A KIM-1 DISASSEMBLER

Received: 77 Oct 28

I have just got my KIM1 up and running with a FORE-THOUGHT motherboard kit, and an 8K ECONORAM kit from GODBOUT. I was impressed with the quality of both kits. The ECONORAM kit was a little too crowded. I had to unsolder some of the despiking capacitors that were too fat to fit between the 2102s. Next time, I will put the thin ones in these locations.

My first job was to get "A 6502 DISASSEMBLER FROM APPLE", (*DDJ* VOL 1 no. 8) to work. I had more than a little trouble, till I discovered that the KIM1 Outch and Prtbyt routines were clobbering the Y register that the disassembler was using as a counter. You might like to publish my version of this program which is enclosed. If anyone wants to avoid the problem of hand keying it in, I would be glad to furnish a copy on paper tape for \$1.00 or on cassette for \$3.00.

I am mainly interested in engineering applications. I would think that the micro computer is so cheap now that it would displace many applications now on time-sharing. Of course, the answer is in the cost of programming. That is where we computer buffs could perform a real service and have a good time doing it. Time sharing is good but the overhead is high. There is nothing like having your own computer right there when you want it.

I would like to use BASIC, but I fear it will be too slow for some of my problems. For example, a single problem in PIPE STRESS may need to invert a 6 X 7 matrix 20 times. If we could only debug with a small problem on BASIC, and then compile the source tape into machine language for running large problems. The construction of such a compiler is far beyond my capability. Does anyone market a BASIC with floating point, and arrays that will run on my KIM1?

To work on any big engineering program, you need at least two people. One must be knowledgeable with the problem. You need feedback in working up the documentation, and in other ways too. I am 70, retired and available. I have a degree and 40 years experience in mechanical engineering. I can run a typewriter. Let me know if I can help you with a problem. I submitted the following programs to the DECUS library: PIPE STRESS, CRITICAL PATH METHOD, REGRESSION ANALYSIS, BUILDING HEAT LOSS. Having only 4 K of core on my PDP8f that I recently sold, BASIC was out of the question. Having no feedback from anybody, my documentation was bad, in spite of very great effort.

Very truly yours,

Theodore E. Bridge

54 Williamsburg Dr. Springfield, MA 01108

more

PS In writing the above mentioned programs for the DECUS library, I made good use of a FLOATING POINT INTER-PRETER in the DECUS library. It uses much less memory than BASIC and runs very much faster. Would anyone like to help me write a similar interpreter for my KIM1? I worked up a trace routine for the interpreter. I grant that debugging with BASIC would be much easier. Also only a few people can communicate with you if you are using your own interpreter. However, a BASIC interpreter is not really useable on a very large engineering application.

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Number 20

KICKING THE 8080 HABIT

Received: 77 Oct 17

Maybe it's just my imagination, but it seems that a lot of people aren't utilizing the Z-80 to its fullest. Everyone is so used to writing code for the 8080 that they don't seem to bother upgrading their software when they upgrade their CPU. Or maybe, as in my case, since we've been eating and sleeping in Intel Octal for so long that we just can't seem to catch on to all the enhancements of the added Z-80 functions and instructions. I would like to see you guys (or, someone else) come out and explain all the nifty Z-80 tricks. I know I can't be the only one that is stuck in the rut of 8080 code. (Please!! Don't tell me I swapped my CPU board JUST for speed-the software potential is fantastic.)

Michael Settle	751 Washington #115	
	Arlington, TX 76011	
How about it? Anyone car	to send us something on "To	aking

full advantage of Z-80's inner mysteries "?-TRW

MICROCOMPUTER SOFTWARE INDEX

News Release

Received 77 Nov 28

A great quantity of software has been published in microcomputer books and magazines since late 1975. These programs range from complete BASICs to assemblers, routines, games and direct application programs.

The Schreier Software Index, An Index to Published Microcomputer Software, indexes hundreds of published microcomputer programs. The S S I contains cross references and over 130 program divisions. Many of the cited programs specify chip description. In addition, the S S I features complete publication documentation and bibliographic data. Locating a random number routine for a 6800 or an 8080, for example, takes but seconds.

Direct orders may be placed with S S I, 4327 East Grove Street, Phoenix, Arizona 85040. Price postpaid in the United States, Mexico and Canada is \$5.00. The S S I is also available from a number of microcomputer dealers across the U.S.

