

# OS-9 Newsletter

Volume II No.5 <<< BELLINGHAM OS9 USERS GROUP >>>

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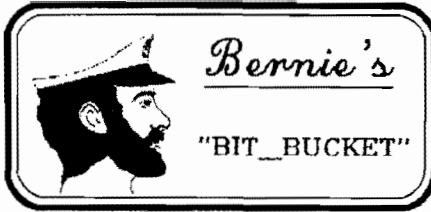
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## SETTING UP YOUR HARD DRIVE FOR MULTI-VUE

So you don't see any advantage to using MULTI-VUE, why? Maybe you just haven't set up your hard drive to take advantage of it. MULTI-VUE is my primary file finding/loading utility and it works great for me. Here are some tricks that folks have shown me and a few I've figured out by using it for the past few years. I hope they can help you get more enjoyment out of your equipment. I always run MULTI-VUE in an 80 column graphics screen. In my startup scriptfile I merge all the standard pointers, patterns, and fonts with the generic window, /w. The last line of my startup file says: "start/multi"

All my wife or son has to do is turn on the machine and type DOS and trusty old OS-9 Lvl 2 will look for the "startup" scriptfile and proceed to execute MULTI-VUE. A copy of my "startup" file (listing1) and "start/multi" (listing2) are included.

I have a /dd/START directory in which I have script files that start several programs. Listing1 links the shell, clears the screen (display OC), list the OS9 Welcome message to the screen (mold), loads MULTI-VUE command utilities such as fstat, merges graphic fonts, patterns and pointer to "/w", initialize whatever windows I may want and starts a shell in each window, initialize my ramdisk and finally run my "start/multi" scriptfile.

listing2 is my "start/multi" scriptfile in which I clear the screen (display OC), create my 80 column graphics screen and startup MULTI-VUE (shell startmv < >>/w5&).

If you have an entire directory of AIF files and try to load them you will quickly realize that all the noise (and the wait) is due to having the disk load the icons associated with each AIF file.

### Listing 1

```
link shell.
display OC
list sys/motd
clkget
printerr
echo Lock and Load, MULTI-VUE STUFF
load stuff
iniz w1
merge /dd/sys/stdpats4 >/w
merge /dd/sys/stdptrs >/w
merge /dd/sys/stdfonts >/w
echo Open windows /w1, /w2, /w3, /v1
iniz w1
shell i=/w1&
iniz w2
s cf 5 >/w2
shell i=/w2&
iniz w3
s cb 2 cg 1 cf 0 cs >/w3
shell i=/w3&
iniz v1
shell i=/v1&
echo initializing RamDisk
iniz r0
echo The RamDisk is ready to be formatted.
start/multi
```

### Listing 2

```
display OC
echo * Multi-Vue Startup *
wcreate /w5 -s=2 0 0 80 24 5 1 7
display 1b 21 </term >/w5
shell startmv <>>/w5&
```

### Listing 3

Directory of /h0		
AIF	CALC	CMDS
COM	DBASE	DESK
DOCS	FONTS	GAMES
MIDI	PICS	RAINBOW
SOURCE	SPELL	START
SYS	TEXT	UGLIB
USR	UTILS	WORKROOM
aif.prk	startup	

What I learned from this is to keep a SMALL number of AIF's in any one directory. The notable exceptions are the UTILS and AIF directories. More are kept in these directories because the AIF dir is where backup AIF's are stored and modified and the UTILS directory is going to be application intensive instead of data intensive. Try to limit most directories to one screen-full (24 files). This was more important before the fastgrf patch was available, but it is still a major item. The best example is your root directory. It should ALWAYS be kept clear of data files! (See listing3)

The directories that have the most data files are my /dd/COM/OST (OSTERM), /dd/DOCS, and /dd/WORKROOM/ARCnPAK (for ARced and PAKed files), and of course my CMDS directory. I have a directory called /dd/WORKROOM (listing4) where I do my de-ARcing and un-PAKing. In my WORKROOM dir are directories named ARCnPAK, BO9, MWC, PASCAL, BURKE, and AIFs for VEd (editor), dEd (Disk EDitor), multiple copy utilities, and a few others. Virtually all data files that pass thru the WORKROOM directory are transient.

Another example of directory arrangement is my /dd/GAMES directory. (Listing5). In this directory I have no AIFs at all so it loads quickly. I place all the commands in my /dd/CMDS directory and all game data files in the directory with the name of the game. I place the "AIF.GAM" file in the directory with the game data files and name it with all capital letters. All game data files are named with lower case letters. Then I sort the directory with MULTI-VUE's sort utility (under the files section on the menu-bar) (See Listing5.5 for the ROGUE directory) By being in upper case the AIF file is floated to the first position on the screen. When this procedure is followed throughout the entire directory tree you wind up with the least amount of mouse movement and the least hassles with MULTI-VUE.

