Wordplay

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  Jim Thomas   284-2425
  HARDCOPY:
  Mike Calkins   636-1839
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  Al Kinney   640-5860
BBS CHAIRMAN
  Duane Goodman   232-3785
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  Mike King   357-4413
  Martin Crommie   222-9070
  Al Kinney   640-5860

"It took 6 hours to assemble, but so far, over 3 months to debug it."

SEPTEMBER PROGRAM
by Martin Crommie

This month's program will be a demonstration by Gary Winfrey of the ASGARD SLIDE SHOW PROGRAM to use with Graphx files.

```
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!                                           !
!              WANTED:                      !
!                                           !
!          "SIDEMOUNT" RS232                !
!             FOR 99/4A                     !
!                                           !
!          CALL DAVID WATSON                !
!                at                         !
!              682-2806                     !
!                                           !
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
```
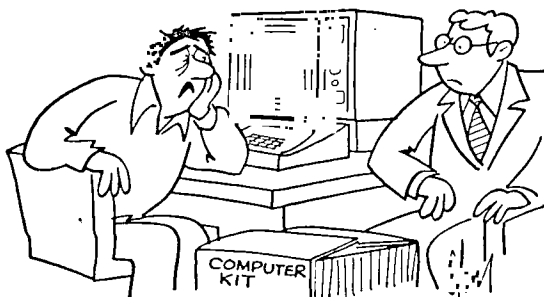
SCHEMATICS NEEDED!!

Your user group would like to get copies of the schematics for the following:
RAM EXPANSION #1041336
DISC CONTROLLER (STAND ALONE) #1040378
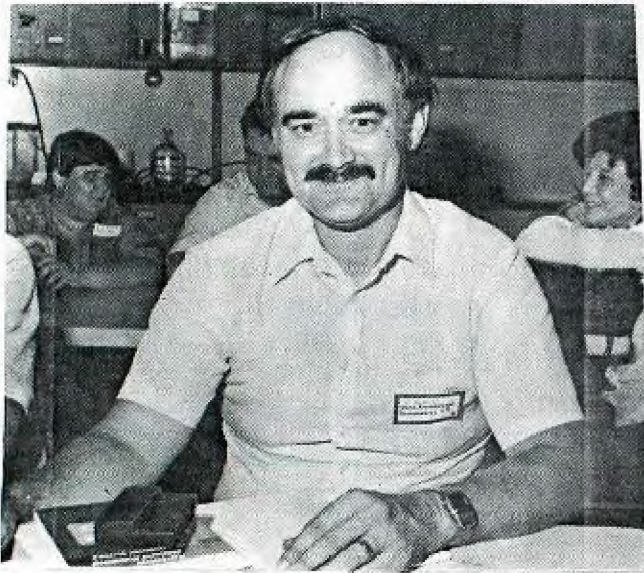RS-232 (STAND ALONE) #1037105

CARDS:
MEMORY EXPANSION #1039330
INTERCONNECTION DIAGRAM WIRING PERIPHERAL BOX
 #1039437
POWER SUPPLY # 1039304
INTERCONNECT ADAPTER #1039393
CARD DISCONTROLLER #1039340
RS-232 CARD #1039308
P-CODE CARD #1039317
INTERCONNECT ADAPTER EXPANSION, EXPANSION BOX
 #1039311

Also needed are service manuals for the 99/4A console and peripheral expansion system.

If you have any of the above items, please get in touch with Mike Calkins (636-1839), our hard copy librarian, so that we can get a copy for the PUNN hard copy library. Thanks.

WES RICHARDSON
From the BLUGRASS 99/4
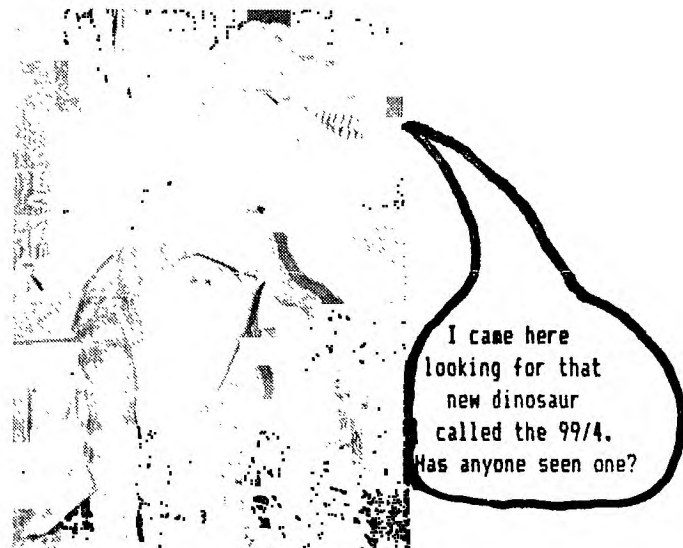**COMPUTER SOCIETY,**
GEORGETOWN KY.

