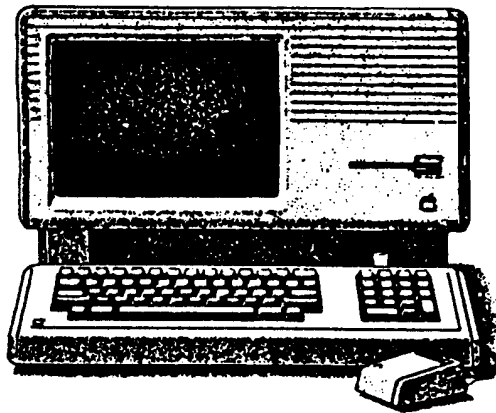


Doc # 78

Apple Lisa Information



FILE NAME

Workshop Error Message File Format

DISK #

COMMENTS

DTC

David T. Craig
736 Edgewater, Wichita, Kansas 67230
(316) 733-0914

The
Lisa
Professional

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Apple Lisa Computer ERROR MESSAGE FILE Internal Format

APPLE LISA COMPUTER ERROR MESSAGE FILE INTERNAL FORMAT

Document created by
David Craig 736 Edgewater Wichita, KS 67230
[1986]

DISCLAIMER

This document was prepared by the author after a careful analysis of several error message files. Since the author is in no way associated with Apple Computer, Inc. the following information may contain technical errors.

INTRODUCTION

The Apple Lisa computer, when running under the WorkShop 3.0 development environment, stores the textual error messages for many of its tools in special files. These files are called ERROR MESSAGE FILES and have a special internal format. The WorkShop utility tool ErrTool creates the error files from a standard ASCII file with each message text line starting with an integer number (negative or positive) followed by a space and the message. Instructions for ErrTool's use are given in the Lisa WorkShop 3.0 User's Guide in section 11-19.

The following sections of this document describe the internal file format of an error message file, show the textual input file for the WorkShop standard error message file (WorkShopErrs.ERR), and show the raw file contents for this same file.

Apple Lisa Computer ERROR MESSAGE FILE Internal Format

FILE FORMAT

Each error message file contains two sections; the DIRECTORY SECTION and the DATA SECTION. The directory section specifies the number of messages contained in the message file and the offsets of each message from the beginning of the file.

The DIRECTORY SECTION has the following format:

Message Count (N)	Version
Message # 1 Number	Message # 1 Offset
Message # 2 Number	Message # 2 Offset
Message # 3 Number	Message # 3 Offset
Message # 4 Number	Message # 4 Offset
Message # 5 Number	Message # 5 Offset
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Message # N Number	Message # N Offset

DIRECTORY FORMAT

Each entry is 2 bytes or 1 word long. The *Message Count* is the number of messages or phrases which are in the file. The sample dump from the below section shows the file to contain \$002A (hexadecimal) or 42 messages. The *Version* entry is only a guess, and has been equal to \$0000 or 0 on all of the message files I have examined. The *Message Number* is the number that the message author assigned to the message phrase. The first message is assigned the number \$0001 or 1. The *Message Offset* is the byte offset from the beginning of the file to the start of the phrase. The first message starts at byte \$00AC or 172 in the file. The message numbers in the directory are sorted in ascending order.

The DATA SECTION has the following format:

Apple Lisa Computer ERROR MESSAGE FILE Internal Format

Message # 1 Textual Data	EOS
Message # 2 Textual Data	EOS
Message # 3 Textual Data	EOS
Message # 4 Textual Data	EOS
Message # 5 Textual Data	EOS
<div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>	
Message # N Textual Data	EOS

DATA FORMAT

The *Message Textual Data* contains the raw ASCII data for a message. Each message is terminated by a \$00 which I refer to in the above diagram as the EOS or End-of-String. Note that each Message Textual Data section is of a variable length, even though the above diagram shows them to be of equal length.

If the message data bytes do not fill the last block of the message file, then the remaining bytes are filled with \$00s.

Apple Lisa Computer ERROR MESSAGE FILE Internal Format

ERROR MESSAGE TEXT FOR FILE "WORKSHOPERRS.ERR"