One of the neatest things you can do with MULTI-VUE (since SHELL+, GSHELL+, and FASTGRF) is to use the SHELL+ ability to automatically treat any data file as a script file and attempt to run it. An ICON is not needed

to run a process, just put it in a scriptfile! In my /dd/GAMES/ROGUE Directory (Listing5.5) is a script file called "rogue.R0" (See Listing6). In this scriptfile, OS-9 formats the RamDisk (if needed), copies "/dd/games/rogue" directory to /R0, loads ROGUE into memory and then prompts the user to point to "/R0" and click the mouse. A second scriptfile "rogue.sav" (See Listing7) copies the updated "rogue.scr" in /R0 back to to the original "rogue.scr" in the "/dd/GAMES/ROGUE" directory so my new scores won't evaporate with the ramdisk when I turn the computer off. These scriptfiles help me use MUTLI-VUE's mouse to save time doing boring processes. That's what MUTLI-VUE is all about!

BUT -- MULTI-VUE has more!! I use Paul van der Poel's VED for writing. I love it. (Almost as much as Telewriter!!) VED's only drawback is that it doesn't contain a formatter. Well, MULTI VUE does, -- just by setting up the simple printer parameters under the hourglass icon, selecting the file you want to print (one click), then selecting FILES in the menu bar, and finally clicking on PRINT. No, this formatter won't let you use underlining, double-wide, italics, colors, etc. but it will do a great job of writing a letter home to Mom. By using an ICON for your own favorite speller you can have many of the features of WPSHEL (graphics Word Processor Interface).

Remember, you aren't limited to one process at a time with Multi-Vue. When you use Multi-Vue to call your favorite word processor it opens a window for you in which to run it. You can then <clear> back to Multi-Vue and run DYNASPELL on your most recently saved copy of your work. All the while you can be printing test copies with Multi-Vue's formatter.

There is much, much more to Multi-Vue than this short discussion can cover. All in all, I think it is the very most useful utility that I have. Although I was pretty disgusted with it before I got a hard drive, I wouldn't like to think of life with 30 megs of files on one disk without having Multi-Vue there to help me keep tabs on everything.

#### Listing 4

```
Directory of /dd/workroom
AIF.DED  AIF.PAK  AIF.SMT
AIF.VED  ARCnPAK  BASIC09
BURKE    C.MW     GSHELLP
MODULES  MS.DOS   NEWSTUFF
PATCHES SARDIS   SCRIPT
SHELL.V2.1 aif.hdm
```

#### Listing 5

```
Directory of /dd/games
BI0      FS2      GALACTIC
KORONIS  K03     LANDER
MM       MVDEMO   PLANETS
ROGUE    SUB
```

#### Listing 5.5

```
Directory of /dd/games/rogue
AIF.ROG  rogue.ch  rogue.dat
rogue.ful  rogue.grf  rogue.hlp
rogue.scr  rogue.sav  rogue.R0
savegame
```

#### Listing 6

```
* Put ROGUE in /R0
Echo Formatting RamDisk.
rdform 10
Echo Copying ROGUE directory to /R0.
dircopy /dd/games/rogue /r0 d u
echo Loading ROGUE into memory.
load rogue
echo Done.
echo Now point to /R0 and click mouse
```

#### Listing 7

```
* Saves the scores to the hard drive.
echo unlinking RCGUE
unlink ROGUE
echo Copying scores to the hard disk.
copy -r rogue.scr /dd/games/rogue/
rogue.scr
```

NOTE: The COPY utility used has an overwrite option (-r)

## Welcome to OS-9

by Bob Kemper, Delphi

Hi. Just a couple of quick thoughts that can help you keep OS-9 from becoming too big of a headache as you get into it. Some of this stuff may seem silly to you, or obvious or whatever. If so, fine. But I'm not sure how much you might already know, so I'll say it anyway.

1. First thing to remember is that OS-9 is an operating system, not an application. You'll need to download, buy, or write the programs to do the jobs or play the games.

2. Next thing to remember is that OS-9 carries quite a bit of power with it. The effect on you as a user, the main effect, is going to be the increase in complexity and confusion. There's a completely different style to doing things in OS-9 than there is to doing things in RS-DOS.

The difference can seem annoying at first, but after awhile you'll get the hang of it. Everybody (EVERYBODY!) that's gone from RS-DOS to OS-9 has had some trouble getting started. Pretty much all of us are willing to point things out and give help where we can. If nobody online at the moment can help, which does happen from time to time, then just post a question in the forum and you'll usually have your answer in a day or so.

3. Next general idea to remember is that OS-9 is hardware oriented and you will find alot of the programs are written to take advantage of that.

To get the most out of it you'll end up pulling some more hardware on your system. You don't have to add the extra hardware to use the system, but to use it fully you will. If you don't already have 2 double sided drives you're going to want them; it's almost a necessity. Also highly recommended are; a no-halt controller; a rs-232 port; a real-time clock; a mouse; a printer interface (with buffer if possible); and a hard-disk.

A multi-pak or it's replacement isn't necessary to do this, but it will allow

you to add extra things later if you like. Either the Disto SC-II with a 4-in-1 board or the Eliminator with some of its options fills the bill nicely for running most of the external hardware I mentioned.

