM in; Dare I even say the word? BASIC! This I promised would only be done as a tactic of last resort.

Not long ago, I had a few hours of spare time on my hands and decided to write yet another code snippet and a related article. That effort produced the NOW-DOS Utility published earlier this year. Doug McQuaid was really hard up that month. I know he was because he published two of my articles in one issue.



Several people complimented me on the NOW article at the following meeting. Mark Gruner, even had a kind word to say. I consider that a fine compliment, knowing what a professional job he does with the Lotus SIG. Kent Cobb came by and made some veiled innuendos and babbled about the insignificance of using ten times the resources to accomplish any given task.

When the next issue of the NTPCUG Newsletter arrived, I received quite a shock. There it was! Yet another attack of "C" language excesses! Kent had again managed to waste copious amounts of disk space and memory in an attempt to duplicate my NOW utility.

It has taken me a while to find both the time and my old copy of Quick BASIC4.5. Didn't realize how long it had been since the last time I wrote any serious BASIC code. To hear Kent Kinery talk, we might all have to brush upon our BASIC skills. He has gone plumb wild about Visual BASIC.

Most of my time was spent reestablishing the BASIC development environment. Naturally, I compile from the command line. To automate things I use an elaborate batch file to control the edit, compile, link, debug, and oops loop.

A funny thing happened during the project. I overlooked the fact that my batch file was using the "ASK" utility. As things progressed past clean compile to debug, the development batch file started crashing unexpectedly. Seems that the batch file was trying to use the crippled ASK under development in place of the "real" ASK utility further on down the DOS PATH.

It took more than one attempt to get rid of the mental cobwebs and reach a clean compile. Also relearned one of the reasons why I had to walk away from BASIC. Seems that when Quick BASIC 4.5 retrieves the DOS Command Line content it "automagically" converts everything to upper case. Great, just what I always wanted!

Another stumbling block slipped up on me. Seems there is no way to return a value to the caller when exiting a Quick BASIC program. I had to be able to do that to properly set the Batch Errorlevel to show the key the user had pressed. You can look at the code and see the way I made it work.

I'm not going to go through this one line by line. Although I must admit it is not too shabby for a rusty BASIC programmer. I'm doing this mostly to fulfill a promise. BASIC is the most underrated and possibly the least respected language in the industry. I have always felt it deserves much better.

I don't remember all of the fantastic high points that Kent Cobb pointed out about his "C" stuff. I do remember that speed of development was his strong

suite. Had I been up to full speed, I would guess a development time of less than an hour would not have been too unrealistic.

I'll take the same approach Kent took and pretend that using almost twice as much memory and disk space (17.2K) as his "C" took (seems like it was around 10K) isn't important in the scheme of life. After all, I just got a new 120Meg Connor and now have 8Meg on the motherboard.

For those of you who are interested, the ASK.BAS source code is included in this article. Don't get me wrong, BASIC is a very useful language. I recently read somewhere that something like eighty percent (80%) of the PC software has been developed in some variation of BASIC.

Current versions of BASIC have far exceeded the days of Dartmouth Tiny BASIC. BASIC is a very competitive software development tool when used in the proper environment for the proper task. I really do not consider this either the proper environment or task.

What might be interesting, is for someone to use a current BASIC compiler and their own logic approach to rewrite this one "better". How 'bout a Windows version?

Don't even bother Stewart. You could just throw a handful of real strange characters on the page and claim it works. How would we ever know?

Fred

a

```
' Module: ask.bas                               Rev: 1.0
' Batch file utility which pauses the batch file operation and
' allows the user to key in a key stroke response. ASK then exits
' with an ERRORLEVEL value equal to the position of the key code
' in the command line used to invoke ASK. The [[Esc]] key will
' always return an ERRORLEVEL value one higher than the highest
' valid key code. Invalid key strokes will cause a "beep".
'
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' Not for resale or redistribution, either singly, or
' incorporated in other products, for financial gain in any
' manner.
'
' Copyright 1991 Systems Consultants
' ALL RIGHTS RESERVED
'
' We have to include the following line for our special exit
' needs.
'
' $include: 'qb.bi'
'
' Define a-z                                     ' The "GO Faster" declaration
ESCS = CHR$(&h1b)                                ' This is the ASCII value of
' the "Escape" character.
q$ = CHR$(&h22)                                  ' This is the ASCII value of
' the "character".
NULLS = ""                                       ' And just a handy string for later.
'
' The following line is required for our custom exit.
'
dim inregs as RegType, outregs as RegType
'
screen 0                                         ' Here we are just
color 2,0                                       ' doing some display
locate ,,1                                     ' system initialization.
c$ = commands$                                  ' Get the command line content.
if len(c$) = 0 then                             ' See if there was a command line.
  gosub usage                                   ' If not...
and if
sptr = instr(c$, q$)                             ' Scan for the first quote character.
if sptr = 0 then                                ' If no quote character was found.
  gosub usage
else
  if sptr < len(c$) then                         ' If not at the end of the command
    fchar = sptr + 1                             ' line, point to the first text char.
    sptr = instr(fchar, c$, q$)                 ' Find the next Quote char.
    if sptr = 0 then                             ' If no closing quote was found
      gosub usage                               ' go tell the user.
    else
      if sptr < len(c$) then                     ' If more command line remains,
        print mid$(c$, fchar, sptr - fchar); ' display the Prompt.
      else
        gosub usage                             ' There is no valid key list.
    end if
end if
```

listing continued on next page

ASK in a third language. (sheet 1 of 2)

Listing for ASK.BAS, a sequel to ASK (G. Kent Cobb, November 1989), and to ASK.ASM (Fred Williams, October 1989)

```

else
  gosub usage
end if
end if

vkeyss = right$(c$,len(c$) - sptr) ' Use the rest for the valid key list.

do
do
  ks = ucase$(inkeys)
  loop while k$ = NULL$ ' Do this until a valid key stroke.
                          ' Do this until any key stroke.
                          ' Convert to upper case for compare.
                          ' Keep waiting for a key.

  if k$ = ESC$ then
    retval = len(vkeyss) + 1
    exit do ' Was the key pressed the "Esc" key?
            ' Yes, so make return value = Max +1.
            ' Force exit from Do loop.
  else
    retval = instr(vkeyss, k$)
    if retval <> 0 then
      exit do ' Look for the key in the key list.
    else
      beep ' If we found the key, we are done.
    end if ' The key was not in the key list.
  end if
loop ' This could go on forever.

inregs.ax = &h4c00 + retval ' Set up the CPU registers for...
call interrupt(&h21, inregs, outregs) ' a non standard BASIC exit.

' Here is where we explain how this works for the poor soul.

usage:

print: print "Usage: ASK" ; q$ ; "<message>" ; q$ ; "<key1><key2>...<keyn>"
print:
end

```

ASK in a third language. (sheet 2 of 2)



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North Texas PC Users Group

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CELLS & RANGES

an eclectic collection of spreadsheet information

by Betty Brooks

Arts & Letters revisited

Last month, I mentioned that Computer Support Corporation, the publisher of Arts & Letters did not offer any special discount for User Groups. Just the other day I spoke with someone from Computer Support's marketing team who liked my suggestion that there should be a User Group discount ... and so, they are offering Arts & Letters Graphics Editor for \$299 and the Composer for \$199 to User Group members. Call 213-661-8960 and tell them you want to take advantage of the User Group prices for these products. I think they have the best clip art collection available with any product I've seen. I have already used some of the clip art, saved as CGM files, in my spreadsheets using WYSIWYG and in AMI Pro, Lotus' word processor. It is fun to use Arts & Letters to "fix up" the clip art before exporting it as a CGM file. If you read my last column, you will also remember that I use PC Publishing's Clip Artist utility, CGM2FMT, to convert the CGM clip art file to the FMT format. I really like this combination, because the end result is less files to keep track of when moving files around. Plus, I can do any editing I need while still in 1-2-3 with WYSIWYG when the graphic clip art is in the FMT format. Needless to say, I have been playing around with clip art lately!!!

