WORDPLAY

The PUNN Newsletter Portland, Oregon

WORDPLAY - FEBRUARY 1994 - VOLUME 13, No. 2

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MURPHY'S LAW

JOKE OF THE CENTURY!

- MACHINES WORK.
PEOPLE THINK.
HA HA HA HA HA HA!!!

From the President

MANY THANKS ARE DUE TO MIKE KING AND RON MAYER FOR THEIR RECENT WORK ON THE PUNN BBS. MIKE HAS CLEANED UP AND REWRITTEN SOME OF THE CODE AND UTILITES BUT THERE IS STILL MUCH TO DONE. BUT WHEN HE IS DONE THE MENUS WILL WORK PROPERLY AND MESSAGES AND MESSAGE NUMBERS WILL STAY IN THEIR PROPER ORDER. SO MANY, MANY THANKS GUYS!.

AT THE LAST GENERAL MEETING I GAVE THE FIRST PROGRAM IN A SERIES ON DATABASES. THE MAIN THRUST WAS ON TI-BASE AND IT'S RELATIONAL CAPABILITIES. FOR THE NEXT MEETING I WILL CONTINUE THE SERIES WITH A PROGRAM ON WHY TO USE RELATIONAL DATABASES AND WE WILL GET RIGHT DOWN TO HOW TO DO IT--EXTRACTING DATA, USING DATA IN ONE FILE TO FIND AN ITEM IN ANOTHER FILE AND BEGINNING COMMAND FILES. TI-BASE IS THE ONLY DATABASE THAT WILL LET YOU COMPLETELY CHANGE THE STUCTURE OF A FILE AND NOT MAKE YOU KEY IN ALL THE INFORMATION A SECOND TIME.

ELECTIONS ARE SET FOR THE DECEMBER MEETING. MIKE CALKINS IS SEARCHING FOR CANDIDATES. PLEASE HELP HIM OUT AND VOLUNTEER.

DECEMBER BOARD MEETING WILL BE AT WALT MOREY'S PLACE.

SEE YA ALL AT THE MEETING!

<TERRY>

Cal's Corner

Thanks to all the TI User Groups!

We have a lot to be thankful for this holiday seaon.

Thank you for being there when I got started. For helping me see the need of a disk drive when all I had was a console. For the all the equipment when I was ready buy. For help when I got stuck in a program. For the friends that I have made. Without you my computer would be an enemy not my friend. As I explored and increased my system, I found that a modem and a phone line gave me more. Programs, problems and people to help me. Bulletin Boards both local and long distance gave me more TI Users Groups and more new friends.

I have a request to make to all good TIer's out there. I am trying to put togther a new 1995 list of TI BBS and ares that have TI files. Could you send me the phone number of your local TI BBS or the BBS from where you get your TI file. If you have a fairly new list (1993) of TI BBS, that would be great!. I will take all the information that I receive and complile master list and make them available in a future WORDPLAY issue and it will enrich the entire TI community.

I can be reached by writing me in care of WORDPLAY:

Cal Oberg
c/o WORDPLAY
THE PUNN Newsletter
P.O. Box 15037
Portland, OR.97215

Until next TIme,

CAL OBERG

Treasurer's Report.....By Cal Oberg

Sale of Micropendiums.....	$ 24.50
Software.....	$ 9.00
Membership Renewals.....	$ 55.00
SubTotal.....	$ 88.50
Last Month's Balance.....	$366.69
This Month's Balance.....	$455.19

MYRT'S MEMOS

Sez my buddy to me one fine day
"Let us buy a computer, I say
I find that there is a big sale,
So we for ourselves will avail."

The sale showed to be a TI
And the ads all promised that I
Much smarter and quicker would be
As well as artistic, you see.

So home came the thing with a flash
And we set it up with a dash
Only to find that we
Needed disk drives and, yes, a PE
(box, that is)

Programs came from here and there
Each promised to run with a flair,
But somewhere 'tween "Enter" and "Run"
Came something to ruin the fun.

Instructions I followed with care
To light up the screen with a flair,
But somehow it just didn't work
And I felt more and more like a jerk.

After cursing the moon and the sun,
We discovered a group they call PUNN
AH! People who knew what to do
And were willing to help others, too.

Were all of our problems solved - NO
But now we have somewhere to go.
The gliches we face with a friend,
And conquer, at times, in the end.

A blip, or a sprite, or an icon
Will float on the screen in a micron
But most important of all
Are the friendships, spring, winter, and fall.

