The Dispatch Disk

Southern Districts Commodore Users Club inc. News Paper.

June 87.

COMMITTEE - 1986/87.

President	: Ken Pilkington phone 382 7119	16 Anselm St.	Christie Downs.
Secretary	: John Hancock phone 381 7973	2 Pat Cres.	Morphett Vale.
Treasurer	: Julie Collins phone 381 7202	12 Resolute Cres.	Hallett Cove.
Assisting	: Austen Evans phone 387 0249	10 Galatea St.	Hallett Cove.
	Mike Griffin phone 216 9193	11 Dudley Cresc.	Marino.
	Sam Hancock phone 384 4231	4 Elsie St.	Christie Downs.
Librarian	: John Hancock - see secretary above. Library open 7:00 pm - 7:30 pm each general meeting.		
Newsletter	: Rob Price phone 270 5694	66 Bolton Court	Flagstaff Hill

===

Next meeting : MONDAY 27th July at 7:30 pm.

Location   : Salvation Army Hall Elizabeth Rd. Morphett Vale.
Subject   :

            August-

===

===

MODEMS.

In our April meeting we saw a demonstartion of "Viatel", the Telecom database. It was quite interesting to watch the various screens appear, at our selection on the screen. But, how did it happen and what special equipment is needed by the home computer enthusiast to achieve the same results in his or her own home? The answer in part to these questions is a "Modem", coupled with special software.

What is a modem? This can be defined as: Modulator-DEModulator. Still none the wiser? Well basically it is a device that allows you to connect your computer to the telephone line. This equipment is necessary because of the different transmission modes. Computers emit digital pulses while transmission over the telephone network requires frequency. In order to overcome this problem we require a modem, which converts digital to frequency (modulates) and at the other end converts frequency back to digital (demodulates) .

The two most common type of modems available are the accoustic coupler, which is a pair of insulated acoustic sockets into which the telephone handset can be placed. This has been replaced by the direct connect type which at one end connects to the computer and to the telephone plug at the other. This latter type can have many features ranging from the most basic type requiring manual dial and answer etc. to the exotic with auto everything.

Modems have a number of standard baud rates available to them, the most commonly used are listed below:-
          1/.CCIT V.21 or 300 baud full duplex answer/originate
          2/.CCIT V.23 Mode 2 1200/75 baud half duplex
Other faster baud rates ie.1200 and 4800 baud are available on more expensive and often more sofisticated modems.

The baud rate on simpler modems is selected manually by switch or dial and the corresponding setting is made within the program running on the computer. It is necessary (generally) to know the baud rate setting together with the data format of the computer you are calling, the settings generally used by Bulletin Boards in Australia are:-
          1/. 300 bps
          2/. 8 Data bits
          3/. 1 Stop bit
          4/. No parity
          5/. Full Duplex
          CCIT V21 Modem Standard.
          Set your modem to ORIGINATE mode.

Normally your modem will be provided with Terminal Software, this is required to set up the computer, to allow it to talk to the modem through the user port, set the baud rate for data transfer and set the protocols as discussed above. Some of the better programs available have the following features:-
          1/. Ability to upload and download files.
          2/. Ability to display colour and graphics.
          3/. Ability to capture data or screens direct to disk or
               to printer.
          4/. Save screens to RAM for closer viewing after logging
               off the computer.

What information is available from the various Databases/Bulletin Boards? Most of you will have seen the variety of screens available from "Viatel" offering information on a wide variety of subjects ranging from the business services such as home banking and exchange rates for foreign currency. To general interest subjects such as adventure games played by a number of users at the one time to common interest groups eg. Commodore users sharing information.

Other Bulletin boards as in the list at the end of this text are provided by enthusiasts for the use of other enthusiasts. The range varies from Bulletin Board to Bulletin Board, they typically have EMail or electronic mail, General forum areas and Tele software (Public Domain).

Should you have recently purchased a modem I have listed a few of the South Australian Bulletin Boards below. Most charge a fee for access however you may be allowed a short period of time to view the board as a visitor.

Happy Computing.

Rob Price.

Adelaide Micro User Group BBS
Phone (08) 271 2043
Hours: 1000 - 2200 CST We & Hols

Computer Ventures
(08) 255 9146
24 Hours CST

Electronic Oracle IBBS
Phone (08) 260 6686
Hours: 24 Hours CST

Multiple BBS (Multi-BBS)
(08) 255 5116
24 Hours

Omen V RTRS
Phone (08) 243 2477
Hours: 1800 - 0700 Daily

SA Commodore BBS
(08) 371 0435
?

