

OS-9 USERS GROUP

"DEDICATED TO EXCELLENCE IN OS-9 COMPUTING"

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MOTD

"A MAGAZINE FOR OS-9 USERS / PROGRAMMERS"

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From the Desks of Boisy and Jim, (Boisy first)...

This issue of MOTD marks the retirement of several officers and the introduction of new leadership. From the concept of rebirth in late January of 1992 to the present, the OS-9 Users Group stands with a steady stream of new members adding to the old, and a healthy treasury. In addition, we are now a bonafide non-profit corporation.

Jim Destafeno of Wyoming, Delaware, has stepped forward to give his services to the OS-9 Users Group as the new President. I have known Jim for 5 years and find his enthusiasm for the Users Group nothing short of promising. Please join in support of Jim as he leads our organization.

Of course, all this would not have been possible without the vision and work of the following people who made the OS-9 Users Group a success:

- **Scott McGee** -- Scott participated in the OS-9 Users Group's initial formation last year and deserves much credit for its existence.

- **Carl Kreider** -- Carl brought experience and credence to the OS-9 Users Group at a critical time. He will be vacating his position as Vice-President, but will remain as a member of the Board of Directors.

- **Debi Kreider** -- Debi has put much of her time into making deposits,

writing checks, balancing the books, and making sure new members were properly endowed with membership cards, welcome letter, and a disk. Debi retires as Secretary/Treasurer.

- **Alan Sheltra** -- Alan's volunteer efforts on the MOTD proved helpful to the OS-9 Users Group. Alan also steps down as MOTD editor.

- **Zack Sessions** -- Zack has done an excellent job in bringing together the OS-9 Users Group Library and other packages; some from Europe. Zack will continue to serve as Librarian.

- **George Dornier** -- George will remain as a member of the Board of Directors.

These people have given of their time (and sometimes, money), without compensation, for the betterment of this organization. They all deserve our thanks and sincere gratitude for jobs well done.

Lastly, I want to thank all of you, our members, for your support. By becoming a member, you have contributed to this organization's achievement.

<Boisy Pitre>

- Long live OS-9! -

"Hello", to all; it feels good to be on board. I want to give you an idea where we can go. Yet first I want to thank Boisy, the board members and the people behind the scenes for their good faith. Then to you members, I promise to do my very best repre-

senting your wants and needs.

I have watched the User Group through its vicissitudes for many years. It has been headed by computer dreamers, doers, engineers, programmers, and maybe others, but never a business major/computer user. I can't guarantee a better "ride", but you can lay money on us working the hardest on the basics.

For starters as editor of the "MOTD" the number one priority is to get it mailed on time. Right behind that is the "MOTD" content. I know I want to hear from and about people that are using OS-9 under commercial conditions. Who will be the first? We can do it by phone and tape if need be.

Also, I have an idea of what I would like to see in the MOTD, but the more important question is, "What sort of things would you like to read about?"

In another direction, there has been conversation about starting an OS-9 Standards Committee. In addition, others have been taking about reviving the thrust to get the Level II, Version 3.0 put together. The article beginning on page seven details the discussion. In both cases the UG has offered to help in any way possible. Would you like to help with these projects, or have another idea the UG can help with?

Whichever... together we are off on a new adventure. We hope to make a positive contribution to the community while having some fun. Please do let me know when you don't like where we are going, and why. Thanks again to all - now lets have some get to it

<Jim DeStafeno>

Product Review

by J. Scott Kasten

Product XSCF

Description Extended SCF file manager for OS-9 68000 V2.2 or later. Has enhanced line editing and recall capabilities.

Price \$60 plus \$4 shipping.

Company .. ARK Systems USA
P.O. Box 23
Santa Clara, CA 95052
Phone/Fax (408) 244-5358

The XSCF package contains a well written 27 page manual and a program disk. The manual has complete descriptions of the files on the program disk, installation instructions, and usage information. The disk has the XSCF file manager, an attachment program, a program to create custom descriptors, and several ready to use descriptors.

XSCF is not a replacement for the SCF file manager, but is an enhanced file manager that works with SCF. The software requires a properly running SCF file manager and descriptor set to function. At present, it is not compatible with the file manager for G-Windows terminals, but the ARK people say they are working to resolve that soon.

The software is very easy to use. After loading it onto the hard drive, and selecting a ready to use descriptor, I used the attach program to get it running. Command line inputs are recalled from the approximately 1K command line recall buffer with the arrow keys. The arrow keys also move the edit cursor. Within an edit line, you have both overstrike and insert capability.

The latest version of the program has an intelligent insert feature. The insert mode is entered automatically when the cursor is stopped on a space character, thus allowing insertion of extra command line options with fewer keystrokes.

