

# MOTD

The OS-9 Users Group Newsletter

## January/February Issue 1994

Finally, I just finished sealing the last envelope on the Nov/Dec Issue and will be dropping them in the mail today.

One of the reasons that we were so late with the issue is due to the really COLD weather the midwest, specifically Chicago, has just had.

One of our cars wouldn't start and I was left stranded during the day. I work from midnight to eight AM while my wife works from ten AM until she leaves the office, usually around seven PM. This left no time to drive to the post office to get stamps, go to get photocopies made or generally get much of anything done.

The good news is I have finally made some progress in getting some projects I've wanted to finish out of the way. This will leave a lot more free time to dedicate to the Users Group.

It is amazing how quickly time will pass when you have projects started and not finished. Seems like just the other day I was going to install a SCSI interface on my computer. Hm, come to think of it, that was right after the Fest. Well, no matter, it'll get done sometime soon.

Well, a new year and new members. If you know anybody that hasn't joined and could benefit from the Users Group try to sell them on us.

I must admit that we are a little smaller but I do expect that will change in the near future. As old members send in their dues I'll be updating our membership roles. It would be nice to see new names as well.

## Elections!

Nominations and suggestions for nominations are being solicited by the Users Group. The elections will be held at the Chicago CoCoFest this year. If you would like to be considered for an office or want somebody else to be nominated please read the Interim bylaws and following the instructions there place your nomination.

The next MOTD will list the nominating committees nominations. This doesn't mean that others will not or can not be nominated, just that these individuals are the ones that the board of directors feel are best qualified.

The graphic for this issue shows a conductor with his timepiece out. This is how I feel at times, like when I look at the calendar and wonder where the last three weeks went to. I think this is a problem most people have, how to use the little free time they have constructively. I must apologize to the members of this Users Group for not being able to devote a lot more time to the group but as I will explain later in this column there are extenuating circumstances.

More news! OS-9 has been selected for testing in several areas of interactive media and cable TV services. This is good news indeed. OS-9 has beaten out Microsoft Windows in a head to head competition.

The breakup of Atlantic Bell will not likely affect the consumer tests that are scheduled for OS-9 based interactive video on the East Coast. This is just another example of OS-9's versatility and power that it was selected on both coasts for the OS of the new Video systems.

(Cont. on Page 1)



## MOTD Information

The OS-9 Users Group, Inc. is a not-for-profit organization, registered and incorporated in the state of Iowa, whose members share an interest in the OS-9 operating system in all of its various forms.

MOTD Is the official newsletter of the OS-9 Users Group, Inc.

The OS-9 Users Group, Inc. has no affiliation with Microware or any other organization.

The opinions expressed by the authors of any articles or columns are not necessarily the opinions of the Editor, Publisher, columnist nor do they reflect the policies of the OS-9 Users Group, Inc.

The MOTD will be printed a minimum of four times per year.

To receive MOTD you must be a member in good standing of the OS-9 Users Group, Inc. in accordance to the bylaws.

To become a member in good standing you must pay the yearly dues of \$25.00 US funds (\$30.00 US Funds if you live outside of the US or Canada) and obey all of the membership rules set forth in the Constitution of the Users Group and the bylaws.

Dues may be made payable to:

**The OS-9 Users Group, Inc.  
6158 W. 63rd St.  
Suite 109  
Chicago, Ill. 60638**

**USA**

Memberships run from January 1st through December 31st. Send a SASE for a membership kit which will include a membership form and information about the Users Group as well as a pro-rated price for joining the Users Group in mid year.

Please remember that this is a self help organization and also a non-profit organization incorporated in the state of Iowa and as such it is directly governed by the laws of that state as well as all federal laws. Accordingly Dues are non refundable in accordance with both state and federal law.

Reprints or back issues are available to members in good standing at the cost of \$1.50 each plus \$.50 Shipping (US funds). Please send a SASE and a list of the issues you wish sent to you.

Here is a list of the current officers of the OS-9 Users Group, Inc.:

POSITION	NAME
<b>PRESIDENT</b>	Carl J. Boll
<b>EXEC. VICE PRES.</b>	Colin McKay
<b>VICE PRES. 6809</b>	Brian Goers
<b>VICE PRES. 68K</b>	Eddie Kuns
<b>VICE PRES. COMM.</b>	Paul Jerkatis
<b>TREASURER</b>	Bro. Jeremy
<b>SECRETARY</b>	Howard Luckey
<b>LIBRARIAN</b>	Zack Sessions
<b>EDITOR</b>	Joel Hegberg

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## MOTD Contributions

Articles, editorials, letters to the Editor or Board of Directors, personal ads, graphics or columns may be submitted by the following means:

E-mail to Joelhegberg @ Delphi, E-mail to Sysop @ SandV [(708)352-0948] or by mail to the the User Group address in Chicago. All submissions should be in pure ASCII format.