COCKROACH GRAPHICS PIRATE

GRAPHICS PIRATE

If you are a reader of the 'Australian Commodore Review', you may have seen the advert for the COCKROACH GRAPHICS PIRATE, herein after described as CGP. If you pop into 'SO-LO VIDEO', you will see a large black plastic holder with a pirate logo staring back at you. Even if you have seen it mentioned, it appears most unlikely that you, in common with most of our members, know much about this little device which has revolutionised the world for the C-64 graphics freaks.

The Cockroach Graphics Pirate is a transparent cartridge for use on the Commodore 64, SX64 and 128 in 64 mode.

Any screen maybe captured at the press of a button and saved to disk, including sprites and character sets. these files may be extensively edited using a powerful display editor supplied on disk or as the screens are conveniently saved as Koala or Doodle files, they may be loaded into these drawing programs.

Unlike many hi-res dump cartridges which only give you one shot at a hard copy of your screen, this one allows you to save your screen to disk for subsequent editing and printing.

'So what?' you ask. Well for a start, what game player has made it to the final screen of a game and achieved a world record only to be disbelieved by all and sundry, somewhat like the fisherman and his tale of the size of the one that got away.

One of the best features of the C-64 is its graphics capacity - certainly unmatched for a computer of its size. Since its original issue, dedicated programmers have worked at using memory in graphics mode to an extent probably not even envisaged by the designers of the machine. After capturing such magnificient graphic screens as the opening screen to 'Cobra', - Stallone fans - eat your heart out, or the beautiful sceenery from 'The Pawn'. The disk supplied with the CGP enables you to create 'A Roach Show', which allows these screens including the sprites to be compressed and compiled into a slide show. An ultra high speed loader is incorporated which enables a new screen to be displayed every 5 seconds without screen blanking. We are hoping to be allowed to set up a Roach Show at a future meeting to awaken all members of the Club to the graphics potential of the C-64.

The ability of the CGP to be able to capture screens in Doodle or Koala format opens up the possibility of transferring these images, or parts of them, into the print medium - specifically into Print Shop, Newsroom and the Geos suite of programs. Of course you need access to a couple of other programs to help the process along but it's not too difficult to do. Accompanying this article are some examples of graphics captured from the programme 'Split Personalities' printed out as they were captured by the CGP and then showing resultant Newsroom photos and the Print Shop non-CBM graphics.

While we said that the CGP would enable you to prove that you had reached a certain stage in a game, fortunately, |or unfortunately depending upon your point of view,| the quite brilliant screen editor that comes with the CGP enables you to reconstruct the screen or repair a damaged screen e.g. in the game 'Green Beret', the first screen during play is of a brick wall and a bridge. the brick characters are cleverly designed so that they butt up against each other and appear to form a complete wall. By manipulation of these brick type characters it is possible to construct a variety of different shaped buildings. If you also possess Doodle and/or Koala graphic programs, even a non-artist can create screen graphics which are a pleasure to view. In a number of modes, it is possible to create a special graphics file which enables the picture to be stored in a compressed format enabling more pictures to be stored on each disk. Also provided is a printing program which enables these compressed files to be printed out. Printers supported at present are Epson, Gemini 10x, 801/803, Okidata 20 col. and BMC-80. Whilst we have only had the opportunity to view the results of the Epson version, the resultant printout measuring 20 cm x 14 cm is far superior to anything we have seen produced by other graphic printout programs.

If all this isn't enough, two other programs are included. One creates graphic screens by loading Print Shop and Print Master graphics into hi-res and enables the hi-res screen to be saved in 4 different formats. The other utility program enables you to load Clip Art graphics from newsroom into hi-res and save it as a Doodle file. By use of the CGP cartridge these screens can still be converted to the Koala format although there is no facility in the program to do it directly. newsroom graphics captured this way can be printed out and your kids can colour them in on a rainy Sunday afternoon whilst you play with your C-64, but beware if you show them how to operate a Koala Pad, they will take over the C-64 themselves and do the colouring in on screen.

By now you must be aware that we think that the Graphics Pirate is the greatest thing since sliced bread. If the C-64 had been invented before that it would have had a similar status. We are now working on reproducing a graphic screen caught with the CGP to billboard size with Billboard Maker. Our field seems endless!

