



*North Texas PC Users Group*

5.5

May 1986



**North Texas PC NEWS**  
(STARMAIL ADDRESS 51563)

Published monthly by members of North Texas Personal Computer Users Group for their use. Members each receive a free subscription; for others, price of the NEWS is \$2 per copy. Members are requested to notify the Membership Chairman in writing of address changes. Send all editorial correspondence to:

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All material for publication in North Texas 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 957. Member distribution is 744; remaining copies are distributed to PC user groups around the country, and to advertisers, prospective members and others with common interests.



The deadline for the next issue of North Texas PC NEWS is May 23rd.

June Meeting - 2nd Saturday  
July Meeting - 4th Saturday

...from the Editor's desk

This issue of PC NEWS has some excellent original material from our talented writers. Keep up the good work!

You may notice a slight improvement in the quality of type in this issue. We found some coated paper stock that takes our matrix dots a little better than the 20-pound stock we've been using. Problem is that it only comes in cut sheets. Anyone out there know where we can get some perfed coated paper that will take a good impression from a dot matrix printer?

This issue of the PC NEWS was composed using PS Technical Word Processor by Scroll Systems, and printed with a Toshiba P351 dot matrix printer in Prestige Elite typeface.

Remember to check the mailing label on your newsletter periodically. If you renew your membership more than thirty days before the expiration date listed on the label, you'll get an extra month free.

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## Quick & Dirty Hard-Disk Integrity Log

by Reagon Andrews

Horror stories, myths and rumors describing "creeping data deterioration" in CMI 20-megabyte hard disks in IBM's "Enhanced" PC/AT's have been circulating throughout the PC community over the past year. Unfortunately, problems reported by AT owners not only aren't mythical, but are turning out to be much more factual than either IBM or CMI would like to admit.

Hard-disk failure and subsequent data loss in the IBM-CMI combination apparently has grown to such magnitude that "PC Magazine's" April 29, 1986 issue (Vol. 5, No. 8) was dedicated to problems PC/AT owners have reported with the CMI disk. "PC" included "non-comments" from both CMI and IBM on the problem/s. (PC/AT owners would be advised to read this issue very, very carefully.)

However, data loss due to disk deterioration isn't confined solely to the PC/AT. All hard disk drives are mechanical, and, thus, prone to wear over time.

I was aware of the potential data-loss problem inherent in hard disks, but it wasn't "personal" before the North Texas PC Users Group hard-disk purchase in March. Addition of the Adaptek ACB-2070 (2,7 RLL) controller and a CDC WREN II hard drive quickly converted the PC into a source of some anxiety -- when thinking about possible loss of 60-megabytes of data.

Since the CDC WREN II's are, as the advertising claims, "built like tanks," my major source of worry is slow, disk-media deterioration. I feel the most serious and dangerous form of deterioration is creeping media deterioration that slowly worsens over time until significant data damage has occurred.

Eventually, the hard disk may not be readable by DOS.

Media damage usually results when the disk head actually strikes the disk surface

violently enough to gouge or otherwise alter the coating or plating that "holds" the magnetic "writing." Damage may also be caused by dust particles trapped inside the drive at time of manufacture and poor coating or plating that begins to flake or lift off the disk surface and "float" around the drive chamber.

Partial solution to the problem of head-caused media damage is keeping the disk heads "parked" over an "unused" area of the disk when not in use. Short utility programs to "park" the disk heads are available from drive vendors, computer magazines and local bulletin boards. Such a program, called SHIPDISK, is provided on the IBM Diagnostic-Disk utilities included with PC/XT's and AT's. Newer, premium drives with voice-coil actuated heads don't need such "parking" since their heads retract on power down.

In spite of glowing advertising to the contrary, no hard disk is totally immune to damage from shock, hard movement and other abuses. Even drives with voice-coil head actuators and drives with "hard" plated media can be damaged by dropping or jarring while running. These disks can also be subject to creeping media deterioration over time.

Some hard-disk experts suggest that the following rules are mandatory for continued, safe operation over time:

Avoid violence. Treat the disk with tender, loving care and don't move your computer while it's running. Don't drop or otherwise jar or shock the machine.

Backup your hard-disk files frequently in proportion to their importance to you. Vital business files may require daily backup.

Make "CHKDSK" an equally frequent habit. Record the "bad" sector count in a log every time you run "CHKDSK" on your hard disk. If the number of "bad" sectors reported begins slowly increasing, seek repair or replacement immediately!

The first of these suggestions is easy -- no new behavior is required -- focus is on "avoiding" shock to the computer and hard disk.

continued on page 4

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*at the*

*Dallas User Group Meeting*

*on Saturday, May 10*

*at 9:00 AM*

*at The Dallas Infomart*

Software News Bulletin

Everyone's talking about the latest breakthrough in software technology - Software Recording. This technology, developed by the Software Recording Corporation of America (SRCA), is used in the product AutoMentor.

This product has been nominated by research firms and clients for the Software Publishing Association's "Best Business Product" and "Best New Use of a Computer", and *PC Week's* "Product of the Year" awards.

The SRCA client list reads like a Who's Who among trendsetters in computer technology: IBM, Lotus, Ashton-Tate, Novell, Micro MRP, Electronic Data Systems (EDS), and the list goes on.

Corporations who are leaders in technology implementation, such as Allied Bandix, Blue Cross/Blue Shield, Westinghouse, Eastman Kodak, Citibank, Compaq Telecommunications and The New York Times, have selected SRCA's AutoMentor for training, user support, task automation, and presentations.

SRCA will provide a special presentation and free drawing for the Dallas User Group members on Saturday, May 10 at 9:00 a.m. Don't miss the special opportunity to increase your sales and add to your computer development power with the latest in software technology!



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# \_\_\_\_\_ May Programs \_\_\_\_\_

Charles Kroboth, Program Chairman \_\_\_\_\_

9:00 AM, Auditorium \* AUTOMENTOR \*

Ron Hayes, Support Manager, and Susie Hayes, Marketing Manager, for Software Recording Company of America will be presenting their new authoring system. AutoMentor is a software development system which allows you to create interactive and self-running demos, tutorials and training sessions for software and hardware. You can use Automentor to create "live" or simulated demos and tutorials. You can use it to create software prototypes, or to automate your software testing. This is done without any programming. AutoMentor uses a new technology called Software Recording, which includes a simple interface that resembles a tape recorder.



10:15 AM, Auditorium \* IBM \*



Ginger Scardis of IBM will attend our May meeting and demo their new entry into the Lap-Top Computer market. The PC Convertible was just introduced last month and includes some new features for us to consider. 3" disk drives, plug in printer, and 2 extra function keys are but a few. The IBM showroom on the third floor of Infomart will be open after the presentation for hands on demos and to field any of your questions. Sorry, I couldn't talk them into a door prize.

2:00 PM, Atrium \* Dallas Computer Council Anniversary Speaker \*

Allan Kay

Evolution of The Micro Computer and It's Future

May marks the first anniversary of the Dallas Computer Council. To celebrate one year of peaceful co-existence with each other we have decided to bring in a guest speaker and set up the atrium of Infomart for every one to hear. Allan Kay is currently employed by Apple Computer and his job title is Apple Fellow. Allan is known as a "visionary" in the micro computer world and is one of the founding members of the Palo Alto Research Center, Xerox's think-tank. Prior to Apple he was employed by Atari as Chief Scientist. Among Allan Kay's accomplishments are Windows and the Mouse. The Topic will be Evolution of the Micro Computer and It's Future.

COMING NEXT MONTH:

June 14 @ 10:15 AM  
BYTE Magazine / BIX

----- OPEN SHOWROOMS AT INFOMART MAY 10 -----

IBM - 3034  
Tandy - 2066  
CPT - 3027

## Q &amp; D LOG continued

The second suggestion is a bit harder, but is eased by "FASTBACK" and other backup programs available.

The last suggestion is the problem. Developing good operational habits has never been one of my strong points. Procrastination is, perhaps, my preferred mode of operation. "Later," and "Someday" are favorite schedule nomenclature.

