The History of Commodore

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The History of Commodore

1.1 The History of Commodore

1.2 EVOLUTION OF THE DISK DRIVE

Evolution of the Disk Drive
by Joel Ellis Rea

from George's Den BBS
via Greater Oklahoma Commodore Club Newsletter, 6/88
via The Interface, newsletter of Fresno Commodore User Group/64UM 12/89

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First there was the Commodore 2001 Personal Electronic Transactor (PET). It was one of the first personal computers on the market. It had a whopping 4K of RAM, and 8K BASIC in ROM, and a Kernal to control input/output and other system operations. It used Commodore BASIC Version 1. There were no disk drives then, but provisions were made in the form of an IEEE-488 General Purpose Interface Bus. It also had the funniest little keyboard you ever saw!

Commodore then invented the 2040 Dual Floppy Disk Drive. It was an industry first. Previously the main computer had to control every tiny detail of disk drive operation, not to mention loading a large Disk Operating System (DOS) into the computer's RAM in order to use the

drive. The 2040 was an intelligent drive, with its own computer system inside, and its own DOS in ROM! By simply PRINTing commands to its command channel, BASIC users could SCRATCH, RENAME, and COPY files, and DUPLICATE an entire disk without any further help from the computer. Only problem was, they could not SAVE or L0AD programs, or use data files.

The problem was BASIC V1. It did not know about the timing involved with actually transferring data back and forth between the computer's RAM and the disk drive's computer. So, Commodore created Upgrade BASIC (now known as BASIC V2), and put it into a new PET, called the 2008. It had only 8K of RAM, a REAL keyboard (unlike other companies, Commodore NEVER tried a rinky-dink keyboard again!), and it could use the disk drive!

But the 2040 drive had its faults as well. It could not handle random access files (one of the most important advantages of a disk drive over a tape drive) without a LOT of effort On the user's part. It could not trap errors correctly, and it required the user to type OPEN 15,8,15, "I":CLOSE 15 every time a disk was changed. It could not seem to center the disks properly.

So about the time Commodore came out with their 3008 PET computer (including BASIC V3, with very minor differences from V2), they introduced the 3040 Dual Disk Drive. This had DOS V1.2 in it, which corrected the error trapping problems. But they did not fix much else. Also, people were getting tired of having to type OPEN 15,8,15 etc. when their Apple-owning buddies could do the same with RENAME oldfilename, newfilename.

Almost immediately thereafter, the Commodore 4016 PET came out. It had 16K, expandable to 32K, and BASIC V4. This version had nice disk commands like CATALOG, SCRATCH, DLOAD, DSAVE, BACKUP, COPY, etc. These commands simply translated themselves into the old commands that the drive could understand.

Along with the PET 4016 came the 4040 disk drive. It had it all! Besides fixing the hardware problems, it had DOS V2.1, which supported relative files (also referred to as random files) The new DOS also performed an automatic "I" (initialization) every time it detected a disk with a different ID, so the user did not have to type this command unless he had two or more disks with the same ID. it also used a slightly different disk format from the 2040's and 3040's, so that a disk made on a 2040 could be used only by copying its files to a 4040 drive.

Later, Commodore came out with the CBM 8032. It had BASIC V4, 32K of RAM, a 12-inch 80-column monitor (the old machines had 40 column screens), and a more business-like keyboard. Indeed, it was a business machine.

A business machine needs a business disk drive. So Commodore presented the 8050 disk drive. It used a double density format that allowed over twice as much data on each disk. It also could tell if a disk drive door had been opened, and automatically did an "I" command when the door was shut again.

Later came the 8052 double-sided drive, and the D9060 and D9090 hard disk units that could store 2, 5, and 7.5 megabytes (1 meg=1024K).

Then came the VIC20. Commodore made many advances on this one. Low price! Graphics! Low price! Color! Low price! Three-channel sound, RS232, eight user programmable function keys, and a game cartridge slot. Not to mention low price! Even though they were producing a computer to compete with home video games, they learned their lesson with the PET 2001 and gave the VIC 20 a REAL keyboard.

