NEWSLETTER

This issue of The Data Domain Newsletter has an emphasis on books and magazines, as well as short reviews of some software and hardware items. The Data Domain's selection of magazines and books continues to grow, reflecting the dramatic expansion of publications devoted to microcomputing.

John V. Lombardi, editor

Ray Remembers

DATAMATRON

Gung ho, automation!
And dinner gets cold
While daddy's debugging
And mommie grows old.

Along with our offspring
And memories proficient
Of times when by-hand
Was considered sufficient.

I too have a memory
With stored information
On years of togetherness
Pre-automation.

A girl from the office,
I'd know how to fight
But that's not where daddy
Is spending the night.

I've lost and I know it.
He thinks that it's fun.
Hey, how do you poison
An Osborne 1?

(with apologies to Lou Ellen Davis)

I can't think of a more appropriate selection for our day and age (except for its sexist tone which effectively dates it). What makes this poem most interesting is that the last two lines were originally "How do I poision a 1401," and the poem has been my wife's lament for just about 20 years. My faded and yellowed copy was cut out of Datamation magazine in about 1961.

To add to the curiosity of the thing, the reactions of those who have read it recently are worth noting. Some assumed that the use of the number "1401" was the result of poetic license to make the thing rhyme. Others thought "1401" must be a new computer they hadn't seen yet. Not one person in ten had even heard of a 1401. Just in case you are one of those readers who is too young to remember the IBM 1401, I'll tell you a little about it.

The 1401 was the first mass produced business data processing computer. I don't know the exact number, but I recall something like 75,000 sold between about 1961 and 1967. At an average monthly lease price of about $8,000 to $10,000, that's an impressive number of machines. The 1401 was a character oriented machine with variable word length. That meant that data was held in core memory in user-defined fields in either 6-bit character form or as a packed number of two BCD digits per character position. To add two, dollar amounts together, you wrote an instruction which took one operand from field A and added it (digit by digit) to the data from field B, storing the result in either of the old fields or a new (user defined) field C. Note that nothing was stored in registers because there were none. And woe be to the programmer who failed to make sure that the results field was long enough to hold the result.

Anyway, I found the poem while cleaning out some junk in my basement and once again was astounded at how much things change and how little people change. A computer nut is a computer nut, all that changes are the model numbers of the computer.

Ray Borrill

From the Apple Pit

Well, this issue of From the Apple Pit may be the pits. Your writer has run out of 36 hour days this month. However, I'll try to hit the high points for you.

What do you put into a 176K Apple II+? Well, darn near anything, and lots of it. I had an opportunity to look at the Saturn Industries 128K Ram Card for the Apple II first hand during this month. The grades are in, and this card gets an unequivocal A+. The card installs with no surgery. It uses the new 64K by 1 dynamic ram chips that do not have to pick up the memory refresh line from the mother-board. It has LED indicators a la MicroSoft to indicate card and bank activity and comes with a tremendous amount of software support and an excellent manual. There are three disks in the package, one each for DOS, Pascal, and CP/M. Each has provisions to expand the operating memory space or to emulate a phantom disk drive in the resident operating system. And what a phantom drive....soooo fast and soooo quiet. At $599 this card is the best deal going in the memory market. There goes my budget again.....

If you have access to a modem be sure to try the bulletin board program Net-Works from Computer Station. It is running evenings (after 5:00 PM until 7:30 AM) and weekends 24 hours. At (812) 334-5455 for the Bloomington BBS or at (317)-326-3833 for an Indianapolis BBS that runs nearly 24 hours per day (except when the SYSOP feels an uncontrollable urge to use his Apple). Try it. The bulletin boards are fun, and useful as electronic mail systems.

If you are one of those individuals who stuffed a Stellation 6809 Mill card in your Apple and then tired of assembling machine language routines for it, take heart. Stellation now has Basic/09 available for the card. This is an extremely powerful Basic that will run rings around anything short of a 16 bit machine. Even the 16 biters better keep their clocks running fast.

Well, I have to be brief this time....the issue is fat.

John Prather

Osborne I Software

The Osborne I microcomputer continues to be a popular product. Because of its versatility, reasonable cost, and portability, the machine remains a best buy. To support this computer, The Data Domain can provide a wide variety of software, in addition to the basic package of programs provided with the machine.