The intelligent part of the recall feature lets you type the first few characters of the desired command to be matched. This reduces the requirement of scrolling through all previous command lines to zero. Also, after a command line instruction is used it is

moved to the top of the recall stack so it may be accessed more rapidly if needed again.

The descriptors allow you to select the active hot keys for the XSCF file manager so it can be customized for any keyboard or terminal. To interpret the cursor movement keys of many terminals this file manager will even handle keys that generate ASCII sequences up to five characters long. Another nice feature, you don't have to edit and assemble a descriptor to customize it for your system.

An included utility simply asks for a module name, and has you strike the keys you want for the editing functions. The attachment program is what attaches the XSCF file manager to an active I/O port on the system.

ARK is a new company only in relation to the U.S. They started in Japan in 1985 providing system level programming and consulting services for the OS-9 68000 market. In 1989 they moved to California.

My experience with ARK has been good. There was initially an incompatibility problem with my system, but they proved eager to resolve the problem as quickly as possible. At the time of our review the software had not been tested with the V2.4 of the operating system. After several fax exchanges the cause of the problem was found and fixed. Apparently, Microware made some low level changes that required an update to the XSCF file manager.

This file manager enhancement will make your computing life easier. When you order, be sure to tell them what disk format you need. (Size, density, track/sector offsets.) Now there are no clear standards for OS-9 disk formats, therefore many vendors and manufacturers have peculiar format parameters. It is thus most helpful if you can tell a vendor specifically what you need. <JSK>

- Ved / 68000 - TEXT EDITOR 2.0

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Ved 2.0 supports also your K-Windows mouse ... but it still works with any terminal (as long as it has cursor positioning).

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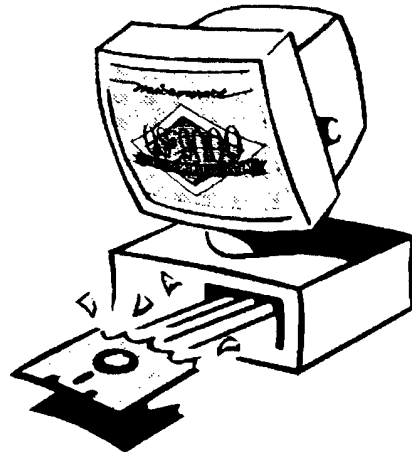
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Getting The Most From Your Tools

by Bob van der Poel

I heard an "old saying" for the first time the other day (well, remember I'm just a youngster): "*When the only tool you have is a hammer, every problem ends up looking like a nail.*" And if this is true about home renovations and hardware stores . . . it contains a lot of truth for computers too.

How about some examples?

- If you are a C programmer all data will fit in a structure and all problems

can be solved with a function.

- If you are a FORTH programmer, there is no such thing as a real number.

- If you love OS-9 the rest of the world is on non-real-time.

And so it goes. But I digress. What I want to talk about is how we let our tools determine how we solve problems; instead of letting the problems determine what tools to use.

In the worlds of OS-9 and Unix countless problems are solved everyday simply by combining basic programming tools (well, sometimes it isn't all simple). Here are some quick examples:

To find a lost program in the myriad of directories on your hard drive you could use a "find" program. However, you could just use the standard DIR and GREP that came with your system. To get a listing of the files whose name contains "ved" I could:

```
dir -ur ! grep ved
```

Or, for a text file containing a sorted listing of my C source files:

```
dir -ur ! grep \.c$ ! sort >cstuff
```

This is pretty basic for any serious OS-9er. Things get more interesting When application programs start to use the same tricks. Sometimes it works... and sometimes things don't work quite right.

I was trying a new program awhile ago. What it does, doesn't matter; nor is its name; we'll just call it ULTIMATE. A function of ULTIMATE is to edit a small text file. I suppose

ULTIMATE's author could have spent a extra six months writing a text entry and editing function. Instead he decided to let the user call up their own editor to do the job.

Being a thoughtful and considerate soul he didn't even force the use of a particular editor. Instead, he checked the shell environment variable EDITOR for the user's choice of editor. Then, ULTIMATE forks to this editor with the filename of a temporary file. When the editing is finished, the temporary file is combined into the application's database and the temporary file is deleted.

All this works, but ...

it is not the perfect solution.

First, ULTIMATE must assume it knows the correct calling syntax for the editor. In most cases this is an easy assumption to make. However, what if the user's editor insisted on having a "-" in front of the filename? For this possibility a second routine is necessary. An "environment" or "initialization" file should be used to tell ULTIMATE the exact syntax. The design of the environment file can become very complex when one tries to take every eventuality into consideration.