We have only two problems and they don't relate to the CGP. As we are poor game players and so we quite often cannot get through to some of the great graphic screens which occur later in games. We are interested in hearing from expert game players and utilising their services. We would also like to be able to add sound/music to our Roach Slide Shows, so how about some of the music experts in the Club lending a hand.

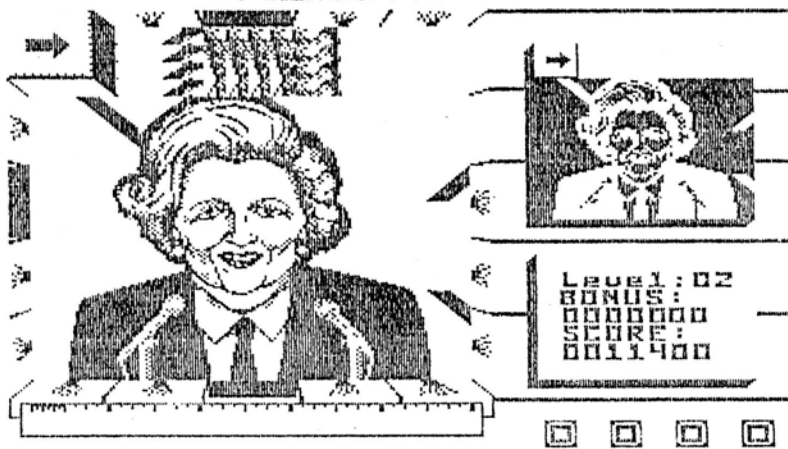Article text by   Jeff Carey   (294-8447)

Graphics captured, edited and printed
using the Geos suite of programmes by   Ross Edwards   (277-1549)
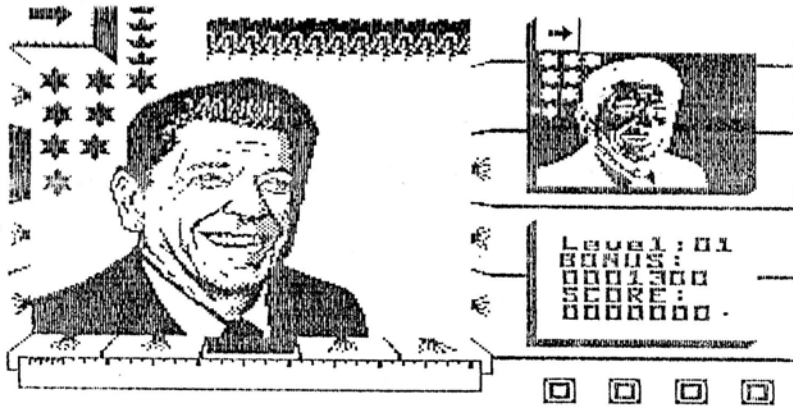
Ronald Reagan

Margaret Thatcher

As captured from Split Personalities

As Newsroom photos

As non-CBM Print Shop graphics

PRINT SHOP/PRINT MASTER PROGRAMS PT-2

This is the second of three articles on the Print Shop and Print Master programs. This article will compare the two graphic formats and present a program to convert the Print Shop graphics to Print Master format. The last article will present a Print Shop graphics printer.

GRAPHICS FORMATS

This gets quite complicated so take it slowly.

The basic unit of storage of information on this computer is the Byte. The byte can take 256 values. Each byte can be split up into two parts called nibbles. Each nibble can have 16 values, we then have two 16 value nibbles to represent 256 values. Note that 16 lots of 16 is 256. It would be nice to represent these two nibbles with two characters, one for each nibble. The digits, 0 to 9 can be used for the first ten values of each nibble but we still need another 6 characters for the remaining values. We will now use the first six letters as digits, ie, A, B, C, D, E and F. The table to the right shows the values of each digit used to describe the nibble. This is called the hexa-decimal number system, usually shortened to hex. Hex=six and decimal=ten.

VALUE	HEX DIGIT
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	A
11	B
12	C
13	D
14	E
15	F

Now remember that the basic storage unit in this computer is one byte which is two nibbles. It then follows that one byte can be represented by two hex digits.

If the above was just a little too much then it might pay to persevere with it since it makes it much easier to understand the operation of many programms, including this one. If you wish I can go through this in a meeting.