- 1 More than 20 parameters on exec procedure/function call
- 2 No closing ")" found
- 3 End of Exec file before ENDEXEC
- 4 No Exec file specified
- 5 Line buffer overflow (> 255 chars)
- 6 End of Exec file in comment
- 7 Invalid percent: not "%n" form
- 8 Garbage at end of command
- 9 File does not begin with EXEC
- 10 No argument to SUBMIT
- 11 ELSE, ELSEIF or ENDIF not in IF
- 12 ELSEIF after ELSE
- 13 Nothing following "~"
- 14 EXEC command other than at start of file
- 15 Out of memory. Exec processing aborted
- 16 More than 20 variables declared
- 17 No value returned from file called as function
- 18 RETURN with value in file not called as function
- 19 ENDWHILE not in WHILE
- 20 Duplicate parameter/variable name
- 21 Bad Number. Numeric constant expected
- 22 Number too large
- 23 ORD requires a string argument of at least one character
- 24 UNTIL not in REPEAT
- 25 Bad Number for first argument to numeric comparison
- 26 Number too large for first argument to numeric comparison
- 27 End Of Exec file in RUN command INPUT
- 28 Bad Number. String expression with numeric result expected
- 29 Number returned by string expression is too large
- 101 Invalid Exec Option:
- 102 Invalid Exec option on SUBMIT:
- 201 Unable to open input file "a"
- 202 Unable to open exec run file "a"
- 203 Unable to access file "a"
- 204 Unable to rerun file "a"
- 205 Unable to reread file "a"
- 206 File variable "a" already in use
- 207 File variable "a" is undefined
- 208 File variable "a" is not open for input
- 209 File variable "a" is not open for output
- 210 Bad exec run file name generated: "a"
- 211 Unable to reopen input file "a"

Apple Lisa Computer ERROR MESSAGE FILE Internal Format

RAW HEXADECIMAL DUMP OF ERROR FILE "WORKSHOPERRS.ERR"

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0123456789ABCDEF	
00000000	00	2A	00	00	00	01	00	AC	00	02	00	E4	00	03	00	F9	-	".....S..o
00000010	00	04	01	19	00	05	01	30	00	06	01	53	00	07	01	6F	-\$.M
00000020	00	08	01	8E	00	09	01	A8	00	0A	01	C6	00	0B	01	DC	-T..e
00000030	00	0C	01	FC	00	0D	02	0E	00	0E	02	24	00	0F	02	4D	-F...f..
00000040	00	10	02	75	00	11	02	95	00	12	02	C4	00	13	02	F5	-Z...t...
00000050	00	14	03	0B	00	15	03	20	00	16	03	54	00	17	03	65	-+More
00000060	00	18	03	9E	00	19	03	82	00	1A	03	E6	00	1B	04	20	-	ers on exec proc
00000070	00	1C	04	46	00	1D	04	82	00	1E	04	84	00	1F	04	C9	-	edure/function c
00000080	00	C9	04	E8	00	CA	05	06	00	C8	05	27	00	CC	05	41	-	all.No closing "
00000090	00	CD	05	5A	00	CE	05	74	00	CF	05	95	00	0D	05	84	-)" found.End of
000000A0	00	D1	05	DC	00	D2	06	05	00	D3	06	28	40	6F	72	65	-	Exec file before
000000B0	20	74	68	61	6E	20	32	30	20	70	61	72	61	6D	65	74	-	ENDEXEC.No Exec
000000C0	65	72	73	20	6F	6E	20	65	78	65	63	20	70	72	6F	63	-	file specified.
000000D0	65	64	75	72	65	2F	66	75	6E	63	74	69	6F	6E	20	63	-	Line buffer over
000000E0	61	6C	6C	00	4E	6F	20	63	6C	6F	73	69	6E	67	20	22	-	flow (> 255 char
000000F0	29	22	20	66	6F	75	6E	64	00	45	6E	64	20	6F	66	20	-	s).End of Exec f
00000100	45	78	65	63	20	66	69	6C	65	20	62	65	66	6F	72	65	-	ile in comment.I
00000110	20	45	4E	44	45	58	45	43	00	4E	6F	20	45	78	65	63	-	Invalid percent:
00000120	20	66	69	6C	65	20	73	70	65	63	69	66	69	65	64	00	-	not "%n" form.Ga
00000130	4C	69	6E	65	20	62	75	66	66	65	72	20	6F	76	65	72	-	rbage at end of
00000140	66	6C	6F	77	20	28	3E	20	32	35	35	20	63	68	61	72	-	command.File doc
00000150	73	29	00	45	6E	64	20	6F	66	20	45	78	65	63	20	66	-	s not begin with
00000160	69	6C	65	20	69	6E	20	63	6F	6D	6D	65	6E	74	00	49	-	EXEC.No argumen
00000170	6E	76	61	6C	69	64	20	70	65	72	63	65	6E	74	3A	20	-	t to SUBMIT.ELSE
00000180	6E	6F	74	20	22	25	6E	22	20	66	6F	72	6D	00	47	61	-	ELSEIF or ENDI
00000190	72	62	61	67	65	20	61	74	20	65	6E	64	20	6F	66	20	-	F not in IF.ELSE
000001A0	63	6F	6D	6D	61	6E	64	00	46	69	6C	65	20	64	6F	65	-	
000001B0	73	20	6E	6F	74	20	62	65	67	69	6E	20	77	69	74	68	-	
000001C0	20	45	58	45	43	00	4E	6F	20	61	72	67	75	6D	65	6E	-	
000001D0	74	20	74	6F	20	53	55	42	40	49	54	00	45	4C	53	45	-	
000001E0	2C	20	45	4C	53	45	49	46	20	6F	72	20	45	4E	44	49	-	
000001F0	46	20	6E	6F	74	20	69	6E	20	49	46	00	45	4C	53	45	-	