However, as a participant in the Group hard-drive purchase I was forced to mend some of my ways. Realizing that bad habits are hard to change, I decided that my only course of action would be to devise some quick-and-dirty method to run appropriate media checks and record the results automatically -- and, preferably, without writing (or debugging) a line of code. Hours searching the local RBBS's for appropriate software didn't hold much appeal, either.

IBM (Microsoft) provided the solution. I decided to use existing DOS utilities in my AUTOEXEC.BAT file to provide "bad" sector logging on start-up. In addition to this permanent log, I wanted screen indication of any change in bad sectors. I also wanted to avoid any complicated command sequence that might preclude other simple additions to the AUTOEXEC.BAT. And, to simplify housekeeping, the additional commands should be a part of the core file rather than direction to another .BAT file.

The resulting AUTOEXEC.BAT file is neither elegant nor parsimonious. But the routine can be put together in a matter of minutes without resorting to BASIC, MASM or TURBO. (DOS 2.1 or higher is required.)

Simplest routine would be addition of the following command to the existing AUTOEXEC.BAT file:

```
"CHKDSK [d:]"
  ([d:] represents the hard drive, usually "C:"
  in XT's & AT's. Don't type the brackets
  "[ ]" or quotation marks!)
```

The user will still have to record the "bad" sector information in a running log using this simple routine.

Since DOS 2.0 allows redirection of program output, this could easily be redirected to the printer:

```
"CHKDSK [d:] >PRN"
```

Use of ">" following CHKDSK tells DOS that the output from CHKDSK should be redirected from the console (screen) to the printer port. Leave a space before ">", but no space after. Take care that the arrow points to the right -- a left-pointing arrow "<" will redirect TO CHKDSK, and may erase CHKDSK.COM. Also, it's a good practice to always specify the target drive even though the AUTOEXEC.BAT file is on the default (hard disk) drive root directory.

Although this will produce a written copy of CHKDSK results, it has several disadvantages -- including a system crash if the printer isn't turned on. Replacing "PRN" with a file name will cause DOS to create a file with that name and place the results in the file. But, this file is destroyed (truncated to zero length) and rewritten each time AUTOEXEC.BAT is run. To keep a running log of bad sectors, you want to append (add to the file) rather than rewriting the file contents. Simply using a double arrow ">>" will append program output to the file named after the arrows:

```
"CHKDSK [d:] >>[d:][path]filename[.ext]"
```

If you have two (2) floppy-disk drives in addition to your hard-disk drive, you could leave a disk in the B drive and keep a hard-disk log there. I went to a lot of trouble to keep two floppies when I added the hard disk to my PC. I use it for formatting floppies and running a disk backup program. Logging bad sectors is another good use for it.

Your command would then look like this:

```
"CHKDSK C: >>B:BADSEC.LOG"
```

Actually, this works pretty well, but the resulting log is not very "neat." All of CHKDSK's screen output is added each time AUTOEXEC.BAT runs. Since I run regular checks on two 30-megabyte logical drives the resulting file gets very large quickly, especially if frequent "Ctrl-Alt-Del's" are used. ►

Q & D LOG continued

DOS provides a useful utility, FIND, which is a "filter." Using FIND with redirection allows "finding" the line in CHKDSK output that contains the information desired and placing the line in the log file. The line sought is "XXXXX bytes in bad sectors" and FIND needs some string unique to that line. In this case, either "bad" or "sectors" would be sufficient to identify the line:

```
"CHKDSK [d:] | FIND "bad" >>[d:][PATH]filename[.ext]"
```

Notice use of the vertical bar "|" plus delimiters, spaces, between CHKDSK and FIND. The string to be found must be in double quotes ("), in this case, "bad". FIND is case-sensitive, i.e., looks for exact use of capital and lower-case letters, so care must be used to duplicate case in the string. FIND works well with most programs that produce screen output, which opens a number of interesting possibilities for enhancing a log file.

I use AST's "ASTCLOCK" to set the system time on start up. It's an easy matter to include date and time in the logging file by adding a couple of additional lines to the AUTOEXEC.BAT file:

```
ASTCLOCK | FIND "date" >>B:BADSEC.LOG
ASTCLOCK | FIND "time" >>B:BADSEC.LOG
```

More than likely, most of the accessory clock programs will work just as well here. Using IBM's DATE and TIME commands would require a little more effort than I'm willing to expend, since both need to be followed by keyboard input.

This works well, and a prudent person would leave it at that. However, my preference is toward neatness and easy legibility when possible. Therefore, I added a header to the file and placed dashed lines between each entry in the file. My knowledge of the more arcane DOS and Batch commands is quite limited, at best, so I took the easy path and included a few TYPE commands to accomplish this.

The next decision in creating the new AUTOEXEC.BAT file was where everything was going to be placed. I decided to put

accessory and temporary files in a directory called "\LOG." At least one temporary file would be necessary to hold data from CHKDSK to write "old" (i.e., previous) bad sector space count to screen before "new" data from CHKDSK would be displayed. This way I would be able to compare new data with previous data immediately.

Too lazy to use an editor, I did all this via COPY CON:XXXXX.XXX. (See "North Texas PC News," 5.4.) First, I needed a header:

```
COPY CON:BADSEC.LOG <CR>
<CR>
***** <CR>
HARD DISK SECTOR INTEGRITY CHECK <CR>
File Initiated March 31, 1986 <CR>
***** <CR>
<CR>
<F6><CR>
```

Output from the AUTOEXEC.BAT file will be appended to this file, BADSEC.LOG, on start-up. The TYPE command output can be redirected and appended as easily as other program output, so I decided to add some dashed lines and subheadings to add legibility and made two more short files via COPY CON: "C.log," and "BAR.log." The first file is a line of dashes "-----", over the words "Drive C:" while the second file is a single line of "=====."

The resulting AUTOEXEC.BAT file is a little cumbersome, but works quite well and took a minimal amount of time and effort to set up. Here's an example of how a completed AUTOEXEC.BAT file for a single hard disk might look:

```
ECHO OFF
CLS
ASTCLOCK
SET PATH=\;\DOS
SET PROMPT=$p$g
ECHO Logging Hard Disk Error Check
(This reminds me why nothing is happening
while CHKDSK is running on 60-megabytes
of hard disk.)
```

```
ASTCLOCK | FIND "date"
>>\LOG\BADSEC.LOG
```

Q & D LOG continued

```
ASTCLOCK | FIND "time"
>>\LOG\BADSEC.LOG
(Time and date are added to new entry in
file BADSEC.LOG in \LOG\ subdirectory on
hard disk.)
```

```
TYPE \LOG\C.LOG >>\LOG\BADSEC.LOG
(Drive ID for C: and dash line added to
file.)
```

```
TYPE \LOG\BADC.LOG
("Old," last bad-sector check from C: parti-
tion printed to screen.)
```

```
CHKDSK C: | FIND "bad" >\LOG\BADC.LOG
(New error check made on C: partition,
written over existing file BADC.LOG.)
```

```
TYPE \LOG\BADC.LOG >>\LOG\BADSEC.LOG
(Contents of new BADC.LOG appended to
BADSEC.LOG.)
```

```
TYPE \LOG\BADC.LOG
(New bad sector check on C: printed to
screen.)
```

```
TYPE \LOG\BAR.LOG >>\LOG\BADSEC.LOG
(Bar "======" added to bottom of
BADSEC.LOG.)
```

```
ECHO Hard Disk Error Check Completed!
```

```
COPY \LOG\BADSEC.LOG B:BADSEC.LOG
(Hard disk file written to floppy disk drive
B:.)
```

The first time this AUTOEXEC.BAT file runs, you will receive an error messages since you've issued a TYPE command for a file that doesn't exist (BADC.LOG) until the first AUTOEXEC.BAT execution is completed. Although there is a temptation to keep it all on the hard disk, that would defeat its purpose to some extent. One feature of this routine is that the previous error check is displayed on the screen and followed by the new error check which gives immediate indication of any change in the number of bad sectors found by CHKDSK.