4. Final general idea to point out is that there's changes and additions to OS-9 that you'll end up putting on your system. Some of the changes can't work together, and some of them require a previous change. Sometime there are replacements for stock commands that have the same name as the stock one did. In other words; after awhile you'll be working with something that's very different than what you start off with. To keep from going nuts later on; KEEP TRACK OF EVERYTHING YOU CHANGE AND ADD! Get yourself a cheap notebook that's dedicated strictly to this information. For every change you make and everything you add keep track of:

- a. The name of what's being changed.
- b. The name of the change if it has one, and who wrote it, and when.
- c. Where you got the change from, and the file name if downloaded.
- d. What the change is supposed to do.
- e. Ident information from before and after making the change. At least:
  1. Header for:
  2. Module size:
  3. Module CRC:
  4. Edition:
- f. The date you make the change.
- g. Any notes that help you know what's new, better, different, etc.

5. The really final general idea to keep things smooth and as painless as possible is to always make backups of everything as soon as possible. Don't use the original disks of purchased programs other than to back them up. If you get a hard disk get in the habit right from the start of backing up any additions on a regular schedule. If you start writing programs (pretty much everyone does) keep backups of your work as you go through the program. (When finished you can always backup the end version and get rid of the inbetweens) Backup, backup, backup!! It can't be emphasised enough. There's many ways of messing things up, and you can lose so many hours/days/weeks worth of work. MAKE BACKUPS!

6. Ok. Some specific suggestions of software you should get right off the bat. These are just some of my favorites. Other OS-9ers may disagree or may suggest others, but for now this is a reasonable list to start with.

One good point about the things on this list: they're all free on CompuServ, Delphi or local OS-9 Bulletin Boards.

#### Utilities:

AR VERSION 1.3 Needed to unarchive many files.  
 PAK V2.02 Same reason.  
 SCF EDITOR PLUS Much improved over the standard. Get it.  
 CP-COPY/LINK/MOVE FILES Quick and easy file handling  
 IPATCH.AR Many patches use this routine. Get it.  
 TYPE.AR Fire up a new window (snap!) that fast.  
 DMODE-XMODE FOR DISKS Change disk descriptors.  
 ARCHIVE/RESTORE FACILITY For backups. BACKUP, BACKUP.  
 Patches:  
 GFX2 IPATCH Fixes a small bug in the next listing.  
 ENHANCED GFX2 Adds power features to GFX2 for Basic09.  
 FAST GRFDRV PATCH & DEMO Much faster graphics.  
 GSHELL+ PATCHES Makes Multi-Vue a reasonable GUI.  
 CP IPATCH FOR VER.01.01 Fixes a small mistake.  
 L-II BUGS & PATCHES You'll want this information

#### Applications:

SHELL+ V2.1 Forget the standard Shell. Use this one.

There's dozens, or maybe even hundreds of other programs, utilities, patches, etc. that you'll want to have. There's drivers for almost all hardware you may end up getting. There's patches to fix various bugs in OS-9 itself. There's patches for modules that have already been patched once or twice. They can't all be listed here, but they are listed in the descriptors in the download databases. If you think you've found a flaw with something, take a look in the database. You'll probably find a patch for it. Plus, you can always ask questions in forums.

I hope this helps you get things together a little easier. OS-9 L2 is a wonderful operating system. I think you're going to like it.

## We Need to Standardize OS-9/OS-K

by Joel Ewy;Delphi

I grew up with my Color Computers. But as much as I've loved these machines, there is much about them that really annoys. The lack of a parallel port, the single poor and non-standard serial port, the limited keyboard, and the abominable Multi-Pak come immediately to mind. And, of course, some of us need more speed than the poor old 6809 can deliver.

Well, now we are faced with a wide array of new computers that range from 6809 to 68030 (with even the possibility of a co-processor for MS-DOS for one of them.) But the common denominator among all these machines,

and the one thing that really links them to the Color Computer is the OS-9 operating system.

We are at a critical point in the history of our little nonconformist stream of personal computing. At this time, we could establish a large and growing software base running on an amazingly diverse array of computers, or we could splinter into various rival groups and fade into obscurity to join the Coleco Adam and Texas Instruments crowd.

The keys to the success of the IBM compatible market were an open bus

architecture, standardized components, and, most importantly, a single operating system enabling the same software to run on all the compatibles. All of us who use OS-9 understand why it is far superior to MS-DOS. The key is its strict modularity, and true device independence.

The designers of all the new OS-9 computers have learned lessons from the IBM world, most of them using at least some IBM compatible hardware. But the most crucial thing developers must keep in mind now is software compatibility.

OS-9 makes it easy for us to write software that runs in diverse hardware environments -- but only if we stick to the rules and plan ahead. Using good programming practices -- again modularity is the key -- it should be possible to write applications in C, BASIC-09, or even Pascal that will run, with only minor source code modifications (like substituting a standard header) and re-compiling on OS-9 III on a CoCo 3 or TC-9, OS-9/68K on a TC-70, K-Bus machine, MM/1, or the PT-68K4 (System IV). The TC-70 and the MM/1 use the exact same processor and graphics chips. The PT-68K4 uses the ubiquitous VGA card. Good modular programming and OS-9 should make it relatively easy to write even paint programs that can run on any of these computers with as little modification as substitution of one module at runtime.