The award for longest distance traveled to a PUNN meeting goes to Wes Richardson of Georgetown KY. Thanks Wes for taking the time to look us up and for spending some time with us. We enjoyed your visit!!

| Mike | Al | Cricket |
| King | Kinney | Raybern |

Cricket presents gift certificates to Al and Mike in appreciation of their work on the PUNN BBS. Thanks guys for a job above and beyond the call of duty. Next time we will try for a 512K card. (Just kidding Cricket)

Award for the shortest distance traveled goes to our president, Cricket. (Just down the stairs) No wonder she looks happy.

I came here looking for that new dinosaur called the 99/4. Has anyone seen one?

PUNN'S oldest members

BBS REPORT:
by Duane Goodman

One of the things I wish to do this month is take you thru part of the new BBS software. The things I will cover are:

    Logging in
    (G)oodbye - Normal Logout
    (M)essgae Base(s)
    (S)ystem Information
    (T)ime
    (U)ser Information
    and
    (W)ho was Last Caller.

    Lets start by dialing the board.
    DIALING: 2336804

    After connecting to the board you will get the following information unless you press control 'C'. Pressing control 'C' will drop you down to the login screen.

    PRESS CONTROL 'C' TO SKIP

```
PPPP  U   U NN   N NN   N
P  P  U   U NN   N NN   N
P  P  U   U N N  N N N  N
P  P  U   U N  N N N  N N
PPPP  U   U N  N N N  N N
P     U   U N   NN N   N N
P      U U  N   NN N    NN
P       UUU  N   NN N    NN
```

```
BBBBB  BBBBB  SSSS
B   B  B   B S    S
B   B  B   B S
B  B   B  B   S
BBBB   BBBB    SS
B  B   B  B      S
B   B  B   B     S
B   B  B   B     S
B   B  B   B S   S
BBBBB  BBBBB  SSSS
```

    PRESS ANY KEY TO CONTINUE

    PUNN BBS Version 1.1
An original Extended Basic program,
using Assembly Routines by:
   Paul Charlton   XMODEM TRANSFERS
   Mark Hoogendoorn I/O HANDLING
            -and-
   Special Routines to handle the
MorningStar 128K card, Password
and many others by MIKE KING of
Portland Users of Ninety Nines.

Carriage Return <ENTER> is NOT
needed for most single letter comm-
ands.

You are caller number 8766

Enter your User Number or "0" if
you are a guest. User #:4
Please wait ..

Password:<will not echo>(enter here)

Hi,DUANE

Date of Last Call:08/23/86
Time of Last Call:00:06:35
Total Number of Calls:674

Press any key to continue ..
 (goes to main menu)

(B)ulletins
(C)hat - Call the SYSOP for Chat
(F)ile Transfers [XMODEM ONLY]
(G)oodbye - Normal Logout
(I)nfo News
(L)eave a message for the SYSOP
(M)essage Base(s)
(O)ther BBS Numbers
(P)assword Changes
(S)ystem Information
(T)ime - Current Time Date
(U)ser Information
(W)ho was Last Caller
(X)pert Mode [TOGGLE]
 # Instant Sign Off

B,C,F,G,I,L,M,O,P,S,T,U,W,X,# -> t

    Lets start with something simple like (T)ime. Pressing (T) will access the Hayes Chronograph and return the following information:

THE CURRENT TIME IS 13:35:13
Monday, 08/25/86

You have been connected for
 0 Hours 0 Minutes 33 Seconds
Press any key to continue ..
 (returns to main menu)

    Pressing (W) will tell you who the last caller was.

B,C,F,G,I,L,M,O,P,S,T,U,W,X,# -> w

WHO: AL KINNEY
USER NUMBER 27
BAUD RATE: 1200
TIME ON : 12:53:34
TIME OFF: 12:56:48
DATE   : 08/25/86
Press any key to continue ..
 (returns to main menu)

    Now lets try the (M)essage base and see what option

are available there.

B,C,F,G,I,L,M,O,P,S,T,U,W,X,# -> #

   You always start out in the General message base.