Periodically, say once a month, a more intensive bad-sector inspection should be made

via Norton's DT (Disk Test) utility included in version 3.0 and 3.1 of the Norton Utilities. A similar program is found in the "PC Magazine" April 29 issue. Other similar utilities can be found on local RBBS's and might prove easier to implement than typing either the BASIC or assembly language listings from "PC."

Reason

a

### NTPCUG Volunteer Mobilization!

If you filled out one of our volunteer forms and we haven't rung your chimes yet, don't give up! We have been working on it and just about have everything set up. So far, it has been used for the info booths and disk-of-the-month and has helped tremendously. Unfortunately, we found that we ran through those that checked off those two categories rather fast. (It takes 12-15 people each month just for the info booths.) So we have declared open season on info booth and DOM volunteers. Everyone will be eligible to be drafted for these. So be prepared. We have veys of finding you!

Also, I had a grand total of 1 nice person to offer to help with calling members that we don't have volunteer info on. If you can help too, leave me a message at 349-0314 or Startext 113737. If you haven't fill out a volunteer form, save us a phone call. You can use a membership application available at the info booth. Just mark it 'Info Change Only' and turn it in there. Thank you all for your participation so far! We're going to grow to be a better organization because of you!

Jim Janeway

a



## Introduction to RS-232

by Fred Williams

This is planned to be a three-part series of articles on one of the most common data communication standards, RS-232. In the first segment, the history and definition of the RS-232 specification will be covered. The second part will introduce you to the most non-standard part of the RS-232 standard, the physical plug/pin and cable design. Each IBM-PC product will be covered, as well as the more common modems. The third and final piece will cover the design and construction of "null modems", and printer to PC connection. This segment will also include an introduction to XON/XOFF protocol which is not a part of RS-232, but needs to be covered when talking about printers.

Several years ago the Electrical Industry Association (EIA) appointed a committee to develop an interface standard between Data Terminal Equipment (DTE) and Data Communication Equipment (DCE) employing serial binary interchange. This standard was called RS-232. Copies of the current standard may be purchased from the EIA Engineering Department, Electronic Industries Association, 2001 Eye Street N.W., Washington, DC 20006. Newer standards, RS-422 and RS-432, have also been issued by the EIA and will eventually replace the older RS-232 standard as they offer even greater performance.

RS-232, or more specifically RS-232-C, reflecting the most recent revision of the standard, provides a widely accepted method of connecting two machines together so that they may pass information back and forth between them. Although the machines may be from two different vendors, they can be safely interconnected electrically if both machines conform to the RS-232-C specifications. RS-232-C not only defines the data signals which carry the actual information, but also defines several special purpose control signals which ensure the smooth flow of information between the interconnected machines. These signals basically control who "talks" and who "listens" as well as some other more specialized functions. As in the past, I will cover only those RS-232-C signals that relate

directly to Personal Computer asynchronous communications.

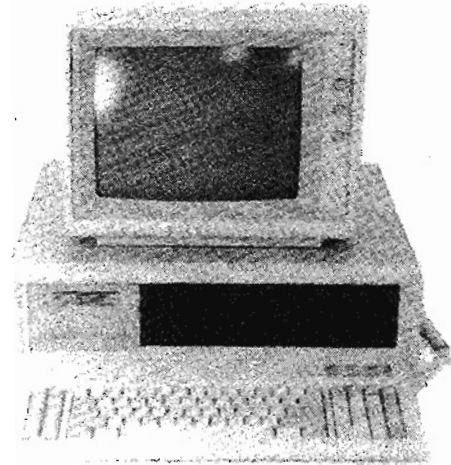
I will not cover the actual electrical specifications of the interface in this series, as I feel most of you only wish to understand what the signals are for and not what the signals' electrical characteristics are. If you want the electrical "nitty gritty", please refer to a full copy of the RS-232-C specifications. But, do keep in mind that any interconnection arrangement must conform to the electrical specifications or the hookup between two machines will fail to work properly. With today's equipment it is highly unlikely that electrical signal characteristics will cause problems if good workmanship is used in establishing the physical connection between two machines.

As I discuss each of the RS-232-C signals, I will relate them to the lights which are located on the front of the Hayes Smartmodem as well as some other external modems. So in the future, when you sit back and watch the blinking lights, you will do so with a great depth of knowing satisfaction. Even of greater value, you may be able to isolate the reason for a failure to communicate based on which lights are on or are not on. For those modem lights not directly related to RS-232-C signals, I will give their meaning as they relate to the sequence of events that make up a communications session.

In order to keep this discussion simple, I will exclude any references to the CCITT V.xx series of interface specifications used in the international community. I will also avoid discussing all of the EIA RS-232-C signal descriptions, designation codes, and etc. If anyone is interested in more detailed knowledge please contact me, but be aware that I normally do this for money (preferably large sums) and not the sheer thrill of giving. So, on with the "cheap" version.

The following signal descriptions are my interpretation of the EIA RS-232-C specifications. It is recommended that those of you who are going to develop the future communications network of the universe and other equally valuable designs, spring for the extra cost of a complete RS-232-C specification straight from the horse's mouth, EIA in this instance. ►

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## RS-232 continued

In this discussion, references to two different types of equipment will be made, Data Communication Equipment (DCE) and Data Terminal Equipment (DTE). My definitions for the two types of equipment are: Data Communication Equipment is any device used to communicate data over a communication link. A modem (Data Set) is considered Data Communication Equipment. Data Terminal Equipment is any equipment which either creates data to send or utilizes data received. A Personal Computer and a CRT are two examples of Data Terminal Equipment.

With the needed equipment nomenclature definitions out of the way, we are ready to press on with the RS-232-C signal definitions. So, here we go. Oh, by the way, I do use some rather basic electronic circuit terminology in these definitions. If you are unfamiliar with their meaning any modern dictionary will probably give an adequate description for each of them.

## Protective Ground

This conductor must be connected to equipment ground and may, because of electrical code, be connected to external ground. This circuit establishes a common "chassis" ground between the DCE and DTE. If this connection is not established, signal problems may develop and may include a potential shock hazard, though very unlikely.

## Signal Ground (SG)

This conductor provides a common ground reference for all interchange signals, excluding protective ground. This circuit may be "strapped" to Protective Ground in order to meet local electric code requirements. This conductor should be present to ensure the greatest signal integrity possible.

## Transmitted Data (TD)

The signal's direction is considered as transmitted from the DTE to the DCE. On the Hayes modem the light marked "SD" will flicker on and off as data is received from the

DTE on circuit (TD) and in turn transmitted by the modem (DCE). The DTE should not transmit data on this conductor unless the following circuits, when implemented, are in an ON condition: Request To Send (RTS), Clear To Send (CTS), Data Set Ready (DSR), and Data Terminal Ready (DTR). Each of these signals and their respective meaning are covered later in this definition. When no data is being transmitted by the Hayes the light marked "SD" should be OFF.

## Received Data (RD)

This signal is considered as being received by the DTE from the DCE. The light marked "RD" on the Hayes modem flickers on and off when data is being received from the communication link by the modem (DCE) and sent on to the DTE. The DCE will hold this signal in a steady "marking" state any time that the Received Line Signal Detector (RLSD) (Carrier Detect (CD) for short), circuit is in an OFF condition. This signal must also be held in a steady "marking" state if the Request To Send circuit is OFF when operating in a "Half Duplex" mode. On the Hayes the "RD" light should be OFF when no data is being received.

## Request To Send (RTS)

This signal is sent by the DTE to the DCE. So, the DTE "requests to send" data. When this signal is received by the DCE, the DCE switches to the "transmit data" mode. Once the DCE is in the transmit data mode, it turns ON the Clear To Send (CTS) signal. When the DTE turns Request To Send (RTS) OFF, the DCE finishes sending any current data and turns Clear To Send (CTS) OFF. If implemented, Data Terminal Ready (DTR) must also be ON before data is sent to the DCE from the DTE. Remember Clear To Send (CTS) is not turned off until all current data is sent, and that Request To Send (RTS) cannot be turned on again until Clear To Send (CTS) has been turned off.

