



North Texas IBM PC Users Group

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North Texas PC NEWS

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Deadlines:

All material for publication in PC NEWS (articles and ads) must be received by the NEWS staff no later than the fourth Friday of the month prior to publication.

Articles:

Column width of articles is not critical, but please do not right-justify the copy. Article submission is preferred by modem (817-275-4109 or Startext 51563), or disk in ASCII format, unjustified. If you send a disk, please include a printed copy of the article to assure accuracy. Double spaced, typewritten copy is acceptable but must be received a week before the deadline.

Circulation:

North Texas PC NEWS circulation is 825. Member distribution is 675; remaining copies are distributed to PC user groups around the country, and to advertisers, prospective members and others with common interests.

The deadline for January PC NEWS is two days after Christmas, December 27! Write your articles early and get them in before Christmas. That way you'll be able to enjoy the holidays more, and so will the Editor.

... from the Editor's desk.

Door Prizes

Ralph Jarvis won last month's door prize - a copy of Ashton-Tate's Framework II. Congratulations, Ralph! In December a copy of PAR-ADOX and several other door prizes will be given away. Be sure to come! You must be a member of our group as of November 15th and attend the meeting to be eligible for the December door prizes.

Bits:

Received a lot of good material for this month's newsletter... keep up the good work. + **Becky Rahaim** who was formerly SIG Coordinator, is now in charge of publicity for the Group. + **Phil Chamberlain** is the new SIG Coordinator. Phil has offered help in gathering and assembling the Special Interest Program Reports. SIG Reporters please send future SIG writeups to Phil. Thanks for the help. + **Carrington Dixon** has another article reprinted in an exchange newsletter. Carrington's article "DOS 3.0 Backup Bug" was picked up in the November issue of GSBUG, newsletter of the Greater South Bay PC Users Group, Redondo Beach, CA. + Two more User Groups, **TI-Pro** and **Timex-Sinclair**, have become Affiliates of the Dallas Computer Council, bringing the total to eight.

Orientation Sessions

The User Group will have two orientation sessions at each monthly meeting. These sessions are for those new to the Group, or those interested in finding out about it. One session will be at 9:45 and the other at 12 noon. As usual, the room number will be available the morning of the INFOMART meeting. We had one session at noon in November, and it was well attended. Discussion centered around the organization of the Group, what the Group can do for individuals, and what we can do for the Group.

President's Corner



The largest microcomputer meeting ever in Dallas took place November 9, 1985, at INFOMART. The occasion was the presentation of the just-released Framework II, which was attended by over 500 IBM, Tandy and TI user group members. Robert Carr, who did the original development work on Framework, flew in from San Francisco to make the presentation. Robert is a marvelous speaker, and we all were entranced by his demonstration.

Norma Wade of the Dallas Ashton-Tate office also spoke for a few moments on the Framework upgrade policy and other matters pertaining to Ashton-Tate products.

Many thanks to Marcie Glickman of Ashton-Tate's main office for planning this presentation.

Ralph Jarvis came up before the presentation to volunteer for 'anything' to help out the User Group. It appears that volunteering is rewarded in more than one way, as Ralph won the door prize, a copy of Framework II.

Thanks Again, Tom

Tom Fowlston of AV-Pro, Inc. once again provided a projector for our main meeting. We really appreciate your effort, Tom.

Bulletin Board

A small committee is meeting to design the Bulletin Board we have discussed. Some general policies are: non-members of our User Group will have extremely limited access to the BBS, we have agreed to adopt principles similar to those espoused by the Capitol PC Users Group, and while the hardware will be in one member's location there will

be one backup who will have complete (electronic) access to the system so that the BBS will be up the maximum amount of time. Also, any software accepted by the SysOp for general distribution will be tested for worms and other destructive devices. Software not so tested will be placed in well-designated areas.

New Officers

It is almost time to elect our 1987 president and 1986 Directors. While a number of you have come forth to help lead us, there are crucial appointed positions to fill. Do not wait until January to volunteer; Jim Graham would appreciate knowing of your interest in helping.

Hard Drive Group Purchase

It is now about time for this project to begin. There is a questionnaire elsewhere in the PC News for you to fill out. The results of this survey will enable us to shop more effectively. Any hard drives we get will be 'XT' compatible; that is, you can boot your system from that disk.

Also, each type of drive will be tested for compatibility with various software. The timing of the actual purchase should enable us to take advantage of expected price reductions after COMDEX; it is possible that 30 Meg drives may be not much more expensive than 20 Meg drives.

Anyone with information as to quality, reliability, and performance of hard drives, please give me a call at 867-8012.

Merry Christmas!

Stuart

Program Chairman says ...

December Presentations

9:00 AM * SmartForecasts *

William Sumerford will demonstrate a new package from Smart Software called SmartForecasts. This is a statistical program offering business forecasting and data analysis for users with little statistical training.

The program makes projections of such items as sales, revenues, expenses, market share, and inventory. It can automatically make statistical forecasts, as well as support multivariate analysis or multiseriers forecasting techniques. In addition, users can graphically adjust forecasts to account for complexities and "insider" knowledge, customizing the program's maximum 150 rows and 15 columns of data.

* GASPI *

GASPI is a visual shell which extends and enhances MS DOS. It combines single keystroke commands with a simple pointing method of selecting files and subdirectories. The result is an easy-to-use operating environment that takes the drudgery out of personal computing. G. Kent Cobb, of Great American Software Producers and a member of our User Group, will make the presentation.

10:15 AM * PARADOX *

Tim Auer of Ansa Software will demonstrate the new relational database PARADOX. The interesting thing about this company is that it was financed by the same folks that started Compaq Computer and Lotus. Tim says PARADOX is a new class of relational database that is as easy to use as Lotus because it has a 123-like interface and is fast and powerful because it incorporates proprietary artificial intelligence technology. **A COPY OF PARADOX WILL BE GIVEN AWAY AS A DOOR PRIZE!**

Coming Attractions...

January * REVELATION *

Dion Long and friends will be coming in from the Seattle based company - Cosmos. While network hardware for personal computers has been available for several years, network software has been practically nonexistent. REVELATION is one of a few major database products running successfully in this environment.

Charles Kroboth

Toys for Tots

An invitation from the Dallas Atari Computer Enthusiasts (DAL-ACE):

You are invited to our Toys For Tots festivities to be held at the Infomart on Saturday, December 14.

Festivities will include games, door prizes and an auction. The price of admission is one toy (unwrapped) or \$3.00. All money (from admissions, games and auction) will go toward the purchase of toys for needy area children, to be distributed by the United States Marine Corps.

It should be pointed out that this admission is for entry into a room (or rooms) set aside for DAL-ACE. It is still FREE to get into the Infomart, enjoy your respective clubs, and the vendors. All prizes are open to anyone but will be geared toward Atari computers.

Check the schedule board in the lobby at Infomart for time and room number. Look for DAL-ACE Toys For Tots.

Thank you for your support and Merry Christmas.

Dave Gillen
President, DAL-ACE

PARADOX

A preliminary review by Bruce Lutz.

PARADOX is to dBase III what Lotus 1-2-3 was to VISICALC.

As an extensive dBase III user, I am not implying that PARADOX is any more perfect than was Lotus 1-2-3. However, in spite of its very few faults (copy protection, a slight tendency to be memory hungry, and its somewhat less than perfect documentation in the BETA version I tested), it is clearly better than dBase III, Version 1.1, and in my opinion is better (more user friendly) than rBase 5000. Version 1.1 for a similar set of reasons.