Second, when forking to another editor, ULTIMATE loses control over the visual appearance of the screen. In a user environment like G, X or K-WINDOWS it is possible for ULTIMATE to create an overlay window for the editor to function in. This creates two more quandaries: will the editor work in a overlay window; and how does ULTIMATE know if a windowing environment is being used?

I don't have any easy answers to any of these questions. However, they are questions that must be addressed by the writer of an application program.

The following is what I hope is just the start of a list of things to keep in mind:

1. Shell environment variables that should be checked. Some common definitions I know about include:

- **HOME**, The name of the user's root directory.

- **SHELL**, The name of the user's shell (don't assume it's shell).

- **USER**, The name of the user (Bob, Joe, or Mary).

- **TERM**, The name of the user's terminal (vt100, wyse. Used by termcap).

- **PORT**, The name of the port (usually, an RS-232 line /t4).

- **MODEM**, The name of the port used by the modem (/t5).

- **EDITOR**, The name of the preferred editor (emacs, vi, ved).

- **LINES**, The screen y-size.

- **ROWS**, The screen x-size

2. Never assume anything! Don't assume the user wants log files stored in /dd/LOG or game scores should be in /h1/usr/etc/data/games! Certainly you have to make some assumptions ... but be flexible. If you are looking in a directory, check in /dd, /h0, /h1, /d0 and HOME. Don't assume the user has a particular utility or, even if he does, it accepts a certain command syntax.

I recall a silent curse when I was using a Level II system. It had a replacement dir command. The original used an "e" to signal an expanded directory; the replacement needed "-e". Unfortunately, deldir forks the command "dir e" when asked for a listing. It worked fine with the original dir; but, with the new one, it attempted to list the directory "e".

3. With mass storage becoming larger and cheaper, be sure to store defaults and other options in a read-able, user modifiable, accessible format. Environment files are good. In my programming I "assume" the user will keep an application specific environment file in "/dd/sys", "/h0/sys", etc.

4. Be cautious using "standard" utilities. Standards change.

With a new editor at the helm of MOTD, things for us OS9ers look promising. Let's keep up the tradition of sharing information. I always welcome article suggestions...but keep in mind, like programs, I only write the ones that interest me. Drop a note to CIS 76510,2203; PO Box 355, Porthill, ID, USA 83853; or PO Box 57, Wynndel, BC, V0B 2N0 Canada. <BvdP>

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Tech Corner

by J. Scott Kasten

LASER PRINTER MANIA, Part 1 of 3

For this and the next two months the subject will be laser printers. No doubt many of you have become more interested in laser printing technology due to the drastic price reduction over the last few years. With interest comes many questions about how they work, how to use them, and about the cost. Those are some of the issues we will address in this series.

Drastic price reduction. As manufacturers update their products lines it is possible to find discontinued, but new models under \$600 in surplus equipment catalogs like DAMARK or DAK. Today it is possible to buy Pannesonics, Sharp, CITO, etc. laser printers from mail order vendors advertising in places like Computer Shopper. If you prefer to go through a retailer, where you can get help if you need it, then tack on about \$50 to \$100 depending on the model of the

printer wanted.

What about hidden costs? Well there are a few in the long-term operation of a printer. Let's start with a crude, but telling, cost analysis. Let's compare the laser printer costs to a 24-pin dot matrix. An average dot matrix ribbon cost is about \$8. My experience with ribbons is they will print about 1200 pages, but only the first 500 or so are resume quality. Thus, we'll estimate an average of 750 decent pages per ribbon. Excluding any other cost, that is about 1 cent per page.

Although you could get more pages from a dot matrix ribbon, you must consider that the quality goes down severely after the first 500 pages. A laser printer will produce resume quality until the toner is almost gone.

However, when comparing matrix quality to laser quality we have to keep all costs in mind. The laser printer toner pack costs about \$35 mail order and lasts about 3000 pages. Now for a "gotcha": after about 12,000 pages, the photosensitive drum on which the page image is created needs to be replaced. The

price will vary, but for low cost printers like the low end Pannesonics you can expect to pay about \$120 for a drum.

The average cost to print 12,000 pages is about 2 1/3 cents. (I assumed 4.5 toner cartridges over this interval just to be safe.) In this analysis, I have excluded the cost of a new fuser unit (this is what melts the ink into the page). The fuser has a life of about 100,000 pages, in addition I also excluded the replacement cost of a dot matrix print head.

Costly wear repairs were omitted because they will occur after several years of service. I think when such things finally do occur, most people would opt to buy a new model printer versus repairing the old one. We might conclude a laser printer costs slightly more than twice as much to operate as a quality dot matrix.

We must also address the issue of memory in laser printers. Most of the cheaper printers come with 512K or so RAM. If all that is needed is quality 300 dpi text, then 512K will probably suffice. However, most people get interested in using a laser for quality home publishing, which typically in-

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volve graphic designs.