Current Base is General Messages

(C)hange Message Bases
(R)ead Messages
(E)nter Messages
(M)ain Menu
(#) INSTANT Sign off

C,R,E,M,# -> r

   To read messages sellect (R) and you get the
following menu:

READ MESSAGES #

 (F) Read Messages in FORWARD order
 (R) Read Messages in REVERSE order
 (I) Read Individual Messages
 (S) Scan Message Headers
 (N) Search for New Messages
 (M) Return to MAIN MENU
 (H) Read HELP file
 (#) Instant SIGN OFF

   Here you can read forward, reverse, individual
messages, scan all message headers, search for new
messages or return to the previous menu. You also have a
help file and an (#) instant sign off option.

 F,R,I,S,N,M,H,# -> f

(F) Read Messages in FORWARD order

   Sellecting forward will display the low message and
high message on the system and the highest message you
have read.

 LOW Message # 0
 HIGH Message # 62

 Highest You've read is 45

 Beginning with Message Number? -> 46

 Read (C)ontinuously or (P)ause
 after each message? C/P

   Selecting (C) scrolls the messages continuously,
while selecting (P) will cause the system to pause
between messages.

 < < < PUBLIC MESSAGE   37 > > >

 TO: AL KINNEY   08/18/08
 FM: DUANE GOODMAN 04   15:21:34

 SB: AUTO REPLY (R)
AL,
 I think the addition of an option
to reply when reading forward or
backward in addition to individual
is a great idea.
 Just a great job all around!!!!
Press any key to continue ..
Delete message #37 ? Y/N

   (At this time if you sellected (P)ause and if the
message is either to or from you, you will be given the
option to delete the message.)

 < < < PUBLIC MESSAGE   51 > > >

 TO: ALL USERS   08/24/86
 FM: AL KINNEY 27   12:51:41
 SB: WELL....
You may have noticed some things
have changed in the past couple of
days, most notably, the message base
now tells you which messages are
available for reading, and which is
the highest you have read. In most
cases, the highest number will be "0
the first time you access it, and
then it will keep track of your act-
ivity from there on. Along with
that, I made some changes to the fil
e transfer area. The download sect-
ion is F A I R L Y secure, but the
upload section is REAL FLAKY. I'm
still working on that, and hope to
get all the kinks worked out today.
You can also leave messages to SYSOP
now, without fear of blowing the sys
tem up. If you do crash it, give me
a call and give me the gory details
Press any key to continue ..

 < < < PUBLIC MESSAGE   52 > > >

 TO: ALL USERS   08/24/86
 FM: AL KINNEY 27   12:56:29
 SB: CONTINUATION OF MESSAGE #51
so that I can hopefully get a handle
on where the weaknesses are..

I think we are starting to see a
little daylight, but there will stil
l be a few times when your patience
will be tested. I hope to have this
sucker really running smoothly by
the time of the SEATTLE FAIR, so we
can have it running up there for
demonstration purposes.

You may also have noticed that there
is now 1438 blocks of download space
available. We were fortunate enough
to be able to purchase a CORCOMP DSD
D Disk controller from Andy Lengyel

for $90 and our TI Controller. Tha-
ks Andy! You have always been a
MAJOR CONTRIBUTOR to PUNN!!
Press any key to continue ..

< < < PUBLIC MESSAGE 53 > > >

TO: ALL USERS   08/24/86
FM: AL KINNEY 27   12:59:39
SB: MORE OF MESSAGE 51
To go along with that, Ron Mayer has
let us use one of his DEC Dual drive
units, which contain two single side
double density drives. So all told,
we now have over 1 Megabyte of on-
line storage capability. Not too
bad for an ORPHAN, eh!?

Keep the good ideas and support
coming, PUNN is the best User Group
in the USA, and with a little time,
we will have the best BBS for a TI
ANYWHERE!! (ahem! sorry, got a
little carried away!!)
Press any key to continue ..
< < < PUBLIC MESSAGE 55 > > >

TO: ALL   08/24/86
FM: AL KINNEY 27   13:07:20
SB: OH, BY THE WAY...
Just a quick thought...

Anytime you are reading Info News,
Bulletins or messages, you have a
number of options:

  a) Abort the reading by using the
      CTRL 'C' command.

  b) Pause the reading by using the
      CTRL 'S' command.

  c) Resume the reading by using the
      CTRL 'Q' command.

Give'em a try. You'll like it, esp-
ecially, if you are using the cont-
uous mode to read messages.

 alk
Press any key to continue ..