What we really need at this crucial time are some standards to keep the OS-9 market from fragmenting. The MS-DOS world has IBM to look to for standards, but we can't rely on Tandy anymore. Besides, this community has always been very good at doing things for ourselves.

I propose that we organize some sort of committee to establish or adapt standards for OS-9. This will ensure that OS-9/68K software will be compatible across the various new platforms, and it could ensure continued support for the thousands of 8-bit OS-9 computers that are still running out there.

Think of all the possible platforms for our operating system. The Atari ST, the Macintosh, and the Amiga can run OS-

9. There are coprocessor boards for MS-DOS machines. OS-9000 will run on thousands of 80386 and 80486 PC's, as well as the 32 bit Motorola microprocessors. OS-9 can run on anything from tiny ROM based embedded controllers to personal computers and up to monstrous multi-user VME-bus machines. The potential market is enormous. But the hordes of MS-DOS users won't come to OS-9 when they outgrow their single-tasking non-reentrant memory hogs unless we have a large software base of powerful programs of all sorts that run right out of the box in a real point-and-click environment. For most of them, the only necessary hardware investment would be the addition of a coprocessor or the replacement of their motherboard. But we've got to give them a reason to do that.

Things that our standards organization should seriously consider include a coprocessor file manager for communicating with other operating systems from an OS-9 window, a graphics file manager that abstracts pixels and screens, sending as much picture information to the screen or window as the hardware drivers and descriptors will allow, and some standard file for-

If we play our cards right now, we may no longer have to stare with envious eyes through the MS-DOS software catalogs and wish there was some Optical Character Recognition software, or really good CAD and PC-board layout software for OS-9. We've all invested hundreds of dollars and thousands of hours into our computers, let's not let all that go to waste. It's really up to us.

## IMS MM/1 Report

Interactive Media Systems, Inc. would like to inform customers concerning its vigorous activities in the last two months. IMS has been finalizing details of its The Time Is Right campaign, begun just before Christmas with the involvement of several large Color Computer clubs across the United States. By June 1, it is anticipated the The Time Is Right campaign will be led by 10 or more independent IMS sales representatives in the Pacific Northwest, New York City, upstate New York, Baltimore, Atlanta, Dallas/Ft. Worth, and other places where a concentration of OS-9 users and universities exists.

The Time Is Right campaign relies on the enthusiastic support we have received from clubs across the United States. IMS representatives are already beginning to develop relationships with these club members to assist in setting up independent retail operations, interfacing with college students, and more.

IMS has shipped its second edition of The Insider. If you have not received your copy, please call Mary Kay Weglein at 301/718-4960. If you have an invoice or check number, please let her know.

This issue is full of interesting material on the newest multimedia events around the country. In fact, since the time that the MM/1 was announced, the volume of multimedia news has exploded. Now Microsoft, Tandy, and IBM have thrown their hats in the ring. Their success will likely depend on software specifications as well as hardware specifications. Updates on their approach to multimedia, and how they will affect the MM/1, are included in this issue and the next issue, due out in late May.

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**NW CoCoFest**

June 21-22 Port Orchard, WA

# Dynacalc/ /Phantomgraph

by Al Johnson;Port O'CoCo

The following information is to get you started using Dynacalc and Phantomgraph, and does not cover all of the possibilities of Phantomgraph. Many of the features such as color, groups, and attributes (an attribute of 1 will cause your pie graph to have a pull-out piece) will need to be explored by you as you learn more about this program.

The following is a simple sample of a Dynacalc spreadsheet named "dates" that will be used as a reference.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2	12	23	43	23	21	34	28	17	18	31	41	10

The data will be saved in rows to a RAM disk /R0. In the information that follows examples will be given after an explanation in this format: explanation (example).

The selection bar across the top of Phantomgraph invokes pull-down windows. When you are instructed to "click" in the window: this means you place the cursor in the pull-down window without highlighting any selection and pressing the fire button on your joystick.

## DYNACALC:

After you have entered your data in Dynacalc you must save them in an ASCII format to be used by Phantomgraph:

- / - Activates command line.
  - s - Indicates system function
  - # - To Load or Save data.
  - s - Save data.
- Enter pathname of file to be saved (/r0/dates).  
 Select <R>ow or <C>olumn (R)  
 Enter range to be saved. (A1..L2)

File is now saved in a format that is usable by Phantomgraph. It can be identified by the fact that it has no extension.

## PHANTOMGRAPH:

First you must select the directory in which your data was saved (/R0).

- Click on Files in the upper bar.
- Highlight pathname area.
- Type in new directory name. (/R0)
- Press <ENTER>

Place the cursor in the pull-down window where it does not highlight the directory name and click.

Now convert the file from a Dynacalc format to a Phan-

tomgraph format.

