

NEWS

Vel 3

North Texas IBM Personal Computer Users Group

No. 12

Special Interest Programs

Programmers

12 noon Room 106 Jim Hoisington

Neil Bennett usually chairs the Programmers Special Interest Group session but is off to Australia for a couple of months. Jim Hoisington agreed to steer the meetings until Neil returns in February. According to Jim, the December meeting will again feature the programmer's famous round table discussion of computer things - old, current, new, and predicted.

Beginners

9:00 am Room 105

John Hall

BASIC

9:00 am Room 107 Mike Durbin

Business

12 noon Room 105 Burke/Talbott/Fries

Beginning Assem

Charles shultz

(for a complete listing of room assignments and meeting times, see page 4. Ed.)

Agenda

This month we will have a demo of "Command Center", a program that extracts and compresses data from the Corporate mainframe for use at the Manager's PC. The presentation will be made by Mr. Drew Murphy, of Pilot Executive Software, Boston, MA.

Christmas Suggestions

by Xania Rice

It's hard to buy software as a Christmas gift, unless you have an unlimited budget, or you've heard the computer owner say exactly what is wanted. Most owners form definite opinions as we read the myriad of ads in the computer magazines, and unless the gift fits our need it's going to sit on the shelf after a brief trial. With that in mind, let's explore some items that might be "safe" gifts.

How about a box of diskettes? These are always useful... stay away from the cheapies though, they can cause problems that you least expect. Or a box of paper? Printer paper with laser cut perfory (Microperf, Laser Perf, Micro Perf, etc.) is best for the "neat" type.

Then there's always a subscription (or extension) to one of the magazines... PC World, Infoworld, PC Tech Journal as examples. For an expansion board that is not fully populated, a set of chips would be welcome (be sure you know the computer vintage). For the new owner of Wordstar or Supercalc or EasyWriter or Whatever, a template such as KLEERTEX that fits over the keyboard and shows all major commands at a glance. And, a lot of public domain software is available from our Disk of the Month program... an order blank is printed in this issue for your convenience.

Most of the above items are priced at under \$30 and can be purchased from advertisers in this month's PC NEWS.

(Ordinarily, I would not think of running an ad on the front page of the newsletter, but the following ad is so timely, so needed, and appropriate that I couldn't resist the temptation. Ed.)

WANTED: Accounts of computer trials and tribulations, or constructive articles that others might find of interest. Articles to be published in North Texas PC NEWS. Hard work, no pay, but somebody's got to do it... why not you? See page two, or call 817-275-4109 and ask for John.

Next Meeting December 8, 1984

Jesuit College Preparatory School 12345 Inwood Road, Dallas, Texas

(Schedule on page 4 - Map on page 6)



North Texas PC NEWS

Published monthly by members of North Texas IBM Personal Computer Users Group for their use. Members each receive a free subscription; for others, price of the NEWS is \$2.00 per copy. Advertising is accepted; contact Editor for rates. Members are requested to notify the editorial staff in writing of address changes. Send all editorial correspondence to the Editor, PC NEWS, 2025 Rockcreek Dr. Arlington, TX 76010.

(817)275-4109 (214)690-9087 Editor John Pribyl Programming Editor Tom Prickett (214) 234-8688 Software Review Editor Dick Gall Circulation Manager Bob Russell (214) 422-4269

Illustrations by Mel. White and Marion Cutler

Copyright (c) by North Texas PC NEWS, 1984. (Articles may be reproduced by other User Groups if credit is given to the author and the publication.)

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 is 56 characters. Article submission is preferred by modes or disk (ASCII format). Double-spaced, typewritten written copy is acceptable.

North Texas IBM Personal Computer Users Group

A non-profit, independent group, not associated with IBM Corporation. The Group meets on the second Satur-day of each month. See page 1 for meeting time and place.