     After reading the messages in one message base you
can go back to the first (M)essage screen and select
option (C) to change the message base.

  (C)hange Message Bases
  (R)ead Messages
  (E)nter Messages
  (M)ain Menu
  (#) INSTANT Sign off

 C,R,E,M,# -> c

$ $ $ Message Bases $ $ $

0 - General
1 - Programmer's Q A
2 - Hardware Q A
3 - Letters to PUNN (OPINION)
4 - For Sale or Trade
9 - Exit

     At this time there is room for 130 messages in the
General message base and 20 messages in each of the other
4 message bases. Numbers in the message bases will
increment upwards continuously rather than wraping around
to 1 as in the previous system.

     Message screens are now 20 lines long instead of the
10 on the previous system. To enter a private message on
the new software all you need to know is the user number
of the the individual you wish to leave a message to.
You type in the user number, and the system responds with
the User's name and ask you if this is the correct
person. If it was, then enter your message. If not then
lets go to the (U)ser option of the main menu and show
you how to obtain the correct information.

  B,C,F,G,I,L,M,O,P,S,T,U,W,X,# -> u

  (F)ind a user -or-
  (L)ist the User Base -> F
   Name to find? BOB
  BOB SIDWELL   58
  Right one? N
  BOB TIPTON   62
  Right one? N
   BOB NOT FOUND!!
  Press any key to continue ..

     The user search routine is set up so that you can
search either by first or last name. If in the above
example you had searched by "SID" you would have gotten
BOB SIDWELL, or anyone else who had the string "SID" in
their name. A succesfull search will return you to the
Main menu. If you can't find the individual's name you
are looking for by the (F)ind routine you have the option
of (L)isting the User Base.

  (F)ind a user -or-
  (L)ist the User Base -> L
  01 SYSOP   SYSOP
  02 DORMAN   BLAZER
  03 PETE   FAST
  04 DUANE   GOODMAN
  05 JIM   THOMAS
  06 MARTIN   CROMMIE

     Doing a (L)ist will return the complete user base in
the above format.

Now lets take a look at File transfers. Select (F)
from the main menu.

B,C,F,G,I,L,M,O,P,S,T,U,W,X,# -> F

XMODEM File Transfers # # #

(B)rowse File Information
(D)ownload Files
(U)pload Files
(S)how Directory
(H)elp
(M)ain Menu
(#) Instant Sign Off

To upload a file select (U) from the above menu.

B,D,U,S,H,M,# -> U

(U)pload Files

Enter the NAME of the file you wish
to upload. Filename must be 10 char-
acters or less.

FILENAME --> OVERLAY
Please wait ..
DO NOT UPLOAD COPYRIGHTED SOFTWARE!
PLEASE! Take a moment to enter the
following information about the file
you are preparing to upload:

    FILENAME:<as it appears here>
    FULL TITLE:<if different>
    HARDWARE CONFIGURATION:<what is
    required to use this program>
    OPERATING ENVIRIONMENT:<what is
    the software required>

NOTE: You must supply information
about the file you intend to upload
or the upload will not be added to
the download catalog.

Press any key to continue ..

Enter description <up to 5 lines>
   !....+....+....+....+....+....+....!
1. OVERLAY
2. FILE TO MAKE OVERLAY STRIPS FOR
3. YOUR PROGRAMS. (LIKE TI-ARTIST,
4. ECT) RUNS OUT OF X-BASIC
  Two Lines Left...
5.
 (H)elp (A)bandon (L)ist (Send) (E)dit
 (C)ontinue (#) Sign Off ->

H,A,L,S,E,C,# S Please wait ..
OK, send your file OVERLAY

After sending your file you may wish to browse thru
the download area and download a file.

   (B)rowse File Information
   (D)ownload Files
   (U)pload Files
   (S)how Directory
   (H)elp
   (M)ain Menu
   (#) Instant Sign Off

B,D,U,S,H,M,# -> B
FASDIR/1
FASDIR/1 is a Directory type program
that will run in SUPERCART or GRAM-
KRACKER # # # O N L Y # #. It was
written by Mike King of PUNN.

(R)ead Again
(D)ownload this file
(N)ext item
(P)revious menu

    Browse will show you the information file that was
intered during the upload and will give you the option of
(D)ownloading, or going to the next item in the download
area.

R,D,N,P -> D
Starting transfer of FASDIR/1

Press "S" to Start transfer or
    "A" to Abort transfer

Your Choice?S
If using FASTERM, enter
<FCTN><SHIFT><X> ... NOW!