- Select Utilities.
- Select Convert
- Select Dyna.
- Highlight "Input File Name".
- Type in file name. ("dates")
- Press <ENTER>.
- Select "Data File Name".
- Type in file name for converted data. ("mydates")
- Press <ENTER>.
- Highlight "Value 1 Column".
- Enter the first number of the row or column that contains data that you saved using the # option in Dynacalc. (2)

If the row or column you saved contains labels for your data, you should now highlight "Label 1 Column" and type in the row or column. (1). Put the cursor in the pull-down window where it does not highlight and click. When the window reappears, move the cursor outside the window and click.

Your converted data has now been saved. To access this data for graphing you must open the file that contains the data. Do that as follows:

- Select files.
- Select open.
- Select data.
- Select filename. ("mydates").

You are now ready to decide what your graph will look like.  
 Select graph.

If you want titles, x-axis, y-axis, labels, etc.:  
 Select titles and fill in the information.

To activate titles, imported labels, etc.:  
 Select verbose and turn on the desired functions  
 Choose the type of graph.  
 Select draw graph

To print your graph:  
 Select print.  
 Select type of printer.

To save your graph:  
 Select files.  
 Select close.  
 Select graph.  
 Type in file-name  
 Click in pull-down window.

Remember that if you have been using a RAM disk (/R0) you must save your data and graph on a disk before you exit the program. Or you can copy the /R0 information to a disk using your copy commands before you shut the computer off.

Here is a sample Dynacalc/Phantomgraph Startup file:

```

iniz w3
display 1b 20 2 0 0 50 18 0 2 2 1b 31 2 0 >/w3
dynacalc <>>>/w3&
iniz w4
iniz r0 (Microware's Ram Disk in the Development Pak)
link shell
merge sys/stdfonts
merge sys/stdptrs
merge sys/stdpats4
display 1b 20 06 00 00 28 18 00 01 01 1b 3a c8 01 >/w4
pg -x <>>>/w4&

```

## MM/1 at Rainbowfest

by Mike Knudtsen;uucp:Prncelon.ed

I just returned from the Chicago RainbowFest, where I saw the latest MM/1 machines and talked with the IMS people.

It's in final form and has been through a pilot production run, so about a dozen developers and customers took machines home (in kit form to beat the FCC certification which is still tied up in paperwork). "Kit" means the completely assembled pair of circuit boards, disk drive, all software, and optional case and power supply.

More kits will be shipped as boards are assembled and tested. The official case is a compact PC box. Fully assembled units will start shipping the day the FCC gets off their butts -- then the Kit offer will no longer be available. If you want one now, by all means get in on the kit deal while you can.

It now comes with Microware's OSK 2.4 and the complete development software set (C, Make, Umacs), NFM, PC-file-transfer, and OddJob (a combination script Shell and AWK-like interpreter), and some other stuff. Kevin Darling's Windowing system is now running pretty much complete and is included in the package.

Besides the usually animation and sound demos, I saw it running preliminary versions of the drawing program (also bundled) and the UtiMusE MIDI music score editor/player (not included, and not ready for release yet).

Both circuit boards are slightly bigger than an old IBM punch card, really compact. All CMOS chips, so only the disk drives need cooling. Palette controller is now standard, 8 bits each RGB for 16 million colors. DMA stereo sound is

## Signetics' 68070 IC-2 Serial Port

The Signetics 15 MHz 68070 in the MM/1 includes more than just a central processing unit. The other features include a serial port, stereo DMA (Direct Memory Access) controllers, watchdog timers, and the Signetics inter-processor serial bus called "Eye-Squared-See" (I-2).

The I-2C bus is a serial communications link between different integrated circuits. In the short term, IMS is writing drivers and error-detection and correction code to allow various MM/1's to use the I-2C bus for simple networking, much in the manner of Apple's Appleshare network for the Macintosh.

The high speed mode of the I-2C bus will be used most often. The rate is 100KHz. Maximum data transfer is thus roughly 100Kbaud. Practically, IMS anticipates a throughput of about 80Kbaud but with improved reliability via error-detection and-correction, and with improved access with its packetizing.

For sake of illustration, imagine that IMS has established a CD-ROM help interface that involves a "talking head" using advanced I-2C speech synthesis and an image (one-twentieth of the screen) of a person's head. The images and the speech synthesis together are transmitted over the bus to provide the MM/1 user helpful information.

One-twentieth of an MM/1 screen is 3370 bytes. By only transmitting changed bytes, and by compressing those, each single frame of the help screen can be reduced to about 700 bytes or better. Ten frames of video per second requires 50Kbaud. I-2C signals for voice synthesis require 4.5K baud. Thus, the bandwidth required for such a "talking head" is about 55K baud. This still permits enough bandwidth for simultaneous transmission of one full screen of help information per second. These results indicate that, even though I-2C does not compete in speed with ArcNet or Ethernet, it can be impressive, especially with multimedia system software support that maximizes the I-2C bandwidth with built-in compression and decompression. The I-2C bus can be used in master or slave mode. It can be connected to a maximum of 128 different peripheral ICs or MM/1 systems. The serial data is transmitted reliably over a data pin thanks to the clock transmitted over the clock pin. SCL sends the clock timing, and SDA sends the serial data. I-2C can generate interrupts at seven levels of priority.