Officials:

President Chris Morgan (214) 739-5895 President Elect coen (214) 739-5895 (214) 739-5895 Program Chairman Charles Kroboth Treasurer Bill Hood Secretary (214) 739-5895 Charles Kroboth Operations Director Jie Graham (214)739-5895 Setup Team Jim Janeway and Tom Fowlston

Special Interest Groups:

Beginners John Hall (214) 495-2375 BASIC Applic. (214)271-8779 Mike Durbin Sharlene Talbott (214)386-5596 & Ricky Burke (214)276-5003 Business Applic. & Ricky Burke (214) 783-8543 & Ed Fries Disk of the Month Doug Windham (214) 278-5321 Programmers Dr. Neil Bennett (214)238-7650 Assembler Charles Shultz (817)566-3919

Telephone (during business hours)
Bulletin Board SYSOP: Mark Collard (214) 361-0304 (214) 223-0983 (24 hrs, download & upload, messages, 300/1200)

Dues: Regular Membership - \$24.00 year Student membership - \$12.00 year Dues are payable for full-year increments only. PCN mailing label shows your membership expiration date. Renewal must be received at least six weeks before that date for uninterrupted mailing of PC NEWS. Mail payment to: Treasurer, NT IBM PC UG, 10400 N. Central Expwy #210 Dallas, TX 75231

Editorial

Reporters Needed

PC NEWS needs reporters. Someone to report on things we do at the general and SIG meetings that are of interest to members who cannot attend. Other readers who are not at the meetings advertisers, other user groups, magazine editors and the like - are also interested in what we're doing. Can we have more material of this type in the newsletter? Will you volunteer?

Writers Needed

We also need some people with inquisitive minds to do creative writing for your newsletter. Our membership, which now stands at over 400, surely has a number of people that would be willing to share their views, trials and tribulations with the group, if only someone would give them a push. Well...

consider yourself pushed.

Put it on your agenda, and get cranking!

If you want a look at a real newsy, professional looking newsletter, take a look at Blue Notes, the newsletter of the San Francisco PC Users Group. We have copies in our newsletter exchange volumes. True, they have about twice as many members as we do, so they probably get more volunteers, but we're not lacking in quality... just volunteers. Why don't you see if you (yes, I mean you) can do a little more participatin'.

John Pribyl

Copy deadline for next month's PC NEWS is December 28!



DISK OF THE MONTH

by Doug Windham

DECEMBER HIGHLIGHTS

NEW THIS MONTH ----

Catalogs are now available only on diskette for \$3. The cost of printing would have forced the price up in January, and would not let me make the following offer. Bring your old catalog diskette and a quarter (.25) to the meeting and exchange them for a new catalog diskette each month.

DECEMBER 1984

(Double-sided)

CLUBware by RAYHAWK AUTOMATION INC. has a long list of performance enhancement routines for use with BASIC.

QFRINT - quickly print a string at the current location.

IPRINT - print a string using the color/attribute given.

CLREOL - clear from the current position to the end of

CLREOS - clear from the current position to the end of the screen.

SCRLDN - scroll some portion of the screen down.

SCRLUP - scroll some portion of the screen up.

XREP - repeat some character along the x axis.

YREP - repeat some character down the y axis.

Software to accelerate the PRINT statement for compiled BASIC that uses BASRUN.EXE. Source code is NOT changed.

Software to accelerate the PRINT statement in interpreted and compiled BASIC programs.

(This was reviewed by Dick Gall last month in PC NEWS.)

PD0021

(Double-sided)

JR-TALK PC-TALK.III for PCjr (DOS 2.1 only)
Requires 128k RAM, 1 diskette drive,
DDS 2.1, and a modem or modem card.

PC-TALK5 PC-TALK.III Version 5.00

The original PC-TALK.III is User-Supported Software from The Headlands Press, Inc. P.O. Box 862, Tiburon, CA, 94920. They request a \$35 contribution if you find the program of value to you.

JR-TALK is a modified version of the original program for the PCjr. This version is not available directly from the Headlands Press but instead is a modified version of the original.

MAJOR NEW FUNCTIONS AND FEATURES OF PC-TALKS

The Set/Clear Alt 1-0 Temporary command, Alt-=, has been changed to Shift-Tab. This was done since Prokey Ver. 3.0 uses the Alt= combination to define macros and this is not overidden by their Suspension command.

Split-screen function: Pressing Cntrl-Home, provides that all of your keyboard input will occur on screen line 25, while all received input occurs on the upper 24 lines as before.

A Hangup Command has been added.

The REDIAL routine has been rewritten to be more informative.

Path and Subdirectory support. Alt-6.

When using Alt-V, View File, the disk free space is now provided in the compiled version, as it was in the Basic version.

