A Brief Derive Version History

Martin Hepperle - 2022-2024

The following pages present some version listings of Derive and associated products like muLISP, muSIMP and, muMath.

Unfortunately, most printed manuals for these software products seem to be unavailable in scanned form, which is a pity. For example, scans of the following two manuals would be very welcome:

- “muLISP-81 Reference Manual”, no reference found
- “muLISP-82 Reference Manual”, no reference found
- “muLISP-83 Reference Manual”, no reference found
- “muLISP-86 Reference Manual”, The Soft Warehouse, 408 p., 1986, Honolulu, Hawaii
- “muLISP-87 Reference Manual”, The Soft Warehouse , 439 p., 1987, Honolulu, Hawaii
- “muLISP-90 Reference Manual”, no reference found

Note: muLISP-81 and muLISP-83 dialects lack real number atoms.

Growth of primitives in standard muLISP systems (MS-DOS version if not noted otherwise, without extensions loaded)

muLISP-80 2.0 (CP/M)	88 primitives
muLISP-83 4.11 (CP/M)	118 primitives
muLISP-83 4.11	121 primitives
muLISP-85 5.01	303 primitives
muLISP-86 5.10	354 primitives
muLISP-87 6.00	411 primitives, irrational and transcendental functions: IRRATNAL.LSP
muLISP-87 6.10	415 primitives, irrational and transcendental functions: IRRATNAL.LSP
muLISP-90 7.20	421 primitives, irrational and transcendental functions: IRRATNAL.LSP

Year	Product/Version	Operating System and Comments
1977	muLISP	first version of muLISP functional
1979		company *The Soft Warehouse* founded
1979	muMath-79	CP/M (8080, Z80), TRS-80 DOS, implemented in muLISP
1979	muSIMP	written in muLISP to provide simpler user interaction
1980	muLISP-80	CP/M, with muStar, (8080), 10/06/80, before licensing to Microsoft
1980	muMath-80	for Apple II (native 6502), Apple II (Z80 card with CP/M), and TRS-80
1980	muLISP-80	CP/M, Version 2.0, licensed by Microsoft
1980	muMath-80	CP/M, written in muSIMP-80 2.02 (Microsoft)
1980	muMath-80	CP/M, written in muSIMP 2.03, licensed by Microsoft
1981	muMath-80	CP/M, written in muSIMP 2.10, 04/25/81, licensed by Microsoft
1981	muMath-80	CP/M, written in muSIMP 2.12, 07/09/81, licensed by Microsoft
1981	muMath-80	CP/M, Osborne 1, written in muSIMP-80 2.14, 12/19/81 (Microsoft)
1981	muLISP-81	IBM PC and CP/M
1982	muLISP-82	IBM PC and CP/M, see Micro/Systems Journal Review, May/June, 1985
1982	muMath-82	IBM PC, see PC-Magazine Review, December, 1983
1982	muSIMP-80	Apple II, ADIOS, Version 2.15 (03/01/82), 6502, licensed by Microsoft
1984	muLISP-83	Soft Warehouse Version 4.11 CP/M-80, 03/22/84, licensed by Microsoft

1984	muLISP-83	Soft Warehouse Version 4.11 IBM PC, 03/22/84, licensed by Microsoft
1984	muMath-83	IBM PC, Version 4.12 (8088)
1985		company name changed to *Soft Warehouse Hawaii*.
1985	muLISP-85	Microsoft LISP Version 5.01 IBM PC MS-DOS, 09/15/85
1986	muLISP-86	Microsoft LISP Version 5.10, IBM PC MS-DOS, 01/06/86
1987	muLISP-87	Soft Warehouse Version 6.01, IBM PC MS-DOS, 06/17/87
1988	muLISP-87	Soft Warehouse Version 6.03, IBM PC MS-DOS, 07/12/88
1988	muLISP-87	Soft Warehouse Version 6.10, IBM PC, MS-DOS, 12/07/88
1988	1.00	MS-DOS, implemented in muLISP
1988	1.02	MS-DOS, written in muLISP-87
1988	1.53	MS-DOS, written in muLISP-87 (only executable and help file available)
1988	1.60	MS-DOS, written in muLISP-87
1988	1.61	MS-DOS
1988	1.62	MS-DOS, written in muLISP-87
1989	2.00	MS-DOS, price $200
1990	muLISP-90	IBM PC, Version 7.20 (02/07/94)
1990	2.013	MS-DOS, written in muLISP-87
1990	2.05	MS-DOS, written in muLISP-90
1990	2.053	MS-DOS, written in muLISP-90
1990	2.083	MS-DOS, written in muLISP-90
1991		Derive User Group (DUG) founded, newsletter published up to 2024
1992	2.50	MS-DOS, written in muLISP-90, including HP 95LX Application Card
1992	2.54	MS-DOS, written in muLISP-90
1992	2.55	MS-DOS, written in muLISP-90
1992	2.55 XM	MS-DOS, uses EMS, written in muLISP 90 XM Version 7.16 (02/10/93)
	2.58	MS-DOS, written in muLISP-90
1993	muLISP-90 XM	IBM PC, Version 7.16 (02/10/93)
1993	2.60	MS-DOS, written in muLISP-90
1993	2.60 XM	MS-DOS, uses EMS
1994	muLISP-90 XM	IBM PC, Version 7.20 (02/07/94)
1994	3.00	MS-DOS, first version to support Acrospin for 3D graph visualization
1994	3.00y	MS-DOS, written in muLISP-90
1994	3.00y XM	MS-DOS, written in muLISP-XM 7.21, uses PharLap extender for EMS
1994	3.02	MS-DOS
1994	3.05	MS-DOS, written in muLISP-90
1995	3.06 XM	MS-DOS, written in muLISP-XM 7.21, uses EMS
1995	muLISP-90 XM	MS-DOS, Version 7.30 (10/13/95)
1995	3.10	MS-DOS
1995	3.10 G	MS-DOS, written in muLISP-XM 7.30 (10/13/95), uses EMS, German
1995	3.10 XMG	MS-DOS, written in muLISP-90, uses EMS, German
1995	3.11 XM	MS-DOS, uses EMS
1995	3.12	MS-DOS
1995	3.13	MS-DOS, written in muLISP-90
	3.14	MS-DOS
1996	4.00	MS-DOS, first Version for Windows
1996	4.03	MS-DOS, Windows, but not for Windows XP
1996	4.04	MS-DOS, unified Derive/Derive XM, written in muLISP 7.40 (08/28/96), 16/32-bit, Windows