Borland's Latest Info

In June, I received a letter from Borland, proudly announcing that they have now sold more than one million copies of Quattro Pro. This took only 18 months. When I was talking with someone at Borland, they told me an interesting story about the code name for Quattro Pro 3.0, which was Splash. It seems that the Quattro Pro team was told that when they sold a million copies, Borland would build a swimming pool on their campus, thus the code name Splash! I wonder if the pool has been built yet?

By the time you read this, Borland will have a new "smaller" version of Quattro Pro on the market. It is called Quattro Pro SE and sells for \$69.95. The only thing missing is the graphical user interface and it's

accompanying attributes. Any spreadsheet developed in the regular version of Quattro Pro will run as is, unless the macros use the GUI features. People who do not need the graphical parts of the spreadsheet should seriously consider this new version. You can't beat the price.

In July, Philippe Kahn, showed Quattro Pro for Windows to the Pasadena IBM User Group. It is reportedly going to support three-dimensions and uses a new notebook metaphor. Apparently, the notebook model will make use of tabs and pages to generate a group of worksheets. As with current versions of Quattro Pro, there will be inter-spreadsheet linking. The user will be able to include up to 255 worksheets in a notebook. Each spreadsheet (page) can be selected by the index tab displayed on the screen. Object-oriented programming tools are used extensively in this new version. Reports and Forms are functions treated as separate object modules for example. There was no release date given during this demo. Quattro Pro for Windows sure sounds interesting.

A Couple of Hints

I promised to pass on a couple of the tips and ideas from Larry Roshfeld's Lotus Week presentation. Once I received his disk, I discovered that most of the ideas are too large for presentation in this type of column, but there were a couple of macro command uses I will share. If you use the (indicate) command, starting with version 2.2 of 1-2-3 you can use up to 80 characters as the message. If you use the ASCII character 219, which is the solid box character, you can fill the entire top line of the screen. This has the effect of blacking out the underlying information which would show the contents of the cell the cursor is on. You also can use spaces to blank out the top line. It really helps stop the cluttered look on the screen, but it also prevents you from seeing the contents of the cell unless you press the F2 (edit) key to bring the contents onto line 2 of the screen.

The (form) command has been a part of version 3.x of 1-2-3 from the beginning, but it is now included in version 2.3. When you use the form command to help guide data input, you can create some very attractive screens. Larry had a nice example of using the form command in WYSIWYG mode and including a live graph on the screen. The macro allowed data input and when the insert key was pressed, the data was used to update the graph. The (form) command syntax allows you to specify the input-location (where the form is on the spreadsheet), location of the call-table, include-list, and exclude-list. The call-table is the part I like and have used. It allows you to have 1-2-3 parse each keystroke and check it against the call-table's list of "special" keystrokes. By having this special list, you can have things like the

Insert key be used to signal that the user wants to place the data from the form into the database. If you check for the tilde (enter) key, then the macro can allow the program to move the cursor to another location when programmed to do so. By including the (help) key you can trap for the F1 keystroke and present the user with your own custom help screens, which can be very useful in many situations. I also like to include the (end) or (esc) key as the keystroke which ends editing in the form. The macro programming will take over and do whatever steps you want, next after data entry. In Larry's case, he had the graph updated to include the new data. The call-table is actually a list of keystrokes in one column with a list of macros relating to the particular keystrokes in the next column. The include-list and exclude-list are lists of keystrokes which you want to either include or exclude from use in the form data entry. There is an excellent discussion of the syntax and use of the form command in the reference manual. Once I read through the information, it was quite easy to start using the command in my macro programming. The {form} command is so much more flexible and user friendly to use than the /Range Input commands, it will be worth your time to learn more about it. The proper syntax is:

```
{form input-location},{call-table},{include-list},{exclude-list}}
```

If you do not use the parts which are optional (those within the square brackets), you must still put in the commas to separate the parts. When you use WYSIWYG and the {form} command along with tuning the frame off, the user will never even know they are in a spreadsheet. By the way, the {frameoff} command does not work in WYSIWYG in release 3.1, you will have to go through the WYSIWYG menu commands to turn off the frame. (:Display Options Frame None Quit Quit). Unfortunately, these commands make your screen blink while going through the menu sequence which, of course, doesn't happen with the {frameoff} command. Hopefully this is something we can expect to be fixed in the next release. Even when you use the {windowsoff} and {paneloff} the screen still shows some flickering, but at least it works more smoothly than without using those commands.

Betty

■

Betty has a spreadsheet and database consulting business called Records & Ranges. She can be reached at 214-618-1608 (4312 Bragg Place, Plano, TX 75024) if you have any questions or suggestions for this column.

A review by Jim Hoisington

Delivering CC:Mail

by Eric Arnum,
M&T Books

When I first saw this book, I found it hard to believe that there was a need for it. After all, CC:MAIL comes with clearly written manuals and is not difficult to install, learn, or maintain. I was wrong about the need for the book.

Unlike so many books on the market today, this is not a restatement of the material in the manuals. It is good solid advice about CC:MAIL written by someone who has used the product for a long time and has developed some techniques minimizing the work needed to keep it running and to train new users.

CC:MAIL is an electronic mail package that runs on Local Area Networks (LANs). It claims to be the most popular LAN package and may well be. Last year, the company was purchased by Lotus Development Corporation and is now part of the Lotus product line.

Although the book does not duplicate the documentation and go into every part of the system, it would be useful if you were considering buying an electronic mail package and wanted to know what a good E mail package can do.

If you just bought CC:MAIL or have been using it for a couple of months, you will find some of the advice in the book invaluable. For example, the author tells you how to use the CHKSTAT utility to spot which users are never deleting any messages and causing the message database to grow to an enormous size. He also describes a technique for entering names of people in remote post offices (other CC:MAIL systems) so that the names of the people in your system always appear at the top of the mail directory.

Finally, the author goes into some of the add in packages like FAX and REMOTE. His candid description of the functions and weaknesses of each package are a good way to find out if they would be useful to your users.

I guess the best recommendation that I can give you is that I learned some things about using CC:MAIL by reading the book and I've been administering a CC:MAIL post office for over a year.

Jim

■

RAM PAGEFRAME IPX MEMORY BIOS CACHE VGA MOUSE 386 BLUEMAX 486 HIGH DOS EGA INITIALIZE

640K WINDOWS ROM LIM EMS HMA DOS 5.0 XMS BUFFERS UMB 386MAX 486SX DRIVERS

Only the most intelligent memory managers can pass this test.

There's no question. If you want top performance from your 386 system, you need maximum memory management. And that takes intelligence. But whose intelligence would you rather use—yours or your memory manager's?

Here's a little quiz to help you make the smart choice.

1 True or False: All memory managers are alike.

False. Most memory managers free up space for applications by moving TSRs and device drivers from conventional memory into high DOS memory. But they vary widely in how effectively they do it. Others require a lot of guesswork, and a lot of time. And you still won't get top performance.

MAX, on the other hand, uses its intelligence to calculate automatically the thousands of possible ways these programs can be arranged in high DOS, and finds the best possible fit. First time, every time. Guaranteed.

2 Why do other memory managers leave some programs in conventional memory when there's still room for them in high DOS?

Many resident programs need much more space to load than they need to run. FlexFrame, a MAX exclusive, "borrows" up to 64K of high

DOS memory for loading, so it can pack more in. That frees even more memory for applications.

3 True or False: Using TSRs in Windows is a great way to crash your system.

With other memory managers, that's definitely true. But not with MAX. Thanks to another MAX exclusive called *TSR instancing*, you can use nearly any pop-up utility as many times as you want in Windows.