But for the sake of low price, Commodore took several MAJOR steps backwards. Only 5K of RAM, 22-column screen, back to BASIC V2. And worst of all, they scrapped the wonderful IEEE-488 bus that could shove all eight bits of a byte down the wires at once, and replaced it with a "serial bus" that had to spool those bits out one at a time.

Commodore then produced the 1540 single Floppy Disk Drive. It was basically a one drive, serial bus version of the 4040. It had less RAM, so that fewer files could be open at any one time. It used the new half-high disk drive units. instead of two microprocessors (one for the drives and one for the interface), it had one processor controlling the single drive and the interface.

About two years later Commodore invented the Commodore 64. (ever hear of that one?) I will not go into all of its nice features, but it still had the serial bus and BASIC V2. Along with it of course came old slow and pokey, the much hated, much loved 1541 that so many of us use and cuss daily.

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1.3 COMMODORE HISTORY

FILE: cbm30.seq
FROM: Group Host 02/23/89
SUBJECT: Commodore History
AUTHOR: AZ User Group

A recollective 30-year history of Commodore, provided by the Arizona Commodore User Group, with annotations by other user group leaders. My comments in brackets [GH:...] are intended to augment the original text, which I found to be a very nice history.

With 1988 being the 30th anniversary of Commodore Business Machines, we thought we would start 1989 by looking back at our roots. Commodore started out as a typewriter repair company in Toronto Canada in 1958. by the late 1960s it was selling calculators and electric adding machines. At that time a Commodore hand-held calculator sold for well over $1000. In October of 1976 Commodore bought MOS Technology, a microchip company, and introduced its first personal computer, the KIM [GH: I bought my KIM-1 with 1 K of memory) from MOS before they were bought out by Commodore, so CBM could use their chip production for the PET, which I understood was the first computer actually marketed by CBM] . How many of you have ever heard of a KIM, much less seen one? The KIM-1 used the now famous MOS 6502 microprocessor used in the PET and the VIC-20, as well as many non-Commodore Computers. [GH: such as the Apple computer]. At the first West Coast Computer Faire in San Francisco in the spring

of 1977, Commodore introduced the PET (Personal Electronic Transactor). It came out at the same time as the Apple II [GH: the first Apple was just the "Apple"]. Tandy Radio Shack's beat both to market. The name PET was actually chosen to take advantage of the "PET ROCK" craze of the day. The first PETs had an 8K memory [GH: the very first PETs delivered had only 4K of memory. The 8K version cost me $795] and monochrome monitor and built-in data cassette [GH: and a chicklet keyboard] By the time the PET line ended, it had become the SUPERPET with 96K and an extremely powerful version of MICROSOFT BASIC. On the heels of the success of the SuperPet, Commodore released the VIC-20, Commodore's first color computer [GH: at $299]. The VIC had 8K of memory [GH: 3K BASIC RAM built-in] and could be expanded to 32K.

In early 1982, Commodore unveiled its revolutionary C-64 computer with 64K of RAM and a 40 column color display [GH: for $595 without monitor]. Unlike the PET line, the 64 came with a version of BASIC with very little disk drive support. Commodore reasned that most 64 owners would not want a disk drive [GH: PET 4040 Dual Disk Drives cost $1295!!!], and very few 1541 drives were initially available. Commodore marketing strikes again. Early 64 owners spent many hours typing in programs from magazines or converting PET programs, since there was virtually no [commercially] software available for the first two years. The SX-64 portable was introduced in 1983. The SX came with a built-in 5-inch color monitor, disk drive and power supply......