The laser printer produces graphics much better than a dot matrix. Although 512K may allow full page graphics, up to 150dpi, or small patches of 300dpi graphics, 1 Mb is really needed.

That first meg is the most costly, since it includes the cost of the memory board. After that, memory is cheap, usually about \$30 to \$50 a mega bite. For the cheaper lasers, it is possible to buy a board with 2Mb RAM in the \$100 to \$150 range. I've found 1.5Mb to 2.5Mb of total memory is optimal for most people. This is plenty of memory for imaging 300dpi graphics pages and still leaves room for several user installed fonts. (More on that later.)

Few people new to laser printers realize user installed fonts take up memory, and lots of it. Expect to lose about 256K for 4 different point sizes ranging from 5pt to 20pt.

I believe the initial cost (\$600 printer plus \$100 for added RAM) and the long term operating costs are now falling well within the price range of the average home user. Anyone shopping for a new printer should consider the sharpness and clarity of a laser printed page can more than reward the purchaser far beyond the higher startup cost. <JSK>

Level II Upgrade with Standards by Chris Perrault

The following is an example of the ability of the UG and MOTD to support the users of any variant of OS-9. We have offered to help in any way possible to reach the goals presented below. ED

Hello and greetings to all members of The OS-9 Users Group and MOTD subscribers. This article deals with two things. The first is an old thought revived, encouragement to upgrade OS-9, Level II to version 3.0. The second is to form a Lev II Standards Committee.

The following is a message I posted on Delphi, which mostly deals with my ideas of how we could go about developing v 3.0. I want to use this

message as an example of how a standards committee would be very useful in such situations.

To date Lev II has matured since it's release. It has been patched piece by piece; rewritten, and hacked at. As a result it has really begun to let it's true potential shine. It is a slick system with those patches, new drivers and descriptors, and other modifications installed. In addition, the computer Lev II was patched to run better on, the Tandy Color Computer, has many third party performance and capacity upgrades. All of these things make for a much more usable system.

As great an improvement as this has been there is a downside. The confusion and possible incompatibilities involved with all the modifications is a major turn off. A turn off to not only newcomers or novices, but even the system veterans tend to have problems keeping everything together.

Farna Systems showed that different Lev II patches could be made to operate together when they released their 'PatchOS9' disk. Now we need to follow that lead and do a full fledged job, move ahead and detail our own Level II, v 3.0. Tandy and Microware have made it clear they are not interested in v 3.0. It is time we take this upon ourselves.

We have a lot to work with. Good idea and solution communication between the system users including the various vendors can result in the needed modules and the hardware updates, through the MOTD and other magazines, and BBSes. We will decide what is best for our computer and Operating System as a community. We undoubtedly know what is best, better than anyone.

Why do I think this is necessary? Because it will make things much easier and more flexible. This is true for both Programmers and End users. There will no longer be the hassle of making a million different modifications just for a program to work with an operating system that has many different versions. "Turn-key users and programmers are unwilling to go through all this, and no one can blame them.

How can this be done legally? Once the structure of Level II, v 3.0 is finished, it could be distributed on a disk such as the 'PatchOS9' disk I previ-

ously mentioned. The disk would contain all the patches and modifications along with an install program that would blend the original LEVEL II disk content with the upgrades. The result of running the install program would be Level II, v 3.0.

We would then have one standard to work with. People could advertise their programs saying, "Level II, v 3.0 required". I would like to know how you all think we should go at this?

To make v 3.0 we need only to finish making whatever modifications we feel are still necessary; new drivers, etc; and to get as much of the unofficial upgrade incorporated as possible. Lastly, we would have to decide on the hardware standards.

I think we start on this project as soon as possible, we have already waited to long. It is time to end the confusion and obstacles of sticking to a system this old. Also, we have begun talking about the feasibility of forming on a Standards Committee again. Such a committee would prove very instrumental in this process of detailing v 3.0.. We do need an official group to pull all this together.

We definitely have some great people here supporting us in the community; vendors, magazine publishers, the User Group, etc. Unfortunately it is very hard for them to keep in consistent contact with the whole community; and there is so much work to do. A functioning Standards Committee would come in handy. The 'deafening silence' in the community right now doesn't mean doom. It's far from it, but there is just no committee of community representatives to pull us together. We are too big and the OS-9 operating system is too good not to have it. <CP>

Chris would like to know if you think OS-9 Level II should be upgraded to version 3.0. If you think it should be and feel you are qualified, are you interested in serving on a Standards Committee? He would also like to know if you worked on the previous effort to develop v 3.0. Also, do you know someone else that worked on the previously attempted v 3.0 upgrade? If your answer to any of the above is affirmative, please send your name and address to the MOTD Ed

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