4 With DOS 6.0, there's no need for a memory manager—right or wrong?

Well, that depends. DOS 5 does free up some memory with its smaller program size. And it does let you place programs into high DOS manually.

But for optimal memory management and guaranteed top performance, what you really need is MAX. It's the powerful, automated, full-service program that specializes in all facets of managing your memory. So while DOS 5 is good, DOS 6 with MAX is outstanding.

The answer is easy. The delivery is free.

Just choose the MAX that's right for you. There's 386MAX[®] for any IBM compatible 386 or 486 based system at just \$130.* And BlueMAX[™] at \$155,* the only memory manager that gives you up to 250% more high DOS memory on all 386 and 486 IBM PS/2s.

Order direct before 3:00 pm Eastern Time, and we'll have MAX on your desk the next business morning, free of shipping charges.† We'll even include a free copy of ASQ![™] the intelligent memory analyzer.

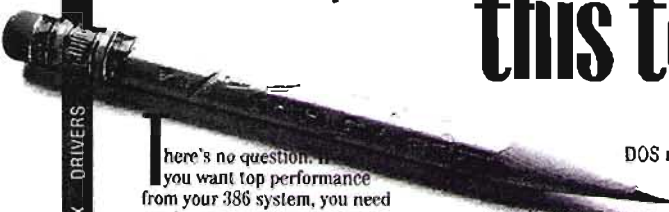
To get maximum performance from your system, graduate to the Intelligent Memory Managers. See your dealer or call toll-free today.

1-800-676-6386 ext. 417

* BlueMAX \$74.95 386MAX \$64.95 retail through October 31, 1991

640K WINDOWS ROM LIM EMS HMA DOS 5.0 XMS BUFFERS UMB 386MAX 486SX DRIVERS

RAM MEMORY BIOS CACHE VGA MOUSE 386 BLUEMAX 486 HIGH DOS EGA INITIALIZE



The Intelligent Memory Managers™

© 1991 Qualitas. Qualitas, 7101 Wisconsin Avenue, Suite 1386, Bethesda, MD 20814. All company and product names are trademarks or registered trademarks of their respective owners. System Requirements: Any 386 or 486 PC or PS-2, min. 256KB of extended memory. DOS 3.0 or higher, high density floppy disk or hard disk drive. † Offer valid in North America only.

Self SIG HAPPENINGS

News and meeting notes of Special Interest Groups

(Material for this column should be sent to Andy Oliver, SIG Coordination, before the 10th day of each month).

Assembler SIG

Our October meeting featured an interesting presentation by Andrew Chalk on Serial Communications. Our November meeting will feature a presentation by Glynn Brooks on the differences between MASM 5.1 and 6.0. Check the BBS prior to the meeting for any last minute changes or uploaded material that will be presented.

Frank Cavallito

Beginners C SIG

The October meeting was a lively one with Bolan Meeks taking the reigns to continue the discussion we had in September about linkers, object (.OBJ) files, and library (.LIB) files. Bolan discussed, in detail, the considerations needed when building a C library, and using the librarian utility supplied with most C compilers to take a collection of object files to create one library file.

As a follow up to Bolan's presentation I am going to discuss a commercial library that I have been using quite a bit to manage B+Tree indexes in November. Then in December I am going to present a library that I have been working on for quite some time now. This library, which I call DB Tables (DBT), uses the B+Tree index library to implement a fairly sophisticated database management system. My plans for 92 are already in the works. In January we will start at the beginning for all you beginners out there. This SIG will truly become the Beginning C SIG. I am working on the schedule now and I will be saying more about it later, but suffice to say we will hit all the most important bases about C in what I hope will be a meaningful progression.

Stay tuned!

Stan Milam

Business Users/DAC Accounting SIG

The October SIG Meeting was devoted to questions/problems about DACEasy Accounting v4.1 and a look at some of the changes announced for v4.2. We are reassured that this upgrade is nothing like the major v4.0 re-do with fixes covered in v4.1.....We all hope for the best, and I am optimistic.

At the November 16th meeting, Eddy Landry, who many of you know, will give us a live demo of v4.2. Eddy has extensive experience training both users and Certified Consultants so those of you who make it to that meeting will be well rewarded. If you know of other people who are using DAC Accounting or who are considering the program, do them a favor and invite them to attend. Eddy will also give us a preview of several other accounting programs which DAC will be introducing in the coming months, one of which is a very sophisticated modular program that has been marketed by their new British parent company through consultants around the world. Needless to say-November should be a biggie!!!

Putt Shaw

Communications SIG

In September, our demo of the CompuServe online system was unavoidably postponed due to job requirements of the presenter. We anticipate rescheduling this presentation very early in 1992. Instead, we spent quite some time talking about BBS software that might replace our current, often disliked, Chairman BBS. Discussion centered on TBBS (The Bread Board System), Wildcat!, and UBBS (Ultra Bulletin Board System).

In October, Steve Stone was gracious enough to demonstrate Bitcom communications software. Bitcom is one of the many communications software alternatives available to interested users.

In November, the illustrious Bill Green will detail Mirror software, one of his favorites. Then, in December, Charles Jacobus will present Carbon Copy, yet another option. There are also rumors of some form of Christmas party taking place in December.

See you at the Comm SIG!!

Doug Gorrie

Computer Law SIG

David Wygant, sales representative for West Publishing Company, will be at our November SIG meeting to demonstrate *Westlaw* (a legal research computer data base.) West Publishing is a 115-year old company leading the publishing industry for legal research materials. If you would like to see this product in action, please attend this important meeting.

Debra Rangel

C++ SIG

Ah, the joys of writing SIG HAPS ten days before the previous meeting! I'll get out the crystal ball, and try to predict what's going to happen between now and then. If all went according to plan, we spent the October meeting talking about data entry routines. As I write this, I'm working on a better version of scanf, which I hope to talk about in October. This routine is written in C, but it will eventually form the basis for a C++ "prompt" class.

In November, we'll have a guest speaker. Arthur English of Digital Artistry will be demonstrating Quick C for Windows. Join us for this enlightening presentation, and the inevitable heated debate.

Kent Cobb

DOS SIG

Are we going to have fun this year!

Don't know if we'll be able to keep up with all the shifts and direction changes DOS looks like it's going to

SIG

take over the next several months as a result of IBM, Microsoft, DRI, Quarterdeck, Qualitas, Quadtel, etc. — and Apple — manipulations.

Reagan will be back from COMDEX/Fall '91 and should have some impressions as to what directions the "War of the Operating Systems" may take over the next few months. Already hearing Pre-COMDEX rumors that are fun, like a rapid release of DOS 5.X or 6.X as result of DRI's DR DOS 6.0, or the "integrated" Windows 3.X-DOS forecast earlier this year. Another question: will next versions of DOS and DR DOS include low-end, peer-to-peer LANs? Those rumors are starting up too. (Or, will Novell "Lite" be another OS/2 "Lite"?)

Something almost everybody learned this year was that we all need better system information than we've had in the past. Installing DOS 5.0 proved that beyond any doubt. Who'll be working to improve this area for us? COMDEX may answer some questions here also.

Come to the November DOS SIG and join the wild speculation. We'll end on the usual Q & A session where more mundane questions about using existing versions of DOS in real systems doing real work.

Reagan Andrews

General Genealogy SIG

The General Genealogy SIG always meets in Room 7001 from 9 to 10 a.m. There were 63 present for the September 28 meeting.

A portion of the program was devoted to MS DOS basics as applied to genealogy. For the next several months, the first part of the program will be devoted to this theme.