...Many SX-64 owners waited patiently for the second built-in drive [version] that never appeared [GH: model DX-64 that was not distributed]. Although touted by Commodore, the SX was never physically able to use a second built-in disk drive; there was never enough space and the power supply was barely able to handle the rest of the system. While the 64 was selling well, Commodore released the ill-fated PLUS/4 and Commodore-16. [GH: with built-in word processor, database, and spreadsheet software in ROM]. By being software incompatible, and for the most part, hardware incompatible, they lived a short life. Commodore released two new models in 1985. The answer was the next logical step. Advertised as three computers in one (C-64, C-128, and CP/M), the 128 was the most powerful 8-bit machine Commodore had ever built. It featured 40 and 80-column text and graphics, a faster serial bus and expanded sound and graphics commands from BASIC. [GH: and it made good CBM's earlier abortive attempt to implement CP/M for the C-64 as a plug in module]. On the heels of the 128 came the release of the Amiga 1000. Commodore purchased a small California joystick company in 1984 [GH: They were into more than just joysticks] and used the company's name and its prototype 68000-cpu super game machine for which ex-CBM CEO Jack Tramiel's newly acquired ATARI Corp was also bidding for its newest line of computers. More recently, Commodore released the Amiga 500 and 2000 as well as line of MS-DOS compatibles including the PC-10, PC-20 and Colt.

As Commodore Business Machines begins its 31st year, we can all look forward to more of the Commodore tradition of great Hardware and Poor Marketing Decisions. 1989 should be an interesting year.

Group Host: Thanks to ACSg Editor Faye Thornton for this history. If anyone has any additional historical highlights or comments to add,

please post them here, to make this history as complete and accurate as possible. A good account of the early Commodore years is in the book "Computer Wars" by Tomczeck(sp?), which is out of print.

SUBJ: ORIGINAL PET
FROM: EmilV1 01/21/89
Gary, I thought the history was pretty well done and think I will publish it in our newsletter (obviously, with the appropriate credits). However, there is one thing I noted that I would quibble about; namely the word PET. I am not sure that pet rocks had been invented in 1976 when the decision had to be made by Commodore on what to call their all-in-one product. I do know that the word was an acronym:
PERSONAL
ELECTRONIC
TRANSACTOR
Since I still have copies of the literature that led me to choose the PET over the Apple or the TRS-80 Model 1, I can attest to the above.

BUT, did the acronym come first and the definition later????

SUBJ: Commodores In Canada
FROM: Steve N55 01/22/89
Commodore actually put out a PC-lO, PC-30 and PC-40 in Canada and Europe about three years or more before the US was given the show of the PC-series. The PC-10 and 20 were one and two drive machines based on an 8088 processor, while the PC-40 is based on the 80286 AT architecture. Mind you, Commodore pulled another goof, and had timing problems with the Fixed Disk controller, so that only their Hard Disk controller would work (did I say goof, or marketing decision??). At least Western Digital has a fix for that as well. The NEW PC series that the US has is fixed from the timing problem. Also, the older PC series that was first introduced in Canada for testing were very LARGE desktop machines.
A bit of Canadian History.
Steve N. - President Nova Scotia Commodore Computer Users Assn.

SUBJ: Pet Rocks
FROM: Group Host 01/25/89
Emil,
Yes, I too bought an early Personal Electronic Transactor, and at the time I had no awareness of the association with the Pet Rocks Craze. Until that tidbit can be confirmed, I'd add "(SIC)" after Pet Rocks in any reprint or use editorial license and omit that reference with ellipsis ("...") :)
I appreciate the additional comments on this history.
Does anyone remember the C-64 CP/M module that didn't work and got CBM in trouble with the FTC? To some extent the C-128's CP/M capability is fulfillment of that original, probably overly optimistic promise of CP/M by Commodore.
Reprinted in the NYCig News/Kids Computer News
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1.4 THE COMMODORE PET

PET: The Original Commodore Computer
by Charles F. Burns

from The File, Commo-Hawk CUG, Cedar Rapids IA, 11/89; reprinted in The Interface, newsletter of Fresno Commodore User Group/64UM 8/90; reprinted in: NYCig News, Thomas Trocco, Editor & Computer Dept. Chair
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Where it all started: the Jack Tramiel typewriter Shop In Toronto Canada.