Thanks to friends, old and new
Mike and I join to send you
Best wishes for HOLIDAY CHEER
And a HAPPY COMPUTING NEW YEAR

THIS MONTHS
POETRY BY MYRT CALKINS
AND
GRAPHICS BY CAL OBERG

What is a Database?

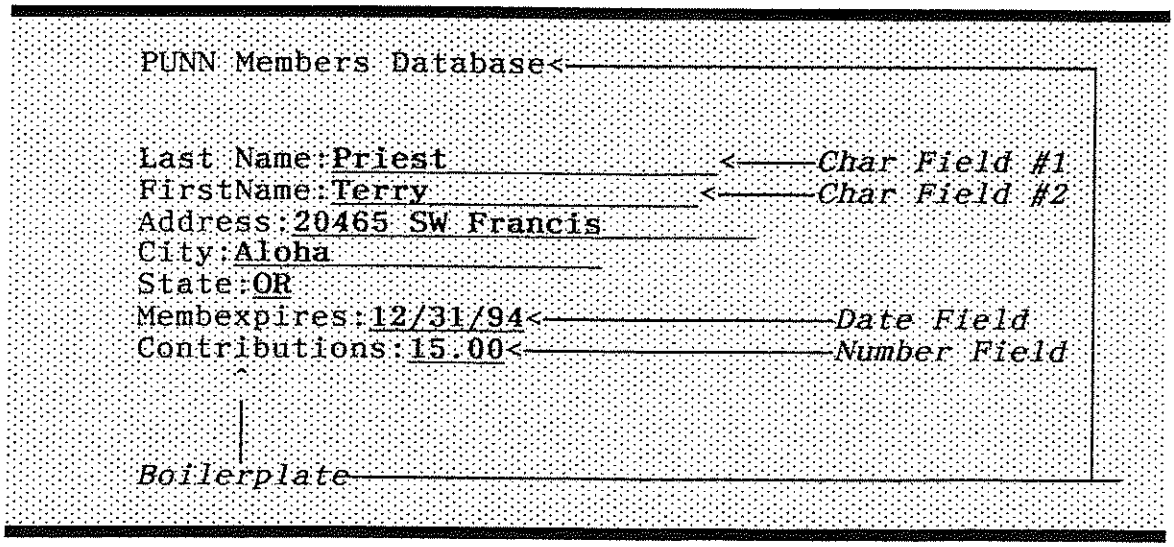
BY
TERRY PRIEST

Databases are part of our everyday lives. We use a few without really realizing it. One of the best examples is the phone book. It has all the parts--a collection of fields of data(last name,first name,address & phone number) which is the record of each subscriber and is bound together(a file). Information is sorted two ways--alphabetical by user in the white pages and alphabetical categories in the yellow pages. Another familiar one to TI'ers is trusty DM1000. What's that you say--it's a disk manager. It is a disk manager too, but all of the file, housekeeping and disk functions are dependent on the database function. The disk catalog is a fine example of a data base--The fields are the columns (filename,size,type etc.) and the rows are the records since each row describes one file on the diskette. The whole thing is the file (database). You can even see the boilerplate. That is the graphic lines, column names and other information that is not on the disk catalog but is placed on the screen by the DM1000 program. The various actions the program can perform are the equivalent of database reports. A tabular report is a good way to visualize a database. The fields are the columns and the records are the rows. The column names and other text is the boilerplate.

Database programs cannot contain all the data in memory and have a reasonable amount of records. What they do is maintain indexes of data that resides on the diskette. It is first located and then reassembled for use by the program or display. The only exception is Personal Record Keeping Module. It puts all data in memory and saves program and data as program format file. Unfortunately this severely limits the number of records it can contain, especially since it does not use the 32K memory expansion.

Elements of a Database

A data base consists of fields,records and files. See the illustration below:



Each of the pages above is a **RECORD.**
The collection of pages is the **FILE OR DATABASE.**

Another way is the tabular report method:

LastName	FirstName	Address	City	St
Priest	Terry	20465 SW Francis	Aloha	OR<--*record #1*
Zeller	John	1415 Anywhere	Portland	MA<--*record #2*

Types of Databases

There are two types of databases for the TI, relational and flat file. In a flat file format ALL information to be stored retrieved and manipulated must be on each record AND in the same file. Fields that may contain data in only a few cases are on every record occupy blank space in memory and slow processing by the computer. You cannot compare or combine data from different databases even if they have some information in common unless you manually print out and do it yourself. In addition you may be limited by the number of fields allowed on each record. In a relational database you can combine, extract, compare and what have you from different sets of data. This can allow you to have many more fields if you establish a link between them. Record sizes can be smaller if data is organized such that each databases's records contain fields that would be filled on most records. Data that would normally only relate to a few of the records in the main file is kept separately and linked to the origin. Keeping some things separate enables the computer to work faster and is much more efficient in the use of memory and disk space. Relational databases also allow one to record a script to store the instructions or procedures for future use.