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KIM									
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Dr. Dobb's Journal of Computer Calisthenics & Orthodontia, Box E, Menlo Park, CA 94025

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VDM-1 DRIVER MODS

by John Moorhead Received: 77 Dec 2

0005		-			
0005					DRIVER ORIGINATED
0010					DR. DOBB'S JOURNAL,
0015		VOLL	JME #1,	ISSUE #	\$6).
0020					
0025		MODI	FIED TO) INCLUI	DE SPEED CONTROL AND
0030		GENE	ERALLY I	MULATE	THE SOFTWARE DRIVER FOR
0035	*	PROC	ESSOR 7	TECHNOLO	OGY'S VDM-1 VIDEO DISPLAY,
0040	*				ALSO ACT AS THE DRIVER
0045	*	FOR	SOLID S	STATE MU	JSIC'S VB-1 DISPLAY.
0050	*				
0055	*	WRIT	TEN BY	JOHN MC	ORHEAD, 928 J STREET,
0060	*	DAVI	IS, CA.	95616	TEL NO 916-758-2495
0065	*				
0070	*	MAY	5, 1977	7	
0075	*				
0080	*				DL H OR B.S. KEY
0085	*	SCRE	EEN CLEA	AR = "CA	ANCEL'' = CTRL-X
0090	*	AUTO	CRLF (ON INPUT	OF A CARRIAGE RETURN
0095	*	CHAN	GE SPEE	D BY TY	PING NUMBER DURING OUTPUT
0100	*				TPING SPACE BAR
0105	*	STAF	T DISPI	AY BY 1	TYPING ANY CHARACTER
0110	*				
0115	*	NOTE	- A SC	CREEN CI	LEAR MUST BE THE FIRST
0120	*	CHAF	RACTER S	SENT IN	ORDER TO INITIALIZE THE
0125	*	CURS	SOR AT 7	THE BOTT	TOM LEFT CORNER OF THE
0130	*	SCRE	CEN AND	ENSURE	PROPER SCROLLING.
0135	*				
0140	*				
0145	*	ENTE	ER WITH	CHARACT	FER IN THE ACCUMULATOR
0150					
0155					
0160		T	PUSH	H	SAVE SYSTEM REGISTERS
0165			PUSH	D	
0170			PUSH	В	
0175			PUSH	PSW	CHAR IS IN THE ACCUM
0180			LHLD	VDMP	GET SCREEN POSITION POINTER
0185			CPI	ODH	IS THE CHAR A CARRIAGE RET?
0190			JZ	CR	YES - SCROLL, OUTPUT A CR
0195			CPI	08H	IS IT A BACKSPACE?
0200			JZ	BS	YES - MOVE CURSOR BACK
0205			CPI	18H	IS IT A CTRL - X (SCREEN CLEAR)?
0210			JZ	CLEAR	YES - ERASE ENTIRE SCREEN
0215			CPI	7FH	IS IT A RUBOUT CHARACTER?
0220			JZ	SPEED	DON'T DISPLAY (FOR ALS-8 ONLY)
0225			CPI	20H	DON'T DISPLAY CONTROL CHARS
0230			JC		EXIT TO CHANGE SPEED
0235			MOV	M,A	IT HAS TO BE DATA
0240			INX	Н	UPDATE CHAR POSITION ON SCREEN
0245			MVI		PUT CURSOR ON SCREEN
0250	DO		JMP		TEST FOR LINE OVERFLOW
0255	BS		MVI		REMOVE CURSOR
0260			DCX	H	BACK UP POINTER
0265	00		JMP	BS-5	
0270	CR		MVI	М,20Н	CHAR IS A CARRIAGE RETURN
0275			MOV	A,L	UPDATE NEXT CHAR POSITION
0280			ANI	OCOH	COMPLEX UP DOD NOT LETNE
0285 0290			ADI	40H	SETTING UP FOR NEW LINE
			MOV	L,A	ADDRESS OF NEW LINE
0295			MVI	A,0	ADD WITH CADDY
0300			ADC	H	ADD WITH CARRY
0305		1011	MOV	H,A	CALLE POINTER POR MENTE CHAR
0310	111	VOV	SHLD	VDMP	SAVE POINTER FOR NEXT CHAR
0315			MVI	A,7FH	
0320			ANA	L	EVIT
0325			JNZ	SPEED	EXIT
0330			MVI	M,20H	
0335			LXI	H, OCFC	The second contract second sec
0340			SHLD	VDMP	SAVE POINTER
0345 0350			LXI LXI	H,0CC40	
0355			LXI		H TO SCROLL 15 LINES
0355	SCI	ROL	MOV	A,M	START SCROLLING UP
0000	DC.			11/11	STAT OFFICIALITY OF