The I-2C interface works tightly with the CPU on the 68070. All data in controlling the interface is stored in 10 registers that are fully transparent and memory mapped into the CPU on the 68070.

The I-2C was designed by Signetics to provide simple and flexible data interchange among a wide variety of integrated circuits. Many of the initial MM/1 owners, part of the Color Computer and OS-9 groups, are hobbyists. They will doubtless find the I-2C bus challenging.

IMS will support some strategic I-2C-compatible chips and circuits, ensuring that the MM/1 product line provides focused solutions to our targeted markets. By solving problems faced by people outside of the OS-9 and Color Computer markets, the MM/1 will be purchased widely for configurations where PC-compatibles and Macintosh's cannot succeed.





## FHL's TIGER

by Frank Hogg, Delphi

The TIGER is a 68000 co-processor for the TOMCAT TC9 that runs at the blistering speed of 10 Mhz! That's over 5 times faster than the CoCo3! Some functions can be speeded up by as much as 8 times with the TIGER!

Now use all your existing RSDOS software and hardware AND have the power of the 68000 in the same cabinet. Amaze your friends with the speedup possible with the TIGER. If and when you want you can add OS9/Level II and speed that up by a factor of 2 or 3! You could also add OS9/68000 to the TIGER without sacrificing ANY of your existing software OR hardware. OS9/68000 runs on the TIGER with your drives etc. that are running from your TOMCAT TC9! NO extra hardware needed. Later, if you want, you can further improve the performance of the TIGER by adding modules (cards) to the TIGER on the K-Bus! Already there are more than 20 different cards available including memory cards, 2 and 4 port serial cards, 4 port parallel cards, SCSI and floppy controller cards, DMA (Direct Memory Access) cards, and more! With the TIGER you can use these cards even from BASIC! Just 'CALL THE TIGER'!

You don't have to spend THOUSANDS to have the power of the 68000! As a matter of fact the TIGER introductory price is ONLY \$129.95!

The TIGER is in stock for immediate delivery! The TIGER requires the TOMCAT TC9 to run. For more information on the TIGER and the TOMCAT TC9, contact: FRANK HOGG LABORATORY, 204 Windemere Rd., Syracuse, NY. 13205, (315)469-7364

## GNU and "Copylefts"

I have been hearing about GNU software and their "copyleft" policy. I finally came across their official notice posted this month on Delphi. It is very

lengthy and covers every possible detail. I have included only a small portion of their text that I thought you might find interesting as it effects the 68xxx world.

### GNU SOFTWARE:

The Free Software Foundation is dedicated to eliminating restrictions on copying, redistribution, understanding, and modification of computer programs. We do this by promoting the development and use of free software in all areas of computer use. Specifically, we are putting together a complete integrated software system named "GNU" (GNU's Not Unix) that will be upwardly compatible with Unix. Some large parts of this system are already working, and we are distributing them now.

Other organizations distribute whatever free software happens to be available. By contrast, FSF concentrates on development of new free software, working towards a GNU system complete enough to eliminate the need to purchase a proprietary system.

After we create our programs, we continually update and improve them. We release between 2 and 20 updates a year for each program. Doing this while developing new programs takes a lot of work, so any donations of pertinent source code and documentation, machines, labor, or money are always appreciated.

### COPYLEFTS:

The copyleft used by the GNU Project is made from a combination of a copyright notice and the "GNU General Public License". The copyright notice is the usual kind. The General Public License is a copying license which basically says that you have the freedoms we want you to have and that you can't take these freedoms away from anyone else. (The actual document consists of several pages of rather complicated legalbol that our lawyer said we needed.) The complete license is included in all GNU source code distributions and many manuals. We will send you a copy on request.

We encourage others to copyleft their programs using the General Public

License; basically programs only need to include a few sentences stating that the license applies to them. Specifics on using the license accompany it, so refer there for details.

GNU software includes a C++ compiler for 68000 machines (MM/1, TC-70, etc.) that is better than the C compiler supplied by Microware. Also an EMACS type text editor, MAKE utility, GDB Debugger, and many more applications and utilities.

## NW CoCoFest

Rodger Alexander, Donald Zimmerman

LOOK OUT! I'm getting more excited everyday. Only a few weeks until our first ever Northwest CoCo Fest, and things are beginning to shape up very nicely.

For those of you who can't make it for the whole thing, individual event prices are being offered:

Friday night's session \$5

Saturday's Sessions \$5

Luncheon \$5

CoCo Fest Mug \$5 (\$7.50 including tax and shipping)

Swap space \$5

Port Orchard does not have motel facilities so we have made arrangements to "headquarter" ourselves at the Best Western Quality Inn on Kitsap Way as you head north leaving Bremerton. (Bremerton is about 7 miles north of Port Orchard) If you are planning to arrive Friday, make your reservations now! The phone number is (206) 373-7349. (Single=\$62, Double=\$67, Triple=\$75, Quad=\$83)

Friday Night's session will be held at the Best Western Quality Inn and will feature Brook Hanford from KOMO-TV Seattle as our guest speaker.