The submission of material does not guaranty publication. All publication of material is subject to review by the Board of Directors and must not be in conflict with the stated purposes of the Users Group as defined by the constitution and bylaws of the Users Group. The Board of Directors may also establish additional guidelines for acceptance to publication. Submission deadlines are four weeks before actual printing of MOTD.

Criticism towards making MOTD a better publication is welcomed. Letters may be addressed to the Editor and mailed to the Users Group address or sent directly to Joelhegberg @ Delphi. E-Mail can also be sent to Mithelen @ Delphi, CBJ @ Delphi, Luckylene @ Delphi, Briangoers @ Delphi, Eddiekuns @ Delphi or Colorsystems @ Delphi.

## MOTD Advertising

Commercial advertising is available in MOTD. Please send a SASE for current rates. All ads should be submitted as camera ready copy. We reserve the right to limit the size and quantity of ads.

**SandV BBS (708)352-0948**

The SandV BBS is a BBS being maintained by Paul Jerkatits to provide Internet access.

As many of my friends know I will shortly be seeking employment. For the past 16 years I have worked for R. R. Donnelley & Sons as a printer. Last year when Sears announced that it would no longer publish its "BIG BOOK" catalog and was getting out of the catalog business it dealt a death blow for the division I worked in.

Although I was not attached to the Sears Group it was felt that the loss of the Sears account (over 60% of our divisional sales) made support of our division economically unfeasible. Many plans for the work that I do were proposed and rejected. Eventually it was decided to move the work to an outlying division (read that as lower wages) and phase out the Chicago division. This is a real loss since the Chicago division was the first division. It all started here. How times change.

My point in bringing this all up is that in the past couple of months R. R. Donnelley has been bringing in outside services and counselors to help employees with all aspects of being laid off.

One of the key issues that keeps coming up over and over is maintaining a positive attitude. You have to believe in yourself before others can believe in you.

This is true whether you are looking for a job or trying to sell a product or service or just in your relations with other people. It was suggested that we sit down and list the 10 things we like most about ourselves and the 10 things we like least. After we made the list the speaker suggested that we take a good long look at the 10 things we didn't like and make another list of 3 ways we could improve each of those areas. After that he suggested that we now rate those areas two ways. List them in order on how easy they would be to change and then list them in the order of how important we felt they were. He then suggested that from list A we select the easiest one to change and work on that. When we felt we had made a significant improvement we should then take from list B the most important area and work on it. The idea was to not try to make drastic changes all at once but to work slowly and systematically on improving ourselves.

The same holds true with our Users Group. I'm of the opinion that we can't change everything all at once. We are working slowly but systematically at improving our Users Group. The important thing is that we are working on it and there are changes that have been made to happen and more are coming.

I guess that's all I have for this issue. I hope that all of our members are enjoying good health and taking time to smell the roses.

*Carl J. Boll*

## INTRODUCTIONS:

Last issue we introduced Steven Weller, UG B. O. D. member, Colin McKay, B. O. D. member and Executive Vice President, Brian Goers, Vice President/6809, Brother Jeremy, Treasurer, Howard Luckey, Secretary, Zack Sessions, U. G. Librarian and of course myself, Carl Boll, President. In addition we also met Joel Hegberg, Editor of the MOTD. This is the second part of the introductions and also the last installment. I wish to thank each of these members that have given up their time to help with this User Group.

Carl J. Boll President/Chairman of the Board, Os-9 Users Group, Inc.

### Eddie Kuns, Vice President/OS-9,68000 & OS-9000:

I was born in Brunswick, Maine, and have moved around quite a lot since then, as my father was in the Air Force. I currently live in Aurora, Illinois near Fermilab (Fermi National Accelerator Laboratory) where I'm doing the research for my PhD in physics. The school I'm attending is Rutgers University, in New Jersey, but I haven't lived in New Jersey since 1989 when I finished my course requirements!