Spellguard is a spelling dictionary designed to work with Wordstar (one of the standard programs that comes with the Osborne I and makes the computer such a good buy). Spellguard allows the creation of special purpose dictionaries in addition to the normal English language dictionary included ($295).

Documate indexes any document prepared with Wordstar. These can be very complex indexes with subindexes or arranged as tables of contents ($125).

Microstat is a specialized statistics package for use with the CP/M operating system supplied with the Osborne I. It will handle general statistical procedures, generate reports, and calculate complex mathematical formulas automatically ($250).

Other programs from the vast CP/M compatible library are also available for the Osborne I. Ask about them at The Data Domain.

Logo for the Apple II

The Logo computer language is now available for the Apple. Krell Software has published the Massachusetts Institute of Technology's version of Logo ($180). This implementation of the much talked about language requires an Apple II with one disk drive, 48K of memory and an expansion card with another 16K of memory. Apple's Logo is also available, at $175, and includes a good deal more comprehensive documentation.

The program comes on two disks, one with the language itself and the other with a set of utilities. In addition, the package has a third disk with sample programs. The instruction manual is really a reference manual, and is inadequate for the uninitiated. If you are interested in this language, you should read one of the books written to explain and illustrate Logo before evaluating this package.

As we get more experience with this verison of Logo, The Newsletter will have an update on the package.

Update on Superscribe

Superscribe has been reincarnated with a new name, Screenwriter. On-Line Systems has also removed a number of bugs from the previous version. The new version will be available in early April. Users who want to update their Superscribe disks can send one of the original disks to On-Line Systems with a check for $10. They will return an updated version of the program along with new documentation as necessary. Then you can update the back-up disk for $5 by sending it in. Allow some time for all this to take place. On-Line evidently has over 2,000 orders ready to be filled.

Utilities for the Apple at The Data Domain

Most computer users find that they need many utility programs to make the job of managing files, disks, and programs easier. While in most cases the tasks that these utilities do can be done with other, cheaper, methods, the convenience and speed that the utility programs provide is usually well worth the extra cost.

Many good utility programs are published by the various computer magazines, especially Nibble. These can be had for the price of the magazine and a little bit of time typing in the programs published there. Or in some cases you can buy the programs already entered on a disk ready to be used. Nibble has a service to

provide the programs published in the magazine on disk at a relatively modest cost. Most of the disks are available at $20 or $24 and usually contain three or four programs. While some of the Nibble programs are such things as games and data base systems, the majority of them are utilities.

The Data Domain now stocks most of the Nibble programs. There are utilities that do the following kinds of tasks in this series: Cruncher (shortens Applesoft programs for maximum speed and minimum size), Free Space (modifies the Apple DOS so that when you Catalog a disk you get the amount of free space remaining), Apple Archives (allows the efficient management of archive files on cassette tape), DOS remover (eliminates DOS from initialized disks, thus providing more storage on the non-bootable disk), Print-Use (adds print-using statement to Applesoft), AmperSort (a very useful machine language sort routine called through the ampersand), and a number of others.

Another excellent series of utilities comes from Sensible Software. Three of their better known items are the following. The Disk Recovery "The Scanner" ($30) lets you to scan a diskette's recording surface and check for damaged areas. These can then be marked in the directory and not used. The program gives a disk map with a clear indication of good and bad spots on the disk. Moreover, the program will work with 13 or 16 sector disks and will perform on disks that already contain programs or data without hurting the data.

Super Disk Copy III ($30) is a general purpose disk utility that manipulates files and disks in any of the Apple formats from 3.1 to 3.3 DOS. It copies single files, DOS, or the entire disk. It undeletes deleted files and replaces illegal characters in filenames. It fixes problems with file sizes, alphabetizes filenames in the catalog, and rearranges files to more efficiently use the disk space. It also converts between DOS 3.2 and 3.3 in either direction.

A third utility is the Multi-Disk Catalog III ($25). This mini-database program is designed to maintain large disk libraries in a coordinated and classifed way. The program reads each diskette's catalog and stores this information into the database. A classification field can be added. It can sort the filenames very rapidly to create indexes into a large diskette library easily and efficiently. It works on diskettes in any Apple DOS format, 3.1 through 3.3.