Three Database Programs for TI's

1)Personal Record Keeping (PRK). Module based, does not need P-box, can use cassette or disk. Does not recognize 32K memory expansion.
2)PR Base. Requires Disk drive (2 recommended),32K,XB or EA5 loader. Uses the entire disk for data. Your program must be on separate diskette named PRBASE. The data disk cannot be read by any disk manager or other program.
3)TI Base. Requires Disk Drive,32K. Loads from XB,EA,Mini Memory, TI-Writer opt3. Data stored on diskettes in normal way. A relational type database, you can have 5 separate databases communicating at once.

Feature:	PRK	PRBase	TI Base
Type	Flatfile	Flatfile	Realtional
# of fields/record	15	17	17
Max Field Length chars	15	255 total of ALL fields	255
Number fields	Yes	No	Yes
Date fields	No	No	Yes
Math functions	Yes	No	Yes
Max # records	Varies, <100	350 SSSD 710 DSSD 1430 DSDD	16,000+
Storage	Cassette or Disk	Disk	Disk
Output Devices	Printer	Printer or Disk file	Printer or Disk file
Stored report formats	Two, fixed	User defined 5 report/ 2 Labels	User defined Unlimited
Flexibility	Low	Medium	High




Organizing Data

1).Decide what data is needed and break into fields.
2).Name the fields on paper and estimate length if characters or numbers.
3).Review fields to see if greater or lesser breakdown is needed.
4).If you have too many fields combine some or use a different program.
5).If a substantial number of records will have blank fields use relational database. If so use steps 1-5 to design the supporting database.
6).Enter the fields in an order that is logical to you.
7).If using PRK or PRBase be sure to leave an extra field for future expansion as the structure cannot be changed or records transferred between databases. Not necessary with TI-Base since records can be copied to another database,fields added or subtracted and rearranged while original data is intact.

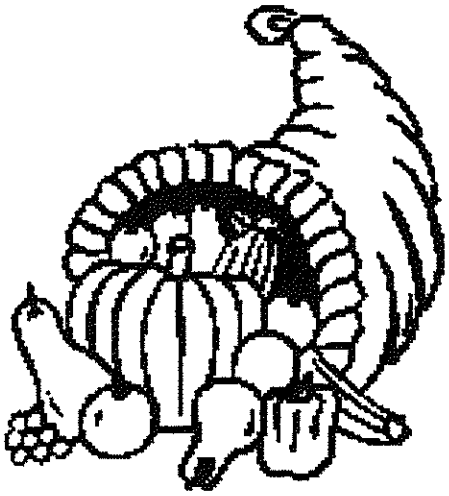
Other Considerations

1).Databases have to be sorted on at least one field in order to operate. Resorting takes time--sort on the field most likely to be used first.
2).Use your database to select information for a TI-Writer mail merge. The formatter can write letters easier than the database.
3).If you will need a count of all or certain record use TI-Base
4).If you must select records based on a logical decision (if-then-else) or case use TI_Base.
5).When setting up the fields in the database enter them in an order that is easy to key in.
6).If you already have data on file use TI-Base. It can read text files (D/V 80) and place data in the file without you having to type it in. You must get the data in row and column format first. If the fields are longer than 80 cols, split it, read into 2 databases and then combine into one.
7).Dates:If you need to manipulate or calculate dates(days before,after,elapsed etc...) use TI-Base.
8).Be aware that numbers are not rounded, they are truncated to fit the field width and decimals allowed them. Errors can accumulate during multiplication or division.
9).Searches:PRK & PRBase can do searches with only part of the desired information but what you search for must match explicitly,ie,PRI would find PRICE & PRIEST. While PR E would not find PRICE OR PRIEST. TI-Base can "scan" the field for EST and would find ESTABLISHMENT and PRIEST in addition to being able to do the first search example.