I first encountered computers when I was in the eight grade, playing with a UNIVAC 90/30 using FORTRAN-66 on punched cards. This computer took up most of a room and had only one VDT, one line printer, one punched card reader, etc! I had to learn which JCL (Job Control Language) cards to insert into my program so I could compile and run it. Shortly after this, I was using a PDP 11 at a local college -- a step up because this computer allowed remote access. Also, a human being could interact with it, well, interactively, using RSTS/E! Those were the days, and I don't look back with regret.

I finally got a computer of my own for my birthday in 1982: A 4k CoCo I. Little did I know where this would lead me! I brought my computer with me to college when I started at Rensselaer Polytechnic Institute in Troy NY in 1983. By the time I graduated RPI with my B.S. in physics, I was using a 512k CoCo III with two floppy drives and a 300 baud modem -- the height of computers! A couple friends had Amigas, but they were still fairly new, and no-one I knew could afford a Macintosh.

In the fall of 1987 I started my graduate work in physics at Rutgers University in New Brunswick, New Jersey. It took two years of classes to finish my course requirements for the degree, leaving only research. I chose to do my research in high energy experimental physics -- particle physics -- so I moved out to Illinois to do my research. Well, I've been out here ever since, and I plan to graduate this year.

For my thesis, I am investigating "lepton universality": the theory that all leptons (the electron, muon, and tau) interact with the same strength in electroweak interactions. In the standard model, this is true by definition, but some other models allow a limited "breaking" of universality. Specifically, I am comparing the "W -> tau nu" interaction to the "W -> e nu" interaction on the experiment CDF at Fermilab.

I started using OS-9 on a friend's CoCo II using level I, but didn't have much opportunity to tinker. Before I bought OS-9 Level II for my CoCo III, I learned UNIX, and knowing UNIX helped me learn OS-9 very quickly. I didn't really dive into OS-9 until I added a hard disk to my CoCo, but I quickly discovered what a wonderful environment OS-9 is.

Today I have two OS-9 computers: an MM/1a and my 1 meg CoCo/6309. I still use both, but the MM/1a gets much more exercise, largely because it's faster. I have been actively involved in the OS-9 community since around 1988, largely through Delphi and the Internet CoCo mailing list. I also got recruited to write the

Delphi Bureau and Database Report for The Rainbow, which was a lot of fun and kept me in touch with the community until the The Rainbow folded. My CoCo was one of the first CoCo's to publically join USENet (look in the USENet network maps for kilroy.chi.il.us), and now the mantle of Kilroy has passed to my MM/1a.

I've been a member of the Glenside CoCo Club since the summer of 1989, shortly after moving out to Illinois.

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#### Paul Jerkatis, Vice President/Communications:

Started working with computers in 1980, freshman year in highschool on a Wang mini-computer. Then progressed to using Tandy's Model 3 the next year. During my senior year, I took an electronics class, where our main project was to build (assemble) the yet to be released Tandy Color Computer 2 from a parts kit supplied by Tandy, Ft. Worth. Mine was one of the few in the class that actually worked when we were done, so I opted to buy it. A few months after graduation, I purchased OS-9 Level one for it, and was totally hooked on OS-9 and the Color Computer.

I went on to Bemidji State University, in Minnesota, to study Industrial Technology that fall (1984). I started the original SandV BBS my second year up at BSU, running on my CoCo 2 using a heavily modified version of the CoBBS package. The next year, I got my first CoCo 3, and switch the BBS over to that, and also started running it under OS-9 using some home brewed BBS software, and then eventually, a very early release of the StG BBS package. I also maintained the Universities BBS, which was run on a VAX 11/750 under VMS.

After graduation from BSU (with a B.S. in Industrial Design) I came back to the Chicago area, and brought the SandV BBS back with me, where it found its new "permanent" home in the basement of my parents house. After almost a year of unsuccessful job hunting after graduation, I went back to my old job with Evergreen Tropicals, which is an interior plant care service, and have been working there since. The SandV BBS is now running on a Sun 3/160 workstation, under SunOS (Unix) with 2 phone lines, and 1 Gig of HD space.

I'm a self taught C programmer, with a lot of experience using and programming under the OS-9 environment, and not quite so much with Unix, although I'm learning more and more about Unix every day with my Sun system.

Other interests of mine include Waterskiing and speed boating, archery, trap and target shooting, and home brewing beer.