1996	4.05	MS-DOS, with 16/32-bit Extender, Windows
1996	4.05a	MS-DOS, uses 32-bit Extender, Windows 3.x
1996	4.06	MS-DOS, written in muLISP-XM 7.40 (06/25/97), 16/32-bit, Windows
1996	4.07	MS-DOS, written in muLISP-XM 7.40, 16/32-bit Extender, Windows
1996	4.09	MS-DOS, uses 32-bit Extender, Windows (have update only)
1996	4.10	MS-DOS, uses 32-bit Extender, Windows /32 bit (have update only)
1996	4.11	MS-DOS, incl. HP 200LX, MS-DOS extender 16/32 bit, written in muLISP 7.40, Windows
	4.13	MS-DOS, Windows, but not for Windows 2000
1999		takeover of Soft-Warehouse by Texas Instruments
2000		TI-92
2000	5.00	Windows 3.x
2000	5.01	Windows 95, 98, NT (16 June 2000)
2000	5.02	Windows 95, 98, NT (30 June 2000)
2001	5.03	Windows 95, 98, NT, 2000 (15 January 2001)
2001	5.04	Windows 95, 98, NT, 2000 (11 April 2001)
2001	5.05	Windows 95, 98, NT, 2000 (5 December 2001)
2002	5.06	Windows 95, 98, ME, NT, 2000, XP (10 October 2002) , written in muLISP for DERIVE 7.43 (03/06/01)
2003	6.00	Windows 98, ME, 2000, XP
2004	6.01	Windows (not: 98, ME) 2000, XP (1 March 2004)
2004	6.10	Windows 98, ME, 2000, XP, links to TI-89, TI-89 Titanium, TI-92+, or TI Voyage 200 calculators (October 2004), written in muLISP for DERIVE 7.45 (08/17/04)
2007		Texas Instruments ends development and distribution of Derive

Notes:

- red: I do not have original disks, but a copy of the files (which may be incomplete).
- black: must exist “somewhere”, I found references to or screenshots of these versions.
- The prefix “mu” stands for “micro”.
- There are probably many intermediate versions not listed here, as Soft Warehouse often provided small updates to fix problems reported by users.

The Derive versions for MS-DOS since Derive 3.0 supported the external program *Acrospin*. *Acrospin* could display 3D line meshes of three dimensional graphics. The data was transferred from the Plot menu via a *.ACD text file which contains lists of coordinates and straight line connectivities.

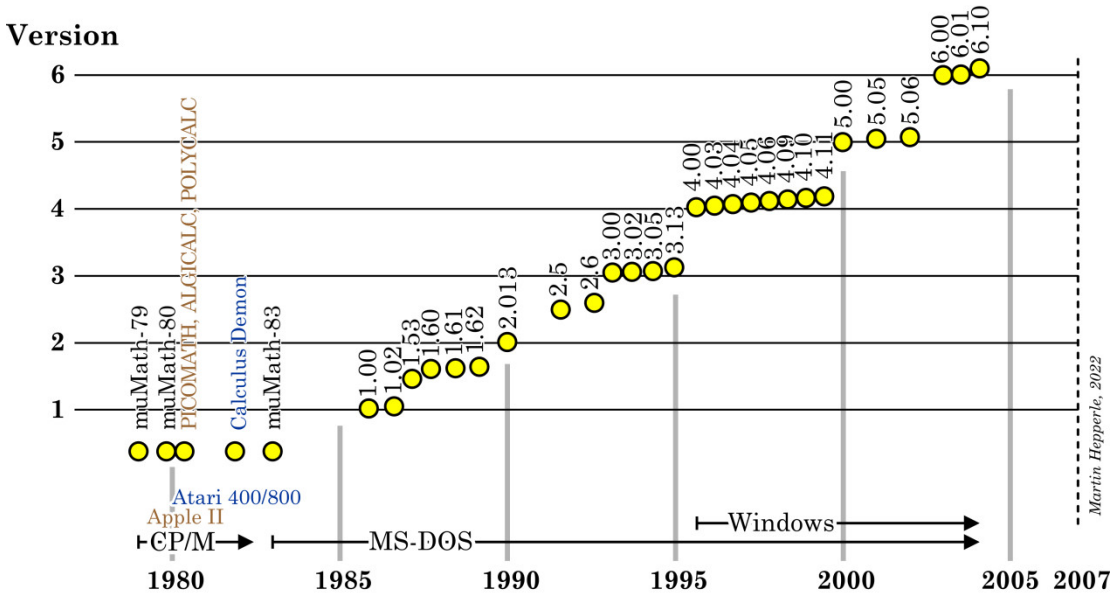


Figure 1: Derive version numbers versus publication year.

