Election time - a time for renewal and healthy change. Election time in a club such as ours should be looked upon as a "refresh" or "renewal of direction and purpose. It's an opportunity for some of those who share in this club to move forward, for a time, to the front. We don't need computer wizards at the helm, just interested computer hobbyists willing to take a little time to organize activities to advance the understanding of our members about their club and their hobby. Too often the suggestion that one "stand for office" returns cries of "too busy", or simply expressed lack of self-confidence from (too many) members too shy to get involved. I've paraphrased an excerpt from an educational trade journal below, just to make a point about participation. Read on, then consider not just "what this club can do for you, but what can YOU do for your club?" (apologies to JFK)

Xvnn though my typewriters is an old model, it works quitz well, xxxcept for onx of the xkyx. I wished many timx that it worked perfectxly. It is true that thnx are forty-onx xkyx that function well enough, but just onx xkyx not working makx all thx differentx. Somtims it xxms to mx that an organization is somewhat likx my typewriters ... not all of thx writpix arx working properly.

You might say to yourself, "Well, I am only onx person, I won't makx or braxk any club!" But you DO makx a differenx, becauxx any group, to bx effecxvely, needs the activx participation of every member. So thx next timx you think you are only onx person and that your efforts are not significx, remmber your typewriters and say to yourself "I am a KXY PXRSON in our club, and I am necessary, very much, especially now, to do my part in making this club strong and effective!" You must realize that it is only by being visibly activx and supporting of thx things wx try to accomplish that this group can function FULLY effecxively, providing guidanx and leadahip for another generation of hobby computerists.

IGNORAMUS:

A person unacquainted with certain kinds of knowledge familiar to yourself, and having certain other kinds that you know NOTHING about!
MAZE'S
NOVEMBER NOTES

This month is election month for the CUGS executive for 1988. I would like to take this opportunity to thank the members who are "retiring" from the executive. Your assistance this past year has made my job very easy. I greatly appreciate the support and help you've given me through this year. Although you're not continuing on the executive, I hope you will still take an active part in CUGS. I also welcome club members who have joined the executive. Your new ideas and involvement in the executive will help our computer club to grow.

The other day I had occasion to look through some back issues of my computer magazines. Yes, I have not yet thrown out a computer magazine, although a lot of them have interesting articles about computers long since gone to that great "computer heaven" (cashed in their chips, ya might say - Ed. note!). I thought I would share with you a few "didjaknows" about the Commodore 64.

DIDJAKNOW that the first mention of the C64 in Compute! occurred in the July 1982 issue in a chart of Commodore's new "third dimension" computers. This chart was intended as a brief overview of the Chicago Consumer Electronics show and the National Computer Conference in Houston. Other computers in the same chart were the BX256, B128, P series and the MAX. The intended release date for the C64 was to July/August.

DIDJAKNOW that in the August and September issues of Compute!, features editor, Tom Halfhill, gave a two-part feature on the C64 which was the result of a half day he spent at Commodore headquarters working with it. Most of his article dealt with sprite and sound capabilities. Some software & hardware support he mentioned (available by Jan. 1983) - 1541 disk drive, direct-connect plug-in modem, PET Emulator (running up to 90% of popular PET software), languages - assembler, LOGO, BASIC compiler, a word processor modelled after WordPro, a whole family of business software with the prefix Easy - Easycalc, Easygraph etc...

DIDJAKNOW that the October 1982 issue of Compute! contained a memory map of the C64 by (guess who) - Jim Butterfield. Also, this issue contained the information that Commodore had slowed the production of the MAX, moving instead to a dramatic increase in the production of the VIC. Also, about this time, Texas Instruments dropped the price of the TI-99/4A by $100 to $199.

DIDJAKNOW that in the editor's notes of Compute! (November 1982), reference was made to the fact that Commodore shipped 12,000 64's in the first two weeks of full release of the product. I quote, "Now, their primary problem, ..., is building them fast enough to meet demand." Where have I heard that before? or since? Also in this issue - a sprite generator program for the C64 and an ad for the C64 for $75.

DIDJAKNOW that in the December 1982 issue of Compute! was another program - Commodore 64 Sprite Editor. This issue also contained the first ads for C64 programs. Most of these ads were for remakes of existing VIC or PET software and were to be found in the small 1/4 page ad sections. The only full page ad for a C64 program was for PETSPED. This was also a reworking of a previous ad for the PET. In the editor's notes there is further talk about Commodore production difficulties and a hint at the introduction of the IBM PC.