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#### Mark Griffith, UG Board of Directors member:

I've been involved with electronics for 25 years starting with getting an amateur radio license when I was 16. I naturally evolved into computers when they first came out and have been using them since the 70's. I started using OS-9 on a CoCo2 back in 1985 and have been active since then. I've written a number of utilities and applications for OS-9 and continue to develop new software. I also run the Dirt Cheap Computer Stuff Co.

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#### Ed Gresick, UG Board of Directors member:

Unfortunately I (Carl Boll) experienced a hard drive crash which lost a lot of files including the one for Ed. I will include his vital statistics in the next issue. For now let me say that Ed has been a mover and shaker in the OS-9 community for some time now. He own Delmar, a company that sells computers, software and just about anything that is computer related (Ed, feel free to correct me). He is one of the few vendors that has OSK systems on hand and ready to deliver as orders are taken. He is also a vendor for G-Windows. Ed has many contacts in the OS-9 community and is well spoken of by most.--Carl

## Straight From the Horse's Mouth

This is the second edition of SPTHM, and hopefully it has settled into what will be the regular format. I will try to include two articles, space permitting, in each column.

The first article was written by David Stang, a software engineer working for the Space Experiments Department of NASA's Lewis Research Center, and covers an experiment scheduled to fly on the Space Shuttle in March, 1994.

The second article is about the use of OS-9000 on Intel-based machines to monitor data received by satellite link by Canada's Hertzberg Institute of Astrophysics. This article was written by Doug Reid, an independent consultant specializing in Space Science Engineering.

The articles have been edited by me, so any errors that may appear in them are mine. Opinions expressed herein are either mine, or those of the author, and do not necessarily reflect those of the OS-9 Users Group, Inc.

Space Experiments Department/NASA Lewis Research Center  
SOLAR ARRAY PLASMA INTERACTION EXPERIMENT (SAMPIE)

SAMPIE is a space experiment being developed at the NASA Lewis Research Center in Cleveland, Ohio. It is scheduled to fly on the STS-62 Space Shuttle mission in March 1994.

The objective of SAMPIE is to investigate the electrical behavior of space materials when they are exposed to the space environment, a plasma consisting of high energy charged particles.

There are three kinds of adverse interactions between space materials and the plasma: current collection, snapover, and arcing. Current collection occurs on a solar array when high energy electrons or ions are picked up from the plasma. Snapover occurs at a highly positively biased conductor, and causes a great amount of current collection from the plasma. These currents appear as losses in array operating current and reduce the capability to produce power.

Arcing occurs on highly negatively biased solar arrays and other surfaces containing conductor-insulator junctions. This leads to disruptions in power and electromagnetic interference.

SAMPIE's measurements will provide data for the verification of computer models, and help in the design of future spacecraft power systems.

The experiment hardware consists of an experiment plate, the electronics unit, plasma-potential and shuttle-bias probes, and a plasma pressure gauge. The experiment plate consists of different solar array samples and of small samples of various conducting materials and surface treatments. SAMPIE will be attached to a carrier riding in the orbiter's payload bay.

The electronic components are: two high voltage power supplies to bias the solar cells, a custom designed electrometer for highly accurate current collection, a custom designed transient current detector (TCD) for arc measurement, relay boards, I/O, plasma-measurement electronics, A/D boards, a single board computer (Motorola 68030 processor, RAM and ROM), and flash memory boards for data storage. The VME bus was used. Since the system is required to run in a vacuum, the boards were built with thermal planes for conductive heat transfer. The computer, A/Ds, and Memory were purchased from DY-4 Systems, who specialize in Military and ruggedized VME products.

During the experiment a range of bias voltages is applied to each sample successively while current collection, arc characteristic, and plasma data are collected. After each sample is done the data is saved to the flash memory. The data will be reduced and analyzed after it returns to the ground.

The tasks of the software are to:

- (1) control the high voltage power supplies and the relays;
- (2) acquire data from the electrometer, TCD, and A/D boards;
- (3) store the data onboard; and
- (4) communicate with the ground.

The software was written using Professional OS-9 V2.4 and Microware's PC-hosted development system "PCBridge" (C compiler, assembler, linker, and serial communication). During development, the executables were downloaded to the target using Kermit. The final version was programmed onto the ROMs.

OS-9 was used for its multitasking, interprocess communication, and timing capabilities. Data memory modules were used to share data between processes. Drivers were written to handle some of the custom board data acquisition and to store to the Flash Memory.