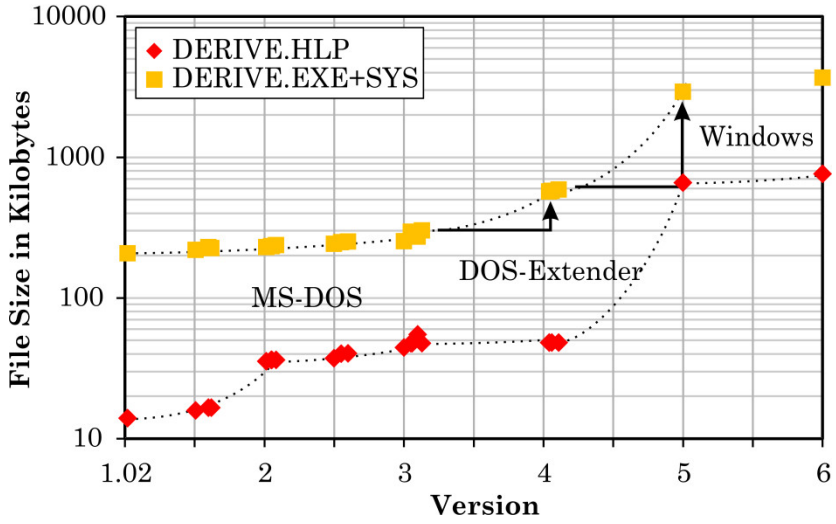
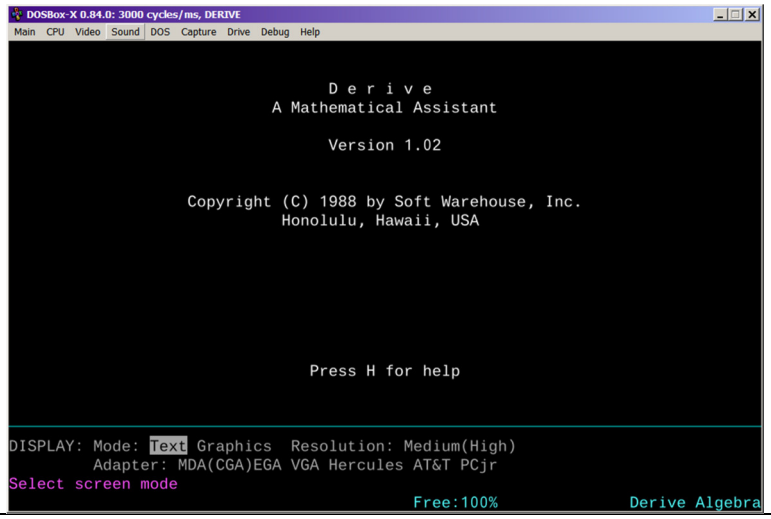
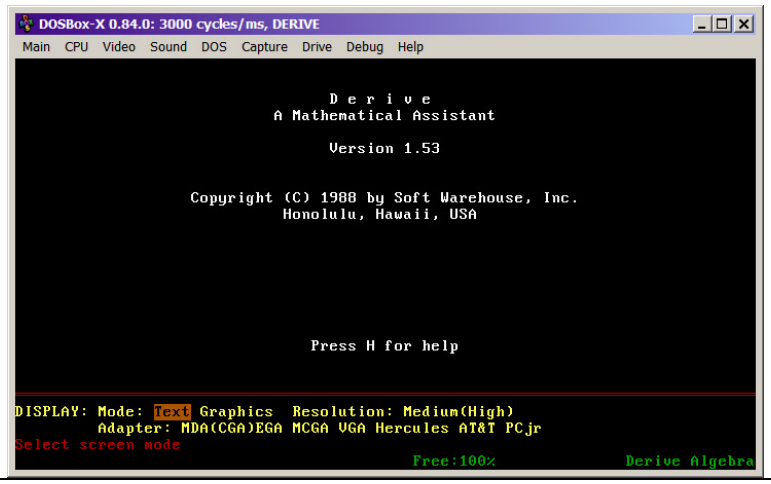
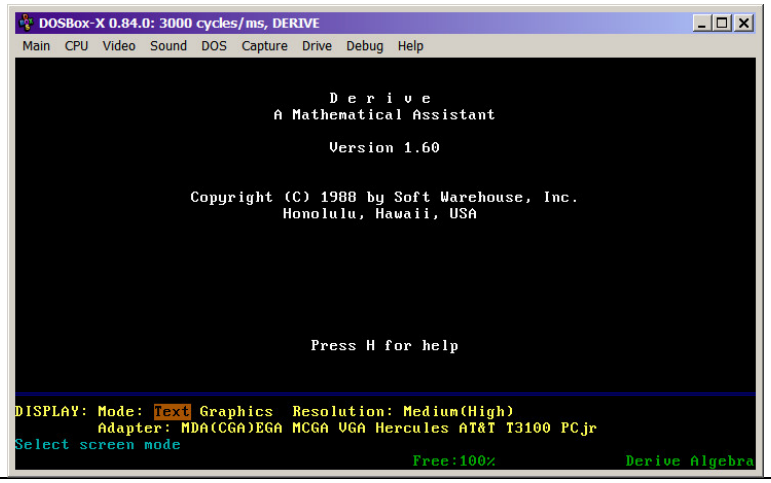
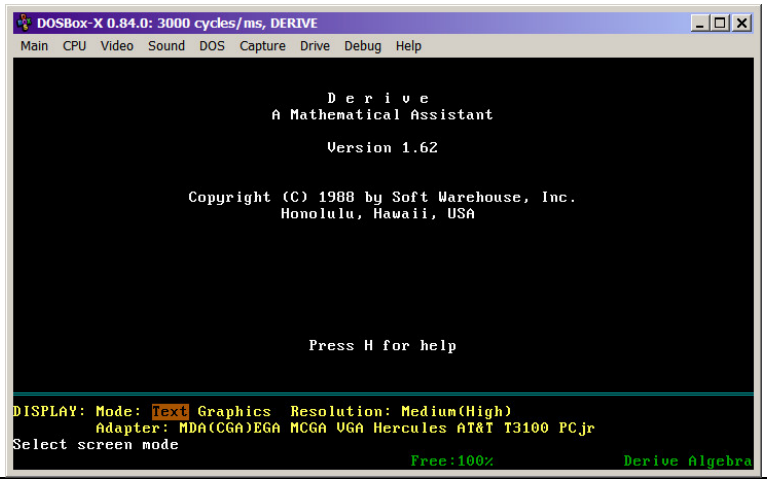
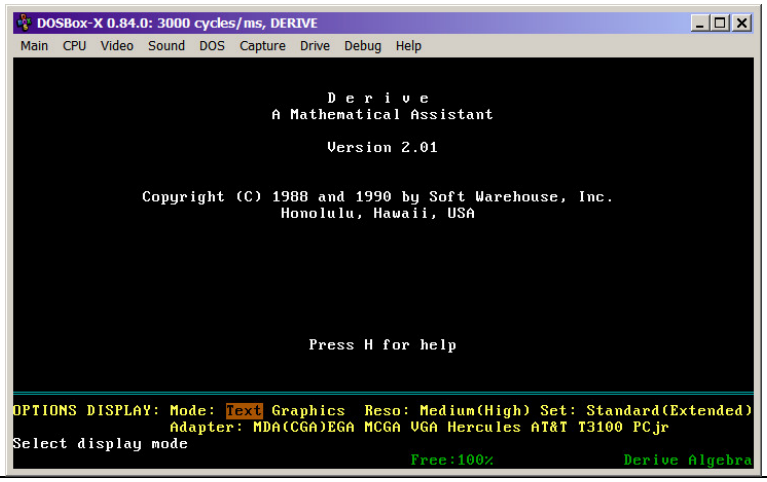
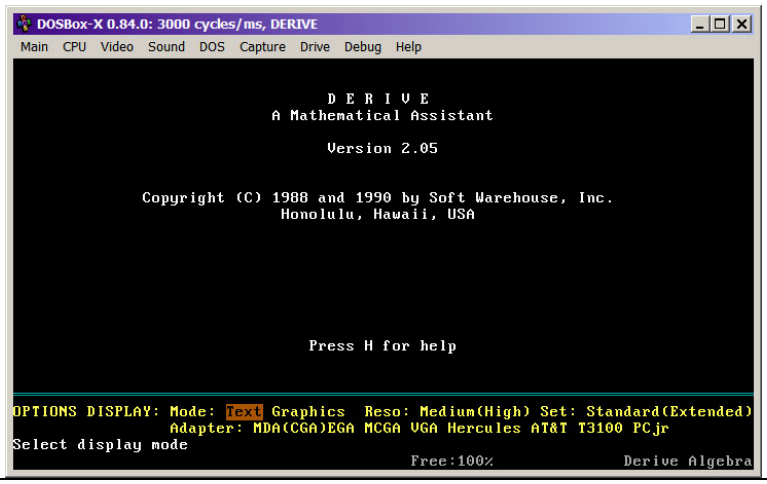
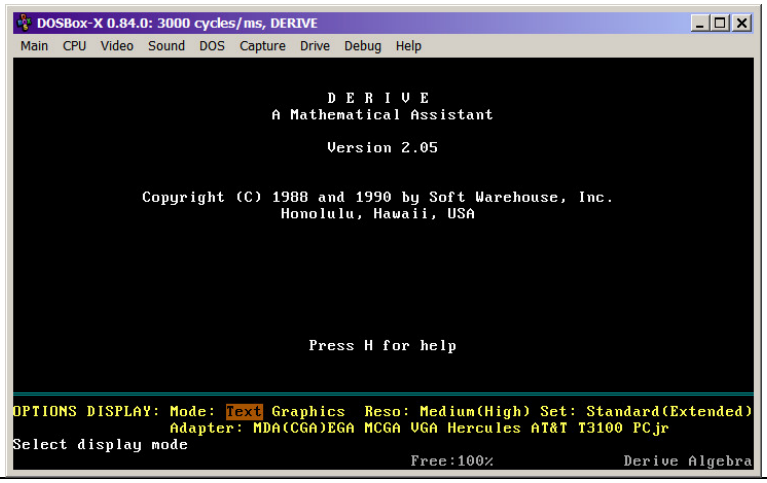
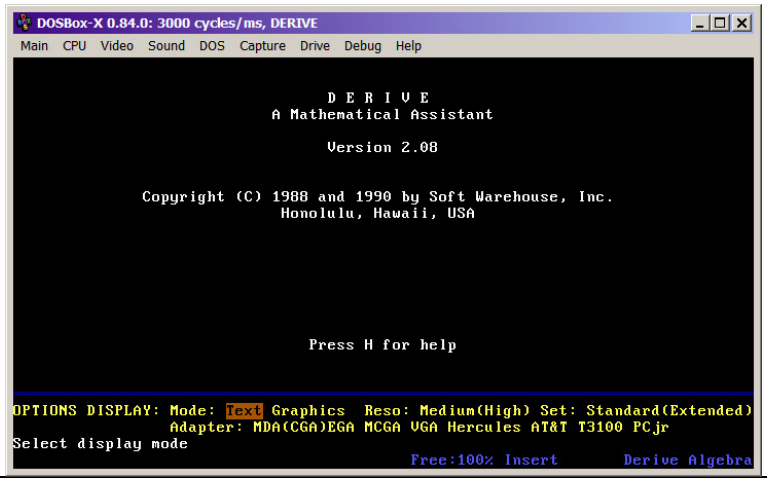
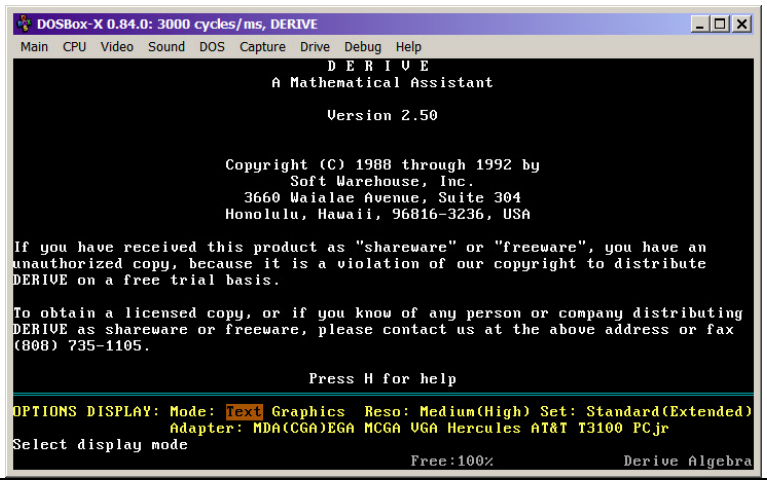