The attendees were reminded that DOS is a Disk Management System. It is used when a genealogy program is installed to set the location of: 1) the genealogy program operational software files; 2) the genealogy program data files; and 3) the genealogy program scratch (or temporary) files. These locations are generally set by the user when the software program

is installed for the first time. If the genealogy program allows automatic set up for the above files, then DOS is used for troubleshooting or finding where the files are located. For instance, suppose your genealogy program is PAF and is located in the root directory of the C disk, and the data and temporary files are located in subdirectories DATA and TEMP. In this case, the directories or subdirectories are accessed as follows: At the C:\ prompt type "cd\". This command will get you to the root directory (cd stands for change directory). You should always go to the root directory before looking for subdirectories. While in the root directory, typing "dir" gives you a directory listing (If the listing is too long, typing either "dir /w" or "dir /p" will prevent scrolling - the /w stands for wide and will list the directories across the screen while the /p stands for pause and will cause the screen to be stationary when full until you hit any key. At that point, it will scroll another screen). In the root directory, typing "cd\data" will put you in the data directory.

Three references were listed: 1) Software Program, called Expert DOS Tutor by Expert Software, Coral Gables, FL 33134, which can be found locally in the Babbage Computer stores; 2) Book, Guide to Selecting Genealogy Software, Jonna Przech & Joan Lowrey, San Diego, CA.; and 3) Computer Genealogy, Anderock & Pence.

Banks McLaurin will present the program in October. It will be on his experience of writing a book on the Bledsoe family. The November 16th program is not firm but will probably be on the use of a calendar software program in genealogy.

Al Sanford

PAF SIG

The Personal Ancestral File (PAF) SIG in Room 7001 on Aug 24, from 10 to 11 a.m. Sep 28 had 52 present. PAF is a \$35 software genealogy program good for beginners or experts with versions available for IBM compatible or Macintosh computers.

The program was "quirks and quagmires" of PAF and was brought by the SIG leader Travis Morris. One of

the reasons for this type of program is that when several of us have gone out to help people at their home with troubles with their PAF programs, we found a lot of deviation from normal basic computer practice. For instance, one PAF user in trouble had over 25,000 names in her data file and no really accurate backup. Her computer is an XT which had seen many years of use and failed. Fortunately we were able to use SpinRite (a low level hard disk format software) to recover her data. It is very important to have a backup. Actually two backups, one stored off premises (put in a safety box at a bank, or taken to a relative's home) is a good idea in case of fire, etc.

The new 5 Aug 1991 update of PAF 2.2 was brought to the meeting. All twelve copies were taken and two more copies were sent in the mail. Please bring 3 replacement disks (formatted or unformatted) to the next meeting if you want this upgrade. And when you do install the new upgrade be sure and run the config.exe program in order to tell the update PAF 2.2 where your PAF program, data, and temporary files are.

The October and November program titles were not firm as of this writing.

Al Sanford

Investors SIG

Something for everyone; take the last two meetings, for instance. In August, Tom Schaeper offered personal programming for your favorite stock options or commodities trading system. You develop it and Tom will program it, in Basic. The investment software package System Writer is one of his choices for testing out your system with historical data.

September brought a commodities trading system to us in the guise of veteran trader Peter Aan. His common sense approach features three rules: set up a trading plan; discipline yourself to follow your plan; and manage your money well. This is a system which follows market trends. Had some of us novices believing we could do it too.

Usually, Nash Kapoor opens the monthly meeting with a short-term update of the stock market moves by way of the Dow Jones Industrial

SIG

Average and Nash likes to close with a 15-minute question and answer period. Here's your chance to query the investment experts among the membership.

Jo Johnston

LAN SIG

Well, we are finally back to the LAN Seminar series. At the October meeting we finished the "Topologies and Access Methods" discussion - begun in July. At the November LAN SIG meeting we will cover "Installation Considerations".

Whoever thought a simple piece of wire from point A to point B could get so complex? Did you know that some LAN experts say that half of the problems occurring on existing LANs can be traced back to wiring problems?

The tentative schedule for the remaining seminar sessions is:

- Nov Installation Considerations
- Dec LAN Case Studies
- Jan Administration Considerations
- Feb Seminar Summary
- Mar Vendor Presentation

See ya' at 10 a.m.

Bernie VanRoekel

Lotus SIG

The October SIG was very busy. The meeting started out with Mark telling the vital statistics of their first child. But since this column was written before the baby was born and before the meeting, the statistics were unavailable for this column. Also at the October meeting, Mark presented the Worksheet Optimizer from Brubaker Software. This product optimizes a spreadsheet by eliminating unneeded cells, streamlining formulas, and many other tricks. A review of the package should be included in this issue. Also presented were some basics of two add-ins shipped with 1-2-3 version 2.3 - Auditor, and Viewer. Auditor provides some limited auditing capabilities for your spreadsheets and Viewer adds Magellan-like capabilities to 1-2-3 that make linking spreadsheets much easier. The November meeting will present 1-2-3 for Windows. The meeting will essentially be a get acquainted session.

Both Mark and Betty will present various features of the product. Since the product is relatively new, this overview session should be valuable to all. 1-2-3 for Windows has received a lot of press - some good and some not so good. Personally, I like the product and I think that it compares favorably with Excel. You will have to come by in November for more information though. See you then.

The Lotus SIG always takes time to answer questions that users are having with spreadsheet and Lotus products. If you have a question, come on by and see us this month.

Mark Gruner

Personal Users SIG

This Special Interest Group (SIG) is for you!... if you consider yourself any of the following: ... a novice... a new PC owner... a beginner with PC's... a person curious about PC's... a soon-to-be PC owner... a personal (versus professional) PC user... or... a PC user needing to review some "fundamentals".

We offer sixteen (16) individual, stand-alone classes covering the "fundamentals of personal computers." Four classes are offered at each monthly meeting of the North Texas PC Users Group (2nd or 3rd Saturday on the 7th floor of the Infomart in Dallas). After four monthly meetings (covering four classes each), we take a month off, and then the entire 16-class curriculum is begun again. The classes are presented in numerical sequence, but you can take them in any sequence convenient to your personal schedule.

The classes always start each month (except those months we take off) at 9:00 AM, 10:00 AM, 12:00 Noon, and 1:00 pm. Since each class is a "stand-alone"... i.e. self-contained and NOT requiring any other classes as prerequisites... you can begin attending at any time convenient to your other priorities and schedule. In addition to receiving informative instruction from people very knowledgeable in their field and class topic, you also receive a set of handout notes for each class, to allow you later review. There are no homework assignments, no pressures, no tests, and no dumb questions. You don't even have to be a member of the NTPCUG before you

attend... ALTHOUGH YOUR ARE ENCOURAGED TO JOIN NTPCUG AND VOLUNTEER YOUR TALENTS.

This 16-class curriculum of PC fundamentals is specifically designed to be the kind of learning experience you always wished existed... where you are accepted just as you are, and where you can gain knowledge without the hassles... and best of all... the classes are FREE!

Join us as we learn and review "THE FUNDAMENTALS."

The four classes for NOVEMBER 1991 will be:

9:00 am	Class 9.2	Genesis & Overview of Computer Languages
10:00 am	Class 10.8	NTPCUG Disk of the Month (DOM) Library
12:00 Noon	Class 11.2	PC Graphics Modes
1:00 pm	Class 12.2	Bulletin Boards & Archiving Programs

Bob Presley

Advanced Programmers SIG

Objects were flying at the October meeting as Stan Milam defended Borland's Pascal in front of a group of hostile C++ programmers. Will Pascal survive? Will Stan escape from INFOMART unharmed? Do the C++ programmers know where Stan parks his car? For the answers to these and other important programming questions, check out the Pro SIG this month.

Jim Hoisington

Unix SIG

At our October meeting Jim presented a discussion of how to install a UNIX system. It's not a simple as installing DOS, is it? I've always liked the contrast contained in some instructions I have for installing both UNIX and DOS on one machine. The section on DOS is first and is less than half a page, including directions on partitioning the disk. The rest of the page and the next three pages are for UNIX. Of course that was for a relatively simple system setup for a special use. A serious system attached to a network would have been much more complicated.