The only substantial limitation I found on its performance capabilities was that it is limited to 65,000 records. This should not be a limitation for most people. Although a review that I read in Infoworld commented on the slowness of PARADOX, I found PARADOX to be roughly three times as fast as dBase III. PARADOX further has file import and export capabilities which are completely compatible with dBase III, and I found that it could import a dBase III file, sort it and export it back to a dBase III format in almost the same time that the program could be sorted by dBase III. I did find, however, that the size of the file increased about 10% upon being converted from dBase III format to PARADOX format and increased another 10% when it was returned to the dBase III format. I did not experiment further to see if a COPY command in dBase III could return the file to the original size, but upon experimentation with the file with dBase III, could not find any problems in sorting or querying of this twice converted file.

A potential problem with PARADOX is, that while it is not as memory hungry as rBase 5000, it requires 512K of memory to provide satisfactory operation and since it produces many temporary files in its various operations, a considerable amount of hard disk space can be used up in a hurry while performing an operation. PARADOX recommends that you have a minimum of one megabyte of free space when performing any operations. Although I

did not have any such problem, the reviewer of the article mentioned above, lost a file without warning when he initially had one megabyte of disk space left and was doing a 250K file conversion.

I was using a Beta version of PARADOX and hope that the final version is considerably better. While the documentation definitely is better than dBase III, an aid for the most part better than rBase 5000, I found, on several occasions, mistakes in the documentation and many times had to experiment with many different approaches before figuring out the secret of performing some of the operations, which were explained in general, but not detailed in step-by-step operations.

While I expected the conversion of one data base file to another to perform satisfactorily, I also converted an amortization table which I had in Lotus 1-2-3, having 194 rows. This file was converted to PARADOX format in less than one minute, and as far as I could tell, there were no errors. When PARADOX thinks it finds an error in conversion, it takes each of the erroneous records and places them in a separate temporary file for your editing before sending the edited records to the original file.

There are so many features of interest to the writer in PARADOX that it is impossible to name them all, and it is almost impossible to even name all the ones that are most impressive.

One of the features that I liked very much was, that the commands are somewhat similar to dBase III commands, and in fact, an accompanying manual devoted specifically to dBase III users lists all the dBase III commands and the comparable PARADOX commands. PARADOX does, however, not only contain substantially all the dBase III commands, but many additional commands and functions which dBase III does not have. In addition, PARADOX allows the creation of user-defined functions, which are termed PROCEDURES, and are held in memory for quick execution. These PROCEDURES may incorporate one or more input parameters. The programming language is termed PAL. In addition to PROCEDURES

and PAL, the program allows the recording of keystrokes to form programs called SCRIPTS and the editor can be used to edit these keystroke-type programs. From the somewhat limited use that I gave the program, it would appear that well over 90% of the users of PARADOX can perform all their operations by merely recording their keystrokes in the script format and never using the PAL programming language.

When a user changes the contents of one or more fields in a table using the REPLACE command (or a DELETE command or an INSERT command) PARADOX forms a temporary "changed" table so that the user can see if the records that he wanted changed were actually changed in the way that he wanted. If they are not changed properly, the new table can be deleted, and the temporary table can be renamed to the original file name, if so desired, until the changes are made in the manner in which the user wanted.

Another nice feature is that the FIND command operates to find records both in an indexed and unindexed file. If the file is indexed, the proper record is found much faster (in less than two seconds) as opposed to a record step-by-step comparison if the file is not indexed. Thus, a file need not be placed in an indexed form until the file becomes big enough that the "finding" time is a problem. Further, once PARADOX is told to index a file in a certain manner, any further accesses to the file in terms of adding records or editing records automatically updates the index with no further action on the part of the user. This feature alone is a very worthwhile improvement over dBase III in view of indexing problems that the writer has had on files that multiple indexed and often altered.

The report generator section of dBase III comprises a few pages, while in rBase 5000, it comprises several more pages. PARADOX used over 100 pages to describe the report generator and still does not do a complete job. The report generator of PARADOX is very sophisticated and, while a reasonable amount of experimentation is required to perform many of the suggested samples, it should be remembered that there is an entire softbound book avail-

able just on how to operate the report generator in dBase III. dBase III report generation is orders of magnitude less sophisticated than is the report generator of PARADOX.

One of the disappointments of PARADOX was its HELP menu. While the HELP menu is better than some programs, I thought that the HELP screens were probably not as good as dBase III and definitely much less helpful than those of Lotus 1-2-3.

Another disappointment of PARADOX was its internal editor. While the editor is slightly more sophisticated than dBase III editor, that isn't saying much.

An interesting feature of PARADOX is its use of arrays. The arrays are only one dimension, but can contain as many as 15,000 elements. Since the array is kept in memory, it is unlikely that the number limit will be exceeded before the user's memory is exceeded. Since the array elements can contain different data types, a given record can be copied to an array and the fields within the array based record can be manipulated and then copied to another file.

Linking two different tables to form a third table is one of the easiest functions in PARADOX that can be imagined after delving in the world of dBase III. Not only is the setup in PARADOX simple, the keystrokes can be recorded if such a linking operation is to be performed often, and the script can be named and recalled at any future date. In fact, any query operation is automatically committed to script and at the end of a successful query, the user can "backtrack" and decide that this particular query is worth saving for future use.

The program costs \$695.00 and I believe, since it is such a powerful and user friendly program, that many people could benefit from the program, even though they never use the PAL programming language. In fact, the programming language and its associated documentation are such that it might be as hard or harder for a novice to learn the PAL

(PARADOX continued on page 7)

Special Interest Program Reports

Assembler SIG

MAIN TOPIC of the November meeting was the assembly language development environment (ch. 5 in Robert LaFore's book, "Assembly Language Primer for the IBM PC & XT", Plume/Waite); functions of the different programs and files; differences between ASM and MASM; differences between EXE & COM files; different ways of invoking (M)ASM, LINK & EXE2BIN. NEXT MEETING we'll cover 3 short number base conversion programs (ch. 6 in the Waite book) which involve instructions for math, logic and register manipulation. LAST NEWSLETTER write-up got in too late to make it to press -- sorry about that.

John Wolley, SIG Leader
WORK PHONE: (214)238-9443

Business Applications SIG

Twenty, mostly business owners with a few accountants and consultants, attended the November SIG meeting.

Wally Boyer, president of Forestwood National Bank, Dallas, held their interest with a presentation on "How to get more money from your banker." He focused on the nature of the relationship on both the lender and borrower sides, and what kinds of numbers best influence the banker and help an owner run his business better.

For December, SIG leader Ed Fries, Communication Plus Adv/PR, Richardson, will present a computer slide show prepared on "PC Storey-board," an advanced yet easy-to-use new graphics program from IBM. Then Boyer will pick up where he left off in November, touching on computer accounting applications as well.

Ricky Burke,
H:(214)276-5003
W:(214)272-0515

Ed Fries,
W:(214)783-8543

C Language SIG

The November meeting was devoted to an informal discussion of the kind of activities we should pursue in the CSIG meetings. Is it to be tutorial for the beginner or is it to be directed toward discussion more appropriate for the advanced programmer? Most agreed that one cannot learn a language in a one-hour per month exposure. Many in attendance are experienced in other languages and are looking to C as another language available to them. These expressed an interest in experiences of the practicing C programmers of our group.

We reached a consensus that we should structure the meeting around the needs of experienced programmers who may or may not have C experience. C doesn't seem to be a language that one would recommend to the beginning programmer.