Saturday: The main event gets underway in Port Orchard at the HiJoy Bowl on Bethel Rd. (A BOWLING ALLEY????). The upstairs section of the HiJoy Bowl is full of conference rooms, so we will be well served, and afterwards we can always bowl a few lines while we "cri-



lique" the day's events

#### SPEAKERS:

1. History of the CoCo: Tom Rosenbaum (Spectral Assoc.)
2. OS-9/Unix: Les Bulyar, Alan Johnson, Bob Foster, John Schliep
3. Hardware & Upgrades: Rodger Alexander
4. Communications: Scott Honaker (Microsoft)
5. BASIC: Mark King
6. Sources for HELP and SOFTWARE: Terry Laraway
7. Luncheon Keynote Speaker: Chris Burke (Burke & Burke)

#### SWAP MEET:

If you have some computer "stuff" you want to sell, trade, etc., BRING IT! Your registration fee includes a space for you to display your wares if you choose to do so. I heard that a couple of Radio Shack stores are planning to "set-up" a large area to display and sell "CoCo-Stuff" at discounted prices. I know I've got a bunch of stuff I'm planning to bring.

#### REGISTRATION \$25:

Everything is included: Friday night's session at the Best Western Quality Inn in Bremerton, All of the mini sessions on Saturday morning, Swap Meet space rental, Luncheon and your very own personal souvenir MUG with a green CoCo Screen on one side and a blue OS-9 Screen on the other. See the Ad for specific times of each event. And I'll see you there June 21 & 22!!!!

## 68xxxMUG

The May meeting of the Seattle 68xxxMUG featured a viewing of instructional video tapes produced by the Bellingham OS-9 Users Group. The first taped session was installing 512k memory board into a CoCo-3 and the second taped session was installing a Burke & Burke hard drive system on a CoCo-3. Everyone watched very quietly. That was a first!

Donald Zimmerman from the Port O'CoCo Club spoke to the group about the upcoming NWCoCo Fest on June 21-22 (See advertizement). Don also passed out flyers about the Computer Bank that collects donated computer systems, software and equipment and then distributes them to disabled people who can use the computers at home to become self sufficient and earn an income doing computer related task such as mail labeling, etc.

Scott Honaker brought a VERY old 8 Meg Radio Shack Hard Drive, the size of a full size PC-AT computer and twice as heavy. He tried to connect it to the coco with the Tandy Hard Drive Interface and using the /HD descriptors and drivers included in the Config file on the OS-9 Level-1 version 2.00 system disk. BUT, we couldn't get it to work. Oh well, it will always make a good anchor. Anybody want to buy my 18 ft. Sailboat for \$3200?

## NW Club Activities

### B'ham OS9 Users Group

The Bellingham OS-9 Users Group met May 16th at my home. We reviewed Craig DuBois progress with his major modification to his CoCo-3 to make it fit in a mini tower case (see April Newsletter). We also discussed the club's participation at the NWCoCo Fest in Port Orchard.

For the CoCoFest it was agreed that we would bring down a half dozen copies of our Public Domain Library to sell at \$1/disk. 3 copies of our instructional video tape, all back issues of the newsletter to sell at their regular price of 55 cents each, 1/2 dozen copies of our OS-9 Tutorial to sell for 1/2 price (\$1) including the Public Domain Disk that goes with chapter 5, and finally we will print up a bunch of extra May issues of the Newsletter to GIVE AWAY. It was also decided to combine out swap meet table spaces so that our club presentation would have more room. We also all agreed to get reservations at the same motel for Friday night.

The hardware session of our meeting was for the benefit of our newest member Ray Flick, who was given an old model-1 full height 35 track single sided drive that he wanted to hook up with his FD-501 as a second drive. We soon discovered that his old drive did not read or write data, but we did use a another drive I had to complete our

demonstration. First, we set the drive select jumpers so that the second drive would behave as Drive 1. Then we pulled out the protective barrier in the card edge connectors on the ribbon cable so that the cables could be used "properly" when turned upside down with drive selection done via the drive select jumers rather than the missing pins on the card edge connectors.

We also discussed disk drive power supplies and noted that on Ray's FD-501, he had two 8 amp bridge rectifiers and that his 12 volt regulator was rated at 3 amps. Since the FD-501 is a 1/2 height drive and the case has room for another 1/2 drive, we installed a Seagate ST-225 and sure enough, plenty of power to operate both the floppy and the hard drive. We were very surprised considering it was made by Tandy????

Next meeting will be June 13th at Fairhaven Middle School where will try to add two more video sessions to our video library.

--Rodger Alexander--

## Port O'CoCo

We started the meeting by getting more chairs. We had the largest group in our history with about 20 people attending. After introductions of who we were, what we had, and what we wanted from our equipment, we brought everyone up to date on our upcoming Gala Event.

The NWCoCo Fest on June 21-22 is taking more detailed shape. The loca-

**NW CoCoFest**

June 21-22 Port Orchard, WA

tion is the HiJoy Bowl in Port Orchard for the Saturday schedule. The pricing now has a smorgasbord approach. The evening discussion is \$5. The collector's CoCo mug is \$5. The swap meet is \$5. The luncheon and keynote speaker is \$5. All the seminars and help sessions are one package price of \$5.