For November we are going back to our roots. The early days of UNIX. The history of the UNIX operating system would be interesting in it's

SIG

own right even if it had not become as important as it is today. The story opens with a committee of computer experts designing the perfect operating system, the OS of the future. They failed, of course, but in doing so set in motion a series of events that continue today.

Doug Scott

Windows Applications SIG

In November, Micrografx will be coming out to demonstrate their new drawing program for Windows. Windows Draw is a \$150 Windows program that Micrografx has just introduced. Micrografx is positioning Windows Draw as an inexpensive alternative to Corel Draw. Windows Draw will be able to create and edit Bezier curves, align text along a curved path, and edit fonts. Windows Draw includes 2500+ clip art images and many other features. Windows draw promises drawing power at a very low price when compared to other DOS drawing programs.

Micrografx will have a drawing to give away a free copy of Windows Draw and will be distributing special pricing coupons at the meeting.

Art English

Windows Developers SIG

In November, we will be going back to the basics of how Windows programming works.

I have had several people ask for a session for beginners, and this will be

it. We will probably repeat this type of session twice a year.

If you are a Windows programming guru, you might want to skip this meeting. But, if you are new to Windows programming and still mystified by how messages, Windows memory, and multitasking work, this meeting is for you. I will be teaching this session from The Art of Windows Programming; course, I developed. It will be a fast paced introduction to what Windows programming is all about. I will be demonstrating Windows programming concepts using Microsoft's new QuickC for Windows development system.

If you are interested in QuickC for Windows, you should also plan to attend the C++ SIG in November too. At that meeting, I will be demonstrating how QuickC for Windows works and how it can be used for developing Windows, DOS, and QuickWin applications.

Art English

Word SIG

Word for Windows 2.0 – will it make the streets before WordPerfect for Windows? COMDEX/Fall '91 may have the answer(s) and Reagan will report on the Microsoft Word activity seen in Las Vegas during the giant event.

What about the competition? There will be latest versions of Describe, Ami Professional, Legacy and several other contenders displayed and it will be interesting to see how they measure up to the Microsoft - WordPerfect standards.

A little light reading - I did come across an amusing anecdote about

Word 5.5's development. This is out of Peter Rinearson's "Running Microsoft Word 5.5" published by Microsoft Press. Seems Rinearson claims that a lot of the Word development was done on PC's running OS/2. If that's true, and Microsoft published the book, it sure does explain a lot of things about the latest version of Word – and the people who did the work on it. Hmhmhmhm.

We'll spend some time looking at problems the users of current versions of Word are having – and possible solutions. In printing, Reagan still swears by PostScript, but other standards may have more to offer in the future, particularly TrueType in Windows 3.1. Again, COMDEX may offer a few answers.

Reagan Andrews

WordPerfect SIG

For the November SIG meeting, we're going to break the hour-long meeting into two sections; a intermediate and an advanced. For the intermediate feature, we're planning to have a section on tabs. We'll quickly go over the basics and will concentrate on showing you how to delete and move columns, misalign an asterisk with a right tab, create hanging indents, and give you tips on Do's and Don'ts of the Tabs feature. For the advanced section, we'll discuss the Advance feature which lets you precisely position text wherever you need it within 1/100th of an inch. Great for DTP needs, graphic line position, and squeezing more information onto a page. Looking forward to seeing you there.

Come armed with questions!

Lori Quinn

January is the month we elect a president-elect and three members to the board of directors for 1992.

As required in the bylaws, we select the president-elect who will serve one year in that capacity before he or she becomes president the following year.

Is this your year to serve?

NEW DISKS



...from the DOM Squad

Disk 648. Duke Nukem. Pl 1, Shrapnel City, 8/91 - EGA/VGA. Arcade Game Copyright 1991 Apogee Software Productions, designed by Todd Ropple, published by Apogee Software Productions, 3960 Broadway Blvd., Suite 140, Garland, TX 75043. (214) 278-5655

Duke Nukem is like a comic book come to life. The graphics are great. It is the year 1997. Dr. Proton (formerly Dr. Blunderwitz), before a terrible radiation accident that altered his brain, built an army techbots. Duke Nukem has been hired by the CIA to capture Dr. Photon and stop his plan for world domination. A plane drops Duke on a huge skyscraper with only a nuclear pistol. He must avoid the traps and the robots, keep his health, and maneuver his way down through the mazes to find Dr. Photon.

Hints: Cokes and turkey legs are provided to Duke additional health points. If you fire on the turkey it will give you twice the health points. If you are low on health points avoid the rabbit (it looks like the energizer bunny). It gives you points, but it takes away health points. Be careful what you shoot at, sometimes there are cokes hidden behind the gray boxes. And sometimes boxes are in treacherous locations that might cost a health point to get to it.

This part of the game is public domain. The other 2 parts are \$15 each. For \$30, you get secret hints and a cheat mode password.

SYSTEM REQUIREMENTS: IBM PC or compatible with 640K RAM, EGA or VGA graphics, and hard drive. Joystick is optional. (Note: this game does have a problem with TSR or memory resident programs).

This software was donated by Apogee Software.

This review prepared by Shawn Durni, edited by Kathryn Loafman(9/91).

Disk 649. For Comic Book Collectors 2.00, 2/90 - Collector's Database by Steven C. Hudgik, HomeCraft Computer Products, P.O. Box 974, Tualatin, OR 97062. Registration - \$59.95

FOR COMIC BOOK COLLECTORS is a specialty database. There are three levels of data storage. The average Collector has 6 fields (Title, Writer, Artist, Issue#, Note, and Value); the Advanced Collector has 15 fields (the previous, plus: Cost, Condition, Other, Publisher, Cover Date, Hero(s), Villain(s), Appearance(s), and Cross Reference); and the Professional level has 21 fields (the previous 15 plus 6 unassigned fields). If you need to keep complete descriptions for investment or insurance reasons, you can keep very detailed information. If all you want is a catalog/index, you can use the basic level. This three level approach allows you to create multiple databases for the collection, depending on you need for detail and the amount of disk space available. The program will handle up to 10,000,000 entries per file.

The program is completely menu driven. There is an 18 page manual on the disks; but a user can create databases, enter data, edit, and search from the Main Menu without ever referring to the documentation. There is also a Utility Menu that allows you to copy entries from one file to another, rebuild indexes, condense data, change file names, reserve future needed space on a disk, have a security code (registered users only), and customize or change the titles on the first three lines of each database. All this program lacks is a utility that will compare the original cost of each entry with the current value and tell you how much your collection has appreciated (a possible future enhancement under consideration).

SYSTEM REQUIREMENTS: IBM PC/XT/AT, PS/2, or compatible; minimum of 256K of memory and 2 floppy disk drives. Floppy disks may be used (up to 2000 entries can be stored on a floppy); but for large collections a 20 Meg hard disk is recommended. An 80 column printer is required for printed reports.

This software was contributed by the author, Steven C. Hudgik.

This review prepared and edited by Kathryn Loafman (9/91).

Disk 650. StatMaster 2.0, 6/91 - Demographic data on Texas by CyberSoft, Inc., 1820 W. Drake Drive, Suite 108, Tempe, AZ 85283-4312. (602) 491-0022

StatMaster is a database of demographic information from the Bureau of the Census. Data for this version is on the state of Texas. Data for all of the 50 states and Washington D.C. are also available. The information on Texas uses the 1980 census data. Registered users will receive statistics from the 1990 census as soon as it is available and the ability to export the information into formats supported by word processors, databases, and spreadsheet programs. The registration fee for individual states is \$49. StatMaster Professional which includes all 50 states and D.C. has a registration fee of \$495.

HARDWARE REQUIREMENTS: IBM XT/AT, PS/2, or compatible with 640K of RAM and at least 1MB of free disk space.