As a result of this discussion, we have started a project to gather a bibliography of information on the C language which might help newcomers to the language to make decisions as to how they might start. We will copy this and distribute it at the December meeting. Club members are encouraged to contribute information on C libraries, public domain software, organizations, etc. Please send your contributions of this type to me at 13858 Peyton Dr., Dallas, TX 75240.

Sid Nolte, SIG Leader
HOME PHONE: (214)233-6178
WORK PHONE: (214)995-3868

Integrated/Software SIG

Last month's presentation by Robert Carr and the folks from Ashton-Tate generated a lot of interest and many favorable comments. Our thanks to A-T for putting on such a fine show.

Special Interest Program Reports

This month we would like to take some time to discuss what we've seen in the last several months of new product releases. We will get some reports from those who have upgraded to the new releases regarding the pros and cons they have discovered. There will also be our usual discussion of news and rumors in the integrated market. So, if you see an interesting article, bring us a copy to pass around.

Jim Janeway, SIG Leader
 WORK PHONE: (214)349-0314
 StarText MC 113737

Investment: N-Squared SIG

The November meeting of the N-Squared Analysis SIG was well attended. About 30 people were there for the scheduled one hour meeting. Since the room was not going to be used afterwards, about 15 people stayed for an additional hour.

Greg Morris discussed moving averages (both arithmetic and exponential). The talk ranged from describing what a moving average was and how it is constructed to the development of a trading scheme using moving averages. Different techniques were shown, from a simple single moving average crossing the price action, to two moving average crossover systems, to using two exponential averages in a Moving Average Convergence Divergence concept. Additionally, the art of choosing which length moving average was discussed and some ideas about using cycles were hit upon.

N-Squared Computing will be offering a 30% discount on their software to all members through the end of the year.

The next meeting will be on Saturday, December 14, 1985 at 12:30.

Greg Morris will cover the "Set Operations" features of the N-Squared Market Analyzer. Last meeting dealt with the Stock &

Futures Analyzer XL. Again, we will advance at a pace acceptable to the majority in attendance. We will review our discussion on moving averages and discuss further the many different ways to help minimize whipsaws. (something that is inevitable when dealing with trend following techniques).

The area of Plot/Print Selections for the Market Analyzer will also be briefly covered since they are slightly different than the Stock Analyzer.

Please start to think about what areas of technical analysis you want to get into and leave your thoughts and suggestions on this "online" system. The best place for N-Squared customers is in the customer menu under the Leave Message section.

Greg Morris, SIG Leader
 WORK PHONE: (214)680-1445

Programmers SIG

This past months meeting brought still more discussion of the new NEC V20 chips. One member highly recommended an article in Sol Libes' new magazine "Micro/Systems Journal" on these chips. Others commented that, while they have been generally successful in PC's, there have been reports of these chips not working in some clones because the clone BIOS used instruction loops for timing.

Neil suggested that one of the functions that this SIG could serve would be as a clearing house for contract programming. Neil gets contacted several times a month by persons/firms needing contract programmers, and he feels that at least some, perhaps many, of the SIG members may be interested in such work. We should probably expect more on this topic at the coming meeting. Another member suggested that it would be very worth while for someone to compile a list of "boards that don't like to

Special Interest Program Reports

share a buss with certain other boards." Certain third party boards and their attendant software have staked out claims on certain I/O ports. When two boards that lay claim to the same port are installed in one PC, trouble ensues.

A knowledge of what boards use what ports and what (if anything) can be done to select ports can save a lot of trouble and frustration.

Books recommend this month included: "DOS Guide for Programmers" and Peter Norton's new book "Programmer's Guide To the IBM PC".

Carrington Dixon

Turbo Pascal SIG

Starting this month, the two TURBO groups will be re-combined into one. Be sure and check the meeting time also. The majority of the members preferred meeting at an earlier time, if this can be arranged.

This month we will review some of the Procedures, Functions, and other TURBO "helps" that have been on Disks-of-the-Month, or published in PC, PC Tech Journal, etc. Everyone is invited to describe his or her "favorite" routine -- or if you haven't used any of them, you're sure to get some good tips!

For my part, I'll describe the Procedure "DOSRUN", that allows you to execute any DOS Command, or run any .EXE, .COM, or .BAT file from within a TURBO program.

Phil Chamberlain, SIG Leader
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StarText Mail Code 2606

January Elections

Elections will be held at the January meeting. Ballots will be published in next month's newsletter. The nominating committee has announced the following nominations:

... for President-Elect:

Jim Hoisington
Stuart Yarus

... for Board of Directors:

Jim Janeway
Robert Sanchez
Walton Grayson IV
Jim Rich
Dick Barr
John Pribyl

Nominations will remain open until December 18. If you would like to nominate someone, verify that they are willing to serve, and then contact a member of the nominating committee (Jim Graham, Reagan Andrews or Bob Russell).

PARADOX (continued from page 4)

programming language than to learn dBase III. A big advantage of dBase III is that there are now approximately 80 softback books on the market which attempt to teach a person how to program or otherwise use dBase III. Of course, at the present time, there is no such wealth of information for PARADOX.

While I am definitely going to purchase a copy of PARADOX, only time will tell whether other users are as enamored with the product as I am, or whether in this day of advancing technology, someone else will very soon come out with a product even better than PARADOX.

The referenced article or review was found in Infoworld, October 28, 1985, and if you want a slightly different perspective on the product, this article should also be read.

Bruce

The choice is yours

MAINFRAME — MICRO — OR BOTH

The right choice for MAINFRAME power with MICRO convenience is the P-STAT® data management and statistical analysis package. P-STAT offers the PC user full mainframe capabilities, and offers it NOW.

Why settle for a package written only for a personal computer, or for a mainframe package striped of features in order to fit in the PC environment? P-STAT on an IBM PC/XT, PC/AT® or compatible personal computer has all the features of the mainframe version. The port to the PC was trivial. In fact, only 4 of the 1265 subroutines (275,000 Fortran statements) required even a single line to be rewritten! This eliminated the problem of errors introduced during a conversion process.

With P-STAT you have a track record of reliability, the result of more than 20 years of experience and testing. With P-STAT you have the ultimate in compatibility because it is supported on more than 40 different computers from a single master source file.

Compatibility means the same User's Manual, Concise Guide, and Tutorial for all users, whether on a PC or on a VAX® running UNIX® (or VMS®). Compatibility means that there is no list of unsupported features for the PC version. Compatibility means that command files which run on the mainframe will run on the PC without change and vice versa.

In addition, compatibility means that new features are available for PC users as soon as they are available for users on micro and mainframe computers.

A government user recently told PC Week "It's much more flexible than any other package. It can do things other packages can't even touch." A recent British review states: "this is probably the most wide-ranging statistical/database package on the market."

So find out about the right choice, contact P-STAT today for more information.