## Clear To Send (CTS)

Signal direction is from the DCE to the DTE. The DTE turns ON Clear To Send (CTS) when it has finished switching to "transmit data" ➤

## RS-232 continued

mode in response to receiving Request To Send (RTS) from the DTE. The DTE should not attempt to send data to the DCE prior to the DCE turning this circuit ON. Also, if Data Terminal Ready (DTE) and Data Set Ready (DSR) are implemented, they must be ON before data is sent to the DCE.

## Data Set Ready (DSR)

This signal is sent by the DCE to the DTE. When this circuit is ON it indicates that the DCE is in a powered up condition and not in a test, dial, or "talk" (voice) state. Also, the communication connection should be in the "Off Hook" status. "Off Hook" is when the DCE is electrically connected to the communication network.

You can equate the "Off Hook" status to be the same as when you have actually picked up the telephone receiver from the cradle. In other words in telephone technical talk you have gone "Off Hook". Remember the old wall telephones in the western movies where the telephone receiver hung on a "Hook" on the side of the big telephone box? Ma Bell and the boys don't rush to change terminology to match the real world. One of their signal wires is still called "TIP" and the other "RING", but that's a whole 'nuther story.

Hayes modems deviate from the pure RS-232-C standard for Data Set Ready (DSR), as the Hayes modems and their imitators immediately turn ON Data Set Ready (DSR) when the modem is powered up and it remains ON until power is removed from the modem. Thus, the Hayes cannot be considered to be "ready" as defined by RS-232-C when the Data Set Ready (DSR) signal is ON.

## Received Line Signal Detector (RLSD)

This signal is sent by the DCE to the DTE, and for short is referred to as "Carrier Detect" (CD) by almost everyone. The Hayes modem indicates the presents of a carrier tone transmitted by a remote modem by turning ON the front panel light labeled "CD" and by turning ON the Carrier Detect (CD) circuit.

At all other times the "CD" light should be OFF as should the Carrier Detect (CD) circuit. This signal is normally protected from short intermittent carrier tone losses by the use of "guard delays" in the DCE equipment.

## Data Terminal Ready (DTR)

The DTE sends this signal to the DCE when it is powered up and ready to communicate data to and from the DCE. The Hayes modem "TR" light is turned ON when the connected DTE turns the Data Terminal Ready (DTR) signal ON. The Hayes modem also handles this RS-232-C signal in a non-standard way. The pure EIA definition of this signal says that when the DTE turns this circuit ON the DCE should go "Off Hook" and connect to the communication link. This is not how Hayes modems work. The Hayes will not go "Off Hook" until a proper Hayes modem command is received from the connected DTE. The Hayes does, however, conform to the definition of the OFF condition of Data Terminal Ready (DTR). RS-232-C specs state that the DCE should terminate the communication connection by going "On Hook" (hang up) when the Data Terminal Ready (DTR) circuit is turned OFF.

## Ring Indicate (RI)

This signal is sent by the DCE to the DTE and is, as the name indicates, how the DCE tells the DTE that his phone is ringing. Ring Indicate (RI) is turned ON each time a ring signal is detected on the communication line and OFF when the ring signal is removed. The DCE should turn this circuit ON and OFF as required no matter what the state of the Data Terminal Ready (DTR) circuit is.

If you watch your Hayes modem, it will either turn the light marked "AA" on or off for the duration of each telephone "ring". Whether the light is on and turns off or is off and turns on is determined by whether the Hayes is in "Auto Answer" mode or not. If the Hayes is in "Auto Answer", the light will be on when no ring signal is present and will be turned off when the telephone "rings". If the Hayes is not in "Auto Answer" mode the light will be off and turn on each time the phone rings. ➤

## RS-232 continued

If your Hayes is not in "Auto Answer" mode and you wish to have it answer an incoming call, you or your software must recognize the phone is ringing and send an "Answer" command to the Hayes before it will answer the call. If you are controlling the Hayes, you will know the phone is ringing by either hearing the ring on the modem speaker, seeing the "RI" light turn on, or both. If your software is to answer the phone, it should monitor the Ring Indicate (RI) signal and send the Answer command whenever the Ring Indicate (RI) signal is turned on by the modem. And, conversely, if your modem is in the "Auto Answer" mode, you must ensure that the Data Terminal Ready (DTR) circuit is NOT ON when you DO NOT want the modem to answer an incoming call.

The Ring Indicate (RI) signal is the last RS-232-C signal of significance to the personal computer using asynchronous communication for data transfer. As I mentioned before, there are several other signals which serve to meet the needs of synchronous communications and other less common modem types.

There is also one or two other lights on the Hayes modem's front panel that are not directly related to an RS-232-C signal. One light is on all Hayes modems, that light is the "OH" light. The "OH" light is used by the Hayes to indicate when the modem has gone "Off Hook" or, more accurately, indicates when the modem is electrically connected to the telephone circuit. Whether the Hayes is "On Hook" or "Off Hook" is determined by modem control commands and therefore not

controlled by an RS-232-C signal. Also the higher speed models of the Hayes modem product line have an additional light labeled "HS". This "HS" light indicates whether or not the modem is operating in the "High Speed" mode. When the light is on, the modem is in high speed and when the light is off, the modem is in low speed. As you can tell by the description, there is no RS-232-C signal which is associated with the "HS" light as it is controlled by the operating baud rate of the modem.

Now that we have completed our description of the relevant RS-232-C circuits we are now ready to use them to meet our personal data communication needs. Their use in connecting a Hayes compatible modem to a personal computer is far less complicated than when connecting a serial printer to your computer. There is also a neat connection arrangement that allows you to connect two computers together without using modems, this is known as a "null modem".

As I said earlier, in the second part of this series we will cover the various RS-232-C cable components and learn which RS-232-C signals are required for most serial device inter-connections. In addition, we will cover the particular cable components and pin-outs which are required to connect external modems to the various PC models. In the third and final segment, I will cover in detail null modems, XON/XOFF protocol, and some of the more common serial printer connections. Stick with me and you may be able to do it yourself (without me) and save large sums of money.

Fred

#### Door Prizes

Thanks to Microsoft and Great America Software Producers for providing the door prizes last month. Three copies of Microsoft Word and two copies of GASP were given away. The lucky winners are:

Word: Paul Talkington, Robert A. George, and Robert E. Simms

GASP: Hatcher E. Chalkley and Glen D. Thompson

## Package Software and The PC

by John Keohane

Whatever kind of business you're in, there are probably specialized packages for that business, whether you're physician, or an attorney, a restaurant, or a furniture store, an antique dealer or political candidate, a construction business or a civic club. It's quite possible that you will be quite complimented to know that there are specialized packages for your kind of business. It rather feeds the ego, because you know that you developed specialized expertise yourself, before and after getting into your business, and at first blush it appears that this computer software will provide effective expertise to compliment your own.

Don't bet on it. You could have an expensive disappointment, or be caught like the pig, not the chicken, in the ham and eggs. You know that the chicken's involved, but the pig is committed.

Package software can be excellent, IF. A package can spread programming and other development costs between many users. A vendor can make money selling you a copy of that package, without charging you the full costs of development, because that can be spread among 20 or 20,000 users of that package. Thus you CAN get better software, for less money, than if you developed it yourself. Hiring contract programmers can easily cost you \$50/hour, and systems analysts and consultants can cost \$100 and hour and more, so buying that package might be a way to go.

What should you look for in package software? What's a good package and what isn't? I won't claim to answer all these questions, but I can provide some information even while not giving away all the secrets of my own computer expertise.

First, do you really want to buy it or build it, or do without? If the question is only buy or build, it is probably cheaper to buy a package, IF it will do what you need done. But do you need that done by computer at all? What cost savings, or profit opportunities will the computer really provide? A step more complex than no computer, is to have generalized word-processing, database, and spreadsheet software and to avoid buying a package for

a particular task (such as accounting) or a particular industry, such as your kind of business. You might utilize such generalized software as Lotus or Multiplan, Rbase 5000 or dBASE III.

In a package you best evaluate whether your proposed package has the fields you need and performs the functionality you require. If it does not, do not get the system. Do not accept an answer that the vendor will custom tailor it for you. Unless there are truly pre-defined user exits, any custom-tailored system, no matter who does the tailoring, will become too big a bear for anyone to manage. This can lead to computer disaster, and quite likely to business disaster as well.