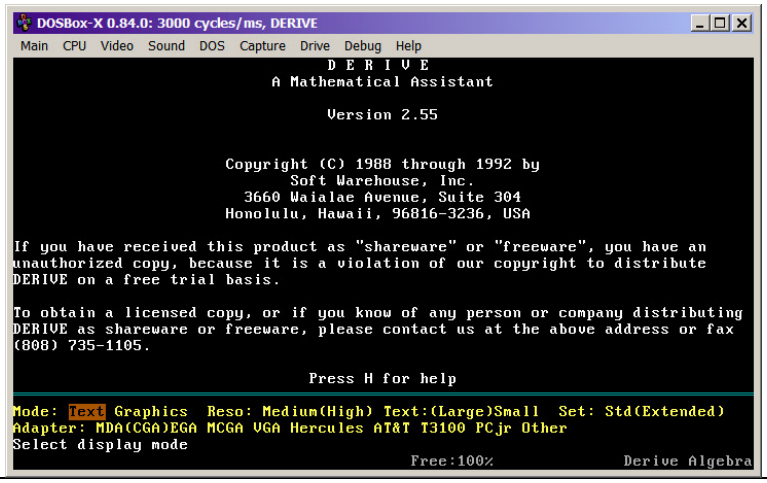
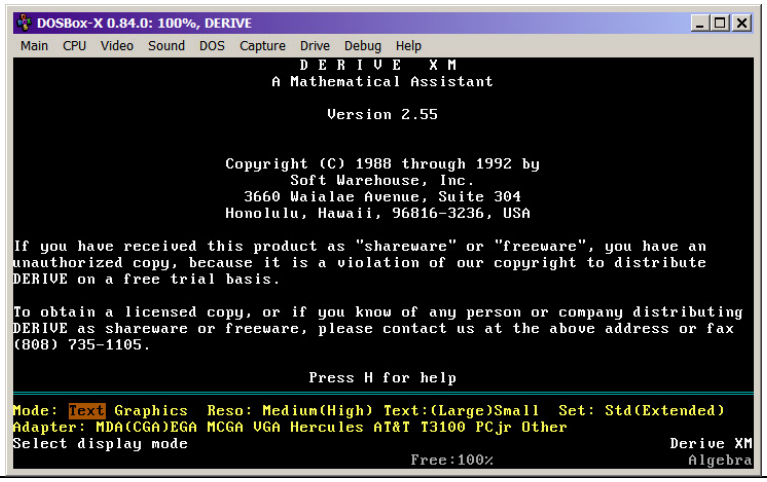
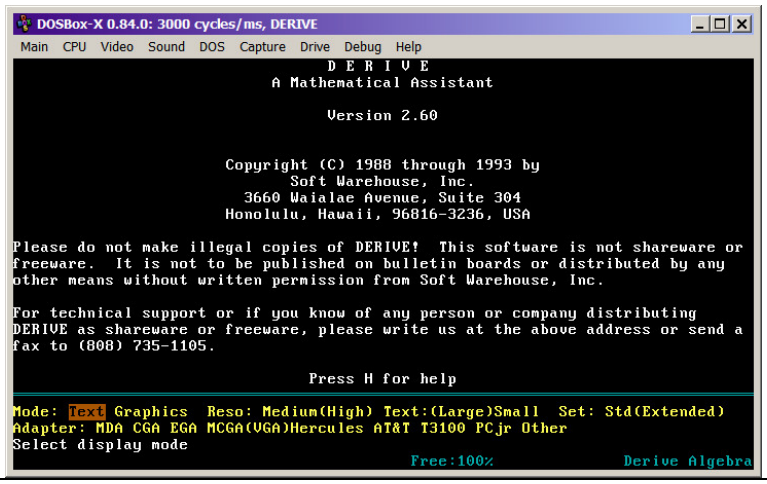
Figure 2: Growth of the main Derive files versus publication year.