P-STAT Features:

- A mainframe package for the PC
- Command driven with it's own internal EDITOR
- An online HELP file
- Interactive with optional batch (background) processing
- Handles alphanumeric data — a single variable may be 999 characters in length
- Handles multiple files during a P-STAT session
- Has relational database capabilities
- Reads and writes both ASCII and DIF files
- Processes multiple-response survey items
- Provides a full range of statistics, including regression, correlation, discriminant and factor analysis, exploratory data analysis, analysis of variance, descriptive statistics, and matrix operations
- Features it's own programming language with the ability to define complex operations easily
- Provides a simple but elegant report writer with the LIST command
- Provides complex report and text processing capabilities with the PUT feature in the programming language
- Has a variety of crosstabulation and stub-and-banner display formats
- Permits output to the terminal, the disk, or directly to the printer
- Single Licenses are \$695.00, MasterCard and VISA charges accepted
- Multiple Copy and Site Licenses are also available
- P-STAT is not copy protected



P-STAT Inc., P.O. Box AH, Princeton, NJ 08542 Telephone: 609-924-9100

P-STAT runs on: Apollo • Arete • ATT • Compaq • Computer Consoles Inc. • Control Data Corp • Convergent Technologies • Cromemco • Data General • Digital

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Investment Software by Jim Janeway

There is growing interest by individuals over the last several years in more sophisticated investment options. Many analysts credit the tax-saving incentives of IRA accounts for the increase in available investment dollars. It is a remarkably well-timed coincidence that this IRA-inspired investment interest has been kindled during the same period that the PC has become an integral part of nation's workplaces, and to a lesser extent, the home. This has led to the opening of an exciting window of opportunity for those ready and able to take advantage of it.

A number of powerful software tools are now available to the personal computer user who would like to wield the computing power of his new-found electronic sidekick against the dragons and demons of Wall Street. These weapons can be separated into six categories: money management, fundamental analysis, technical analysis, online information retrieval, online trading, and portfolio management.

The money management packages are often mistaken for simple home budget programs. While this function is included, they also offer assistance with tax planning, cash flow forecasting, and investment portfolio management. The two best-selling programs in this area are Andrew Tobias' Managing Your Money and Dollars & Sense.

Managing Your Money may set new standards in user fr-- (no, I refuse to say it) -- ease of learning and ease of use. There is no manual, other than brief instructions for setting up and loading your program diskette. Unlike some programs you may have bought, this is by design, not ignorance. All other information needed is detailed in online help screens throughout the program.

You can set up your budget categories and amounts and then enter your actual checks and expenditures each month, allocating them to the appropriate categories. Any time during the year you can check your projected tax liability and even experiment with how certain changes or transactions might affect it.

The program makes excellent use of graphs in both the budget and in the portfolio management section. It shows bar charts comparing budget to actual amounts, and pie charts showing distribution of expenses and income or portfolio diversification. In the portfolio section, you can keep track of stocks and bonds, as well as coins, collectables, or even wines. All this information is used to provide an up-to-the-minute statement of your net worth. (\$199 retail)

Dollars & Sense is a simpler, more basic program, but it works very smoothly and efficiently. One of the particularly strong areas is its tax forecasting module. This screen allows you to compare up to five alternative 1040 tax return summaries side-by-side. ➤

GASP!

Coming Soon To A PC Near You

You can alter any of the amounts shown to see how different transactions might affect your taxes. The program also has all the same budgeting and expense tracking functions as the MYM package. (\$165)

Fundamental analysis is the study of a company's assets, financial status, and historical performance in an attempt to obtain an intrinsic value for its stock shares. One of the representative programs in this category is Value Screen by Value Line, Inc. With this program you search thru Value Line's database of over 1600 stocks, selecting only those that meet the criteria that you specify.

There are thirty-two types of information for each company on the database, such as industry rank, P/E ratio, earnings per share growth, and projected future appreciation. Once you have extracted the stocks that meet your criteria, you can generate your own reports on them or get all the data for a single company on your screen. Nothing fancy or complicated here, but a lot of analytical power at a bargain price. (\$95 + \$29 per monthly/quarterly data diskette)

In the technical analysis arena, we have found two very useful packages - the Dow Jones Market Analyzer (\$349) and The Technical Investor (\$395) by Savant Corporation of Houston. Technical analysis is used to try to determine the best times to buy or sell a stock or commodity. These programs plot price and volume charts and allow you to draw moving averages, trend lines, and other analytical constructs to help you evaluate an investment's recent performance and hopefully give a clue to future moves.

Both programs perform their duties well, but The Technical Investor appears to be a more recently written system. Its menus and commands seem to flow more smoothly and logically. Whereas the Dow Jones program retrieves historical price data only from Dow Jones News Retrieval, Savant's allows you to access two other online services in addition to DJNR. These alternate services are sometimes cheaper than Dow Jones and offer some quotes, indexes, and other data not available from Dow.

To use the technical analysis software effectively will require a modem, as will the various online information services. If you don't have a modem yet, this will be an additional expense, but what an incredible new world of opportunities it will open for you! So if you've been waiting for an excuse to justify getting online with the rest of the world, here's your chance!

The first of the online services available (and the cheapest) is StarText, operated by the Fort Worth Star Telegram. This is a small, local videotext service, but very useful and well run. In addition to business and investment information, it gives you general news stories, sports, entertainment, electronic mail, and an online encyclopedia, just to name a few. In the business category, you can get summary headlines, news stories, commodities prices, and closing stock prices. Not as much info as on the nationwide systems discussed next, but for just under \$10 a month, it's an outstanding value. (\$29.85 for three months)

The best-known business information service is Dow Jones News Retrieval. It offers more investment related info every day than you could probably digest in a year. Some of the topics and sources include Wall Street Journal highlights, text searching through over five years of Dow Jones News stories, current and historical stock quotes, corporate earnings and financial data, and company reports from various research and brokerage firms.

It's easy to run up a nice little bill very quickly, even though the 20 cents a minute rate sounds so harmless. Retrieving a year's worth of historical stock prices on one company costs about a dollar and a half. Most communications software packages come with an offer of an hour's free use of Dow Jones News Retrieval. It's worth taking the time to at least wander through the menus to see if there might be any features that you would like to access periodically. (\$75 initial fee or free with many software packages)

The Source is a more generalized information service, but it has almost as much in the business category as DJ does. In addition to ►

news, quotes, company financial data, and research reports, The Source offers online stock market trading through Spear Securities, Inc. (\$100 initiation, 29.95 with some communications software packages)

Online trading is about as easy a way to lose, or I should say, invest a couple of thousand dollars as I have ever found. After you have sent in your account application, you just sign on, zip through a couple of menus, request the online trading screen, answer a dozen or so questions detailing your desired transaction, and it's done. If the market is open, your trade will be executed in a minute or two. If it's after hours, it will hit the floor as soon as the market opens the next day. Spear's service will even keep track of your portfolio online and allow you to display or print several different reports from it. And of course, Spear is a discount broker, so you'll get very competitive commission rates. (Commissions + Source connect charges)

Fidelity Brokerage Services offers a similar program, but you don't have to have a subscription to an online service to use it. With Fidelity's program, you dial into their own computer system via a local access number. This will save you some bucks over the long haul. The program disk that comes in the mail even has its own telecommunications software built-in. The program also lets you retrieve quotes, company financial data, and an online portfolio reporter. As with Spear, you must open a brokerage account with Fidelity to be able to use the online trading service. (\$49.95 plus connect charges)

Charles Schwab's entry in this area crosses the boundary into portfolio management as well. The Equalizer offers a very nice stock research and analysis function in addition to the standard buy and sell capability. The "Full Report" option is the most comprehensive summary of fundamental information on a company we've seen. The program is very well written and easy to use. The portfolio manager is powerful enough to stand on its own as an excellent entry in this category. (\$199 + connect charges)

The only stand-alone portfolio manager we evaluated was Dow Jones Market Manager Plus. While a complete and useful program,

our feeling is that some of the other packages contain such good portfolio management functions, it does not seem worth the price to pay for it as a separate package. The best of these were in Managing Your Money and The Equalizer. (\$249)

A quick note about compatibility and such. All the above can be used on IBM and Compaq PC's. Other compatibles may have problems with the charts in the technical analysis programs and the programs written in p-system (Dollars & Sense, Schwab's Equalizer, and the Market Manager Plus). Also, on the p-system programs, since these do not run under DOS, if you want to install one or more of them on a hard disk, you will have to reformat the hard disk and partition a portion of it for p-system. After installing, you will always have to restart your computer when going from a DOS program to a p-system program and vice versa in order to reload the appropriate operating system. It is up to you to decide if the program is useful enough to warrant these inconveniences.