Examples of Databases

In this case we have a roster for several different organizations that have most or many members in common. Some of the members have cellular phones in addition to a business and home number. The Computer Club has 55 members;Camera Club has 48 members;Ham Radio Club has 76 members. Of these 20 Computer Club members are also members of the Ham Radio Club and 10 are in Camera and Ham. Similar crossovers exist for the other clubs.

ThanKsgiving is over and it is time to thinK about the Holiday Season that is coming up quicKly. Get into the spirit of giving by contributing to

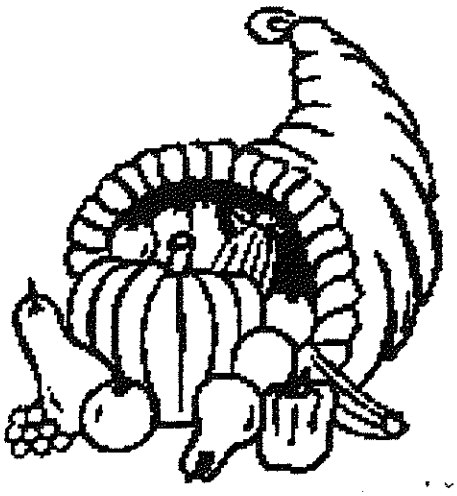


THE ANNUAL PUNN FOOD DRIVE

Bring a contribution of canned goods, non-perishable food items or other necessities such as paper goods or soap to the meeting.

This year the membership has voted to donate these items to Neighborhood House to help with their Christmas boxes

Every year the need becomes greater and your donations are greatly appreciated.



Hi-Res Graphics - Part IV

(Fourth in series by Ann Dhein)

Parts one, two and three of this series defines a drawing package as a program or group of programs what will allow the user to create graphics by turning on (or off) the smallest addressable unit of the screen-a single pixel. Drawings thus produced can be saved to disk and reloaded for editing or printing.

All of the TI-99/4A packages do this and much more. Before you purchase any program you should check to make sure it has the features you are looking for. Norton Graphics, for example, is strictly a programming utility while Paint 'N Print is pure entertainment. TI Artist is the best general purpose program by far, but nothing can beat Graphx for enhancing an artist's creativity. Joy Paint also excels but lacks color capability. Draw 'N Plot can be used as a simple drawing board, but its real merit lies in its ability to interface with your own programs.

A few programs may not work with the Myarc and/or Corcomp peripherals. Joy Paint, TI Artist and Graphx, along with most of the others work on any of the three controllers. TI Artist works beautifully with the Myarc Ram Disk, but Joy Paint does not. You must consider all this when you decide on a purchase.

Printer compatibility will be covered later and should be something to be considered.

The various packages available vary in ease of use. Super Sketch is one of the easiest to use. A child that can't read could use this program. Joy Paint which does even more than Super Sketch is also easy to use. The other programs vary in the amount of time required in learning to use them. Draw a Bit and Master Painter require the memorization of a number of function keys to use them properly. Bitmac requires some key memorization combined with the use of icons.

Draw 'N Plot uses a simple menu and a few function keys. Paint 'N Print is easy to use on a regular basis but there are a number of keys that need to be memorized which makes it harder to get started. TI Artist and Graphx are not perfect, but both are comfortable to use and very easy to begin using. TI Artist makes extensive use of icons for users who prefer them but also allows the faster method of pressing function keys for the various commands. TI Artist also requires switching between two main programs and several auxiliary ones. Graphx uses some function keys and provides an identifying strip for the top of the keyboard which makes them easy to follow. Graphx also uses menu selection for the lesser used commands. Of all the programs Graphx has the best manual. Now let's talk about drawing tools. In these packages the cursor is your "pencil" as well as your "eraser". The pencil can be moved around either by using the keyboard's arrow keys or by using a remote controlled "joystick". Some software requires joystick control. The fire button is usually used to turn the drawing tool off and on. To make curved lines with the keyboard is difficult-you need the control that a joystick has. On the other hand straight lines are difficult with a joystick and the keyboard does a better job in this regard. However, drawing programs can usually creat lines, boxes and circles automatically.

Anywhere a joystick is required, a trackball can be used instead. The ball offers 360 degree movement for such fine control of the pencil that you can easily write your name in script. It is though, almost impossible to draw a straight line with a trackball

In many of the programs the speed of the cursor can be controlled. This is handy because if you are drawing large areas freehand you can go much faster. When you want to work on painstaking detail then use a slower cursor for more accuracy.

Instead of leaving a fine line like the single-pixel pencil, a brush applies wider and fancier lines. Draw A Bit lets you paint in wide or narrow swatches of color. TI Artist includes angle brushes and brushes that make parallel lines such as you would get from painting with a fork. Paint 'N Print has 32 brush styles including circles, squares and triangles in a number of sizes.