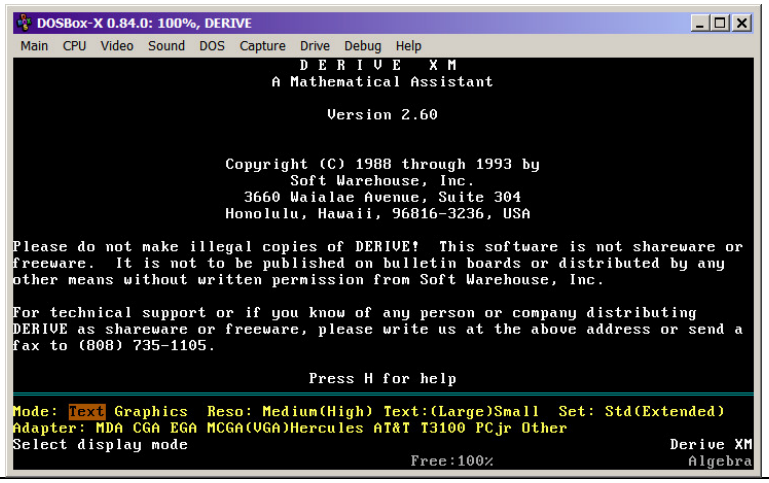
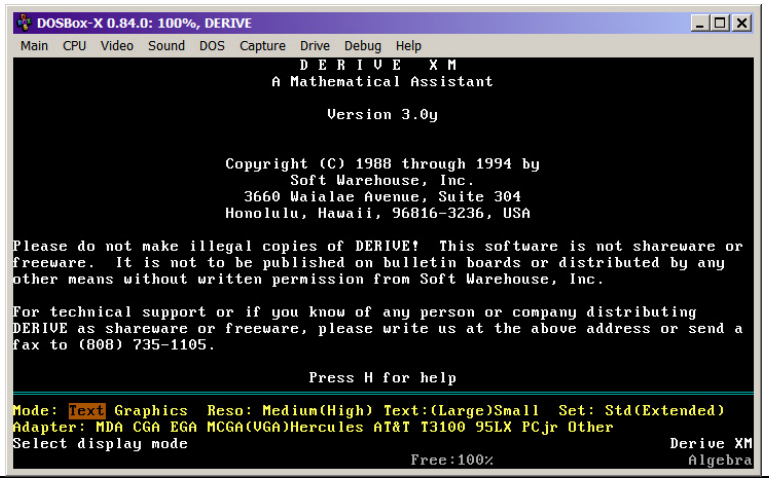
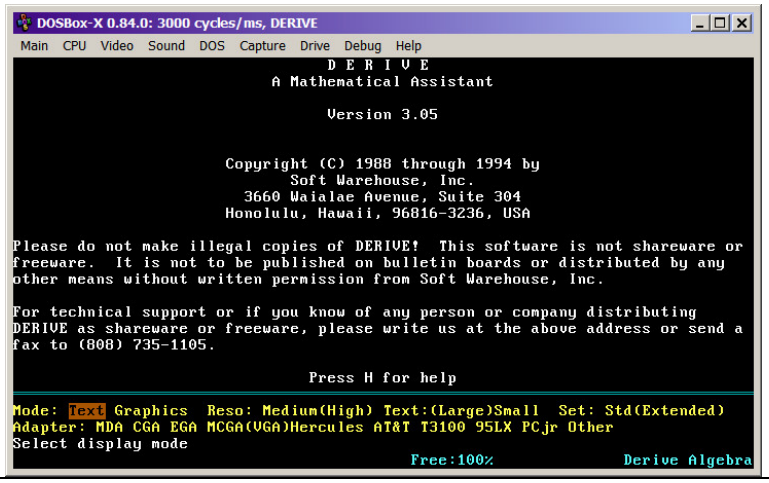
The following screenshots were taken with Options / Display active to show the graphics cards supported by each version.