This Texas version of StatMaster includes data on all counties, cities, and places with populations over 2,500. Some of the statistics include employment data, farm earnings, hospital beds, households, local government debt, local government spending, manufacturing production, population breakdown, city government debt and spending, and civilian workforce.

To use StatMaster, going through the tutorial is helpful but it's rather simple. First you have to select the area you are interested in. You can choose cities or counties to display data. The second step is to select the statistics you want to display as well as the sort order. The final step is to display the data. StatMaster performs rankings, displays statistics, and executes queries (Boolean and searches).

Demographic data can be a powerful input to strategic planning, advertising, site selection, and direct marketing activities. If you need or want access to demographic data, then StatMaster may be the way to get it.

This software was donated by the author.

This review prepared by Mark Gruner, edited by Kathryn Loafman(9/91).

Disk 651. Home Money Manager IIa 2.10 - Home Budgeting and Checkbook by Steven C. Hudgik, Homecraft Computer Products, P.O. Box 974, Tualatin, OR 97062. Shareware: \$ 29.00

Home Money Manager II (HMM-II) is a home checkbook and budgeting package. HMM-II prints customized checks using your printer-compatible check forms, tracks tax deductible donations and allows editing of any entry at any time. It can track 12 checking accounts, 12 credit accounts and handles over 3000 transactions per year on a single floppy diskette. It can handle 84 budget categories and an additional 800 expense categories.

HARDWARE REQUIREMENTS: IBM PC/XT/AT, PS/2 or compatible with 256K of RAM, a color or monochrome monitor, two disk drives or hard disk.

Customizing the check style to fit pre-printed check forms is relatively easy and intuitive, but users should be aware that other software may change the printer line spacing. The check form is easiest to customize if the printer is always set for 8 lines per inch and the pre-printed checks are some multiple of one-eighth inch in height.

This software was donated by the author.

This review prepared by Mitch Hosellon, edited by Mark Gruner(9/91).

ON COMPLEXITY



No. 57 in a Series

Communication Services

by Jim Hoisington

In 1982, I spent some time training young Indonesian engineers to use a computer in a small town on the northern tip of the island of Sumatra. Each evening we would watch the one hour of television programming which consisted of one half our of religious ceremonies and one half our of weather from Malaysia. One evening as we turned off the set, one of the young Indonesians asked me if I had television in my home in Dallas. When I told him that I had six televisions sets and that we received 36 television channels 24 hours a day, he accused me of not telling him the truth. Surely, he reasoned, nobody would ever want that much television.

In 1988, Paul was in Dallas with his family for some additional training and they came to my house one evening. As we recalled our conversation about television, he said what amazed him about our culture was the vast amount of information that we were exposed to on a daily basis.

In the last five years, several alternative communications technologies have come into common use that now make it possible for competing companies to vie for your telephone service. These technologies are cellular telephones, fiber optic cables and very small aperture satellites (VSATs).


Two years ago, I had Reagan Andrews add a question to our annual demographics survey that asked about the number of telephone lines that each of our members had at their homes. Many of our members have two lines and a growing number have at least 3 telephone lines. Based on the demographics of the Dallas-Fort Worth area, most of our members also subscribe to cable TV service.

What we are seeing is a growing ability of each of us to access an increasing amount of information from our homes using our televisions and personal computers and telephones. As our information and communications needs grow, I think the government will repeal the local telephone company's monopoly on providing these services.

Local telephone companies have not always been a government sanctioned monopoly. Early phone companies competed for subscribers. The problem was that each company refused to connect to any of the others. Subscribers could only call people that subscribed to their phone company. Eventually the government stepped in and made telephone service a legal monopoly.

What I think will happen within five years in major metropolitan areas will be the creation competing companies offering packages of communications services to homeowners. These services will include broadcast, entertainment, news, information, and communications services.

If this happens, it will have an impact far beyond the demise of the Postal Service and the local telephone company monopoly. It will affect how and where we live, how and where we work, and how and where we play.

Jim... 

WORKSHEET OPTIMIZER

A Review

by Mark H. Gruner
Lotus SIG Leader, NTPCUG

WorkSheet Optimizer is from Brubaker Software, Inc. and optimizes worksheets. The benefit of optimizing your worksheets is they will take up less space in memory and on disk and will calculate faster. I met Dale Brubaker, president of Brubaker Software, at Lotus Week in June, 1991. Dale sent me a copy of version 1.1 of the program to review. The reviewed version is for worksheets from 1-2-3 versions 2.01, 2.2 and 2.3 and Symphony. Brubaker Software also has a version for Quattro Pro. However, no versions currently exist for 1-2-3 version 3.1. WorkSheet Optimizer (WSO) is a stand alone program which requires an IBM PC/XT/AT, PS/2 or 100% compatible machine with about 320KB of RAM and 200,000 bytes of hard disk space.

Installation was perhaps the easiest I have gone through in several years. All I needed to do was make a directory on my hard disk, and copy the files to that directory. No changes to the AUTOEXEC.BAT or CONFIG.SYS were required. In fact, there was not even an installation program - just simple instructions in the manual. WSO uses all

conventional memory as well as expanded memory (LIM 3.2 or higher). For larger spreadsheets, additional memory may be needed. However, that does not mean that you have to go and buy expanded memory or reconfigure your memory. WSO can use your hard disk as expanded memory if the statement SET TMP="destination" is in your AUTOEXEC.BAT file or the BATCh file you use to start WSO.

As far as memory goes, I started WSO from the DOS prompt and optimized a 137K file and ran out of memory. I then started WSO from Windows and optimized the same 137K file and enough memory was available. I also used the command SET TMP=E:\ in a BATCh file to start WSO. Once again, enough memory was available. Therefore, memory should not be a real program assuming enough hard disk space is available for temporary files.

The manual is well written and only 50 pages or so. It is to the point and walks users through various aspects of the program. A tutorial is included, but the program is so easy to use, you really do not need to go through it unless you want to. Also included with the program were two ASCII files for additional information. One was for general comments and the second was for Symphony users.

To optimize a worksheet, all that is needed is to choose the optimizations to use, enter the source drive/directory/worksheet, and the optimized drive/directory/worksheet. The manual and I certainly recommend keeping your original file in case you want to reverse some of the optimizations performed. Then all you have to do is to start the optimization. WSO creates the optimized file in the specified directory including a report file that details all changes made and analyses performed. These report files can get really big - more on that later.

WSO performs up to seven optimizations including abbreviating macro keywords, removing ERR ranges, removing null strings, removing blank cells, simplifying formulas, removing ALL parentheses, and using common sub-expressions. While it is difficult for a program to perform all optimization techniques, these seven are very common techniques and should shrink and speed up most spreadsheets. The default is to do all of the optimizations except removing ALL parenthesis. If you plan on editing the spreadsheet later, do NOT eliminate the parenthesis. I turned this option on and the additional savings in space and speed were minimal.

One aspect of optimizing formulas and parts of formulas is that WSO will create additional formulas in cells outside of your current active area. The new formulas are stored one column to the right and one row below the active area. Further, these cells are hidden. The report details all of these new cells which is helpful if you want to reorganize your worksheet later. The vast majority of the report file details the formula changes. The more formula changes, the longer the report.

Of the optimizations, most of the RAM and disk savings could come from almost anywhere depending on how the model was built. For instance, removing 1,061 blank cells in a test worksheet reduced disk storage by 9,549 bytes but had no impact on RAM storage. On the other hand, most of the calculation savings probably come from editing formulas and sub-expressions. When editing sub-expressions (or parts of formulas), one common trick that WSO uses is to place those common parts of formulas in those cells outside the active area. The benefit of this technique is that the common part is only calculated once instead of in every formula.