DIDJAKNOW the January 1983 issue announced of the startup of Compute!'s Gazette for Commodore with emphasis on the VIC-20 and the C64.

Now, six years later, wither go we (and the C64)?

DISK-ETIQUETTE

by EARL BROWN

(* ED. NOTE - against the better judgment of the editor - EARL insists on renaming his column SCRATCH AND SAVE - which sounds suspiciously like a description of an itchy millionaire - but, I'm just the editor, what do I know, who am I to object... so, the name changes as of next issue.)

I apologize. It appears I missed the listing for CUGS 128 pgs #03 last month. It's included this month along with COMMUNICATIONS #3 and GENERAL #10. Please note: all members who obtained CUGS GAZETTE #23 disk - one of the programs (perhaps 'UNSCRAMBLE') was (how should I say it), scrambled. Part of a 'CUGS DATA' seq file inadvertently got appended to it in the process of making the program is missing. I'll be happy to re-save the program in question for you. If there are any programs on our disks that are messed up in any way, please, PLEASE, let me know. The program will be corrected or re-placed. Even if you don't wish to have your copy replaced, please let me know anyway. We would really like all programs and disk failures to be resolved.

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Now that the 1581 Disk Drive is available, a third choice is becoming available for that second drive. Granted, it could be a first choice for the 44, V20, 64, or 128 computer system, but you'd be limited to running only some few programs available for in this format machines, and copied non-dos-protected software. As more 1581 drives are sold, software companies will gradually supply software in both formats. Eventually, they will probably discard the 3.5 inch format in favor of the "more-for-your-money" (considerably more storage) 5.25 inch format. Of course, this is not going to happen overnight.

What are the advantages to owning one now? If you do a lot of word processing or databasing and require more storage room than your 1571 can provide, the answer is obvious. Storage on the 1581 is almost twice that of the 1571. (Remember, the 1571 storage is more than double that of the 1541.)

The 1581 also:
- runs at 2 MHz
- has track cache buffer for faster disk access
- nine instead of five job buffers allows more files to be open at once
- supports sub-directories so related files can be stored in separate sects - relative files can be as large as the disk

Finally, the price? About the same as a 1571. Cheaper than the 1571 in the U.S.A.
This article is the start of an ambitious project to examine the various file types that can be used and the programming involved in using each type. In this first article of the series, I will examine the different file types and indicate how these are stored on the diskette. In later articles, I will examine the programming required to use these different files within a computer program. I will use BASIC 2 in all examples. Those of you who have BASIC 4 or BASIC 7 should realize that there are some "shortcuts" available. BASIC 2 will work, however, on all upgrades of BASIC. Hopefully, you will find that it is not that difficult to write programs to access disk files.

There are four different types of files that can be stored on diskettes—ProGRam files, SEQuential data files, RELative data files and USEr (sometimes called 'random access') files.

Let's examine how data is stored on a diskette. A diskette stores data on a number of concentric TRACKS. The 1541 (and 4040) disk drive permits normal access to 35 tracks. Tracks are numbered starting with 1 on the outside of the diskette and proceeding inward to track 35. Each track is divided into SECTORS (also called BLOCKS). A sector will hold 256 bytes (characters). Because the tracks are of unequal length, there are varying numbers of sectors per track with more sectors on the outer tracks and fewer on the inner tracks. Track 18 is used to keep a record of the diskette contents (directory) and controls access to all files on the diskette.

The directory track has one sector (track 18 sector 0) reserved for diskette HEADER information. This is the first sector accessed on a read. It contains 2 bytes which tell the track (18) and sector (1) of the first directory sector (block). The next 16 bytes hold the disk name, 2 bytes contain the disk id and 2 more contain the disk version and format. 160 bytes are used to hold the BAM (block availability map) which contains information as to what blocks are available on the disk. The remainder are in use.

Each directory block contains the following: the first 2 bytes contain the location of the next directory block; the remaining 254 bytes is subdivided into 8 subdirectories of 30 bytes each with 2 bytes separating each subdivision. Each of these subdivisions contains information about 1 file on the diskette. The information is stored as follows: 1 byte contains the file type; 2 bytes contain a pointer to the track and sector of the first storage location of the file; 16 bytes are reserved for the name of the file; 2 other bytes contain the number of blocks used to store the file. The remainder are either unused or used to control the operation of RELative files.