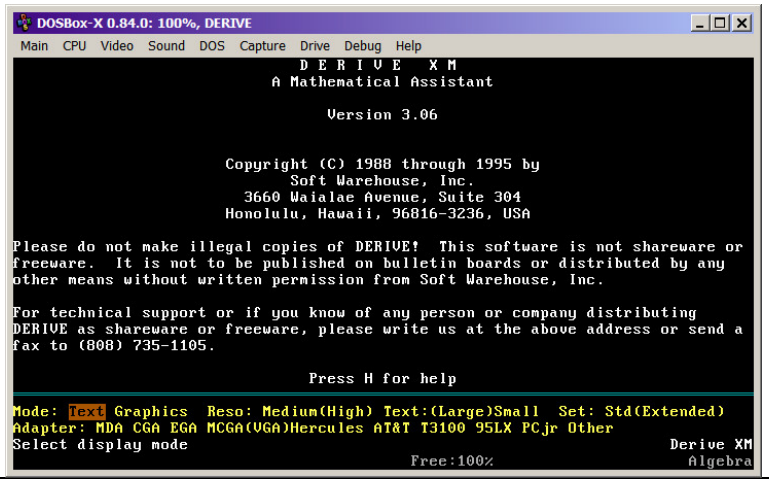
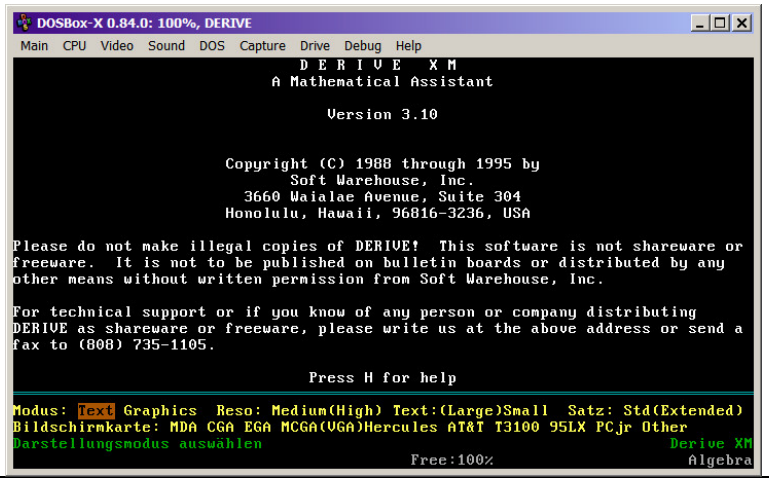
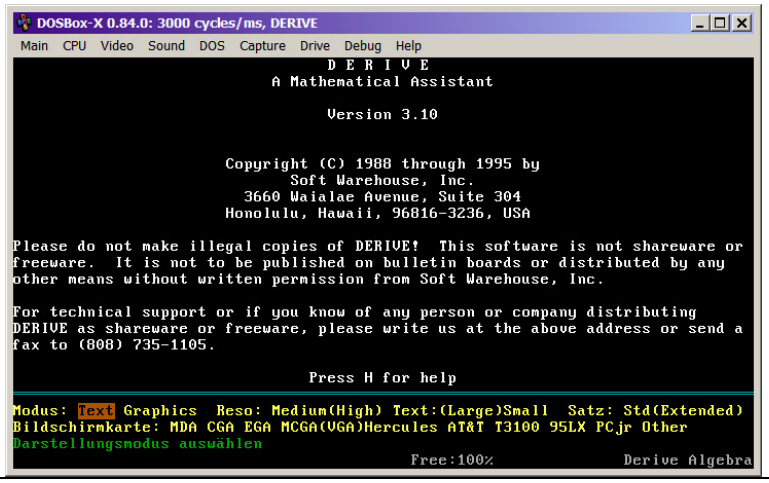
	1988 Version 1.02 This version supports most graphics adapters of that era including VGA.
	1988 Version 1.53
	1988 Version 1.60 This version added a display driver for the Toshiba T3100 laptop computer (which btw. as the same 640 x 400 pixel screen memory organization as the AT&T 6300/Olivetti M24/HP Vectra).

	1988 Version 1.62
	1990 Version 2.013
	1990 Version 2.05

	1990 Version 2.053
	1990 Version 2.083
	1992 Version 2.50

	1992 Version 2.55
	1992 Version 2.55 XM
	1993 Version 2.60

	1993 Version 2.60 XM
	1994 Version 3.0y XM This version used a so called DOS Extender and added support for the display of the HP 95LX palmtop computer.
	1994 Version 3.05

	1995 Version 3.06 XM Version using a DOS Extender.
	1995 Version 3.10 G User interface translated into German.
	1995 Version 3.10 XMG This version used the DOS extender and also came with the user interface translated into German.