-David Stang

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About the Author:

David Stang works for the Aerospace Design and Fabrication Corp., supporting the NASA Lewis Research Center in Cleveland. He is working as a software engineer for the Space Experiments department. His past projects for NASA have included work on a chemical vapor reactor which produces research semiconductor material, and instrumentation and image processing tools for non-destructive testing.

He has a BS in Physics from Miami University, Oxford Ohio, and an MS from Penn State University.

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CANOPUS Project/Hertzberg Institute of Astrophysics  
OS-9000 Synchronous Data Processor

Microware's OS-9000 Real Time Version 1.3 operating system was recently and successfully applied to the problem of processing a complex real time synchronous data stream for Canada's Hertzberg Institute of Astrophysics in support of the CANOPUS project.

CANOPUS is a space science project that monitors the magnetosphere by measuring the Earth's magnetic field, the drift velocity of the plasma in the ionosphere, and optical emissions from the aurora borealis (Northern Lights).

A number of instruments located at some 15 sites across the Canadian North send data through a 3-channel, one-way satellite communication link. The three channels are time-division multiplexed onto a single satellite link. The downlink is terminated in three synchronous modems, the output of which is a modified DDCMP (DIGITAL Data Communications Message Protocol). The link protocol defines the receive only nature of the link which disallows re-transmission of messages in which errors are detected. "

Since price was an issue, OS-9000 was selected since it is targeted for off-the-shelf, relatively inexpensive, embedded PC compatible computers. Development costs were low since a PC 386 clone could be used, and the final cost of the end product was also kept in line. Another factor was that, if worse came to worse, OS-9000 is inherently upgradable to OS-9 and the subsequent high-end VME 680XX products - fortunately not necessary in this case.

For each of the six synchronous input data channels there is one HOP386C TME 386/33 Mhz embedded computer (from Toronto Micro Electronics Inc.), a 120 Meg IDE hard drive, an asynchronous RS-232C, and an RS-485 link back to the MSDOS-based "Group Controller". Finally, all of the TME computers are tied together via Microware's ISPI.3 TCP/IP. The common DOS "Group Controller" is used for the user interface and display.

The reliability of each channel must be "100%", so all six of the computers are on-line but each channel has a redundant channel.

The OS-9000 Runtime PAK boots from the hard drive, automatically loading and executing the application. The ongoing 9600 baud synchronous data stream is acquired via an interrupt routine that writes the data to an input buffer. Since each channel has a multiplicity of data sources, the application software acquires the data on a packet to packet basis, resynching the data stream for each packet. Packets could be as few as one byte apart.

Once acquired, the data stream is checked for errors, filtered, reformatted, and written to an output buffer. The output buffer data is output to a VAX on a packet to packet basis via an asynchronous RS-422 at 19.2K. The protocol used to/from the VAX is a relatively simple ACK/NAK protocol. If the VAX fails, the reformatted data is written to the hard drive. Status data is dumped onto the RS-485 asynch link on command from the Group Controller approximately once per second.

The ISPI.3 is used primarily to download the archived data if and when the VAX failed. Since it was connected to the VAX Cluster, staff are able to login to a selected channel from their desks via TELNET, determine the channel's status, reconfigure the channel as necessary, and/or acquire the archived data via FTP. Over time, the DOS based Group Controller was supplanted by this more convenient interface. Changes to the

application were made in the development computer and copied to the runtime processors via FTP.

The design and implementation was demonstrated through continuous on-line testing to be a success - which, in my mind, speaks volumes for OS-9000. There were, however, problems which were undoubtedly due to the fact the V1.3 felt like a relatively new product. I understand Microware's new release for OS-9000 address a lot of these problems, but I'll mention a few of them anyways, for historical reasons.

In particular, I found the built-in terminal drivers not conveniently suited for data acquisition; the description of how to define and enable an interrupt routine almost non-existent; screen control inadequate; and the debugger and RomDebug complete mysteries. I thought about creating a common driver for the synchronous channel, but gave up after considering the risks.

The V3.2 C compiler was weak and took some getting used to after my strictly ANSI C background. In short, the documentation was difficult - only the fact that Microware's Technical Support people (Pam, etc) could provide copious examples saved the day.

I should mention that Microware did strongly recommend their in-house training which undoubtedly would have alleviated many of the problems I experienced; however, in this world of fiscal restraint, those that control the purse strings would rather see me sit in my office for a month struggling than approve travel expenses. So much for common sense.