Remember the 4 basic disk file types?

ProGRam File: stores a BASIC or Assembly language program. This file is normally used to store computer programs. The storage simply involves filling up the 254 bytes of a block (first 2 are used to link to the next block) and then going on to fill up successive blocks until all the program has been saved. A diskette directory will display PRG to indicate a program file. This is marked in the directory on the diskette as hex $82 (decimal 130).

SEQUential files: In these files, data items are stored one after the other in a long list. Data items are stored in a manner similar to program files. Because the data may be of different lengths, it must be accessed from the start each time it is used. SEQ files in a diskette directory indicates sequential files. They are marked on the diskette by hex $81 (decimal 129).

RELative Data files: Each record of these is the same length. As a result, data can be accessed individually, a much faster process than reading sequential data. However, there is a greater use of disk storage associated with relative data files. A directory listing will show REL to indicate a relative data file (marked by hex $84 decimal 132).

Random Access files: These are also called USEr files because they are controlled completely within a program. Individual bytes of data are placed or retrieved directly from a particular sector by program statements. Random access files are the most difficult to set up and use. On a directory listing this file type may be indicated by USR (marked on directory entry as hex $83 decimal 131). In some cases these files may not have a directory entry at all as information can be put directly on a chosen track and sector. Such a diskette must be used carefully because the information could be destroyed by storing additional files on the diskette.

Next month I will start the examination of each file type and the statements and programming procedures necessary for preparing files using each of the different types.
information that you may have to follow (like setting certain DIP switches) before running Sideways. The installation program also allows setting the number of data bits at 7 or 8. This could be important depending on the type of printer you have. You can also select device number 5 for your printer if you have changed your printer's device number. All of your selected options are saved and become part of the main Sideways program. You do not have to change these unless you change the printer or interface from what you have selected.

Once Sideways is loaded into the computer, the Sideways disk can be removed and the disk containing the data to be printed can be inserted. Sideways gives one main screen display with a secondary help screen of commands available. Values are given for page size, margins, etc. that are most common. These can be easily changed by moving the cursor to the value you want and typing in the change. When a file is selected, it is loaded off your data disk and printing begins.

Sideways is compatible with the following spreadsheet programs: Better Working Spreadsheet, Calc Now, Cal-Kit, Creative Calc, Microsoft Multiplan, Pracitcalc, Swiftd, Syncalc, Triolo. It will also work with any C64 or 128 spreadsheet program that can create text file information (ASCII) on a disk.

A major part of the manual is devoted to troubleshooting and specific instructions for using Sideways with a particular spreadsheet program. This is excellently written and should help solve almost any problem that can occur. A very important part of this section is telling what parameters to use when saving a file so that the file will be compatible with what Sideways can print.

I used Sideways with a spreadsheet made on Multiplan. In one case, the spreadsheet took 3 pages to print normally which resulted in a lot of careful lining up and taping pages together. Using Sideways, I was able to print the entire spreadsheet in 1 1/2 pages of condensed type with everything intact. The program does take more time because a special file had to be created with Multiplan and then Sideways loaded and this file accessed. The printing is slower than normal on a Gemini 10X printer because Sideways prints each line from left to right and there is a slight pause between each line of print.

If you do a lot of work with big spreadsheets, then Sideways may be a program that you may want to examine in more detail. It does permit making much neater and easier to follow printouts.

**UPLIFTING LABELS**

**DISK LABEL REMOVAL TIP**
Gary Senesac
Reprinted from: Aurora Area Apple Core News

Ever reform a label that contained programs or data that you no longer wanted? What did you do about the old label that had been stuck on the disk for the last two or three years? Did it peel off nicely and clean or did it tear into a million little pieces that make the disk jolly look like a survivor of the holocaust? Or did you give up and just paste a new label over the old one?

Find a hair dryer and blow warm air over the label for a few seconds. This softens the adhesive on the label and makes it easy to peel off in one piece. Lift up a corner and blow more warm air on the back side of the label if needed to keep it peeling off in one piece. Length of time to blow will vary depending on the heat range of your dryer and age of the label. If you melt your disk, forget who told you this!