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0123456789ABCDEF	
00000200	49	46	20	61	66	74	65	72	20	45	4C	53	45	00	4E	6F	-	IF after ELSE.No
00000210	74	68	69	6E	67	20	66	6F	6C	6C	6F	77	69	6E	67	20	-	thing following
00000220	22	7E	22	00	45	58	45	43	20	63	6F	6D	6D	61	6E	64	-	... EXEC command
00000230	20	6F	74	68	65	72	20	74	68	61	6E	20	61	74	20	73	-	other than at s
00000240	74	61	72	74	20	6F	66	20	66	69	6C	65	00	4F	75	74	-	tart of file.Out
00000250	20	6F	66	20	6D	65	6D	6F	72	79	2E	20	20	45	78	65	-	of memory. Exe
00000260	63	20	70	72	6F	63	65	73	73	69	6E	67	20	61	62	6F	-	c processing abo
00000270	72	74	65	64	00	4D	6F	72	65	20	74	68	61	6E	20	32	-	rted.More than 2
00000280	30	20	76	61	72	69	61	62	6C	65	73	20	64	65	63	6C	-	0 variables decl
00000290	61	72	65	64	00	4E	6F	20	76	61	6C	75	65	20	72	65	-	ared.No value re
000002A0	74	75	72	6E	65	64	20	66	72	6F	6D	20	66	69	6C	65	-	turned from file
000002B0	20	63	61	6C	6C	65	64	20	61	73	20	66	75	6E	63	74	-	called as funct
000002C0	69	6F	6E	00	52	45	54	55	52	4E	20	77	69	74	68	20	-	ion.RETURN with
000002D0	76	61	6C	75	65	20	69	6E	20	66	69	6C	65	20	6E	6F	-	value in file no
000002E0	74	20	63	61	6C	6C	65	64	20	61	73	20	66	75	6E	63	-	t called as func
000002F0	74	69	6F	6E	00	45	4E	44	57	48	49	4C	45	20	6E	6F	-	tion.ENDWHILE no
00000300	74	20	69	6E	20	57	48	49	4C	45	00	44	75	70	6C	69	-	t in WHILE.Dupli
00000310	63	61	74	65	20	70	61	72	61	6D	65	74	65	72	2F	76	-	cate parameter/v
00000320	61	72	69	61	62	6C	65	20	6E	61	6D	65	00	42	61	64	-	variable name.Bad
00000330	20	4E	75	6D	62	65	72	2E	20	20	4E	75	6D	65	72	69	-	Number. Numeri
00000340	63	20	63	6F	6E	73	74	61	6E	74	20	65	78	70	65	63	-	c constant expec
00000350	74	65	64	00	4E	75	6D	62	65	72	20	74	6F	6F	20	6C	-	ted.Number too l
00000360	61	72	67	65	00	4F	52	44	20	72	65	71	75	69	72	65	-	arge.ORD require
00000370	73	20	61	20	73	74	72	69	6E	67	20	61	72	67	75	6D	-	s a string argum
00000380	65	6E	74	20	6F	66	20	61	74	20	6C	65	61	73	74	20	-	ent of at least
00000390	6F	6E	65	20	63	68	61	72	61	63	74	65	72	00	55	4E	-	one character.UN
000003A0	54	49	4C	20	6E	6F	74	20	69	6E	20	52	45	50	45	41	-	TIL not in REPEA
000003B0	54	00	42	61	64	20	4E	75	6D	62	65	72	20	66	6F	72	-	T.Bad Number for
000003C0	20	66	69	72	73	74	20	61	72	67	75	6D	65	6E	74	20	-	first argument
000003D0	74	6F	20	6E	75	6D	65	72	69	63	20	63	6F	6D	70	61	-	to numeric compa
000003E0	72	69	73	6F	6E	00	4E	75	6D	62	65	72	20	74	6F	6F	-	rison.Number too
000003F0	20	6C	61	72	67	65	20	66	6F	72	20	66	69	72	73	74	-	large for first