P00022

POWER WORKSHEETS

by Wildfire Technology, Inc. 712 Kearns Building Salt Lake City, Utah 84101

This is Volume !A of their worksheets. If you send \$49 to the address above you will be a registered user of these worksheets, which qualifies you for ongoing support, and they will send you the second disk in the set (Volume 1B).

NOTE: These worksheets will work only with Version 1A of LOTUS 1-2-3.

BSTAT MKS Accepts from 1-6 set of data for analytical tasks

DEPREC WKS Performs straight-line, sum-of-years-digits, declining balance, and ACRS deprec

PB0023

(Double-sided DOS 2.x only)

FREECOPY is a public-domain version of DISKCOPY. The main value of this program is the liberally-commented source listing and source file ready for input to MASM.

(This was reviewed by Dick Gall last month in PC NEWS.) >



DISK OF THE MONTH

PD0024 A & B

(Double-sided DOS 2.x only)

CIP DATA BASE TRIAL VERSION (TWO DISKETTES - \$8)

Concentric Information Processor Trial Version from Concentric Data Systems, Inc. 18 Lyman Street Westboro, Massachusetts 01581

Requirements: PC, XT, Compaq, or 100% PC compatible, two double-sided diskette drives or one double sided diskette and a hard disk drive, DOS 2.x and 192K RAM or more. A printer is recommended.

CIP is a file management system. It's most unique feature is VISUAL. The report writer is almost like playing a game. You select a field and then move it around the screen with the direction keys. You see on the screen everything that happens in the system.

The "CIP Data Disk" has 30 CIP applications already on the diskette.

EX0011

(Double sided)

The IBM EXCHANGE ANNOUNCEMENT diskette #11, dated November, 1984 has not been received yet. Check for it at the meeting.

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.

MAIL ORDERS

An order blank is included in this issue for your convenience. All mail orders must have payment enclosed. See order blank for postage and handling requirements.

DISK DETAILS

Price: \$6.00 (except 2-diskette pack) Catalogs: \$3.00

Available at the meeting, in the cafeteria at the specially marked table, before and after the general meetings. Media: DSDD 5 1/4" diskettes formatted without DOS (320k). Public domain software only, standard full disclaimers. Call disk of the month chairman Doug Windham at 278-5321 any time (have answering machine) to contribute new programs for future Disk of the Month issues. All back issues are be available at the meeting and by mail order (see note above).

Room Assignments

Room #	9 10	11	Noon 1	2	3 4
AUD.		IBM Main Meeting	Apple MAC/LISA	Apple Main Meet	ing
			- Timor Bran	1110	* *
105	IBM Beginners	Apple Geneology	IBM Business Applic	cation	
106	IBM Ambly. Lan.	Apple Education	IBM Advanced Prog.		
107	IBM BASIC	Apple Education	Apple Pascal		
108	IBM C.A.I.	Apple Adv. Topics	IBM Engineering/Sc		
109	Apple Beginners	Apple Business			
111	Apple RASIC	Apple III	Apple Communication	ons	
113	Apple CP/M	Apple 6502	Apple Graphics		
114	Apple Stock Market/	Apple In Games	Apple Spreadsheet	is \	
116		Apple Hardware	Apple Beginning Apple	Corp.	

(The following article is a reprint from the IBM Exchange diskette for October, 1984. Ed.)

Diagnosing Memory Problems

Arnold Kishi Hawaii PC Users Group

If you encounter the message "parity error" while operating your PC, a malfunction has occurred somewhere in the PC's memory (RAM). In many instances, a parity error can be traced to a defective RAM chip or one that is seated poorly in its socket.

To find the cause of the parity error, turn off the PC, wait about five seconds, and turn it on again. After flipping the power switch 'on,' the PC automatically runs a series of diagnostics which tests different parts of the system. Since the PC has more than two dozen diagnostic error messages, this article will discuss memory-related error codes. These include "Parity Check 1" -- system board memory and "Parity Check 2" -- expansion memory.

PCs With 256K System Boards

Newer PCs and XTs with 256K system boards have four parallel rows of nine 64K 4164 RAM chips. Each row has eight chips for memory and one for parity checking. When facing the PC chassis from the front, the row of chips closest to the front is designated row 3, with the next being row 2, then row 1, and row 0 next to the expansion slots. In each row, the chip on the extreme left is the parity bit chip.