First Print Shop graphics format. Each line of graphics on the screen is represented by 11 bytes of data. Since each byte can represent 8 picture elements or pixels the graphic is 88 pixels wide. There are 52 lines in the graphic. These values are the same in Print Master, it is only the way that they are stored on disk that differs. We now have 52 lines of 11 bytes to represent the whole graphic of 88 by 52 pixels. The following table shows the layout of the graphic as it appears on the disk.

```
00 :tt ss aa aa dd dd dd dd dd dd dd dd dd dd dd dd
10 :dd dd dd dd dd dd dd dd dd dd dd dd dd dd dd dd
20 :dd dd dd dd dd dd dd dd dd dd dd dd dd dd etc...
```

tt ss   is the track and sector of the next sector containing graphics information. There are three sectors for each graphic.

```
aa aa        This is the load address or the location in the  compu-
             ters memory where this graphic data is loaded.
dd           This is the data.  It will be 52 lots of 11 bytes. Each
             dd is one byte of data.

      An example of data from an actual graphic is;

00 :20 0C 00 58 3F FF FF FF FF FF FF FF FF FF FC 60
01 :00 00 00 00 00 00 00 00 00 0E C0 00 00 00 00 00
02 :00 00 00 00 03 60 00 ETC...
```

From the above we can deduce the following;

```
Next track and sector   - 20 0C
Load address of graphic - 5800 (Note bytes in reverse order)
First line              - 3F FF FF FF FF FF FF FF FF FF FC
Second line             - 60 00 00 00 00 00 00 00 00 00 0E
Third line              - C0 00 00 00 00 00 00 00 03 60 00
etc...
```

The format of the Print Master graphics is a little more complicated since there are a number of different graphic types.

```
00 :tt ss aa aa pp pp ll ll B4 bb dd dd dd dd dd dd
01 :dd dd dd dd dd bb dd dd dd dd dd dd dd dd dd dd
02 :dd bb dd dd dd dd dd dd dd dd dd dd dd etc...
```

```
tt ss        is  the track and sector of the next sector  containing
             graphics information.  There are three sectors for each
             graphic.
aa aa        This is the load address or the location in the  compu-
             ters memory where this graphic data is loaded.
pp pp        The  number of pixels in each line of the  graphic.  In
             this case there are 88 pixels per line.
ll ll        The number of lines in the graphic.  In this case there
             are 52 lines per graphic.
bb           This indicates the start of each line of graphic.
dd           This is the data.  It will be 52 lots of 11 bytes. Each
             dd is one byte of data.
```

      An example of data from an actual graphic is;

```
00 :20 0B 50 77 58 00 34 00 B4 8B 00 00 00 00 00 0F
01 :00 00 00 00 00 8B 00 00 00 00 03 FF 00 00 00 00
02 :00 8B 00 00 03 60 1E 7F 80 00 00 00 00 etc...
```

From the above we can deduce the following;

```
Next track and sector   - 20 0B
Load address of graphic - 7750 (Note bytes are in reverse order)
Number of pixels        - 0058 = 88 decimal
Number of lines         - 0034 = 52 decimal
First line              - 00 00 00 00 00 0F 00 00 00 00 00
Second line             - 00 00 00 00 03 FF 00 00 00 00 00
Third line              - 00 00 00 00 1E 7F 80 00 00 00 00
etc...
```

      This is not important to the understanding of the conversion but the load address of the graphic could do with some explana-tion. A memory address consists of two bytes, one of 65,536 locations, or 64k (k=1,000), hence Commodore 64. The load address

appears as the two bytes 50 77 in hex. By some strange twist of logic the bytes indicating memory locations in this machine are reversed in order. Therefore for the Print Shop graphic the address appears as 50 77 but the address is 7750 hex or 30,544 decimal.

THE CONVERSION

The task is to take the Print Shop graphic and add the necessary information to convert it to Print Master format. There are six programs involved in the conversion. All are available from the users group library. They are;

SH TO MASTER 0
SH TO MASTER 1
SH TO MASTER 2
SH TO MASTER 3
SH TO MAS COMPANION
SH TO MA.NODATA

The first five programms will take the graphics from the Pint Shop graphics disks and companion and convert them to print master format. The program starts with data statements containing all of the names of the programms to be converted. The last program is stripped of data statements.

To convert a disk of Print Shop graphics;

1. Prepare a disk containing all of the Print Shop graphics from that disk that you wish to convert.
2. Load the conversion program.
3. Place the graphics disk into the drive.
4. Run the program.

The program will take about twenty minutes to convert one disk of graphics. You will be left with a disk full of graphics for Print Master format.