Apple Lisa Computer ERROR MESSAGE FILE Internal Format

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0123456789ABCDEF
00000400	20	61	72	67	75	60	65	6E	74	20	74	6F	20	6E	75	6D	- argument to num
00000410	65	72	69	63	20	63	6F	6D	70	61	72	69	73	6F	6E	00	- eric comparison.
00000420	45	6E	64	20	4F	66	20	45	78	65	63	20	66	69	6C	65	- End Of Exec file
00000430	20	69	6E	20	52	55	4E	20	63	6F	6D	6D	61	6E	64	20	- in RUN command
00000440	49	4E	50	55	54	00	42	61	64	20	4E	75	6D	62	65	72	- INPUT.Bad Number
00000450	2E	20	20	53	74	72	69	6E	67	20	65	78	7D	72	65	73	- String expres
00000460	73	69	6F	6E	20	77	69	74	68	20	6E	75	6D	65	72	69	- sion with numeri
00000470	63	20	72	65	73	75	6C	74	20	65	78	7D	65	63	74	65	- c result expecte
00000480	64	00	4E	75	6D	62	65	72	20	72	65	74	75	72	6E	65	- d.Number returne
00000490	64	20	62	79	20	73	74	72	69	6E	67	20	65	78	7D	72	- d by string expr
000004A0	65	73	73	69	6F	6E	20	69	73	20	74	6F	6F	20	6C	61	- ession is too la
000004B0	72	67	65	00	49	6E	76	61	6C	69	64	20	45	78	65	63	- rge.Invalid Exec
000004C0	20	4F	7D	74	69	6F	6E	3A	00	49	6E	76	61	6C	69	64	- Option: Invalid
000004D0	20	45	78	65	63	20	6F	7D	74	69	6F	6E	20	6F	6E	20	- Exec option on
000004E0	53	55	42	40	49	54	3A	00	55	6E	61	62	6C	65	20	74	- SUBMIT: Unable t
000004F0	6F	20	6F	7D	65	6E	20	69	6E	7D	75	74	20	66	69	6C	- o open input fil
00000500	65	20	22	40	22	00	55	6E	61	62	6C	65	20	74	6F	20	- e "a".Unable to
00000510	6F	7D	65	6E	20	65	78	65	63	20	72	75	6E	20	66	69	- open exec run fi
00000520	6C	65	20	22	40	22	00	55	6E	61	62	6C	65	20	74	6F	- le "a".Unable to
00000530	20	61	63	63	65	73	73	20	66	69	6C	65	20	22	40	22	- access file "a"
00000540	00	55	6E	61	62	6C	65	20	74	6F	20	72	65	72	75	6E	- .Unable to rerun
00000550	20	66	69	6C	65	20	22	40	22	00	55	6E	61	62	6C	65	- file "a".Unable
00000560	20	74	6F	20	72	65	72	65	61	64	20	66	69	6C	65	20	- to reread file
00000570	22	40	22	00	46	69	6C	65	20	76	61	72	69	61	62	6C	- "a".File variabl
00000580	65	20	22	40	22	20	61	6C	72	65	61	64	79	20	69	6E	- e "a" already in
00000590	20	75	73	65	00	46	69	6C	65	20	76	61	72	69	61	62	- use.File variab
000005A0	6C	65	20	22	40	22	20	69	73	20	75	6E	64	65	66	69	- le "a" is undefi
000005B0	6E	65	64	00	46	69	6C	65	20	76	61	72	69	61	62	6C	- ned.File variabl
000005C0	65	20	22	40	22	20	69	73	20	6E	6F	74	20	6F	7D	65	- e "a" is not ope
000005D0	6E	20	66	6F	72	20	69	6E	7D	75	74	00	46	69	6C	65	- n for input.File
000005E0	20	76	61	72	69	61	62	6C	65	20	22	40	22	20	69	73	- variable "a" is
000005F0	20	6E	6F	74	20	6F	7D	65	6E	20	66	6F	72	20	6F	75	- not open for ou

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0123456789ABCDEF
00000600	74	70	75	74	00	42	61	64	20	65	78	65	63	20	72	75	- tput.Bad exec ru
00000610	6E	20	66	69	6C	65	20	6E	61	6D	65	20	67	65	6E	65	- n file name gene
00000620	72	61	74	65	64	3A	20	22	40	22	00	55	6E	61	62	6C	- rated: "a".Unabl
00000630	65	20	74	6F	20	72	65	6F	7D	65	6E	20	69	6E	7D	75	- e to reopen input
00000640	74	20	66	69	6C	65	20	22	40	22	00	00	00	00	00	00	- t file "a".....
00000650	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000660	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000670	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000680	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000690	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
000006A0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
000006B0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
000006C0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
000006D0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
000006E0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
000006F0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000700	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000710	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000720	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000730	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000740	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000750	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000760	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000770	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000780	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
00000790	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
000007A0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
000007B0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
000007C0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
000007D0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
000007E0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-
000007F0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	-

<<< FINIS >>>