PCs with 64K System boards

Early PCs have system boards which hold only 54K of RAM. These use chips with the label 4116. They are arranged in four parallel rows of nine chips. When viewing the PC chassis from the front, the row (of nine) chips closest to the front is row 3 and the row closest to the rear is row 0. The chip farthest to the left in each row is the parity bit chip.

Numeric Memory Error Messages

Now that you know which row is where and their "numeric" position indicators, you can begin to isolate which chip may be causing the parity error.

A memory error message which appears on the monitor during the start-up diagnostic or the IBM system diagnostic disk has four digits usually followed by the numbers 201, e.g. 0281 201. System error codes without the number 201 point to problems with other components, not memory.

The first number indicates which 64K bank of memory is involved. On PCs with 256K system boards, this can be ➤



BARGAIN HUNTER SYSTEM

IBM PC 256 K RAM
2 SLIM DRIVES
WITH CONTROLLER
WITH COLOR/GRAPHIC CARD
(color 320c200.mono.640x200)
TOTAL.....\$1,979.00

MONITOR: IMC-1211 GREEN/AMBER--\$115.00

W/SWIVEL, TILT

PX-II(COLOR II)-----\$399.00

TERMS:

PREPAID WITH MONEY ORDER OR CASHIER'S CHECK C.O.D ORDER OVER \$200 CASHIER'S CHECK ONLY. ALL ITEMS 90 DAYS GUARANTEE.

DELIVERY FROM STOCK TO 2 WEEKS.



Dallas, Texas 75243 (214) 231-6372, 231-6373

ONLY

Diagnosing...

(continued)

rows 0,1,2,3. On 64K system board PCs, the number 0 represents the entire 64K bank of chips -- all 36 chips. If the problem is on an expansion board you must utilize the diagnostics for that memory board to locate the error.

For PCs with 64K system boards, the second digit can be C, 8, 4, or 0, and points to the 16K bank within the 64K which is failing. C is row 3, 8 is row 2, 4 is row 1 and 0 is row 0. In contrast, PCs with 256K system boards have 64K in each row and thus the second digit of the error message does not pertain to these systems.

The third and fourth digits represent which bit (or RAM chip) in the 64K bank (row) is causing the error condition. However, this number is in hexadecimal, not a binary number which the average user can understand. I won't get into the specific process to convert between binary and hexadecimal.

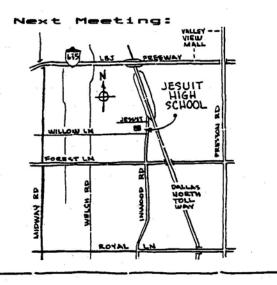
The first digit or two (of the four numbers) will point to the exact row. It is a simple process to switch a chip from an adjacent row with one in the suspect row and run the diagnostics again. Keep switching chips between rows until a different memory code appears. At that point you have located the problem chip. By trial and error you should be able to find the chip in question. If you have a spare memory chip which you know works, use it to replace chips in the row suspected of causing the parity error.

Reseat Chips Before Switching. Before switching chips in the "suspect" row, however, remove all chips and reseat them in their sockets. Run the diagnostics again. Since many parity problems are due to poor contacts between chips and sockets, this trick may eliminate the parity error. RAM chip failures are rather rare.

The most difficult parity error or memory error to locate is one which occurs "intermittently". For example, heat generated by expansion boards, disk drives or other add-ons may cause a memory chip or some other memory-related component to shift sufficiently to break the electrical contact. You may never find this particular problem since the same set of conditions may not be duplicated exactly during diagnostics.

A Simple, Do-It-Yourself Remedy

What has been discussed here is a simple method to troubleshoot your PC. If in doubt, professional service technicians have the tools to diagnose memory problems instantly. But performing these simple checks yourself can save you a money, especially if the cause is a poorly socketed chip. Some technically inclined users have purchased IBM's advanced PC diagnostics (\$150+) which cover the full range of hardware problems.



(The following article is a reprint from the IBM Exchange diskette for October, 1984. Ed.)

Helpful DOS Utilities

Dr. David Burhans, Jr. Sacramento PC Users Broup

I'd like to share with you a group of DOS 2.0 utilities which I use constantly and would sorely miss if they were suddenly taken from me. These commands "MORE, SORT, 1, >, and <" have more uses than I will discuss here. If you find my examples helpful, you may read more about these commands in your DOS manual: Chapter 10, Advanced DOS Commands.