All said and done, I'm still using OS-9000 and still recommend it. Presently in our lab, a prototype 486/66Mhz running OS-9000 Professional is acquiring a contiguous synchronous 1.2Mbps data block (with a significant hardware FIFO), unscrambles the data, and writes it to a DOS hard drive for FFT analysis - not, I might add, in real time.

In addition, for all the bad mouthing I did about the comm drivers, I am presently using them to test various asynch protocols to/from an embedded processor soon to be launched onboard a NASA rocket. In short, once I got over the rather significant learning curve for OS-9000, I found it both simple and useful.

-Doug Reid, PEng.

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#### About the Author:

Doug Reid is an independent consultant primarily involved in Space Science projects for ROUTES Incorporated, the Canadian Space Agency, and the Hertzberg Institute of Astrophysics in Ottawa, Canada. He can be reached at phone: 613-839-1782, or Internet: dreid@kinburn.isis.org.

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That's it for this month. If any of you have any questions or comments about the column, feel free to write me c/o the Users Group.

*Colin McKay*

cmckay@uuisis.isis.org (Colin McKay)  
UUISIS - Nepean, Ontario (613) 823-6539

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Editors Note: Colin would like members (or anybody for that matter) to submit articles on how they personally are involved with the use of OS-9. Submissions may be sent to Colin at the internet address shown or they may be placed on disk and sent directly to the editor or the Users Group. Other alternatives are as follows:

1. Upload the file to Delphi to user JOELHEGGERG
2. Upload the file to ChiCoCo BBS (in Chicago) in straight ASCII form (312) 735-3355
3. Upload the file to SandV BBS (in LaGrange Park; a suburb of Chicago) (708) 352-0711
4. Upload the file to Cup 'O CoCo BBS (in Carpentersville; a suburb of Chicago) (708) 428-0436

If you upload a file for the MOTD to one of these BBS's please leave E-Mail to the SYSOP on the BBS explaining exactly what you uploaded and where it is to be sent. These BBS's all service more than one Users Group.

If none of these are acceptable another alternative is to submit a typed copy of the article which can then be scanned into the computer. This is the least preferred alternative.

## Vendor Listings \*

The **MOTD** will carry vendor names, addresses and phone numbers as a service to both our members and the vendors.

If you are a vendor of OS-9 related hardware or software you may request to be listed by simply sending a letter to the editor at the Users Group's address. There is no charge for being listed in this area.

Vendors who are members are listed in **BOLD** type.

<b>Vendor Name</b>	<b>Address</b>	<b>Phone Number</b>
AmiMajik Productions-Software	4650 Cahuengo Blvd; Ste #7; Toluca Lake, CA 91602	(818) 761-4135
Ark Systems USA	P. O. Box 23; Santa Clara, CA 95052	(408) 244-5358
Blackhawk Enterprises	P. O. Box 10552; Enid, OK 73706-0552	(405) 234-2347
Bob van der Poel Software	P. O. Box 355; Porthill, ID 83853 or P. O. Box 57; Wynndel, BC, Canada V0B 2N0	(604) 866-5772
Burke & Burke	P. O. Box 733; Maple Valley, WA 98038	(206) 432-1814
ColorSystems	P. O. Box 540; Castle Hayne, NC 28249	(919) 675-1706
Computer Design Services	2550 Sandy Plains Rd.; Marietta, GA 30066	(404) 973-2170
CoNect	449 South 90th Street; Milwaukee, WI 53214	(414) 258-2989
Delmar	PO Box 78-5238 Summit Bridge Rd.; Middletown, DE 19709	(302) 378-2555
Dirt Cheap Computer Stuff Co.	1368 Old Highway 50 East; Union, MO 63084	(314) 583-1168
Disto	1710 Depatie; St. Laurent, Quebec, Canada H4L 4A8	(514) 747-4851
Farna Systems PB	P. O. Box 321; Warner Robins, GA 31099-0321	(912) 328-7859
Frank Hogg Laboratories	204 Windemere Rd.; Syracuse, NY 13205	(315) 469-7364
Hawsoft	244 S. Randall Rd.; Elgin, IL 60123	(708) 742-3084
JWT Enterprises	5755 Lockwood Blvd.; Youngstown, OH 44512	(216) 758-7694
Ken-Ton	187 Greenacres Rd.; Tonawanda, NY 14150	(716) 837-9168
Microware Systems Corporation	1900 N.W. 114th Street; Des Moines, IA 50322	(515) 224-1929
Northern Exposure	7 Greenboro Cres; Ottawa, Ontario, Canada K1T 1W6	(613) 736-0329
'09 Online	221 E. 17th #31; Marysville, CA 95901	(916) 734-4264
Peripheral Technologies	1480 Terrell Mill Rd. #870; Marietta, GA 30067	(404) 973-2156
Sub Etha	P. O. Box 152442; Lufkin, TX 75915	(815) 748-6638
Windsor Systems	2407 Lime Kiln Ct.; Louisville, KY 40222	( ) -

## Magazines

The **MOTD** will list the various magazines that are available along with their addresses. The same rules apply as above. News letters will not be listed here.