Learn about updates to the system from the vendor. The predictable and unpredictable will happen in the future. You and I know that the sales tax rate in Texas is almost certain to go up next year. Who could have predicted other changes as the postal service move from 5 to 10 digit zip codes? How will the vendor handle/provide the updates? What assurance is there that the vendor might not change policy, from providing free updates, to tacking on a major charge? Will the vendor be in business to provide updates at a future time?

What about timing of the system? How fast does it operate? It is really hard to check this performance before you buy, for two reasons. One is the test file size factor, the other your own knowledge factor. The file size factor is that test files are likely to be smaller, much smaller than the business files when a business really gets on the computer. Of course, the vendor is not likely to develop really big test files, but if you develop the test files, they are also likely to be small, for you will get tired of developing and inputting that much test data. The second problem is the knowledge factor. While you're just learning the software, questioning things and finding keys, it can run plenty fast enough for your eyes. Unfortunately, later, when things are old hat, the same system, on the same machine, can seem to just crawl like a turtle.

There is some good package software out there, but you best undertake some serious analysis before you become committed.

John

■



*"If Wang word processing is what you need . . . you'll find Allegory a lot of value for a very reasonable price."*

*—Craig Stinson, PC Magazine*

### Allegory for Wang Users

If you are a Wang user you're probably not too thrilled over the idea of giving up "Copy What" and "Go To Page" just to work with one of those IBM PC's that seem to be all over the place. With Allegory you won't have to. Below is Allegory's Main Menu. Look somewhat familiar? It should, for behind that menu is a word processing program as close to Wang word processing as you are going to find. Not only does the Main Menu include all the familiar functions but the underlying operations are nearly identical as well.

|   |
|---|
| <p><b>MAIN MENU</b></p> <p>Edit Old Document<br/>                 Create New Document<br/>                 Print Document<br/>                 Review Print Queue<br/>                 Document Index<br/>                 Document Filing<br/>                 Library Functions<br/>                 Glossary Functions<br/>                 Text/Doc Conversions</p> |
|---|

*Wang-like Word Processing on your IBM PC*

# Allegory

vs.

# MultiMate

This similarity goes beyond mere cosmetics, matching also the style, pacing, and *SPEED* you are familiar with. For example, there is the Document Summary screen containing the document's Title, Author, Operator, and Comments along with all the statistics you are used to. You even get both single and multiple filing options on the Document Filing menu. Of course there are some differences. The Print Menu has been modified to take advantage of the particular features of the IBM PC. And then there are enhancements, functions like SUPER-INDENT that allow you to indent multiple paragraphs, or UN-DELETE which does just that, puts back the text you just deleted.

In short, Allegory just about turns an IBM PC into a Wang Word Processing System, at a fraction of the cost of any other software product available.

Trademark: Allegory is a trademark of April Software, Inc. MultiMate is a trademark of MultiMate International Corp. Wang is a trademark of Wang Laboratories Inc. IBM PC, XT, and AT are trademarks of International Business Machines Corp.

### Allegory for Non-Wang Users

If you are not a Wang user then you most likely are not greatly impressed with the fact that Allegory is so Wang-like. Therefore, may we suggest that you ask yourself why so many people are Wang users. It's because Wang is an excellent word processing system. So good that Wang has been beating IBM in the corporate word processing market for years. And if Wang would offer their word processing system for the IBM PC at a reasonable price we would not be selling Allegory.

But they don't, and we are.

### Technical Support

Our support policy is very simple. If you have any question about Allegory just call us. No time limits. No annual fees.

### The Bottom Line

If you really want Wang-like word processing on your IBM PC you have three choices.

- 1) Supply Wang Laboratories with \$695 and get a program that is a reasonable subset of their full word processing system.
- 2) Supply Multimate International with \$495 and get a program that has many similarities to Wang word processing.
- 3) Purchase Allegory for \$170 and live happily ever after.

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## Disk of the Month

By Kathryn A. Crawford

MAY 1986

The May disk of the month is PC-Write ver. 2.6, the latest version of the ever popular Shareware\* word-processing program from Quicksoft. This version has all the features of the previous editions (such as mail-merge and the creation of template input and output formats), plus some enhancements:

- automatic reformatting to realign text after making changes
- 40 help screens (previous version had 9) that can be accessed directly or through a menu system
- support for over 200 printers, including support for printers that have the proportional spacing option
- accepts many Wordstar Ctl keys, with a simple procedure to convert Wordstar files to PC-Write file formats

The creation of a working disk is now completely automatic: you just put your blank, formatted disk in drive B and type in the command: "workdisk B:". The proper files are moved to the working disk, and then you are asked to select which printer you will be using. If you have a color monitor, you will still need to copy another file (the "ed.col") to replace the monochrome ed.def file.

I noticed other improvements in format and execution as soon as I started writing text. I wasn't sure if I was going to upgrade to the new version of PC-Write. Being basically lazy, I don't like changes in format, especially changes in the help files; and I had just gotten used to the improved help screen layout in PC-Write ver. 2.55/2. I also resist having to relearn function keystroke sequences. You now need to hit F1 twice to get to the automatic help menus; little things like that can drive

me mad. However, from the moment when I made changes to the text and found the text automatically reformatting, I rapidly became a fan. The words were speedily moved from line to line within the margins, just as advertised. Also, once I got used to the new arrangement in the help screen format, with the help menu remaining on the top half of the screen and the selected help screen appearing on the bottom half, I found it easier to use and understand than the older 9 screen format. If you don't want to use the automatic help menu sequence, the four main menus can be called up independently.

Ruler lines can be embedded in the text file and saved with the document, so modified margin and tab settings can be embedded in the document. This way you can change settings for different sections within a document and retain the changes for the sections.

The method for creating command lines has been changed. Command lines used to begin with a dot ("."), and were called Dot lines. Both command lines and ruler lines now begin with an Alt-G (the Mars, or male, symbol) and are called Guide lines. Guide lines can be read by both the edit and print programs. Some new commands have been added and some old commands have been enhanced. The maximum number of header/footer lines has been increased to eight, and .XF/XH now take negative values to position headers or footers to the left of the text. There are more commands to control page breaks and to reserve blocks of blank space where illustrations will be inserted.

There is a new footnote feature to handle long footnotes that continue across page breaks. Footnotes can now be separated from the text by including footnote header line. Footnotes and chapters can be automatically renumbered.

A spell checker is not included in the update, but there are now a number of spell checkers available on the market that will run with PC-Write. IBM's Word Proof is the spell checker recommended by Quicksoft, and it will run ►

\* Shareware. This is authorization to try out the program for free. It is not a license to use the program indefinitely without sending a contribution to the Author. Ed.



## DISK OF THE MONTH continued

without any modification. Any spell checker that works with a standard ASCII text file will also work, but modifications may be needed. (I use Turbo Lightning and recommend it highly. The modifications are minor and easily installed.)

The users manual no longer fits on the disk, but an 16 page tutorial and a 41 page Quick Guide are provided on the disk. Separating the tutorial from the guide and making it self contained makes it a more useful starting place for the novice user. The Quick Guide, on the other hand, is not intended for the novice. It is a listing of commands, with the commands arranged by the desired function; so if you already know what you want to do, you can find the command. The Quick Guide is intended to be used by people who have already read the manual who need to remember a command sequence, and to show unregistered users of PC-Write the features of the program. To be able to use all the features of PC-Write 2.6, you will need a copy of the full manual.

The new manual is much easier to use than the manual provided with previous versions. The pages are larger and the type is easier to read. You now can tell which chapter you are reading from the chapter title running across the bottom of the page. The format of the text is much easier to follow, with the topics in each section given in large bold type and each section clearly separated from the others. More complete explanations are given of what a feature does and clearer explanations on how to make it do it. The examples illustrating the functions are also easier to understand, being more clearly set off from the text. I also found the index easier to use. It has been expanded, with the specific topics grouped under general topics and put in an easy to read two column format.