As for recommendations, the programs we liked best, in no particular order, are: Managing Your Money, Value Screen, The Technical Investor, and Charles Schwab's Equalizer. We found no fatal flaws in any of the rest - they all performed well. These were just particularly enjoyable to use and produced great results. We hope this information will be of assistance to you in your quest for more productive investing.

Jim

□



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**Data Compression Techniques
Using SQ and USQ**
Mark DiVecchio
San Diego IBM PC Users Group

In any computer system, file storage space must be managed for maximum benefit of computers. Programs SQ and USQ reduce the size of data files by using the Huffman Data Compression Algorithm.

A file is composed of a sequence of bytes. A byte is composed of 8 bits. Bytes can have a decimal value between 0 and 255. A typical text file, like a C language program, consists of the ASCII character set (decimal 0 to 127). This set only needs seven of the bits.

Just think -- if you could use the other bit for another character, you could reduce the file size by 12.5%. If you work with upper case characters, only about 100 of the ASCII codes from 0 to 255 are active. By using the unused bits within each file for other characters, you can save 60% of your storage.

What if you could encode the most frequently used characters in the file with only one bit? For example, if you could store the most commonly used letter "e" with only one bit: "1", you could save 87.5% of the space that the "e" normally takes if it were stored as the ASCII "0110 0101" binary.

SQ and USQ programs answers these questions.

SQ uses the Huffman coding technique to search for the frequency of use of each of the 256 possible byte patterns. Then it assigns a translation for each character to a bit string. All these bit strings are placed end to end and written onto a disk file. The encoding information is also put on the file since USQ needs to know the character distribution of the original file.

The USQ program reads in the encoding information and then the encoded file. It is easy to scan the encoded file and produce an output file which is identical to the file that SQ started with.

HUFFMAN CODING TECHNIQUE is by far the most popular encoding technique. Its encod-

ing replaces fixed bit characters with variable length bit strings. The length of the bit string is roughly inversely proportional to the frequency of occurrence of the character. For those inclined to such symbolism:

Length of bit = $\log(\text{character string} \times \text{probability})$

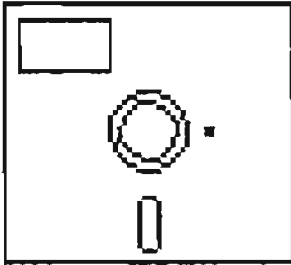
The implementation of the algorithm which we will discuss encodes fixed bit strings of length 8.

This algorithm requires two passes through the input file. The first pass builds a table of 256 entries showing the frequency of each occurrence of each of the 256 possible values for a byte of information.

Once the counting is complete, the algorithm must decide which bit strings to associate with each of the 256 characters that were found in the file. Note that if a particular byte value was never used, no string association is needed.

The second pass through the input file converts each byte into its encoded string. Remember that when the output file is created, the information used for encoding must also be written on the file for use by the decoding program. ▶





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The decoding program reads the encoding information from the file and then starts reading the bit strings. As soon as enough bits are read to interpret a character, that character is written onto the final output file. The next two sections how SQ and USQ actually implement this. Even though this article primarily addresses ASCII input files, this algorithm is not restricted to ASCII. It also works on binary files (.COM or .EXE). But since the length of the encoded bit string is approximately equal to the inverse of the frequency of occurrence of each 8 bit byte, a binary file may not compress very much. This is because a binary file most likely has a uniform distribution over the 256 values in a byte.

A machine language program is not like the English language where the letter "e" is used far more than other letters. If the distribution is uniform, the encoded bit strings will be the same length and the encoded file could be longer than the original due to the encoding information on the front of the file. All this has to be qualified because machine language programs tend to use "MOV" instructions and have many bytes of zeros so that encoding .COM and .EXE files does save some disk space.

SQ PROGRAM is an example of the Huffman algorithm. First it reads through the input file and creates a distribution array for the 256 possible characters. This array contains counts of the number of occurrences of each of the characters. The program counts these values in a 16 bit number. It makes sure that, if you are encoding a big file, counts do not exceed a 16 bit value. Although highly unlikely, it must be accounted for.

At the same time, SQ removes strings of identical characters and replaces them with the ASCII character DLE followed by a character count of 2-255. SQ replaces the ASCII DLE with the pair of characters :DLE DLE. While not related to the Huffman algorithm it compresses the file a little more.

Once SQ has scanned the input file, it creates a binary tree structure containing this frequency occurrence information. The most frequently occurring characters have the shortest path from the root to the node,

and the least have the longest one. For example, if your file were:

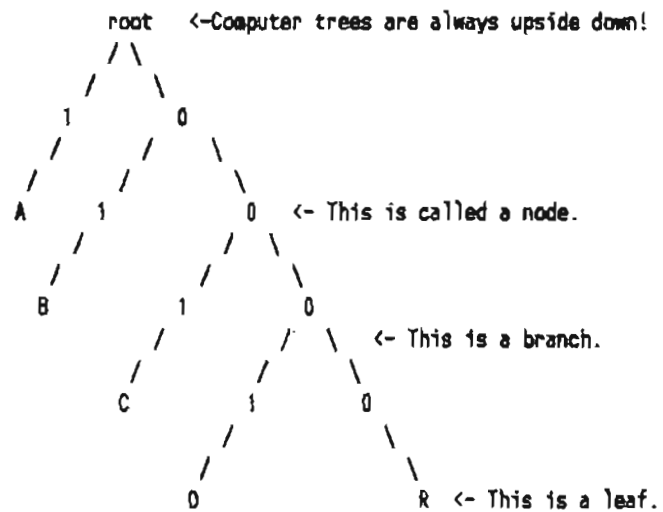
ABRACADABRA (a very simple and magical example)

The table of frequency of occurrences would be:

Letter	Number of occurrences
A	5
B	2
C	1
D	1
R	2
all the rest	0

Since the letter "A" occurs most often, it should have the shortest encoded bit string. The letters "C" and "D" should have the longest. The other characters which don't appear in the input file don't need to be considered.

SQ would create a binary tree to represent this information. The tree might look something like this (for purpose of discussion only):



From this our encoded bit strings which are kept in a translation table would be:

Table Entry	Character	Binary
1	A	1
2	B	01
3	C	001
4	D	0001
5	R	0000

The output file would be:

```

A B R   A C A D   A B R   A
-----
1 01 0000 1 001 1 0001 1 01 0000 1
      (binary)

      A1 31 A1
      (hex)
    
```

We reduced the size of your file from ten to three bytes for a 70% savings. In this example we must put the binary tree encoding information into the file as well. So the file size grew a lot. But in a file with the word ABRACADABRA repeated 100,000 times, the encoding information will be a very very small percentage of the output file and the file will shrink tremendously.

SQ opens the output file and writes out the binary tree information. Then SQ rewinds the input file and rereads it from the beginning. As it reads each character, it looks into the translation table and outputs the

corresponding bit string. SQ is a little more complicated than this outline since it operates in the real world of hardware, but this is a fairly complete description of the algorithm.

USQ PROGRAM is straightforward. It reads in the encoding information written out by SQ and builds the identical binary tree that SQ used to encode the file.