I have always thought that I build tight, compact spreadsheets that are essentially already optimized. So I decided to run some of the worksheets that I have developed at work and home through the program and see the results. While WSO found some changes to make to optimize the file, the savings were rather small. However, I will say that the worksheets were smaller and did calculate a little faster. Here is what happened with the various files.

The first file was an 84,008 byte (disk storage) worksheet I created for work. WSO changed real numbers in 3 cells to integers, removed 8 blank cells (I reinstated all eight), removed one null string, simplified 393 formulas (most of which eliminated the "+" or "-" that appear when using the point-and-shoot mode of 1-2-3), and eliminated sub-expressions in 427 cells. All told, disk savings was 2,696 bytes or 3.2%, RAM savings were 2,206 bytes or 2.4%, and WSO estimated calculation savings of 10% which was close to the actual time saved. The report file was 66,199 bytes and 1,734 lines (30 pages).

The second file was a 72,319 byte (disk storage) worksheet I created for work. WSO changed real numbers in 3 cells to integers, removed 9 blank cells (I reinstated seven), removed two null strings, simplified 109 formulas, and eliminated sub-expressions in 183 cells. All told, disk savings were 1,251 bytes or 1.7%, RAM savings were 1,050 bytes or 1.2%, and WSO estimated calculation savings of 7% which was close to the actual time

saved. The report file was 29,353 bytes or 877 lines (15 pages).

The third file was a 130,698 byte (disk storage) worksheet I have almost finished for work. WSO changed real numbers in 1 cell to integers, removed 7 blank cells (I reinstated six), removed four null strings, simplified 152 formulas, and eliminated sub-expressions in 337 cells. All told, disk savings were 3,550 bytes or 2.7%, RAM savings were 3,796 bytes or 2.5%, and WSO estimated calculation savings of 11% which was close to the actual time saved. The report file was 46,920 bytes or 33 pages long.

The fourth file was a 137,825 byte (disk storage) worksheet that a colleague created at work in 1987 and minor modifications have been made occasionally. But the base model is essentially the same as created. WSO changed real numbers in 15 cells to integers, removed 4 blank cells (I reinstated three), simplified 471 formulas, and eliminated sub-expressions in 1,976 cells. All told, disk savings were 25,249 bytes or 18.3%, RAM savings were 24,606 bytes or 16.3%, and WSO estimated calculation savings of 36% which was a little higher than the actual time saved. The report files was 168,909 bytes or 5,506 lines (92 pages).

The fifth file was a mortgage analysis worksheet I used to evaluate spreadsheet compilers and ICE which is 151,152 bytes of disk space. WSO changed real numbers in 30 cells to integers, removed 14 null strings (I reinstated all), removed 1,061 blank cells (I reinstated all of them), simplified 1,445 formulas, and eliminated sub-expressions in 387 cells. All told after reinstating the blank cells, disk savings were 4,526 bytes or 3.0%, RAM savings were 4,369 bytes or 2.8%, and WSO estimated calculation savings of 7% which was a little lower than the actual time saved. The report file was 124,072 bytes or 4,512 lines (76 pages).

The optimization results of these five test worksheets may not be miraculous or mind boggling, but the program did find several ways to modify the worksheet to make it run better and faster. In going over the many changes it made to the formulas, I have found additional ways to make spreadsheets better and faster; unfortunately, many of these techniques would make it harder for someone else to figure out the worksheet. One important point to make is that all of the optimized worksheets calculated the same results as the un-optimized worksheet.

Since the optimization results were relatively low, I optimized a variety of large spreadsheets that others at work created and use. The results of the optimization were significantly higher than the five mentioned above. Some of the disk and RAM savings were above 20% and calculation time was as much as 44% faster.

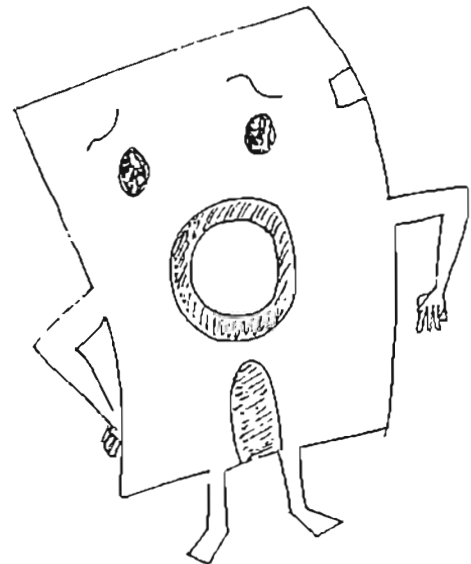
If you are optimizing a base model that is for general use, I recommend that you put in sample data because some of the optimizations may change characteristics of cells that you have to go back and correct later. But since the report file lists all cells changed, putting the attributes back is not a real problem.

If you find yourself building lots of big spreadsheets and would like to discover how to make them smaller, tighter, and faster, you really ought to get WorkSheet Optimizer. This program delivers on what it promises.

WorkSheet Optimizer is from Brubaker Software, Inc. and sells for \$99.95, but there is a user group discount of \$20 so that user group members can purchase the program for \$79.95. Brubaker Software can be reached 606 Carrolton Blvd., West Lafayette, IN, 47906. Their phone number is (317) 497-2928.

Mark

A



I WISH THEY WOULD
STOP BYTING ME!



Inside the North Texas PC Users Group Community

Connie Andrews

The September meeting was. Fred Williams turned up in an "Hawaiian" shirt and wondered where all the rest of us were. Perhaps, Fred, we'll catch up with you next June, or sooner if the weather keeps holding.

Fall is traditionally a very busy time at meetings. We sure wouldn't mind a few extra folks offering to help out at the Information and DOM Booths and with vendor setup/breakdown during meetings. There is also plenty to do during the month, too, for BBS support, DOM software reviews, SIG support, and newsletter articles. Give us a call or contact us on the BBS.

In this issue we are acknowledging volunteers listed below who served for the month of SEPTEMBER. In addition to those listed below, our officers, directors, SIG coordinators and leaders, newsletter publisher, editor, staff and writers, newsletter exchange, and BBS SYSOP and staff are all volunteers; their names are listed in other sections of this newsletter.

PLEASE remember to say thanks to our volunteers!

INFOMART Liaison
Stuart Yarus

Vendor Setup/Breakdown
Bolan Meek
W. Carey Hardy
Tim Hutchison
David Koslowsky
Roberta Smith
** William Sullivan

BBS Champion
Kent Kingery

Presentation/Equipment Setup and Breakdown
Timothy Carmichael
Chris Jung
Christopher Carmichael

Information/Registration Booth
Conley Andrews (Anchor)
Harvey Andrews
Dianne Arnold (Anchor)
John Arnold (Anchor)

Ralph Beaver (Anchor)
Randi Boucher (Anchor)
Walter Carroll
Kathie Greenwood
Rick Griffith (Anchor)
Judy Griffiths (Anchor)
Allan Harbaugh (Anchor)
Hank Holt (Anchor)
Pehl. Lee (extra duty)
Wade Mayfield (extra duty)
Claude McClure (Anchor)
Andy Oliver (Anchor)
Raymond Reyes (Anchor)
John Serrano
Connie Testa (Statistician)
John Trotter
Everett Turner (Anchor)
Jose Valenciano (Anchor)
Jean Waldrup (Anchor)
Peyton Weaver (Anchor)
Paul Williams (Anchor)
Bob Wuller

Disk of the Month (DOM):
(not available at press time)

VOLUNTEER INFORMATION

1. Via BBS: (214)387-2751, (214)387-2752 or (214)263-9038 (metro). Sign up on the Volunteer Conference - make the subject matter your area of interest.

2. Meeting day: Sign up at the Information Booth or DOM Booth to work those areas in a coming month.

3. By phone:

Auditorium Presentations
Timothy Carmichael 661-4626 (w)

DOM Booth Activities
Bill Drissel 264-9680 (h)

DOM Software Review
Howard Hamilton 644-5721 (h)

Information Booth and
General Information
Connie Andrews 828-0699 (h)



Meetings & Times



9:00 AM - 10:00 AM

Micrografx Introduces Windows Draw

Micrografx, Inc.