The first of the Commodore Business Machine (CBM series) was released Jan. 1977, the PET 2001 (Personal Electronics Transactor). The PET 2001 was a self contained unit with a compact graphic keyboard, numeric keypad, and built in tape cassette unit. The PET 2001 had 8K bytes of read/write memory, with 16K and 32K memory expansion options. (a 4K version was also available). The PET 2001 had a 2.0 read-only memory (ROM) which gave the computer its model personality. An external cassette tape unit could be connected to the PET 2001 computer, but it did know what a printer and/or disk drive was unless it had Revision level 3 ROMs.

Commodore released the PET2001 with 3.0 ROMs and an expanded full sized graphic keyboard and numeric keypad. A PET 2001/B,(CBM 2001/B) was released without the graphic symbols displayed; on the front of the keys, the 2001 series computers had a CRT display of 40 columns wide. The normal typing mode for the 2001 was in upper case letter graphic. The only difference was the PET 2001/B normal mode was upper/lower case letters. With a (POKE 59468,12) you could switch from an upper/graphics mode to an upper/lowercase mode. POKE 59468,14 would return back again. The 2001/B did have a graphics mode, except the symbols were not on the front of the keys.

The CBM 4000 and the CBM 8000 series was also released with a 4.0 ROM and 16K (CBM8016 and 32K (CBM8032) of read/write memory. A CBM 8096 Computer was available with 96K of read/write memory. The main distinguishing feature the 8000 series system has from the 2000 series beside the lack of a graphic keyboard is the enlarged 80-column CRT display, or screen.

In 1981, Commodore released the SuperPet 9000 system, with 96K of read/write memory, designed for business applications. First it was a stock CBM 8032 computer and second a 6809 based computer with the language interpreters for Basic, Cobol, Fortran, Pascal, AP, and adapted to run the OS-9 operating system.

Commodore introduced the 500, 600, 700 series and a C128-40 system in the

United Kingdom (not in the USA/Canada). The 500 and 700 series are known as the original model number for the B-128/256 or CBM-128-/40. The C128-40 was on the market before the C-64 and the B/series, yet compatible with neither, with less than 100 ever seeing daylight.

In June 1981, Commodore released the VIC 20 Color Home Computer. In 1982, Commodore released the 700 series systems, in the USA/Canada, referred to as the Low Profile B- 128 & B-256, as well as the high profile B-128 & B-256. The B-128/256 has an enlarged basic 4.0+ ROM interpreter and 128K of read/write memory, expandable to 1 MEG of memory. A B-128C color computer was also available but not promoted in the USA/Canada. The B-128/256 was a highly versatile computer, able to utilize many built in features, insert mode on/off, windows, wrap mode on/off, reverse video, erase mode, normal/graphics mode, and many others. Multitasking was also possible with the B-128/256. In June 1982, Commodore released the C-64 computer.

In 1983, the SX 64 and the SX100 was released as the C64 portable unit with built in monitor and disk drive.

In 1984, the Plus 4 and the C-16 computers were released.

In Jan. 1985, Commodore released the C-128 computer, which was also a C-64 and a CP/M compatible system.

On July 23, 1985, the Amiga 1000 was released with a 256K RAM 16 bit multitasking operating environment.

In Feb. 1987, the AmIga 500 and the AMiga 2000 were released. The power and abilities these machines had would surprise you. They were an excellent math machine, educational, business oriented, and graphic unit. We can make PET/CBM play music and even talk, even when these machines never had any sound ability built into them. The B-128/256 was the only one that has & SID Chip built in.

Many models were not mentioned in this article because of very similar features or some in which Commodore did not support or were too embarrassed about, like the C128-40, or the C-16.

(in May, 1990, CBM unveiled their latest computer, the Amiga 3000)