<b>Magazine</b>	<b>Address</b>	<b>Phone Number</b>
68' Micro's	P. O. Box 321; Warner Robins, GA 30199-0321	(912) 328-7859
Metamorphosis	1368 Old Highway 50 East; Union, MO 63084	(314) 583-1168
The Underground	4650 Cahuengo Blvd.; Ste #7; Toluca Lake, CA 91602	(818) 761-4135
Nine-Times	5755 Lockwood Blvd; Youngstown, OH 44512	(216) 758-7694
CoNect!	449 South 90th Street; Milwaukee, WI 53214	(414) 258-2989



## CLASSIFIED ADS

The MOTD we will be offering Classified Ads to all members. In order to place an ad send in your copy to the address listed on the inside front cover. Ads should be kept as simple and short as possible. The first 4 lines will be free, after that all lines will be charged \$2.00 each. Ads will be run for two consecutive issues. One line will consist of 110 letters, spaces and punctuation marks. You may also send in camera ready copy which may be inserted in the ad. Contact the editor for details and pricing.

### Ad #1:

Spring Clearance: All Coco's! 1 CoCo2, 1 CoCo3 512k, 1 CoCo3 1Mb -- in a PC case with a Disto No Halt Controller, Tandy printers DMP 105 & DMP 110, Tandy CooDos software for 2 & 3, Level 1 & 2 OS9 8/16 windows. \*\* I can't give it away. \*\* Make me an offer!  
AMJ, 3 Lynmetestraat, 8730 Oedelen, Belgium. Call +32 50 781950 office hours MET.

This ad runs for free.

The editor of MOTD reserves the right to refuse ads or to limit ads due to space available in each issue. If the ad was charged for and not run we will refund all moneys. This is being offered as a service to our members only. Please do not place ads for non-members.

This is the fine print. We reserve all rights to do whatever we want! All ads must be kept within the laws of the State of Iowa and the USA. Please remember the charter of this User Group as well when placing ads. Thank You.

## BBS Listings

In order to have a BBS listed in this area it must have support for OS-9 listed in its opening login screen or as part of its title. There is no charge for a listing and this listing will appear as often as there is room for it. To have your BBS listed send the following information to the address listed on the inside front cover: BBS name, BBS phone number, lowest and highest baud rate supported, Sysop's name and location of BBS.

BBS Name	Location	Baud Rates	Phone Number
ChiCoCo	Chicago, Il	300-2400	(312) 735-3355
Cup of CoCo	Carpentersville, Il	300-2400	(708) 428-0436
OS-9er	Waukeee, Ia	300-9600	(515) 987-5315
SandV	LaGrange Park, Il	300-9600	(708) 352-0948

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We apologize for any inaccuracies in these lists. We will add to them as we obtain more information. Please help us out though. Send us any and all information you have, we can use the help. We are here to help serve you the member. If there is somer other service you would like to see implemented please feel free to suggest it. If it isn't against the law or the User Groups interests we will try to implement it. Thank you for your input so far and your continued support. All of the "staff" is looking forward to a great year in '94. Help "make it so".

All opinions expressed are strictly the opinions of the author(s).

## Editor's Log

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What a great time to be an OS-9 programmer! Why do I say that? For a great many reasons, actually. Sure, all of us know OS-9 is a terrific operating system to work with thanks to it's preemptive multitasking capabilities, but for too long OS-9 has not received the attention it deserves. Finally, it appears things are beginning to change. And changing where it really counts -- more OS-9 jobs.

As many of you may know, OS-9 was the topic of a Wall Street Journal article, this January 23rd, regarding the newly emerging set-top TV cable box technology. These set-top boxes are for the next generation of TV viewers, allowing them to interact with their cable television shows. This will make TV shopping more commonplace, and video-on-demand all the rave. No longer will viewers have to settle for what's on TV at the moment, or rush home in order to not miss their favorite show. Instead, TV shows will be available whenever the viewer wishes to watch.