Printer Preview: C. Itoh Pro/Writer

The C. Itoh printers have a fine reputation for high quality at a very reasonable cost, and the new Pro/Writer printer is clearly part of this tradition ($695). Billed as a professional printer, it has high-speed matrix printing with logic seeking and bidirectional printing. It also has proportional spacing capability along with graphics. The printing speed is 120 CPS at 10 characters per inch. There are five alphabets and eight character sizes. The tractor paper feed is bidirectional and the printer is capable of positioning 144 by 144 dots within a one inch square. This printer also has friction feed and will take paper up to 136 columns. The Pro/Writer will work with either parallel or serial interfaces. The serial interface costs $150 extra, but it increases the internal buffer from 2K to 3K and does not inhibit the parallel interface. All in all, this is an excellent printer that can be seen at The Data Domain.

Agribusiness, Robots, and Education: New Periodicals

The explosive growth of the microcomputer industry has generated a concurrent growth of interest in applications. To develop and support special interest groups, a host of magazines have appeared aimed at particular subsets of the microcomputer user community. Nibble, for example, focuses on Apple users interested in programming. The Data Domain has added three magazines to its current selection.

The first, AgriComp, bills itself as the reference for farm computing, and its first issue has a variety of articles in this field. Although the journal will cover most of the major microcomputers, its first issue is very heavily Apple oriented. This is in part a reflection of the wide use of Apples in agricultural applications, and in part it is a result of the first issue's emphasis on Visicalc utilities. For example,

there is an article on "What is 'Visicalc' Anyway.... no farm computer should be without it", one titled "Visicalibrate...using Visicalc to calibrate a sprayer", and "Planning Budget...a Visicalc template for cash flow". These are very well done and demonstrate a clear and professional approach to microcomputer solutions to agribusiness problems.

Similarly, there are features on programming that include suggestions for the Apple and TRS-80 as well as a review of graphic input devices. In sum, this is a most useful magazine for those interested in agricultural applications for microcomputers.

Another entry into the magazine rack at The Data Domain is Robotics Age. This is not a new magazine, as it is now in its fourth year, but the expansion of microcomputer use has also increased the number of people interested in robotics. The latest issue of this magazine has seven features on various robotics topics. For example, there is an article on the robot Rhino XR-1 by the designer, one on power sources for robots, a project report on a computer controlled sentry robot, and a discussion of an inexpensive robot hand. The magazine has ads for robotics products, classified ads, and a survey of new products. Carl T. Helmers, Jr., the original editor of Byte magazine has become the editor of this journal.

With the growing interest in microcomputer assisted instruction, the appearance of The Journal of Courseware Review is a welcome addition to The Data Domain magazine rack. This new journal reviews major entries into the educational software market. Although the journal will cover a wide variety of microcomputers, the first issue is devoted to Apple II software. Reviews are careful, detailed, and authoritative. The programs reviewed include very expensive packages in the $450 range to bargains at $40 or $50. This journal is published by The Foundation for the Advancement of Computer-Aided Education, an agency with strong Apple Computer support, although not a part of the Apple organization. The journal sells for $6 a copy. It is highly recommended for education users.

Data Communications: Data Capture 4.0 for the Apple II

Many Apple II owners purchase modems such as the Hayes Micromodem or the Novation Apple-Cat to permit them to communicate with other Apples, club bulletin boards, stock market services, or information utilities such as The Source. Although intelligent modems such as the Hayes usually contain firmware to operate the Apple as a dumb terminal or to allow Apples to talk to one another, most users find a communications software package to be a valuable addition to their modem. The Data Domain has several programs to help with data communications. The Southwestern Data Systems ASCII Express II and Personal Software's Visiterm are two examples.

Another popular package of this kind is Data Capture 4.0 from Southeastern Software. This is a complete communications package for the Apple. It supports a variety of the most popular modem hardware including the Hayes Micromodem and can be configured to fit practically any combination of Apple hardware. This version of the program works on 40 column Apples, although there is a higher priced version for Apples with 80 column boards.