PROBLEM: You want to list a long file on the screen but it scrolls by faster than you can read it.

SOLUTION: Type the command

TYPE LONGFILE. BAS IMORE.

The IMORE portion of the command will cause the listing to stop after each screenful and wait for you to strike another key before continuing. If you would rather have the file listed on the printer, give the command

TYPE LONGFILE.BAS >PRN

The >PRN portion of the command redirects the output of the TYPE command so that it goes to the printer rather than to the screen.

DON'T FORGET YOUR BRITEF CASE COMPUTER PAPER

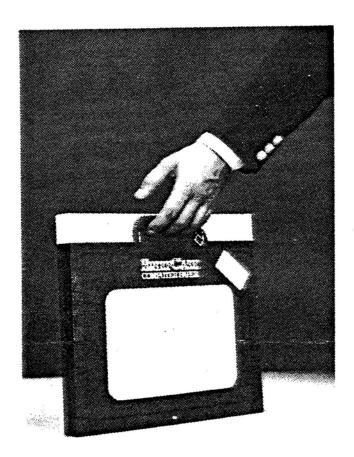
Finest Quality Product Line.

BriefCase computer paper is available in four of the best selling papers, plus an announcement type sheet with blue border as well as compatible carrier-mounted # 10 envelopes.

Each is beautifully packaged in shrink wrapped quantities of 250 continuous letterheads and 100 envelopes.

- White All Purpose Bond
- White Watermarked 25% Cotton Fiber
- Ivory Laid Bond
- White Laid Bond
- #10 Business Envelopes
- Carrier Mounted for Automatic Feeding in Computer Prints. Each is 9½"×11" with ½" margins—yielding standard 8½"×11" letter size sheets. And each microperfed for razor sharp edges.

BRIEF CASE COMPUTER PAPER



Available at these fine area Computer and Computer Supplies Retail Stores:

DALLAS

- Computers Incorporated/ Beltline
- · Highland Park Computer Store
- · Shepard & Vick
- 9 To 5 Center/Beltline
- Compco/Simtec: Arapahoe Rd.
 Main St.

Midway Rd. Welch Rd.

FORT WORTH

- Computer Place
- The PC Expansion

ADDISON

• Highland Park Computer Store

RICHARDSON

- Shepard & Vick
- 9 To 5 Office Products

ARLINGTON

- 9 To 5 Office Center
- Sunbelt Computer Products

s w a p



shop

(Four lines free each month to members, otherwise cost is 15 cents per word. Ads will run three consecutive months unless notified earlier to cancel. Ads must be renewed after three months if continuation is desired. Mail ads to the Editor.)

FOR SALE: XCOMP 15MB Hard Disk for IBM-PC with 2.7MB Super Floppy Back-up. Brand new with 1-year warranty. Retail price \$4295--Now on sale for only \$2995. Call Chuck at (214) 243-4185.

FOR SALE: FINANCIER II Software. Xlent acctg pgm with easy to use documentation. Works to budget; handles 5 checking accts. Rave reviews. Original cost \$195. Barely opened. Leave message 386-7260

FOR SALE: INFO STAR Data Base by MicroPro. Complete package, never used. \$175. Call John Sehnert, 692-0649 or leave message on answering machine.

ON-SITE TRAINING CLASSES: Literacy & Intro. to the PC, PC/XT; Using DOS 2.0; Mordstar; Lotus 1-2-3. Call Dorothy Kemp, a professional educator with computer user experience, at 341-5382. References available.

FOR SALE: (5) USI 9" green monitors, none work, make offer. Call Allen Curl, 343-0030.

FOR SALE: STB RIO Plus w/64k \$237. Norton Utilities \$40 -- both new. Chip sets at \$40 while they last. Rob Sanchez, (214) 985-9768.

FOR SALE: New IBM PCjr 128K w/Compact Printer \$799. IBM Personal Computer Graphics Printer 80 col. \$299. All still in box, never opened. Call David Hurley at 327-0708.