To handle this new interactive system in a way that's friendly and responsive to the set-top user, an efficient operating system is needed. Any guess which operating system has been chosen by the corporate giant Bell Atlantic? That's right... OS-9!

What makes this even more exciting is Microsoft was also in the competition with a product it calls "Modular Windows," and OS-9 won out! The point is, true interactive systems of the future require smooth and efficient multitasking without much overhead, and Microware can deliver that product today in the form OS-9. As Ken Kaplan (founder of Microware) put it, "The main advantage we have is we have the technology today that people need today... they don't, as far as we know."

This story was big news for lots of people, not just for those using OS-9. Boisy Pitre also noted the news story was carried on NPR's "Morning Edition" (aired January 25, 1994) in great detail. It mentioned Microware had "sophisticated software" to allow it to contend in the extremely competitive emerging interactive TV market. If all goes well, Bell Atlantic hopes to provide this new service to over 10 million households by the year 2000.

Even with all this excitement, sometimes being an OS-9 user can become a lonely specialty. However, there's an amazing cure for this ailment. It's known as the Chicago CoCo/OS-9 fest, and it's guaranteed to take away any OS-9 blues you may be having! Chat with fellow OS-9 users and programmers at varying degrees of OS-9 prowess, attend exciting programming lectures, and just have a wonderful time. Check out the ad in this issue for more information. The Chicago show is the largest show each year, so don't miss out on this fun and informative experience!

Until next time,

*Joel Matthei Hegberg*  
M.O.T.D. Editor

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## THIS COULD BE YOUR AD!!!

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Write for more details on pricing and layout. This is an excellent way to target a specific audience. Very cost effective and it helps support the Users Group and the newsletter as well.

# **The Third Annual "Last" Chicago CoCoFest!**

**May 21st & 22nd, 1994**

The Glenside Color Computer Club is again sponsoring a CoCoFest. It is affectionately called the Third Annual Last Chicago CoCoFest because there were a lot of detractors and naysayers when the idea was originally proposed. The CoCo is a dead machine we were told.

We didn't want to believe those people, so against all common sense we decided to try holding a Fest (CoCoPro! sponsored it and we hosted it). It was called the First Annual Last CoCoFest. It was a success.

Then due to necessity CoCoPro! had to close shop. Who would hold the next Chicago Fest?

Well, the Glenside Club decided to gamble all of its treasury on the hope that the CoCo community would come to ChiCago to help support the machine that we all profess to love so dearly. Again the Fest was an unmitigated success!

Now we are doing it again.

Come Join us in celebrating the dream that hasn't died. The little wonder from Tandy (tm).

The Fest will be held on May 21st and 22nd at the HOLIDAY INN, ELGIN. See below for details.

Come have a good time with fellow computer enthusiasts. Support for OS-9, OSK and OS-9000 will be available as well. There will be seminars and vendors for just about anything you can think of. This is the largest gathering of the CoCo community all year. Don't miss it!

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**WHERE: The Holiday Inn Elgin  
345 W. River Rd.  
Elgin, Il.**

**Room Rate: \$52.00/night + tax  
Call: (708) 695-5000  
Be sure to ask for the special  
CoCoFest! or Glenside Rates!**

**Tickets will be \$15.00 at the door or order them in advance for only \$10.00 each with a SASE or \$10.00 each plus \$.50 S & H.**

**Make your check or money order payable to:**

**The Glenside Color Computer Club  
RR#2 Box 67  
Forrest, Il. 61741-9629**

**For more information call Tony Podraza @ (708) 428-3576 or  
BBS: (708) 428-0436**

**We are proud to announce that the annual OS-9 Users Group, Inc. elections will be held at the Fest, Saturday evening as well. Come attend! Support the dream!**

For superior OS-9 performance, the

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G-WINDOWS benchmark performance index 0.15 seconds faster than a 68030 running at 30 MHz with ACRTC video board (85.90 seconds vs 86.05 seconds) using a standard VGA board.

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The perfect, low cost, high-quality and high performance OS-9 computer serving customers world-wide. Designed for and accepted by industry. Ideal low-cost work-station, development platform or just plain fun machine. Powerful, flexible and expandable inexpensively. Uses a 68000 microprocessor running at 16 MHz.

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QUICK ED - Screen Editor and Text Formatter  
M6809 - OS-9 6809 Emulator/Interpreter  
FLEXELINT - C Source Code Checker  
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