10:00 AM - 11:00 AM

FoxPro Version 2.0

Fox Software

11:00 AM - 11:30 AM

NTPCUG Business Meeting

1:00 PM - 2:00 PM

Accounting Vision/32 for OS/2

Intellisoft, Inc.

(See page 1 for description of programs.)

Special Interest Group Meetings

For possible time changes, check the Bulletin Board just before the meeting and the overhead display in the lobby at INFOMART.

9:00 - 9:55
Assembler
DOS
General Genealogy
Hardware Solutions
Personal Users
Quicken
Software Review
Windows Applications
WordPerfect

10:00 - 10:55
Basic Programming
CAD
dBase for TI Pro
Fox Pro Database
Local Area Networks
PAF -Genealogy

10:00 - 10:55 cont
Paradox
Personal Users
Unix/Xenix

11:00 - 11:55
Basic Programming
Community Service
Family Roots - Gnlgy.
Roots III - Genealogy
TI Pro General Mtg.

11:30 - 11:55
Orientation

12:00 - 12:55
C++/Advanced C
Communications

12:00 - 12:55 cont
Computer Law
Investors
OS/2 for End Users
Personal Users
R:Base

1:00 - 1:55
Beginners C Language
Business Apps./DAC Easy
LOTUS
OS/2-Windows Developers
Personal Users
TI Pro - New Users
WORD

2:00 - 2:55
Advanced Programmers

Special Interest Groups

SIG Coordinator K. B. Barton (214)349-6690 h
(214)747-0209 w
(214)223-4044 h
(214)871-5854 w
(214)423-9221 h
(214)317-0308 w
(214)917-0125 h
(214)271-2292 h
(214)205-2215 w
(214)775-1503
(214)233-8353 w
(214)343-3862 h
(214)341-1890 w
(214)618-8002 h
(214)464-7942 w
(817)731-1308 h
(214)827-5751 h
(214)381-9681 w
(214)296-1799 w
(214)635-9379 h
(214)669-9633 w
(214)235-2559 h
(214)416-3101 h
(214)628-0699 h
(214)644-7536
(214)278-7888 h
(214)681-0202 h
(214)937-9678 w
(214)937-5851 h
(214)458-9158
(817)461-4120 w
(817)451-4540 h

Assembler Frank Cavalillo
Basic Programming Kent Kingery
Steve Dixon

Beginners C Lang. Stan Milam
Business Applic. Bruce Schubert
C++ / Advanced C Kent Cobb
Tom Cook
Communications Doug Gorrie

Community Svc Bill Green
Jay Shilstone

Comp Aided Design Bill Saphion
Computer Law Debra Rangel
DAC Software Pui Shaw

DOS Jim Holsington
Reagan Andrews, Ph.D.
Fox Pro Kevin White
Genealogy Al Sanford
H/W Solutions David McGehee
Gary Johnson

Investors Nash Kappoor
Local Area Net Bernie Van Roekel

LOTUS Francis Bright
Mark Gruner
Pat Henley

OS/2-Windows Dev Betty Brooks
James Dunn

OS/2 for End Users Bob Fernier
(817)481-4966 h
(817)481-6625 (h)

Paradox Fred Williams
Personal Users Bob Presley
Bob Russell
Kent Kingery

Programmers Kent Kingery

Quicken Jim Holsington
Buddy Kulick
Rex Gifford

R:Base Richard Hauslein
Don Branham

Software Review Pat Henley

TI Pro James Corbett

Unix/Xenix Kurt Krider
Doug Scott

Windows Applic. Jim Stallworth
WORD Arthur English
Reagan Andrews, Ph.D.
David McGehee
Dorothy Berine
Lori Quinn

WordPerfect Mitch Milam
Metro (214)823-9837 w

North Texas PC Users Group, Inc.

P.O. Box 780066, Dallas, TX 75378-0066

Phone (214)746-4699 for recorded information about the User Group and meeting dates.

The North Texas PC Users Group, Inc., is a non-profit, independent group, not associated with IBM or any other Corporation. Membership is open to owners and others interested in exchanging ideas, information, hardware, predictions, and other items related to IBM Personal and compatible computers. To join the Group, complete the application blank printed elsewhere in this newsletter, and send it with \$24 membership dues to the Membership Director whose address is shown below. A subscription to the newsletter is included with each membership. The Group meets once each month, usually on the second Saturday. See cover for date, time and place of the next User Group meeting.

Board of Directors

Jim Holsington, Mark Gruner
Chairman, Kathrine Loafman
Reagan Andrews, Ph.D. Andy Oliver

NOTE: To access the BBS Metro line from outside Area Code 214, use Area Code 214. (This is NOT a toll call from Area Code 817.)

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(214)387-2752
(214)263-9036 (Metro)

SYSOP: - Tom Prickett
Asst. SYSOP:- Maggie Moomney

Technical Advisors: Fred Williams
Pete Testa

User Relations: Kent Cobb
Information Mgt: Doug Gorrie

Technical Services: Leroy Tennison
TI PRO BULLETIN BOARD (214)484-5122
SYSOP: - Bill St. John

Address Changes, etc..

Payment of dues, address changes, and inquiries about membership should be directed to

NTPCUG Membership Director
P.O. Box 780066
Dallas, Texas 75378-0066

(Check newsletter mailing label for your renewal date..)

Officers

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President-Elect Andy Oliver (214)223-4044 h
(214)871-5854 w
Program Chair. Timothy Carmichael (214)661-4626 w
Treasurer Ken Conner, CPA (214)669-3377 w
Secretary David McGehee (214)681-0202 h
Membership Dir. Jim Holsington (214)416-3101 h
Advertising Dir. John Prybyl (817)275-4109 h
Disk of the Month Kathryn Loafman (214)596-2539
Group Statistician Connie Testa
Volunteer Coord. Connie Andrews (214)828-0699

Members Emeritus

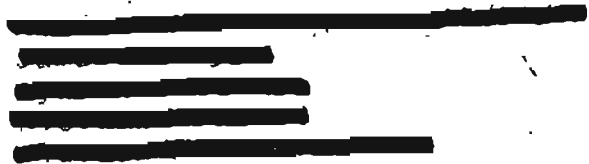
Phil Chamberlain John Prybyl Stuart Yarus



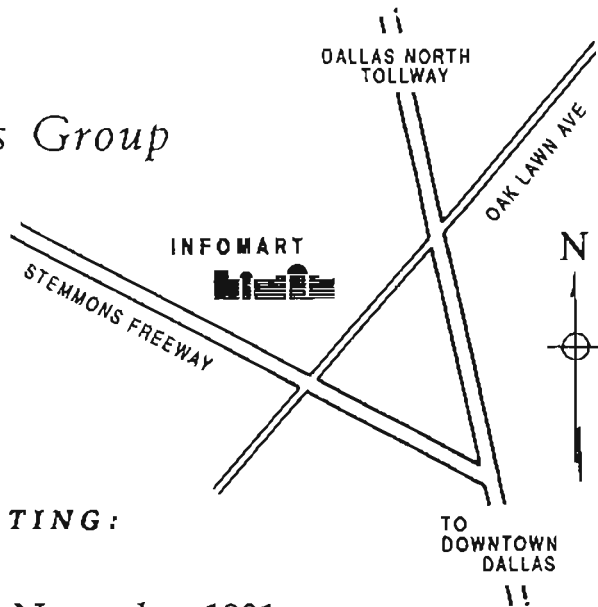
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Dallas, TX 75378-0066

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Address Correction Requested.



North Texas PC Users Group



NEXT MEETING:

16 November 1991