Communications software is designed to permit the Apple to operate like a terminal when connected to a host system and to facilitate a variety of activities while connected. For example, Data Capture makes it easy to dial a number, sign on, carry out the operation desired, and get off the host machine. But more important than these utilitarian functions, the program also handles many housekeeping chores that can arise while trying to talk to different host systems.

Because not all hosts obey the same rules for communication between computers, this program works with a variety of speeds of transmission and special signals, a major advantage if you use hosts with different protocols and codes. Similarly, the program takes care of the details of connecting and disconnecting the Apple from the host without hanging up the phone line. This proves especially helpful when your interaction with the host requires some time to do disk input or output while remaining on-line. For example, the common task of extracting a sequence of files from a host requires that the file be removed from the host to

the Apple, then the Apple taken off line from the host without hanging up the phone. While off line, the Apple saves the extracted file to an Apple disk and then reconnects to the host to get another extract or file. Data Capture 4.0 makes this operation very easy to accomplish.

Many host systems will accept upper/lower case entry, and Data Capture not only supports such lower case chips as the Paymar, but also recognizes the shift key if that modification has been made to your Apple. If your host has a stop/list feature that permits the suspension of output on receipt of some special character, Data Capture can use this facility to receive files larger than the Apple memory buffer. This is accomplished by telling Data Capture what the stop/list character is. Then if the buffer gets full before the transfer is complete, Data Capture sends the stop/list character to the host, suspending output. The buffer is saved to disk and cleared. Then the stop/list character is sent again and the host begins transmitting once more.

As a result of this flexibility and its modest price of $69, The Data Domain recommends Data Capture 4.0 as an outstanding value in Apple data communications.

Book Notes: Basic and Visicalc

The increasing popularity of microcomputers in universities and small businesses has generated a strong demand for books illustrating the solutions to common computing problems in Basic. Although the Basic language is not the ideal computer language for the solution of scientific and engineering problems, and Fortran is probably the most common computer language in this environment, Basic can be effectively used for this type of problem. Two books demonstrate Basic solutions for common scientific and engineering examples.

Basic Programs for Scientists and Engineers by Alan R. Miller (Sybex $15) is a text for students and professionals in these fields who want to learn how to solve problems in the Basic dialects available on the more popular microcomputers. Beginning with a procedure for evaluating Basic interpreters and compilers in terms of their precision and accuracy of calculation, the author also indicates some of the common peculiarities of the various microcomputer Basics. With this useful cautionary information disposed of, he then looks closely at ten classes of problems. These include the following: Mean and Standard Deviation, Vector and Matrix Operations, Simultaneous Solution of Linear Equations, Development of a Curve-Fitting Program, Sorting, General Least-Squares Curve Fitting, Solution of Equations by Newton's Method, Numerical Integration, Nonlinear Curve-Fitting Equations, and a variety of advanced applications.

The method followed throughout this book is that of the text. Instruction, explanation, example, and illustration are the key words. The assumption here is that what we want from the book is to learn how to solve problems in these categories. This is not designed to be a cookbook with standard solutions to every problem, although the many examples can be used and run as they are presented. There is also an abundance of standard algorithms for the solution of typical problems. The discussion ends with a summary of the Basic langauge and comments about the microcomputer variants.

Science and Engineering Programs. Apple II Edition edited by John Heilborn (Osborne $16) is a different type of book. This is a collection of working programs, about 50 of them, in the fields of science and engineering. Although the topics are similar to those in the book by Miller, this is a cookbook without any effort to serve as a text or to explain anything about the programming or mathematical principles involved. Thus, this book is only useful for those who know what they want to find out, who have a thorough understanding of the capabilities of their Apple II, and who want a set of tested and functioning scientific and engineering routines for their work. These programs were tested on the Apple II as presented in the text. They require no special hardware to run, although they can be modified to take advantage of special equipment. The programs are all in Applesoft Basic, although they could be converted to other Basics without major modifications. Also, none of these programs require more than 6K of memory for the program, but the data could well occupy much more memory.

The twelve major categories of programs are as follows: Interpolation, Regression, Data Analysis

(alphabetize, peak finder, data bounding, smoothing, differentiation, etc.), Roots of Polynomials, Linear Equations, Eigenvalues and Eigenvectors, Ordinary Differential Equations, Numerical Integration, Fourier Analysis, Structural Analysis, Thermodynamics and Heat Transfer, and a few miscellaneous programs.