USQ then reads the input file as if it were a string of bits. Starting at the tree's root, it traverses one branch with each input bit. If it has reached a leaf, it has a character which is written to the output file. USQ again starts at the root with the next bit from the input file.

What does it all mean? Now that we understand the algorithm and how SQ and USQ work, we can run our system more efficiently. The theory is valuable, after all!

Files must be above a threshold size or else the output file will be longer



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than the input due to the encoding data put at the start of the compressed data. The exact size of the threshold is unknown because the encoding binary tree data depends on the distribution of the characters in a file. At least we know to check the size of the encoded file after we run SQ to be sure the file didn't grow.

Some files will not compress well if they have a uniform distribution of byte values such as .COM or .EXE files. This is due to the way SQ builds the tree. Remember that bytes with the same frequency of occurrence usually at the same depth in the tree. So if all bytes have the same depth, the output strings are not all the same length.

SQ reads the input file twice, if you can, use RAM disk at least for the input file and for both files if you have the room. If not, then use two floppy drives, one each for input and output. This yields many disk starts and stops and little movement of the head. In the worst case one floppy drive is used for input and output, causing head movement as programs alternate between input and output files.

Other Compression Techniques

RUN-LENGTH ENCODING is a technique whereby sequences of identical bytes are replaced by the repeated byte and a byte count. As you might guess, it is effective only on very specialized files. One good candidate is a screen display buffer. A screen is made up mostly of "spaces". A completely blank line could be reduced from 80 bytes of spaces to one space followed by a value of 80. To go from 80 down to two bytes is a savings of almost 98%. However, this technique does not work well for text or binary files.

ADAPTIVE COMPRESSION replaces strings of characters of code. For example, the string "ABRACADABRA" would be replaced by a code. Typical algorithms use a 12 bit code. This algorithm is unique in that it only needs a single pass through the input file as the encoding takes place. The current version of this procedure is the LZW method, after the inventors, Lempel, Ziv, and Welsh. This algorithm claims a savings of 66% on machine language files and up to 83% on COBOL files. ▶

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If you want to learn more about compression techniques, read these articles.

Reghbati, H.K., "An Overview of Data Compression Techniques," Computer Magazine, 1981, 14(4), 71-76.

Welch, T.A., "A Technique for High-Performance Data Compression", Computer Magazine, 1984, 17(6), 8-19.

Ziv, J. & Lempel, A., "A Universal Algorithm for Sequential Data Compression," IEEE Transactions on Information Theory, 1977, It-23(3), 337-343.

Mark DiVecchio
San Diego IBM PC Users Group

Add & Divide

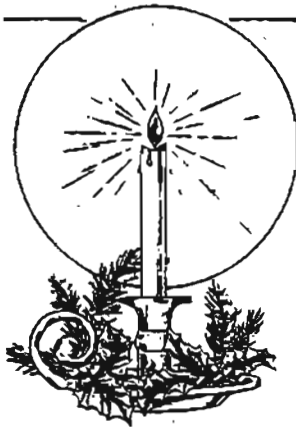
Number 2 in a Series.
(Jim Ryan)

Last month's article caused member Jim Ryan to send us another "quick-n-easy" idea for adding dividers to instruction manuals. Jim says to write your subjects on 3-M "Post-it" notes and use them as divider tabs attached directly to the pages. By overlapping and staggering you can arrange to suit your needs... and you can peel them off without damage to the pages when you no longer need them, or want to change their emphasis. For additional clarity you can add Avery label color coded tabs to some or all of the divider tabs.

A good idea!

Send us your solution. Best ones will be published.

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Software Report

by Dick Gall

NEW FROM LIGHTWAVE:
LETTERS, AI, AND CAVEQUEST

Lightwave Consultants has upgraded its LetterWriter address book/letter processor (see PCN July 85 for coverage of the original), and announced two new shareware products: an artificial intelligence beginner's tool ESIE and a fantasy role-playing game called CAVEQUEST.

LETTERWRITER 2.0 exhibits the normal growth characteristics of evolving software products: more functions, more memory required, and lower "price". Main functions available have been expanded from 16 to 27, now including such things as keyword search and the capability to combine separate address files into one. The 27K LW.EXE file size of version 1.1 has grown to 35K in version 2.0, driving the system memory requirements for running the program from 64K to 128K. The manual file has grown appropriately from 31K to 47K. The requested contribution for an upgraded copy has been lowered from \$75 to \$39. The manual of version 2.0 announces new features to be added in 3.0: installation menu for various monitor & printer types, a built-in full screen text editor, and embedded names to make letters more personal.

"EASY" AI

If you're wondering what AI is all about, ESIE shows promise of being a cost-effective way to find out. ESIE stands for Expert System Inference Engine. In the parlance of the field, it is an expert system shell. Any word processor that produces ASCII files can be used to build a knowledge base for ESIE. Three simple KBs are supplied with it: ANIMAL, DOCTOR, and GLASS. A sample session with ANIMAL follows:

```

go
Does your animal have a backbone?    YES
Is the animal warm blooded?          YES
Normally, does the female of your
  animal nurse its young with milk?   YES
Does your animal eat red meat?        YES
Does your animal have finger wings?   NO
    
```

```

Does your animal have an opposing
  thumb?                               YES
Does your animal have a
  prehensile tail?                     NO
Is your animal nearly hairless?       YES
I think your animal is a MAN
    
```

ESIE's thought process can be revealed by the optional use of the TRACE mode, which shows in real time each statement used during an interactive session.

A small sample of the knowledge base file ANIMAL is shown below. The entire ANIMAL file is about 9K long.

```

goal is type.animal
legalanswers are yes no *
if backbone is yes
then superphylum is backbone
if backbone is no
then superphylum is jellyback
question backbone is "Does your animal have a
backbone?"
if superphylum is backbone
and warm.blooded is yes
then phylum is warm
if superphylum is backbone
and warm.blooded is no
then phylum is cold
question warm.blooded is "Is the animal warm
blooded?"
    
```

ESIE requires a 128K PC, mono or color. As with all shareware, one is requested to send in payment for the software in the amount the user feels the program is worth. The author suggests \$75, for which a copy of the most recent version is provided. For \$145 a copy of the "fully commented" PASCAL source code is included. The distribution diskette includes a quick start guide, a 25 page manual, a tutor on AI, a USER manual, and a short review of the history of AI.

CAVEQUEST

This is a fantasy role-playing game where the major objective is to lose yourself in another land. A color monitor and 128K of memory are required.

The address for Lightwave Consultants is P.O. Box 290539, Tampa, FL 33617.

Dick a



Disk of the Month

By Walton Grayson, IV

DECEMBER 1985 DOM

TUTOR 4.1 by Computer Knowledge

TUTOR is an education package comprised of a program that reads text files and the associated text files. Tutorials are included covering the basics of a first course in computers and IBM-PC Disk Operating System. Some of the items covered are the IBM-PC keyboard, computer history, and computer hardware. Items covered in DOS are most of the commands and how to use subdirectories and batch files.

PD0054

The Draftsman presents a relatively easy and powerful way for converting data into graphic displays. Although the emphasis in The Draftsman is towards business plots, it allows you to create arbitrary graphics. The process of creating a graph normally involves three steps:

1. Specify data input: You've got to plot something, and this step allows you to either key in data directly, or indicate that the data is to come from an existing disk file.
2. Create a chart: This step involves first selecting the type of chart (pie, bar, etc.), then providing details such as titles, colors, labels, etc.
3. Produce a permanent copy of the chart: In this step the chart is generated on either a pen plotter or a dot matrix printer.