To obtain a copy of the PC-Write User's Manual at a group discount price, see Stuart Yarus's announcement concerning the PC-Write 2.6 user manual in this issue of the newsletter.

## PC-Write 2.6 requires:

- An IBM Personal Computer, or true compatible with at least 256K (It will run with 125K, but the files will be small.)
- At least one single or double sided, double density diskette drive (If you have the single sided disk drive, you will need to contact Quicksoft for a specially formatted disk.)
- An 80 column monochrome display or a color monitor with a graphics card (Instructions for the 40 column PCjr mode are on p.308 the PC-Write User's Guide.)
- PC-DOS 2.0 and up. (For PC-DOS 1.0 or 1.1, PC-Write must be copied onto a diskette formatted for the DOS version.)

Kathryn

■

**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 without 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 EACH DISKETTE. When we have more club members volunteer to help with DOM we might be able to extend this option. ►

THE DISK OF THE MONTH IS A BARGAIN AT \$2.00

DISK OF THE MONTH continued

### DISK DETAILS

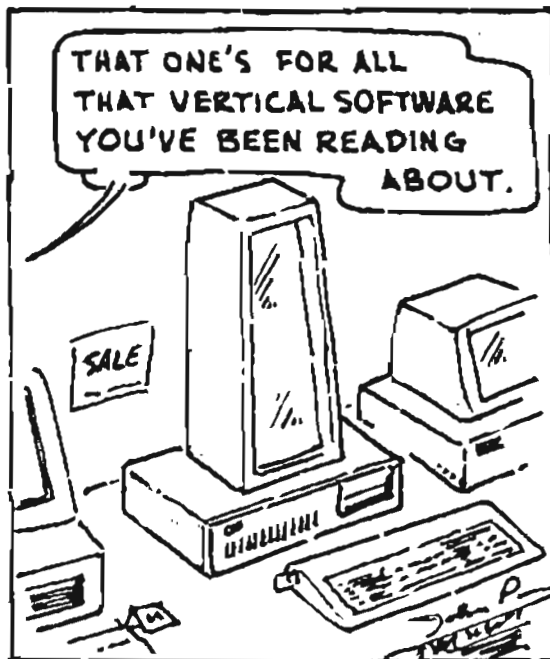
PRICE: \$2.00 per diskette (if the program is on two diskettes the price is \$4.00)

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

MEDIA: DSDD 5 1/4" Formated as 9 sector data diskettes. Public domain software only, standard full disclaimers.

AVAILABILTY: We will do our best to have all past diskettes at each meeting. DOM sales will begin at the DOM counter around 9:00, and continue until 10 minutes before the main meeting when we will close. We will then reopen after the main meeting and remain open until around 3:00.

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. Currently IBM is providing the Exchange bi-monthly. We will have the March/April issue at the May meeting. ■



# PC-Write™

Manual

**NEW  
GROUP  
PURCHASE**

PC-Write Version 2.6 was released in conjunction with the West Coast Computer Faire in early April. A new manual has been written for this release and The North Texas PC Users' Group is offering this manual at the reduced price of \$17.00, including sales tax, as a group purchase.

The new manual has twice the material of the old manual. Due to the expanded size of the manual and the increased size of the program files, the complete manual is NOT on the diskette. The diskette contains the tutorial and a short reference guide.

The new release has many enhancements including automatic reformatting, proportional spacing for printers, support for laser printers, and 40 help screens (9 screens in prior releases). The new Version is offered by our Disk of the Month program for the usual \$2. There is a review of the new release elsewhere in the Newsletter.

The new manual costs \$20.00 each. The group buying power of the Users' Group enables us to offer the manual for \$17.00, including sales tax, if we order at least 50 copies. This Group Purchase will be different from our other purchases in that we are ordering 60 copies now which will be available for purchase at the Disk of the Month table at the May 10 meeting. There will be no order form, just show up at the DOM table in the INFOMART basement and request the manual.

PC-Write is shareware. If you use the software regularly, the author asks that you register your copy. The registration cost is \$75.00 and includes the manual, telephone support, a year's subscription to the quarterly newsletter, Pascal source code, two free updates, and a \$25.00 commission when someone else registers a copy of your registered diskette. See the DOM table for registration information.

Stuart Yarus ■

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Four lines free each month to members, otherwise cost is 15 cents per word. Free ads are on a space-available basis. Eight lines or more at commercial rates. Mail ads to the Editor.

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WANTED: Summer job for student. Student, an experienced C programmer, needs summer job, starting in June. Also knows Pascal, FORTRAN, and LISP. Call Jim at 343-4885.

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## Special Interest Program Reports

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### General SIG News

- The "Beginners" SIG has been re-named the DOS SIG, since that more accurately describes its purpose. Beginners are encouraged to attend one or more SIGs that are directed at their current area of interest or concern, whether it be DOS, BASIC Applications, or others.

- See "Integrated Software" for information on a new Lotus SIG.

- It has been suggested that each SIG may wish to participate in the club's Disk-of-the-Month program, and the file of public domain software, by helping review, catalog, supply new programs, and possibly distribute disks that pertain to your field of interest.

- A reminder that any SIG news items for this newsletter must be received by noon of the last Friday of the month -- regardless of the date of the next meeting.

Phil Chamberlain, Sig coordinator

### Advanced Programmers SIG

This past month's meeting was held in one of Infomart's larger rooms; unfortunately, it was also one of Infomart's noisier rooms. It took a little re-arranging of the seating for everybody to have even half a chance to hear everyone else, but this did not seem to slow down our usual free-for-all exchange of information.

For this meeting we actually had a presentation by a guest speaker (not our usual practice). Jon Roland spoke for nearly half an hour on the new programming language, Q'Nial. "Nial" stands for Nested Interactive Array Language"; the "Q" indicates the implementation by Queens University (Canada). It is based on mathematical work in Array Theory by Trenchard Moore of the IBM Cambridge Scientific Center. Mr. Roland says that

IBM will send some 200 pages of information on Array Theory to all that ask (for free). The address is: IBM Cambridge Scientific Center, 101 Main St., Cambridge, MA 02142. Some of the papers are said not to require a taste for large doses of higher math.

Mr. Roland said that Q'Nial combines the power of APL, LISP and PROLOG. It has all the operators of these three languages plus some of those of the Pascal-like languages. It has in excess of 200 primitives and uses the ASCII character set (unlike APL). It is said to be highly portable and to support graphics and sound (statements that sound contradictory to some of us). The Q'Nial code can be recursive and self modifying. An interesting new language.

Our usual roundtable discussion followed the presentation. Much of the discussion was concerned with the IBM product announcements of the last month, the Convertible PC, the 8Mhz AT, DOS-3.2, and yet another different keyboard from IBM. Also discussed was the future direction of DOS and methods of handling large numbers of Public and External symbols in a large assembler language project. This coming meeting should be just as full of technical help and wild rumors. Join Us.

Carrington Dixon

### APL Language SIG

Our thanks go to Jon Roland for his presentation at our April meeting of Q'Nial, a very powerful array-oriented language related to APL. We were shown Q'Nial running on a Compaq, and John also touched on several issues relating to the future direction of Q'Nial, such as parallel processing.

In May, Davin Church will demonstrate FIB. This is a full-screen programming tool designed for easy application development. It is NOT just for APL. FIB handles, in a clean, consistent manner, the myriad messy details

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## Special Interest Program Reports

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involved in getting data into and out of your programs. The modest acronym stands for Fill-In-the-Blanks, but that barely begins to convey the power and numerous options available; FIB will verify that an entry is of a particular type (e.g., numeric), display an error message, move the cursor to the error with altered attributes, line up decimal points, put the entered value into your program variable, etc., all automatically.

The philosophy behind FIB is to free the programmer from drudgery, and make programming more productive -- not to mention more fun! You won't want to miss it.

Jim Plegenschue, SIG Leader  
214/539-9281 (h)

### Artificial Intelligence SIG

I am very pleased with the acceptance that has been shown of the AI SIG. For the third straight month, attendance has exceeded thirty. The present plans for the group are that we will continue to schedule formal presentations on AI topics. AI SIG needs volunteers for assistant SIG leader. Interested members please call me.