If you have substantial micro-programming, technical writing, secretarial, marketing or related skills and would be interested in joining discussions for forming a moonlight software house for fun (and possibly profit) then send a resume of your skills and interests to
Chautauqua, P.O. Box 214238, Dallas, 75221

DOES GETTING STARTED USING YOUR PC HAVE YOU MAD, CONFUSED AND FRUSTRATED? Driver Computer Service will set up your system and you'll have effective use of it immediately! Ben Driver 530-8833

FOR IBM PC: T.M.I. III; FINANCIER II; Execumare's REAL ESTATE ANALYSIS PACKAGE, opened but not used. \$85 each. All rights, all copies. After 6:00 P.M. 239-3842

FOR SALE: Seattle Computer memory board \$300. Parallel port \$50. Serial port \$50. IBM PC Color board \$90. Tom Prickett 995-0656 day, 690-9087 eve.

DOS Utilities

(continued)

PROBLEM: You want to see a scrted version of all or only a portion of your directory of files.

SOLUTIONS: Type:

DIR B: *. * | SORT | MORE

to see a sorted list of the files on drive B, a screenful at a time. Try DIR *.BAS | SORT | PRN to print a sorted list of all the .BAS files on the current drive and directory.

PROBLEM: You want to create a file on disk which contains a sorted list of some or all of the files in a given directory. SOLUTIONS: To create a file on a diskette which contains a sorted list of all the files on that diskette, type:

DIR +. * (SORT)ALLFILES.DAT

Now type:

TYPE ALLFILES.DAT ! MORE

and see what you've got.

To create a file containing a sorted list of all of your >EXE files, try:

DIR *.EXE (SORT)EFILES.DAT.

PROBLEM: You have an ASCII text file that you would like to have sorted.

SOLUTION: The command

SORT (OLDFILE.TXT) NEWFILE.TXT

will cause SORT to read the file OLDFILE.TXT, sort the lines within it and write the sorted output to file NEWFILE.TXT. The command

SORT/R <OLDFILE.TXT >NEWFILE.TXT

will do the same thing, except it will reverse the sort (from I to A). The command

SORT/+9 (OLD.TXT >NEW.TXT

will perform the sort starting at column 9, ignoring any data in the first 8 columns of each line in OLD.TXT.



FOR SALE: IBM PC Serial Interface Card. Original equipment Asynchronous Communications Adapter Card \$45. Call Bob George at (214) 996-3764.

FOR SALE: 3-CDM networking board, \$650 value, \$250. IBM memory expansion card \$200. IBM black & white monitor \$150. Call Chad, 739-4492.

Diskette Order Blank

November, 1984 North Texas IBM PC Users Group

All members may order any diskette from the club library, and have it mailed to them. All current issues as well as back issues are available.

PRICING: \$6.00 per diskette, unless marked otherwise, plus \$.50 postage and handling for each diskette. (\$2.00 minimum postage and handling.)

Diskettes available: (please check box to left of diskette desired.)

[] Jan. 83 -	Games & Songs
[] Feb. 83 -	Maze & Utils
[] May 83 -	Games
[-1 June 83 -	PC-TALK.III
[-] July 83 -	Sames
[] Aug. 93 -	Utilities
1:1 Oct. 83 -	CHASH
[-] May. 83 -	747.Sort.&Sogoler
[.] Jan. 84 -	Sample Pascal progs.
[] Feb. 84 -	1RD & Math Tutor
[] Mar. 84 -	Games & RT-BAS Games PC-TALK.III Games Utilities CHASM 747,Sort,&Spooler Sample Pascal progs. 1RD & Math Tutor Games PC-ENTRY & NEWKEYS IBM UG Newsletter PC-WRITE 2.2 PCPG & PC-TOUCH Galaxy Trek, UTIL & Corewar PC-FILE.III Ver 2.0
[1 May 84 -	PC-ENTRY & NEWKEYS
[] June 84 -	IBM UG Newsletter
[] July 84 -	PC-WRITE 2.2
[-1 Aug. 84 -	PCPG & PC-TOUCH
[] Sep. 84 -	Galaxy Trek. UTIL & Corewar
[] Oct. 84 -	PC-FILE.III Ver 2.0
[] Nov. 84 -	Sames
[-] Dec. 84 -	CLUBware- Whizzard BASIC speedup
[] PD #1 -	Income tay & INTHS templates
[] PD #2 -	Utilities, XDIR, & BAT
F 1 PD #3 -	LADYRUG (LOGO)
[] PD #4 -	HTTI SPEEDALL & SWIPT
[-1 PD #5 -	Utilities, XDIR, & BAT LADYBUG (LOGO) UTIL, SPEED411, & SWLPT DND (Dungeons & Dragons)
[] PD #6 -	Freecalc & Micro Acct
1. 2 (D TO	Tractar a made a made