As mentioned earlier all paint programs listed here will draw lines for you automatically. Select the beginning and end of your line, press a button and you have a perfectly straight line. Some programs will also draw circles, ovals, rectangles and rays. A ray is like a line except that you can keep moving the cursor (pencil) around the drawing board and wherever you choose to press the fire button you can have a perfect line between your cursor position and your starting point.

Some programs will even draw ellipses and rectangles Draw A Bit and The Graphics Package draw 90 degree arcs (4 arcs make a circle). The various programs handle this function in different manners, but the principal is the same; select the center position and the size and the figure is drawn automatically.

Filling, Shading, and Adding Depth can be accomplished in most of the programs. The Paint 'N Print package limits filling to a rectangle only, but a companion disk is available which allows filling any shape.

A manual fill requires the cursor to be moved around the shape as it is being filled. A semi-automatic fill does most of the shape in one pass while the balance is done with the cursor. A full automatic fill checks to see that every little corner has been filled. Sometimes this is called a "smart" fill.

Some programs provide patterns for shading and depth. Super Sketch has one texture pattern. TI Artist has 10 and Joy Paint has 24 to choose from. Joy Paint also has an airbrush which works like a can of spray paint. It gives a misty sprayed effect in whatever pattern you are using. Because you can control the amount of "paint" that goes on the drawing, it makes an excellent tool for adding shadows and depth. Almost the same effect can be achieved with Paint 'N Print by using one of the larger brush sizes and switching to the texture mode. Bitmac has a feature called "Life" which can be used for getting a shaded effect.

Joy Paint and Paint 'N Print both have routines on their companion disks for creating new texture patterns. Once you have saved these patterns on disk, they can be used over and over.

Reflections is an application where symetrical figures can be drawn easily. The screen is divided into sections and whatever is drawn in one section will be reflected in the other sections. In TI Artist this is called the MIRROR function. Paint 'N Print calls it KALEIDESCOPE.

You can manipulate your picture. That is, you can Move, Flip, Rotate, Invert, Magnify and Reduce what you have drawn. Some programs let you copy one part of a picture to another part and move sections of a picture around the screen. "Inverting means to turn all the "on" pixels off and all the "off" pixels on, thus swapping black for white and white for black. Flipping a picture gives you a mirror image.

The only programs that have functions for enlarging or reducing are Bitmac and Joy Paint. TI Artist has a function where part of a picture when in the zoom mode can be saved to disk. This will give a new picture four times size. For both enlarging and reducing, Joy Paint does the smoothest job.

The more recent programs have provisions for text to be used right along with the graphics. The nicest of these are Joy Paint and Bitmac, each of what amounts to a mini word processor built right into the drawing board. With TI Artist, variable sized letters can be easily typed on the screen from the keyboard in 81 different heights and widths. Paint 'N Print contains a font editor which makes it easy to change the resident lettering. TI Artist provides an alpha numeric load function in the enhancement section of the program. Pre-designed fonts that are stored on the disk may be loaded into the program for an endless variety of lettering. Graphx stores fonts on the clipboard and there is an endless variety to choose from. The letters to be used are laid out in the clipboard and then transported to the picture where you want them Joy Paint 99 works much the same way. The alphabets are stored in a regular picture file and the Cut and Paste option is used to add them to your drawing.

(It now appears we will need Parts V & VI to complete this series. We encourage you to save each part for future use A reprint of the entire series is possible if there is enough interest-ed)

01/01/95
T.I. BUG BYTES USER'S GROUP
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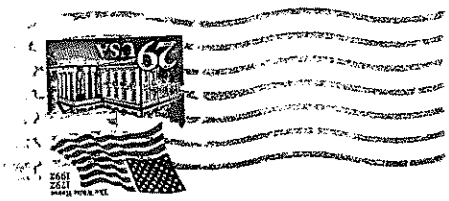
Clontarf MDC QLD, AUS 4019



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*            P U N N             *
* PORTLAND USERS OF NINETY-NINES *
*  PROUDLY CONTINUES TO SUPPORT  *
* THE TEXAS INSTRUMENTS TI 99/4A *
*            COMPUTER            *
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NEXT GENERAL MEETING - MONDAY - DECEMBER 28TH, 1994

NEXT BOARD MEETING -- TUESDAY - DECEMBER 13TH, 1994

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