NOTE: Do not use an original disk since this program erases all of the Print Shop files.

The program can be easily modified to operate on two drives, see the section on the program description. There are also compiled versions of the conversion programms available from the library.

THE PROGRAM

The program begins with data statements. These contain a list of all of the graphics on the disk that need converting.

LINE	DESCRIPTION

1000   The array A will contain all the data from the graphic.

1010   This loop will (ending at 1200) execute once for each graphic on the disk. This number will therefore have to be set to the number of graphics on the disk.

1012   The name of the graphic is read into N$.

1014-1020   Open the graphics file

1030-1060   This loops once for each byte read and reads the data into the array A.

1072-1076   Scratch (erase) the old graphic otherwise we will run out of space. These lines may be removed if modifying this program for two drives.

1085-1090   The new file OLDNAME.GRA is created on drive 0, device 8. If two drives are being used change this line to, OPEN 8,9,8,NC$

1100   This line writes the load address, number of pixels per line (88), the number of lines (52) and 180 (B4 hex) to the beginning of the file.

1110-1160   Writes the graphics data back onto the disk, separating the lines with 139 (8B hex).

Next month in the final part will be a description of a program to print Print Shop graphics.

```
999 REM***START MAIN PROGRAM****
1000 DIMA(600)
1010 FORC=1TO122                       :REM THIS MANY GRAPHICS IN DATA STATEMENTS
1012 READN$
1014 NA$="0:"+N$+",P,R"                :REM OPEN UP THE GRAPHICS'S FRG FILE
1020 OPEN8,8,8,NA$
1030 FORX=1TO600                       :REM ONLY NEED 572 BYTES PLUS 2 LOAD ADDRES:
1040 GET#8,A$:IFA$=""THENA$=CHR$(0)    :REM READ IN THE DATA
1050 A(X)=ASC(A$)                      :REM CONVERT IT TO DATA
1060 NEXT
1070 CLOSE8
1072 NB$="S0:"+N$                      :REM DONT NEED THAT FILE AGAIN SO SCRATCH I
1073 REM                                    OR WE WILL RUN OUT OF DIRECTORY SPACE
1075 OPEN15,8,15,NB$
1076 CLOSE15
1080 PRINT"FINISHED READING, STARTING TO WRITE "N$
1085 NC$="0:"+N$+".GRA,P,W"            :REM .GRA MEANS PRITMASTER WILL 'SEE' IT
1090 OPEN8,8,8,NC$
1095 REM                                    FOLLOWING LINE HAS NEW LOAD ADDRESS
1096 REM                                    AND DATA THAT PRINTMASTER WILL NEED
1100 PRINT#8,CHR$(80)CHR$(119)CHR$(88)CHR$(00)CHR$(52)CHR$(00)CHR$(180);
1110 FORX=1TO52*11STEP11
1120 PRINT#8,CHR$(139);                :REM INSERT START OF LINE CHARACTER
1130 FORY=2TO12                        :REM 2-12 IGNORS FIRST 2 BYTES (OLD LOAD AD
1140 PRINT#8,CHR$(A(X+Y));             :REM BECAUSE A(X+Y) STARTS AT (1+2) = A(3)
1150 NEXTY
1160 NEXTX
1170 PRINT#8                           :REM EMPTY THE BUFFER BEFORE CLOSING FILE
1180 CLOSE8
1190 PRINT"FINISHED "NC$
1200 NEXTC

READY.
```

Barbequeat LOFTIAPARK

The family day and barbeque was held on 13-Jun-1987, and was a very successful event, with the weather on the day being exceptionally kind for the time of year.

The emphasis on the day was for family involvement, and this was helped by the parents helping the kids on a treasure hunt, looking for various items found in the bush. Swings, footballs and an interesting game called 'Trak ball' filled in much of the time for everyone. One undiscovered footballer managed to kick the ball just about on Julie C's barbeque plate, although the football was not in much danger of being grilled, the same could not be said for the footballer ! Other games organised during the day were a three legged race with one parent and one child, and tunnel ball, with every child player winning chocolate frogs and Life Savers.

For the adults, Solo Video and Datapunch were kind enough to supply some software and a box of disks which were won by three lucky people during the afternoon.

A special thanks to Julie C and Sylvia P for their work in preparation for the day, and thanks to everyone who turned up, We are looking forward to another social event some time before christmas.
Ken P June 1987