Electronic Data Systems (EDS)

Currently has (2) positions available for Systems Engineers/Programmers with the Collowing background:

(1) Person with 2-3 years; (1) Person with 1-2 years programming experience using an IBM PC or compatible unit.

Computer Science or MIS degree preferred, although any major would be considered with appropriate computer programming exposure.

Both positions located in Dallas. Persons must be a US Citizen.

Come by or write to: EDS

9250 Amberton Pkwy. Dallas, TX 75243 (214)952-8813

EDS is an Equal Opportunity Employer.

I PD #8 I PD #9 I I PD #11 I PD #12 I I PD #14 I I PD #15 I I PD #15 I I PD #16 I I PD #17 I I PD #18 I I PD #20 I I PD #22 I I PD #22 I I PD #24 I I PD #24	Games Utils, Finance, programs to use w/DBASE II PC Firing Line/PC Underground RBBS-PC (Remote Bulletin Board System) Utilities EPISTAT Finance Manager V3.0 Assembly Language class examples Senealogy on Display V1.3 dBASE II Acct, form letter, library, etc Ultra Utils (Zap, File, Format, Mind, etc) LOTUS Fedtax 84, STOKTRAK, other LOTUS wks Utility 1-2-3 (Printer control & others) PC-TALK & JR-TALK (PC-TALK III for PCjr) POWER worksheets (LOTUS 1-2-3 1A only) FREECOPY (DISKCOPY funct) w/ MASM source CIP DATA BASE TRIAL VERSION (2 disk. \$8)
[] EX #2 [] EX #3 [] EX #4 [] EX #6 [] EX #7 [] EX #9 [] EX #9 [] EX #9	EXCHANGE April 1984 EXCHANGE May 1984 EXCHANGE June 1984 EXCHANGE July 1984 EXCHANGE Aug. 1984 EXCHANGE Announce 1984 EXCHANGE Sept. 1984 EXCHANGE Oct. 1984 EXCHANGE Oct. 1984 EXCHANGE Nov. 1984
[]. DEMO#1	 Demo copy of IBM Writing Assistant (will not print, or read/write to diskette)
	ber of boxes checked (except PD#24 \$8)
\$.50 x num	ber of boxes checked (\$2.00 min.)
\$3.00 x num	ber of catalogs (\$2+\$1 p&h)
	otal amount enclosed
and send or Doug Win DOM Chai PO Box A	dhas rean
Send order	tn:
	ate:
7in:	



PAWS FOR GREAT DEALS ON THESE BRAND NAMES



Elephant DS DD SS ... 27.00/box Verbatim DS DD SS ... 37.00/box Dysan DS DD SS ... 47.00/box Tractor-Fed 3×5 Cards ... 6.50/pck Laser Perf Paper ... 11.25/box

We carry Taligrass hard disk drives, sysgen drives and tabe back-ups, networks, and integrated accounting systems. Call for an approintment to discuss eutomating your business.



North Texas PC News 2025 Rockcreek Drive Arlington, TX 76010



Norton Utilities		Price 60.00
Prokey	75.00	56.25
The Savior	100.00	85.00
Xeno Copy	99.50	75.00
Copy II PC	40.00	30.00

MODEMS

Cermetek Modern Mate 212 (Internal Modern)......350.00 Hayes Smartmodern 1200 .570 00



FX-100 685.00 FX-80 449.00 Okidata 92 for IBM

IBM-Centronics



BUSINES

Harvard Project
Manager ... 262.50
Visischedule 225.00

Supercalc 3 296.25



*

8087 Arithmetic Coprocessor195.00

Price and availability subject to change without notice.

MasterCard PC!

PC5-84

VISA*

Wildcat Computing, Inc.

1830 Avenue K
Plano, Texas 75074
(214) 4243582
1168 West Main
Lewisville, Texas 75067
(Metro) 436-7322





FIRST CLASS