The draftsman provides:

1. Context-sensitive help.
2. Stacked and cluster bars, line charts, scatter charts, pie and exploded pie charts.
3. Free-hand edit mode, with options to draw, scale, and move rectangles and circles, line drawing, arrow creation.
4. Slide show mode.
5. Support for Mouse Systems mouse.
6. 24-hour support via Bulletin Board.

PD0055 FASTYPE (C) 1983.84,85

FASTYPE is a typing instruction program SPECIFICALLY designed for IBM-PC styled

keyboards. You MUST have a Color/Graphics Adapter Card in your PC and be running DOS 2.0 or above.

FASTYPE will run on most compatibles, however, the program runs notably faster on the ATT-PC 6300 which distorts the prompting rhythm. Documentation (about 48 pages) in the form of a comprehensive USER GUIDE is stored on disk.

PD0056

PD0056 is a collection of programs and utilities useful for both the user and Pascal programmer.

BENCHMRK PAS Program to test the accuracy of floating point functions.
 BIOSREAD INC Part of PRINTDIR.PAS.
 READFAT.PAS
 CHECKPSP INC Part of PRINT2.PAS
 CLS INV Used by FRACTAL.PAS
 COMBINE BAT Sort/Merge book index file.
 DOT BAS Program to test the speed of Bios interrupt to perform character I/O
 ENTER BAT Enter index entries for book indexing.
 EQUIP INC Performs Bios interrupt hex 11 the equipment check.
 FASTPRNT INV Used by FRACTAL.PAS.
 FLOAT PAS Test range of floating point numbers.
 FRACTAL PAS Produces fractal images on the hi-res graphics screen.
 GETDIR PAS Get the directory by using DOS function calls.
 GETFREE INC Part of PRINTDIR.PAS,
 READFAT.PAS
 GETSEC ASM Assembly source code for direct disk access.
 GETSEC OBJ Assembled version of GETSEC.ASM.
 HEAPTEST PAS This program demonstrates a bug in Turbo's version 2.
 HEXDUMP PAS Dump the specified file in hex and ascii.
 INDEX BAT Formats an book index from your data.
 INFO BAT Information on producing book indexes.
 LINE INV Used by FRACTAL.PAS.
 MEM INC Part of TEST.PAS
 MEMDISP PAS Displays the contents of memory onto the IBM PC's screen.
 PASCAPS PAS Converts identifiers in a source code file to upper case.
 POINT INV Used by FRACTAL.PAS.
 POINTERS PAS Demo on how to use pointers and dynamic memory (Heap Space)

PRINT2 PAS Program to print an ASCII file in a nice way on the printer.

PRINTDIR PAS Print a sorted directory listing.

READFAT PAS Read the File Allocation Table information.

READPSP1 INC Read Program Segment Prefix information.

SIDEWYTR PAS Print the 'infile' sideways on an EPSON MX-80 Printer.

START BAT Begins book indexing.

STRPRNT PAS Program for testing of Dos 2.0 print string function.

TEST PAS Test of utility funtions.

TESTDB PAS Test of utility funtions.

TIMESTMP PAS Reads the internal clock returning a string of the form "July 5, 1984 9:30am"

TSIN PAS Test range of sin function.

TURBO-UT PAS Utilities to handle data input, validation of data, full screen editing, and the other chores of everyday use.

TURBO-UT COM Compiled version of TURBO-UT.PAS

TURBO-UT DEM Demo file for TURBO-UT.PAS

TURBO-UT DOC Documentation for TURBO-UT.PAS

DISCLAIMER: The North Texas PC Users Group copies these programs as a service to the club and the members of the club. We try to test all the programs, but we DO NOT WARRANT THE PROGRAMS IN ANY WAY. YOU MUST DECIDE IF A PROGRAM IS SUITABLE FOR YOUR SYSTEM AND USE. If you ask, we will tell you what we know about any program, but the final decision to buy and/or use these programs is totally yours. We will gladly and with out question exchange an unreadable diskette for one of the same program.

EXCHANGE: All members of the club are encouraged to contribute copies of public domain programs to the club library. For each new diskette of software contributed, you may select any diskette in the club library in exchange. The contributions will be reviewed before credit is issued at the next meeting.

MAIL ORDERS: At this time we will not be handling mail orders. The one exception we will make to this is if we are out of stock on a diskette at a regular meeting. For this service we will have a MINIMUM CHARGE OF \$2.00 FOR THE FIRST TWO DISKETTES AND \$1.00 FOR EACH DISKETTE AFTER THAT. When we have some club members volunteer to help with DOM we might be able to extend this option.

PD0057

LOTUS 1-2-3 (tm) Worksheets for use with Version 1A only

TUTOR WKS Beginning LOTUS Tutorial

AUTO123 WKS Teaches the use of 1-2-3 to compute Cash Flow. Four CASHFLW programs develop this process in stages.

CASHFLW WKS

DEPRCALC WKS Illustrates the computation of depreciation

DEPRSUM WKS with 1-2-3. Two programs develop this concept.

TRIALBAL WKS These two programs show how trial balances can be computed with 1-2-3.

TRIALBL2 WKS Illustrates the use of 1-2-3 to compute amortization.

AMORT WKS

AMORT2 WKS An advanced version of AMORT.WKS .

CALANDER WKS Illustrates the use of 1-2-3 to construct a Gantt chart for project management.

TIMEPLAN WKS Demonstrates the use of 1-2-3 to develop a monthly calendar for scheduling events.

DISK DETAILS:

PRICE: \$2.00 per diskette (if the program is on two diskettes the price is \$4.00)

CATALOG DISKETTES: Curently this is a two volume set priced at \$4.00. This has all of the readme files from each diskettes in the club library.

MEDIA: DSD 5 1/4" Formated as 9 sector data diskettes. Public domain software only, standard full disclaimers, we will do our best to have all past diskettes at each meeting

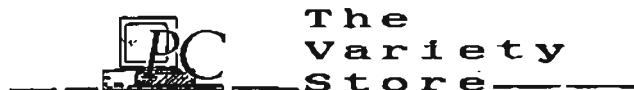
AVAILABILTY: We will do our best to have all past diskettes at each meeting. DOM the will open around 8:30 to 10 min. before the main meeting when we will close. We will then open up again after the main meeting and remain open until around 1:30.

IBM EXCHANGE NEWS LETTER: The EXCHANGE for the current month will be available at the DOM table AFTER the main meeting at no charge to paid up members of the NTPCUG. Back issues of the EXCHANGE will be priced at \$1.00 and will be available as long as the supply lasts.

Walton 2

The programs on this disk were used as part of a Beginning 1-2-3 Course taught by the Head of the Pacific NW Lotus User Group.





John McGinty, DCC Chairman

The coordinated monthly meetings of several Dallas area computer user groups at Infomart have attracted a tremendous amount of attention. Over 1,600 people now attend the meetings on the second Saturday of each month.

The latest bit of attention has come from an unexpected direction. Arlington resident Gerral Hubbard is planning to locally produce a television program featuring Dallas area computer users. The proposed show, Home Computing Magazine, will be taped primarily at the user group meetings sponsored by the Dallas Computer Council.

Hubbard plans to incorporate a number of short sequences which cover educational, recreational, and home applications being demonstrated by users and technical experts. Home Computing Magazine will follow a program format similar to "Entertainment Tonight" and "PM Magazine."

The program will be available to all cable systems in the Metroplex. Once in production, a new one hour show will be produced each month. The "stars" will be Dallas area computer users and their home applications (like STARTEXT). The show should generate even more interest in user groups.