    If you wish to cataloge the whole disk then select
(S) from the following menu.

   (B)rowse File Information
   (D)ownload Files
   (U)pload Files
   (S)how Directory
   (H)elp
   (M)ain Menu
   (#) Instant Sign Off

B,D,U,S,H,M,# -> S
and you will get the following:

            FasDir   V2.5
DSK1 - DISKNAME= RUN-BBS#1
AVAILABLE= 1326 USED=   112
  FILENAME SIZE   TYPE   P
---------- ---- ----------- -
FASDIR/1   24 DIS/FIX 80
FASDIR/2   24 DIS/FIX 80
GEMI-SETUP 24 PROGRAM

```
MICRO/CAT      2 PROGRAM
OVERLAY       32 PROGRAM
WC             6 PROGRAM
   [Command Completed]
Press any key to continue ..
```

If you see someting on the disk that is not in the browse (or download) area of the board, it is because it has not had an information file supplied with it and it is not available for downloading.

Selection (S) from the main menu returns the following information to you.

‡ ‡ ‡ ‡ System Information File ‡ ‡ ‡ ‡

This system is operating on a TI-99/4A Home Computer, configured with 32K of conventional memory, a Morning Star 128K Expanded Memory card, a TI RS-232 inter-face, a CorComp diskcontroller card, two DS/DD and two SS/DD disk drives. Additional equipment includes a Penril 300/1200 Baud "dumb" modem. The clock and calendar is a Hayes Chronograph.

The software is a mixture of both Extended Basic and Assembly code. The XMODEM routines were provided to the public domain by Paul Charlton. The original I/O routines were offered into P/D by Mark Hoogendoorn. The ASM routines for handling the modem, chronograph, high speed data-base searches, and most importantly, the routines for handling the Morning Star 128K card were written by PUNN's own Mike King. Additonally, SXB routines were used for functions such as data-base sorts and string handling operations. This required special loading techniques, which were provided by Mike. The Extended Basic code was written by Al Kinney assisted by Mike King

The system uses the 128K card in a number of ways. First, as a place to store the Subject, From, To, Date and other vital information about each message in all the bases. Originally, the plan was to have all the messages in the 128K card for rapid access, but it became apparent that would limit the number of messages. It was also decided that the most time consuming part of the message base was locating and presenting the information ABOUT the message, not the actual reading. So, the message "bodies" are stored on the disk drives, while the header info is kept in memory.

The second use of the 128K card is to store menu lines. Again, storage on the disk, while acceptable for

some operations, is avoided. This saves a considerable amount of wear and tear on the disk drives. In fact, except for about 15 minutes of initialization and periodic back-up operations, the disk drives are not used.

The third operation supported in the 128K card is the storage and retrieval of User information, such as User Numbers, date and time of last call, etc. Again, this facilitates rapid access and saves wear on the drives.

The final and most important operation is a custom routine that Mike King developed especially for the BBS. This is a routine to permit swapping different "environments" in the twinkling of an eye! By this, I mean the ENTIRE lower 8K (where all the Assembly routines live) can be swapped into a "sheet" of an upper memory "page". A page is a 16K block, while a sheet is an 8K segment. This allows us to do many things that would other- wise be a) difficult, b) time-consuming c) impossible or d) all the above. As an example, the "home" sheet of the BBS is sheet 16. This contains the basic operating environment and controls the modem, I/O routines and an assortment of other jobs.

Now, when someone wants to download a program, the system looks into the 8K space, where it would normally load the XMODEM routines, and sees that it is nearly full. The normal routine would be to initialize that memory space (clear it out), and load from the disk, the XMODEM routines. This can take about 1 to 1 1/2 minutes. Then, the transfer could take place. But, then the process would have to be reversed, to resume normal operation. By using a special "Memory Image" transfer devised by Mike, the whole thing takes about ONE SECOND! In fact to the BBS user, it is invisible.

There are a total of 3 sheets that get swapped as many as 25 or 30 times during a normal session on the BBS, so you can see what a tremendous gain in speed is accomplished.

Press any key to continue ..

Well, thats all for this month. If you feel that this tutorial has been some help to you, please let me know and we will continue it next month. One thing I forgot; how do you get off of this thing? Lets see, it should be somewhere on the main menu. There it is, (G) for good-bye.

```
B,C,F,G,I,L,M,O,P,S,T,U,W,X,‡ -> G

Do you want to leave now, DUANE?Y
OK, DUANE, you were connected for
7 Minutes 49 Seconds
Thanks for calling the PUNN BBS
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