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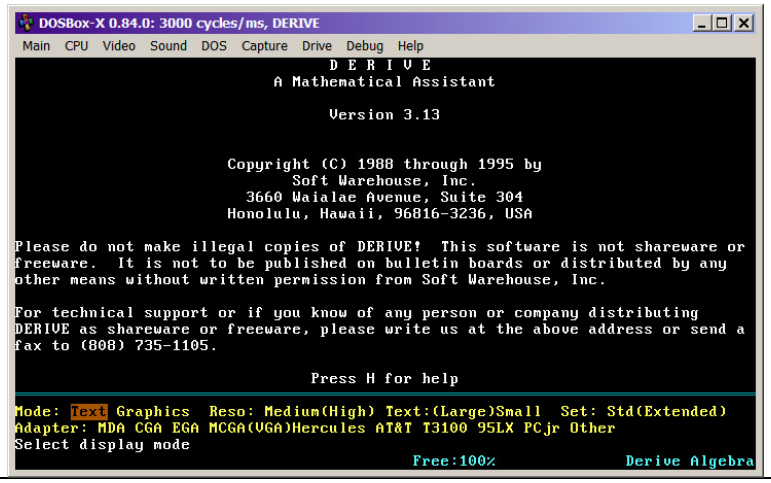
<td> 
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<td>1995
Version 3.13</td>
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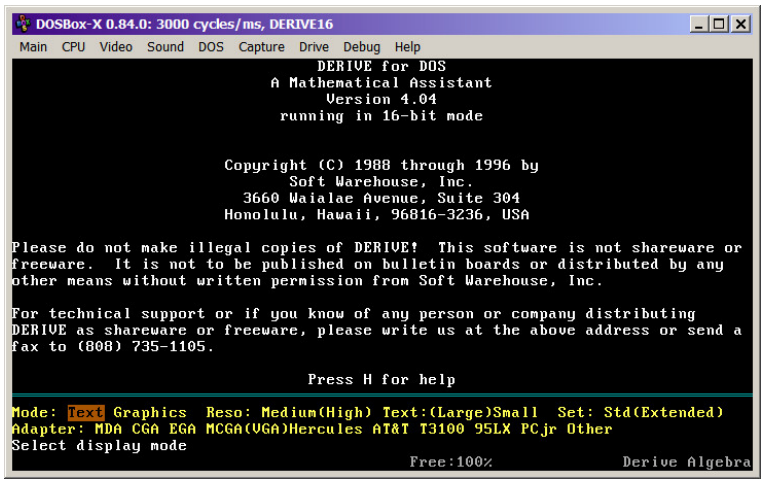
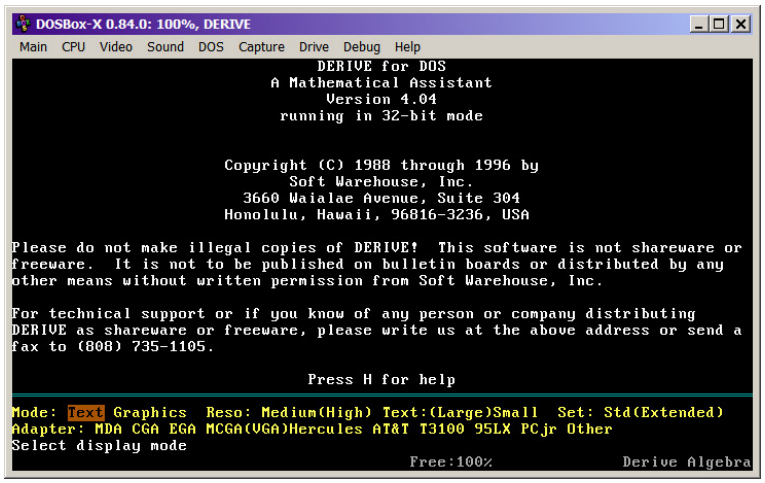
<td> 


</td>
<td>1996
Version 4.04
This version came with executables for a 16-bit and a 32-bit DOS Extender variant.
The 32-bit option required a 32-bit processor like the 80386.</td>
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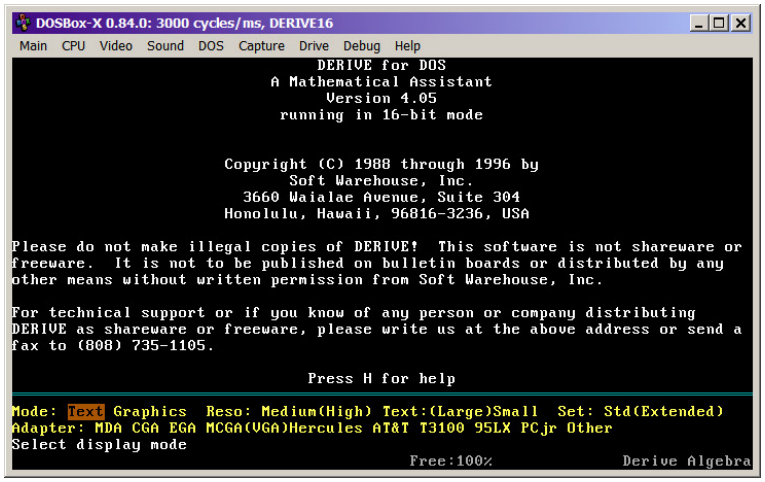

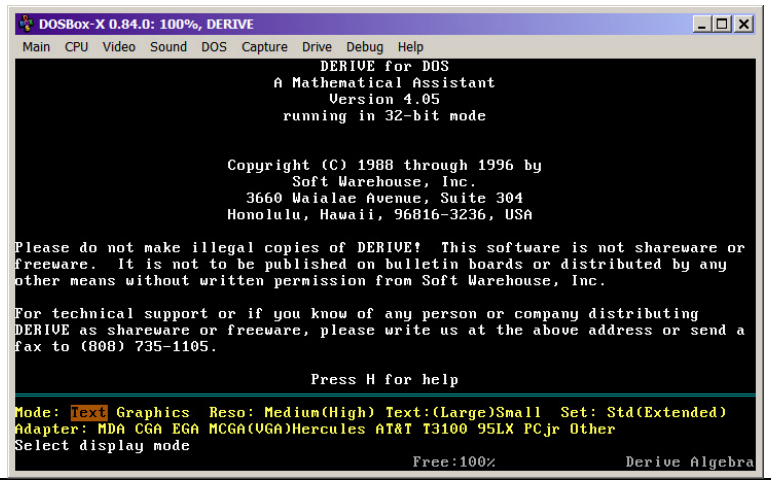

</td>
<td>
1996
Version 4.05

This version came with executables for a 16-bit and a 32-bit DOS Extender variant.
</td>
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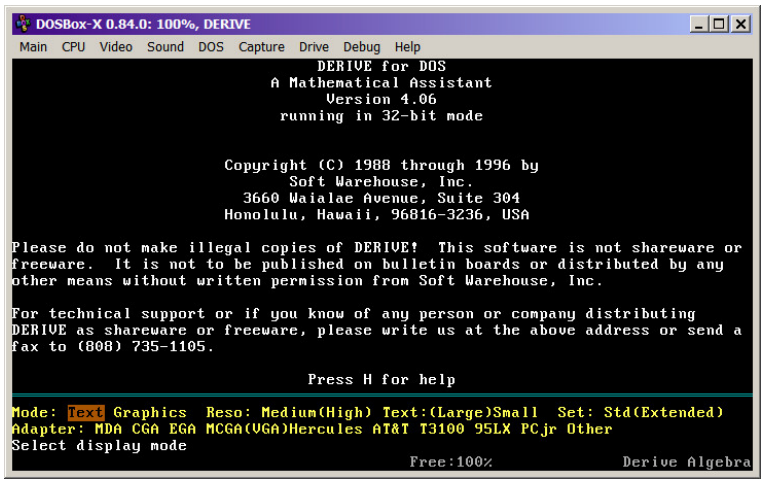