This month, I presented a tutorial on Prolog programming. I also discussed available PC Prolog compilers and interpreters. Representatives from MDDBS also answered questions regarding their "Guru" product.

Again, this month's AI SIG meeting was also announced in the TI PC Users' Group newsletter.

At the May meeting, we hope to have a presentation about TI's Personal Consulting expert system building tool. Tentatively, the program for June will be a presentation on Lisp programming.

Jim Bender, SIG Leader  
214/423-3470 h - 214/343-4885 w

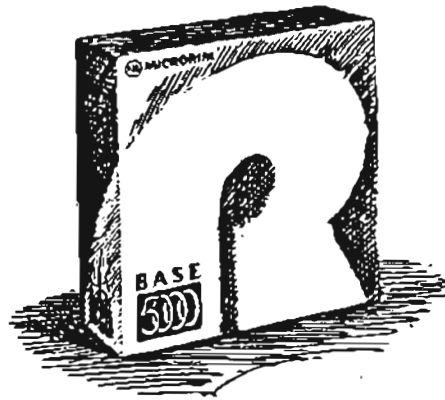
### Assembler SIG

The main topic of the April meeting was Memory Segmentation & String Handling. (2nd half of Ch. 8 in the "Waite book" - "Assembler Language Primer for the IBM PC & XT"). We went over a recommended format for .EXE files, showing code necessary to (1) link into larger programs, (2) explicitly define segments, and (3) initialize the stack segment in such a way that you can't miss it DEBUG. A short block of code showed how the string moving and comparing instructions require a source buffer to be set up in the data segment (pointed to by SI, the Source Index register) and a destination buffer to be set up in the extra segment (pointed to by DI, Destination Index register). A "direction-flag" determines whether the string operations start at the beginning of a string and proceed forward (normal direction, when flag is "cleared") or start at the end of a string and proceed backward (reverse direction, when flag is "set") -- either way, the programmer has to supply the correct starting address! Finally we detailed the instructions necessary to compare two strings byte-for-byte in either of two ways -- until the strings stop matching, or until a match is verified.

For the next meeting We've reserved the large screen projector so we can look at memory segmentation in operation in a live program (postponed from April because the projector was not available). Chris Morgan of Morgan Computing, who was here this time to answer questions of people who made a point to come by as a result of our write-up in last month's newsletter, will be back to let us view the internal mysteries of the 8088 chip in action more clearly than we ever dreamed of with DEBUG. The tool Chris will use, Advanced Trace86, was designed primarily for sophisticated debugging of advanced applications, but it's also a great aid in learning about assembly language in the first place! And, Chris will be offering it to NTPCUG members at 50% off the list price!

John Wolley, SIG Leader 214/770-4455 w

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## Special Interest Program Reports

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### BASIC Applications SIG

In our April meeting, another BASIC language program was distributed and the commands used were then discussed in detail. Although time didn't permit our going through the program completely, we were able to talk about error trap routines, data statements, "INSTR" command, "LINE INPUT" command, and other commands discussed in previous meetings.

As was pointed out in the March meeting, if you use the Microsoft Quickbasic Compiler, you should print the file README.DOC from your disk. It contains many changes and addenda to the manual that comes with the program.

The program to be presented and discussed at the May meeting will illustrate the use of sequential and random files. If you have questions about these or other BASIC language commands, be sure to come to this meeting.

Herb Wilson, SIG Leader  
214/235-3364 h - 214/231-2112 w

### Business Applications SIG

More than 20 attending the April meeting heard consultant Clarence Handlogen discuss his extensive use of batch commands to improve his use of the computer.

For May, Clarence will continue the discussion, and get into the details of how to write the batch commands. You don't have to be a programmer to understand this, and it will make your computing easier and more efficient.

Ed Fries, SIG Leader 214/783-8543 w

### C Language SIG

The meeting for April was an open forum discussion of items of general interest. Rex McCanally led the discussion.

"C" is rapidly becoming the most popular programming language for professional program development. Most of the really good commercially available programs are developed with the C language because it allows the programmer to access most of the features of the machine available to assembly language programmers. The availability of low cost and efficient compilers is making the language even more popular for the novice as well as the expert.

Come to the C language SIG meetings to obtain information on compilers, program editors, debuggers, and features of this popular language.

Dr. Sid Nolte, SIG Leader  
214/233-6178 h - 214/995-3868 w

### Communications SIG

The SIG was visited by members of the local Dallas Microsoft office, bearing gifts. Four copies of the newly released Microsoft communication software "ACCESS" was handed out to "volunteers?" for user evaluation purposes. See what happens when you miss a Communications SIG meeting?

April's formal presentation was an introduction to RS-232 signals. The presentation included standard signal definitions and their relation to Personal Computer communications and Hayes compatible modems. The information presented will be published in a future issue of the North Texas PC news for those who are interested in RS-232 but missed the meeting.

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## Special Interest Program Reports

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I'll try to limit formal presentations to about 30 minutes or less. The formal presentation will be followed by a general question and answer session.

The topic for this month's meeting is RS-232 continued. The intent is to provide an introductory level of what RS-232 is and how RS-232 cables are used to connect various serial devices to computer systems. We have covered the RS-232 standard signals and what their purposes are. This month we will cover how to make, or recognize, "standard" RS-232 cables. And if time permits, how to make various "Null" modem cables for hooking up two devices without modems, as well as how to make cables for some of the more common serial printers and plotters.

Fred Williams, SIG Leader 214/492-1315 w

### DOS SIG

Previously known as Beginners, the DOS SIG concentrates on every phase of the DOS command structure. It is open to members of other groups, who may be in the process of changing to MS or PC-DOS.

John Hall, SIG Leader 214/495-2375 h

### Framework SIG

The first meeting of the new Framework users SIG was very interesting and helpful to all who attended. There is so much to learn in Framework, and if you are like me, you have absolutely no time to sit down with the new manual and learn it all. Next meeting we will continue looking through the many new menu options available.

Jim Janeway, SIG Leader 214/349-0314 h

### Genealogy SIG

At the April meeting, Steve Muncy discussed modems -- what they are and how they are used to communicate with other computers. (Steve is the editor of Applegram on StarText). Modems enable your computer to communicate with many services, such as StarText, CompuServe, MCI, etc. -- and including Genealogy Bulletin Boards. Q.U.G. (Quinsept User Group) Modem Users newsletter lists current Bulletin Board Systems as

|              |                   |              |
|--------------|-------------------|--------------|
| QUEST        | San Jose CA       | 408-946-4933 |
| ROOTS-BBS    | San Francisco CA  | 415-584-0697 |
| QUINSEPT     | Lexington MA      | 617-841-1080 |
| GENEOLOG-BBS | Columbus OH       | 614-488-4736 |
| TREESHARE    | Houston TX        | 713-667-5532 |
| TREE-SEARCH  | Salt Lake City UT | 801-479-9693 |

StarText would welcome a genealogy bulletin board if there is sufficient interest. About 12 people signified interest.

At the May meeting, Al Weeks will present "First Family", a Genealogy program for the IBM PC.

Minnie Champ, SIG Leader 214/341-6507  
Judge N. L. Linebaugh, 214/350-1603

### Integrated/Spreadsheet SIG

Many thanks to Pat Charles of The Software Group for an outstanding presentation of their integrated software package - Enable. We expected a lot from this product that has won so many multi-million dollar government contracts, and we were not disappointed! Not only did the presentation reveal much in the way of raw power and richness of features, but also very sensible and well-designed interfaces and transitions between functions. We are looking forward to learning more about Enable and having The Software Group back for another look in the near future.



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## Special Interest Program Reports

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At this coming month's meeting we will be helping to kick off the formation of another new SIG. Finally, we are going to have a Lotus Users SIG! I have been wanting to see this happen for a long while, but have been unable to squeeze it into my schedule. Last month Sara Reyes approached me saying that she was interested in helping to start such a group. Sara is an accomplished training and consulting specialist in 1-2-3, Symphony, dBase, Rbase, and others to numerous to mention.