One of the speakers will be Tom Rosenbaum of Spectral Associates. He started doing contract work for Tandy's new Color Computer in 1981 and knows many of the inside stories and people. He also used a prototype CoCo that never reached production. Another speaker is Brook Stanford of KOMO-TV's "People Helpers". He will discuss the use of computers by those in need and how he looks at computers as a NON-User. The swap meet is growing with the word that two Radio Shack stores will have space there to blow out their CoCo stock. More stores are being approached.

Next on the agenda was a taste of things to come at the NWCoCo Fest. Over the last 4 weeks several people have contacted Donald Zimmerman with equipment that they no longer

wanted. When all put together it was well over \$1000 worth of computers (including CoCo 3's with 512 upgrades), printers, drives (including one hard drive), other items and software. All of this went at BARGAIN prices. Computers went for \$3 and up. A complete CoCo system (CoCo-3, drive and software) went for \$75. Fun was the spirit of the whole event. And at times the auction was hot and fast. Everyone got a feeling that there is still a lot of value in the coco-3. You know that there are no more of them available in the stores although the CoCo-3 is featured in Radio Shack's current flyer!

The scheduled presentation on C was postponed when Mark King lost his voice! So the rest of the meeting was devoted to Alan Johnson's presentation of how to port information out of DynaCalc into Phantomgraph to make a chart presentation of your spreadsheet material. All the information you need to do this with your own system is presented elsewhere in this Newsletter. Thanks to Alan for allowing his efforts to be published.

Our next meeting is June 17th. We will work on final plans for the NWCoCo Fest

and Part 2 of C by Mark King. The July 15th meeting will continue with part 3 of C by Mark King and a viewing of Bellingham OS-9 Users Group's video tape production of "Installing 512K Memory Upgrade".

--Donald Zimmerman--

### Mt. Rainier CoCo Club

The May meeting of the Mt. Rainier CoCo Club covered the following: Alan Johnson demonstrated conversion of Dynacalc files to Phantomgraph files. Randy Kirschenmann presented a Basic09 program he had written with overlay windows/menus. Donald Zimmerman briefed the members on the forth coming CoCo Fest in Port Orchard on June 21-22. John Schliep discuss the advantages of subscribing to the OS9 Newsletter by the Bellingham OS-9 Users Group. The June meeting will have Alan Johnson with his continuing Basic09 instruction. A further group discussion of little known uses of standard commands by the minus sign followed by letters (OS-9 Command Options). --John Schliep--

# NW CoCo Fest

The best of all worlds! A circus for the entire family and a CoCo Fest for you! Our schedule:

June 21 (Friday)

June 22 (Saturday)

9:00 A.M.

9:30

10:00

10:00

10:30

Roundtable Discussion

Welcome & History of the CoCo

"With the Big Boys: OS-9 and Unix"

BREAK

Swap Meet to noon

**Small Group Meetings** (each 30 minutes & repeat twice)

A: "Hardware: Challenges & Problems"

B: "Where to Get Software"

C: "Communications: How to Reach the World"

D: "Upgrading: Why Do It?"

E: "BASIC from Square One"

F: "Where Can I Get Help?"

12:30

Luncheon

1:30

Keynote Speaker: "What's the Future Hold?"

**Then tour Port Orchard's famous Antique & Craft Shops on our Waterfront!**

Updates, locations, list of speakers, and exhibitors will be mailed to registrants.

### The Whole Fest only \$25!

- This covers all seminars
- The luncheon (buffet)
- The keynote speech
- Space for you to swap or sell
- Unique collectable mug
- Extra luncheon & mug \$10

### Mail Fest Registration to:

Donald Zimmerman  
Port O' CoCo  
3046 Banner Rd SE  
Port Orchard, WA 98366

## Washington State BBS Listing

The following BBS list will be of  
interest to CoCo and OS-9 users:

FAR POINT BBS  
(Seattle)  
(206) 285-8335 RiBBS (Fido NET)

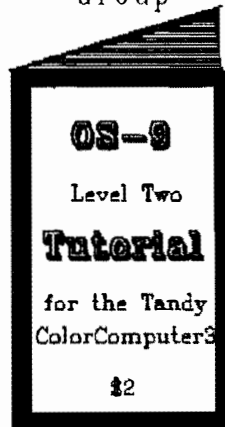
COLUMBIA HTS. BBS  
(Longview/Kelso)  
(206) 425-5804 RiBBS (Fido NET)

DATA WAREHOUSE BBS  
(Spokane)  
(509) 325-6787 Level-II BBS

TIME MACHINE BBS  
(Tri-City)  
(509) 586-2559 CoBBS

BARBEQUED RIBBS  
(Bellingham)  
(206) 676-5787 PC-Board  
(CoCo/OS9 SIG on Conf. 5)

Bellingham OS-9 Users  
Group



Written by  
Scott Honaker & Rodger Alexander

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