Each program is presented in much the same way. There is a very short introduction that outlines what the program does and what method or procedure is used to get the results. The input required is described and a sample run is provided to demonstrate input and output and to serve as a check on the accuracy of the transcribed program. Then there is a listing of the program. This is a very straightforward and easily understood format. If you need programs of this kind, then the book is of considerable value. However, it would have been even more useful had the publication come with a disk with the programs already entered. In a book dedicated to one microcomputer, there is really no reason such a disk could not be provided.

The Power of: VisiCalc by Robert E. Williams and Bruce J. Taylor (Management Information Source, $10) is an example of a new breed of instructional books. These manuals are written to explain and expand on the instructions that come with microcomputer package programs. This one is, of course, on Visicalc, one of the most popular and profitable programs in the microcomputer field. The book is a step by step expanation of how to set up a number of Visicalc applications. Each example, there are seven in all, is more complex than the last, and in all they demonstrate some quite sophisticated techniques for manipulating data with Visicalc. Especially valuable for its explanations of the Lookup function and the many uses of lookup-tables, there is also a good discussion on converting mathematical formulas to Viscalc entry format. The book is 88 pages, and has all the information necessary to replicate the exercises.

Another Visicalc book is VisiCalc Home and Office Companion by David M. Castlewitz, Lawrence J. Chisausky, et al., (Osborne $16). This is a well designed and printed book of some 181 pages that contains information on Visicalc templates for the following application areas: Loans and Investments, General Business, Inventory Control, Advertising and Sales, Personnel and Departments, Personal Finance, and Household Aids. Within each category are about seven different applications. These are clearly and completely described and a listing of the Visicalc entries necessary to create the templates is included. For the price of this book it would have been better to include a disk with the templates already entered, but in any case the applications are very well done.

The IndianAppleUs Bulletin Board System

The local Apple computer group, IndianAppleUs has a bulletin board system (BBS) up and running courtesy of John Prather, president of the club. This system uses the Net-Works program from Computer Stations. It is open during the week from 5:00 PM to 7:30 AM and all day on the weekends.
Please do not call this BBS during regular working hours because the phone is a normal voice phone at RCA during the weekdays.

This system is very easy to use and is entirely self-prompting. You must have a computer with a dial-up modem and, of course, a phone line. The phone number is (812)-334-5455. The first time you call you will be asked some information and assigned a password. Within a day or so your password and phone number will be validated and you will then have full access to the bulletin board. The IndianAppleUs BBS provides electronic mail, programming tips, news, bulletins, and other features. It will be as useful as you make it by calling and contributing. If you have any questions, just call the IBBS and ask the question.

IndianAppleUs Apple User Group

The IndianAppleUs user group continues to meet on the second Wednesday of each month at 7:30 PM at The Data Domain. The programs vary depending on interests of the members. Presentations tend to involve discussions of new hard and soft wares for the Apple. In addition, club members discuss programming techniques. The club welcomes new members whether veteran Apple owners (anything over three weeks) or neophytes.

The Data Domain Sale of the Month

Printers Featured in the current Data Domain sale:

C.ITOH letter quality printer: $1995 on sale for $1875.

The Pro/Writer high quality dot matrix printer: $695 on sale for $625.

Your Opinion Counts: Fill Out the Poll and Get a Discount

We're always trying to make The Data Domain more useful to its customers. We'd like you to take a minute to
fill out the poll below.   Just drop the poll off at the store the next time you're in and use this as a
cupon for 10% off of any book or software purchase under $50. This offer is not good without the poll, and
can only be used once per customer.

How long have you been coming to The Data Domain? _____
Where did you first hear of The Data Domain? _____
Do you have an Apple computer? _____
Do you use it for business or personal use? _____
How do you use it? _____
What radio stations do you listen to? _____
Which papers do you read? _____
Do we treat you properly when you visit? _____
How can we improve our service? _____
Is there anything about our operation we should change? _____
What other products should we carry? _____
Should we change our hours? _____   How? _____
Any other comments? _____

(Please tear off here and return to The Data Domain for your discount.)

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the DATA DOMAIN inc.
221 W. DODDS STREET
BLOOMINGTON, IN 47401
(812) 334-3607

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