It has been a long time in coming, but I think there is going to be an enormous amount of interest and tremendous growth in this group. This will be the inaugural, organizational brainstorming meeting, so come and express your ideas and interests at our 2 o'clock session.

Jim Janeway, SIG Leader  
214/349-0314 w - StarText MC 113737

### Investment: N-Squared SIG

Greg Morris was unable to attend the April meeting. Bob Hanneschlager presided and gave a very interesting talk about Gerald Appell's Time Trend Momentum Method. This analysis technique involves a 12 day momentum of the New York Stock Exchange Index and defining various entry and exit rules based upon its position relative to the index itself. The N-Squared Analyzer software can produce all of Appell's indicators and timing aids.

The May meeting (10th) will be a thorough discussion of developing an indicator with the N-Squared Analyzer software. We will start with an idea and then work through the logic of it while putting it into one of the programs. If you have an idea or algorithm you would like to see--bring it.

Greg Morris, SIG Leader 214/680-1445 w

### Science/Engineering SIG

Thanks to the following for some great presentations. John Williams for showing where some of the better bulletin boards are for Sci/Eng. Sam Levin for some hints on the more powerful features of Lotus version 2. David Lamb for showing us what he knows about the public domain version of MATLAB.

We had a really good response to the presentation on Sci/Eng software, so I will try that one again. In the May meeting, I will present some information on a \$40 Fortran compiler and the NEC "V" chips, and some other miscellaneous items that could be of interest. In order to make it an informative meeting, I need each of you to bring information on some program you have found on a BBS or by writing to a reference in a magazine, or from a friend. Best of all, something you wrote yourself.

Arlin Collins, SIG Leader  
214/436-7697 h - StarText MC 124994

### Turbo Pascal SIG

We had a good turn out in April. David McGhee proposed that we spend some time each meeting learning about efficiently structuring programs, since one of the strengths of Pascal is its structure. That will start in the May meeting.

We will continue to concentrate on Beginners in May. File operations seem to be one area where people need help.

There is definite interest in cataloging the good public domain software and making it more readily available. Mike Dudley is interested. We'll ask for volunteers to work with him.

The postponed group purchase of the commercial "debugger" package should be on tap in May. Call Warren Ferguson for details.

Phil Chamberlain, SIG Leader  
214/243-5034 h - StarText MC 2606



**Room Assignments**  
Saturday, 10 May 1986

Check room numbers in lobby at INFOMART



**Special Presentations:**

**9:00 - 9:55**  
Software Recording Company  
will demonstrate AutoMentor  
for demo/tutorial preparation.  
- FREE DRAWING -

**2:00 PM**  
Allan Kay will give his ideas on  
the future of the microcomputer.

|                     |             |
|---------------------|-------------|
| <b>9:00 - 9:55</b>  | <b>Room</b> |
| Science/Engineering | _____       |
| Beginners           | _____       |
| Genealogy (w/Apple) | _____       |
| Graphics            | _____       |
| BASIC Applications  | _____       |

|                     |       |
|---------------------|-------|
| <b>9:45 - 10:10</b> |       |
| Orientation         | _____ |

**MAIN MEETING: 10:15 - 11:45**

Ginger Scardis of IBM will demo IBM's new entry into the  
Lap-Top Computer market... the PC Convertible.

|                      |             |
|----------------------|-------------|
| <b>12:00 - 12:25</b> | <b>Room</b> |
| Orientation          | _____       |

|                      |       |
|----------------------|-------|
| <b>12:00 - 12:55</b> |       |
| Assembly Language    | _____ |
| APL                  | _____ |
| C Language           | _____ |
| Turbo Pascal         | _____ |
| Framework            | _____ |

|                     |             |
|---------------------|-------------|
| <b>12:30 - 1:55</b> | <b>Room</b> |
| Invest - N-Squared  | _____       |

|                         |       |
|-------------------------|-------|
| <b>1:00 - 1:55</b>      |       |
| Artificial Intelligence | _____ |
| Business Applications   | _____ |
| Communications          | _____ |
| Databases               | _____ |

|                      |       |
|----------------------|-------|
| <b>2:00 - 2:55</b>   |       |
| Advanced Programmers | _____ |
| Integrated Software  | _____ |

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Work \_\_\_\_\_ Metro? \_\_\_\_\_

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Send completed application with your \$24 check to:  
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North Texas Personal Computer Users Group, Inc.  
P.O. Box 780066, Dallas, TX 75378-0066

Board of Directors

Jim Graham, Chairman      Jim Hoisington  
Dick Barr                      John Pribyl  
Jim Janeway

The North Texas 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                  | Jim Graham      | (214)245-4763 w |
| President-Elect            | Jim Hoisington  | (214)245-0973 h |
| Program Chairman           | Charles Kroboth | (214)245-4763 w |
| Treasurer                  | Joe Brophy      | (214)343-9842 w |
| Secretary                  | - o p e n -     | ( ) -           |
| <u>Membership Director</u> | Bob Russell     | (214)422-4269 h |
| <u>Disk of the Month</u>   | - o p e n -     | ( ) -           |
| <u>Public Relations</u>    | Stuart Yarus    | (214)867-8012 h |

Special Interest Groups:

|  |                  |                 |
|--|------------------|-----------------|
| SIG Coordinator                        | Phil Chamberlain | (214)243-5034 h |
| APL                                    | Jim Piegenshue   | (214)539-9281 h |
| Artificial Intell.                     | Jim Bender       | (214)423-3470 h |
| Assembler                              | John Wolley      | (214)238-9443 h |
| Beginners                              | John D. Hall     | (214)495-2375 h |
| Business Applic.                       | Ed Fries         | (214)783-8543 w |
| C Language                             | Dr. Sid Nolte    | (214)233-6178 h |
| Communications                         | Fred Williams    | (214)492-1315 w |
| Databases                              | Chris Morgan     | (214)245-4763 w |
| DOS                                    | Herb Wilson      | (214)235-3364 w |
| Framework                              | Jim Janeway      | (214)349-0314 h |
| Genealogy                              | Minnie Champ     | (214)341-6507 h |
| Graphics                               | Mike Durbin      | (214)271-8779 h |
| Integ. Software                        | Jim Janeway      | (214)349-0314 h |
| Invest - N-Squared                     | Greg Morris      | (214)680-1445 w |
| Programmers                            | Dr. Nell Bennett | (214)422-5673 w |
| Science/Engr.                          | Arlin Collins    | (214)890-6855 w |
| Turbo Pascal                           | Phil Chamberlain | (214)243-5034 h |
| <u>User Group Telephone (Answerer)</u> |                  | (214)242-4187   |
| <u>Bulletin Board</u> SYSOP:           | - o p e n -      |                 |

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.

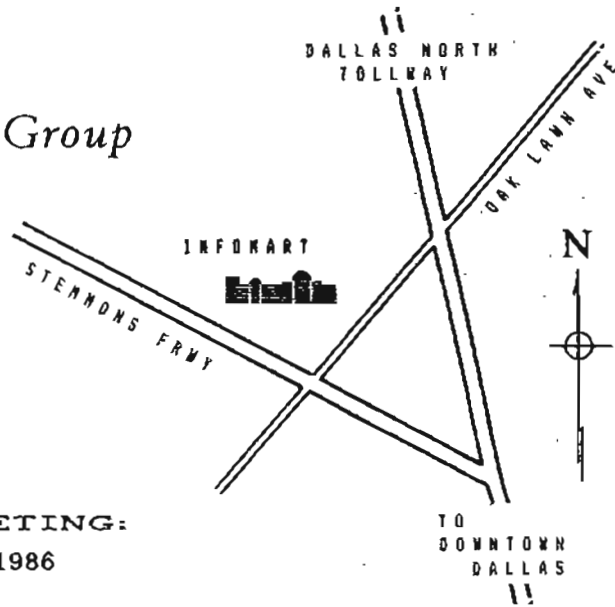


North Texas PC NEWS

2025 Rockcreek Drive, Arlington, Texas 76010



*North Texas PC Users Group*



**NEXT MEETING:**  
10 May 1986