</td>
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1996
Version 4.06

This version also used the 32-bit DOS Extender.
</td>
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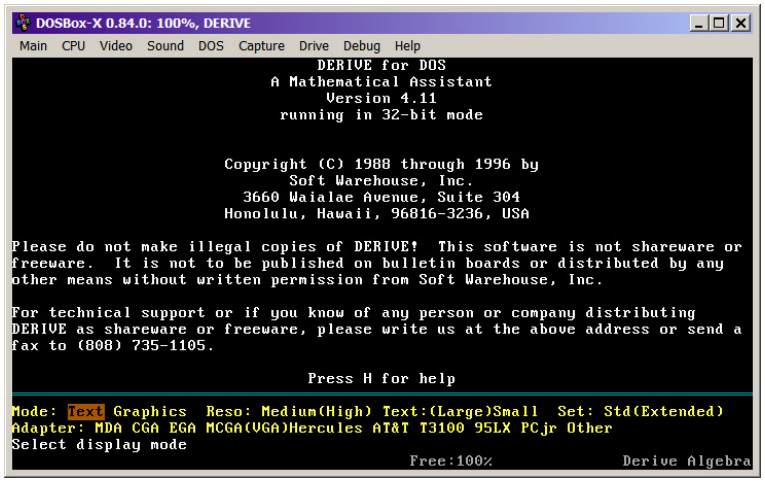

1996

Version 4.11

This version used also used the 32-bit DOS Extender.

It still supported the HP 95LX palmtop computer.

Terminal Installation for muLISP and Derive

The early versions of muLISP up to version 6.10 and Derive up to version 2.083 can be installed for different terminal types.

I don't know whether there was a Wordstar-like installation program for selecting preconfigured terminals or even defining your own escape sequences. The list found in the program code suggest so.

Today I can only patch the code to select different terminals.

The terminal list also includes the HP-110 and HP-150. Therefore, Derive versions up to 2.083, which have been built with these muLISP versions, can be patched to work with the HP-150 and HP-110. However, graphics mode and equation displays are not properly supported (axes and points use incorrect characters).

The *.COM files contain a list of terminals.

```
1 = Other generic MS-DOS computer
2 = IBM PC compatible computer
3 = ANSI.SYS screen or VT-100 Terminal
4 = TI Professional Computer
5 = Zenith Z-100 Computer or VT-52 Terminal
6 = Hewlett-Packard HP-150 Computer
7 = Hewlett-Packard HP-110 Computer
8 = NEC Advanced PC or ADM-3A Terminal
9 = NEC PC-9801 Computer
A = Fujitsu Computer
```

The terminal byte or word in the following context contains the terminal number. Here it has been changed to “06”, the HP-150 Computer.

```
00000440 00001E1E 04000300 00004F00 0000FF07 ..........O.....
00000450 5C7C64FF FF1A0006 00000000 00242000 \|d..........$ .
                         ^^ terminal type
00000460 0000004C 5350FF00 002E1110 FF000000 ...LSP..........
```

Literature related to Derive

(There are a huge number of books about Derive and its application and many of them have been listed in the Derive Users Group Newsletters, many can be loaned from your local library or from archive.org)

[1] Williams, G., “The muSIMP/muMATH-79 Symbolic Math System”, BYTE
[2] Gilligan, Lawrence G., Marquardt, James F. Sr., “Calculus and the Derive Program: Experiments with the Computer”, Gilmar Publishing, 1991, 152 pages.
[3] Arney, David C., “Derive Laboratory Manual for Differential Equations”, Addison-Wesley, 1991, 189 pages.
[4] Arney, David C., “Exploring Calculus with Derive", Addison-Wesley, 1992, 166 pages.
[5] Arney, David C., "The Student Edition of Derive", Addison-Wesley, 1992, 387 pages, uses Derive Version 2.
[6] various authors, “Lab Resource Manual to accompany The Student edition of Derive”, 1992, 69 pages.
[7] Glynn, Jerry, "Exploring Math from Algebra to Calculus with Derive", Mathware, 1992, 154 pages, uses Derive Version 2.51.
[8] Berry, J.S., Graham, E., Watkins, A. J. P., “Learning Mathematics through Derive”, Ellis Horwood, 1993, 371 pages.
[9] Koepf, W., Ben-Israel, Ben, Gilbert, Robert P., “Mathematik mit Derive”, Vieweg 1993 (German).
[10] Denton, Brian, "Learning Linear Algebra through Derive", Prentice Hall, 1995, 353 pages.
[11] Townend, M. Stewart, Pountney, David C., “Learning Modelling with Derive”, Prentice Hall, 1995, 244 pages.
[12] Richardson, R. L., "Business Calculus today with Spreadsheets and DERIVE", Saunders College Publishing, 1996, 416 pages.
[13] Abbey, May Kay, “Calculus Explorations using Derive”, Saunders College Publishing, 1996, 84 pages.
[14] Bogess, Al, et. al., “Single Variable Calculus with Derive”, Brooks/Coole Publishing Company, 1999, 208 pages.

Literature related to muMATH, muLISP

[1] Williams, G., “The muSIMP/muMATH-79 Symbolic Math System”, BYTE Magazine, 11/1980.
[2] Shochat, David D., “Experience with the muSIMP/muMATH-80 Symbolic Mathematics System”, ACM SIGSAM Bulletin #3, pp. 16-23, August 1, 1982. [refers to muSIMP/muMATH-79]
[3] McClennan, David T., “LISPing with your PC”, (review, includes muLISP-82), PC Magazine, 12/1983.
[4] Bortz, J., Diamant J., “LISP for the IBM Personal Computer”, (review, includes muLISP-83), BYTE Magazine, 7/1984.
[5] Wong, William G., “16 Bit Lisp and Prolog Implementations”, (review, includes muLISP-82), Micro/Systems Journal, Part I: V01N01, March/April, Part II: V01N02, May/June, 1985.
[6] muLISP 4.1 – Review, c’t Magazin, 03, 1986 (German).
[7] Piddock, P., “Extended muSIMP/muMATH for Teaching and Learning Mathematics”, Comput. Educ., V10N1, pp. 155-158, Pergamon Press, 1986.
[8] Schwartz, Stanley, “Customizing muLISP”, Sextant, Issue 20, Jan-Feb 1986. [refers to muLISP-83 CP/M, muLISP-85 MS-DOS and Zenith computers]

[9] Trindle, Carl, “Application of the MuMATH Symbol Manipulation System to Chemically Significant Permutation Groups”, J. Symbolic Computation, p.207-212, 1986. [refers to Apple II 6502 version of muMATH]
[10] Wooff, C., Hodgkinson, D., “muMath - a Microcomputer Algebra System”, Academic Press, 1987, 159 pages.
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