If you're an undiscovered "TV star" or simply interested in learning how to use microcomputers more effectively, check out the user group meetings coordinated by the Dallas Computer Council.

We meet at Infomart, 1950 Stemmons Freeway, on November 9 and December 14 starting at 9:00 a.m. Visitors are always welcome to attend.

There are 80 different sessions each month for users of Apple, Atari, Commodore, Epson, IBM, Tandy, TI, and Timex computers. And watch for the new STARTEXT SIG, starting Nov. 9.

Next month, I'll tell you how the Dallas Computer Council got started. ▲

(New or unusual hardware/software/applications for IBM small computers and compatibles.)

Reference Technology Inc. of Boulder Colorado is now offering a CD-ROM (Compact Disc Read-Only Memory) system that allows an IBM PC or compatible to access up to 550 megabytes of data. The system, called "The Series 500 DataDrive", includes an interface card, connecting cord, and "low-level" software (device driver) to install and run the DataDrive. Also included is a Library DataPlate containing 8800 public domain software programs. Grolier's Electronic Encyclopedia is offered on DataPlate for \$199. Another disc contains a software library index of 120,000 micro, mini and mainframe computer programs with a synopsis of each, also priced at \$199. Other DataPlates are planned. The DataDrive system sells for \$1595.

Bye bye backup! Information Storage Inc. of Colorado Springs Colorado, is showing a 200 megabyte read/write, optical storage system "attachable" to the IBM PC and compatibles running under DOS 2.0 or greater. The ISI system (525 WC optical disk drive, the SuperStore 2000 optical disk cartridge, PC/525 optical disk controller, and ISDOS optical disk drive software) is among the first high capacity, optically recorded, non-alterable disk systems for the PC. Once written to disk, the data is non-erasable and cannot be lost or destroyed. This is a definite asset says the company, since you now have complete data integrity with audit trail... no backup required! No price was given for the ISI system.

(WANTED: Reporter for The Variety Store. Call the editor.)



Room Assignments

Saturday, 14 December 1985

Check room numbers in lobby at INFOMART



<p>9:00 - 10:00</p> <hr/> <p>SmartForecasts Demonstration. This is a statistical program offering business forecasting and data analysis.</p> <p>GASPI, a visual shell which extends and enhances MS DOS, will be demonstration by G. Kent Cobb.</p>	<p>9:00 - 9:55</p> <hr/> <p>Science/Engineering _____ Beginners _____ Genealogy (w/Apple) _____ Graphics _____</p> <p>9:45 - 10:10</p> <hr/> <p>Orientation _____</p>
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MAIN MEETING: 10:15 - 11:45

<p>12:00 - 12:25</p> <hr/> <p>Orientation _____</p> <p>12:00 - 1:55</p> <hr/> <p>Eagle Users _____</p> <p>12:30 - 1:25</p> <hr/> <p>Communications _____ Investments (w/apple) _____ Integrated Software _____ Turbo Pascal _____ APL Language _____</p>	<p>1:30 - 2:25</p> <hr/> <p>Databases _____ Advanced Programmers _____ Assembly Language _____</p> <p>2:30 - 3:25</p> <hr/> <p>BASIC Applications _____ Business Applications _____ C Language _____</p>
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MEMBERSHIP APPLICATION

NEW _____
 RENEWAL _____
 ADDR. CHANGE _____

Name _____

Address _____

City _____ State _____ ZIP _____

Phone: Home _____ Metro? _____
 Work _____ Metro? _____

Send completed application with your \$24 check to:
 Membership Chairman, 135 Skyline Dr., Plano, TX 75074



North Texas IBM Personal Computer Users Group, Inc.
 P.O. Box 780066, Dallas, TX 75378-0066

Board of Directors

Stuart Yarus, Chairman Jim Graham
 Chris Morgan John Pribyl
 Charles Kroboth

The North Texas IBM PC Users Group is a non-profit, independent group, not associated with IBM Corporation. Membership is open to owners and others interested in exchanging ideas, information, hardware, predictions, and other items related to the IBM Personal and compatible computers. To join the Group, complete the application blank printed elsewhere in this issue, and send it with \$24 membership dues to address 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.

Officials:

President	Stuart Yarus	(214)867-8012 h
President-Elect	Jim Graham	(214)245-4763 w
Program Chairman	Charles Kroboth	(214)245-4763 w
Treasurer	Bill Hood	(214)960-4754 w
Secretary	Jane Hughson	(214)262-0457 h
<u>Membership Director</u>	Bob Russell	(214)422-4269 h
<u>Operations Director</u>	open	
<u>Publicity</u>	Becky Rahaim	(214)385-8205 h

Special Interest Groups:

SIG Coordinator	Phil Chamberlain	(214)242-4187 h
APL	Jim Fiegenshue	(214)539-9281 h
Assembler	John Wolley	(214)238-9443 h
BASIC Applic.	John Keohane	(214)690-8092 w
Beginners	John Hall	(214)495-2375 h
Business Applic.	Ricky Burke & Ed Fries	(214)276-5003 h (214)783-8543 w
C Language	Sid Nolte	(214)576-5881 h
Communications	Chris Jacobs	(817)465-0807 h
Databases	Chris Morgan	(214)245-4763 w
Disk of the Month	Walton Grayson, IV	(214)369-3535 h
Eagle Computer	George Norwood	() -
Genealogy	Minnie Champ	(214)341-6507 h
Integ. Software	Jim Janeway	(214)349-0314 h
Invest - N-Squared	Greg Morris	(214)680-1445 w
Programmers	Dr. Neil Bennett	(214)422-5673 w
Science/Engr.	Arlin Collins	(214)436-7697 h
Turbo Pascal	Phil Chamberlain	(214)243-5034 h
<u>Telephone</u>		(214)242-4187
<u>Bulletin Board</u> SYSOP:	open	

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

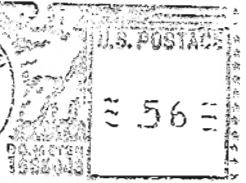
NTPCUG Membership Chairman
 135 Skyline Drive
 Plano, Texas 75074

Check newsletter mailing label for your membership renewal date. No separate renewal notice will be sent.

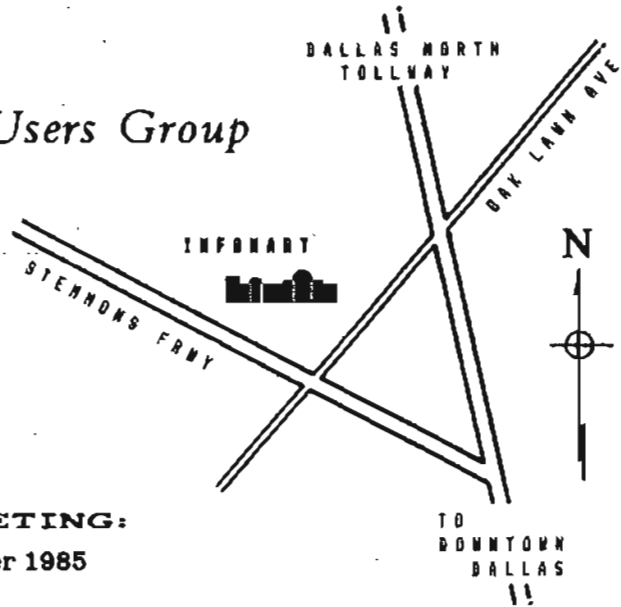


North Texas PC NEWS

2025 Rockcreek Drive, Arlington, Texas 76010



North Texas IBM PC Users Group



NEXT MEETING:
14 December 1985