M.O.T.D.

The OS-9 Users Group Newsletter

Issue #1, 1996

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 with 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 the US and Canada) and obey all of the membership rules set forth in the Constitution of The Users Group and the bylaws.

Dues should be made payable to:

The OS-9 Users Group, Inc.
6158 West 63rd Street
Suite 109
Chicago, Il. 60638
U.S.A.

Memberships run for one year from the date received by the Users Group. Send a SASE for a membership kit which will include a membership form and information about the Users Group.

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 of the **MOTD** are available to members in good standing at the cost of $1.50 each plus $0.50 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 *OS-9 Users Group* officers:

Position	Name
President	Colin McKay
Executive Vice Pres.	David Graham
Director	Ed Gresick
Director	Eddie Kuns
Director	Ken Scales
Vice Pres. (Comm.)	Paul Jerkatis
Vice Pres. (OS-9)	Brian Goers
Vice Pres. (OS-9/6809)	Mike Rowen
Secretary	Howard Luckey
Treasurer	Br. Jeremy
Librarian	Dave Kelly
MOTD Editor	Joel Mathew Hegberg

MOTD Contributions

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

E-mail to JoelHegberg@delphi.com, E-mail to the *OS-9 Users Group* at os9ug@sandv.chi.il.us or by mail to *The OS-9 Users Group* address in Chicago. All submissions should be in pure ASCII format.

The submission of material does not guarantee publication. All publication of material is subject to review by the Board of Directors and the **MOTD** Editor, 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 the **MOTD** issue. *All printed material is subject to nominal editing by the MOTD Editor for clarity.*

Suggestions for making **MOTD** a better publication are welcome. Letters may be addressed to the **MOTD** Editor and mailed to the Users Group address or sent directly to JoelHegberg@delphi.com. E-Mail can also be sent to the following Delphi members: NIMITZ, MITHELEN, LUCKYONE, BRIANGOERS, EDDIEKUNS, EDELMAR, MROWEN, REVWCP, and KSCALES. You may also sent E-mail to os9ug@sandv.chi.il.us.

MOTD Advertising

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

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Time flies when you're having fun! This was going to be a Christmas issue, but, well, Happy 1996!

Atlanta Fest is over. Despite the overall low attendance, much of the regular crowd was there. I think by expanding the show with a lot more OS-9/68000 and perhaps industrial material, the Atlanta and Chicago shows should be able to continue to provide a home for both OS-9/6809 and Color Computer personal users, as well as providing support for other OS-9 users.

Some of the news I usually try to relate here has been moved to /DD/MISC/NEWS, a new column. Also new in this issue is Mike Smith's support column for CDL Basic users.

Chicago Fest

The Fifth Annual Last Chicago CoCoFest will be held the weekend of 13-14 April 1996. See their announcement on page 15.

AGM and Elections

Once again our Annual General Meeting will be held at the Chicago Fest on Saturday, 13 April. Exact timing has yet to be determined.

Among other business at the meeting, election of one Director position, currently held by Ken Scales, will take place. Nominations, signed by the nominee and two other members for the position should be submitted in writing to the Users Group address given on page 2. Please mark the envelope "Nomination".

Some concern has been expressed about members only being able to vote at the AGM. I am planning to ask the BOD to revise the voting procedure to allow a vote by mail (and possibly email) next year.

Mail

We had a major problem with handling some mail that came in last year to our Chicago address. This mail was recently found, passed on to the Secretary, and has been actioned.

OS-9 Internet Sites

There has been quite a bit of activity online recently. A list of sites that may be of interest to OS-9 Users is listed below. These also contain pointers to other sites of interest.

Submissions and Upcoming Articles

Submissions, as always, are welcome. Just send it by email or snail mail to the MOTD Editor at any of the Users Group addresses.

Colin McKay
President

OS-9 Internet Sites

Site / URL	Description
http://os9archive.rtsi.com/os9ugfaq.html	OS-9 Users Group FAQ
http://os9archive.rtsi.com/os9faq.html	OS-9 FAQ
http://os9archive.rtsi.com/os9companies.html	OS-9 Companies
http://iccu6.ipswich.gil.com.au/~bdevries/OCN.html	OS-9 Community Network
http://www.val.net/~fatcat/os9vendors.html	Zog's OS-9 Vendor Index
http://members.aol.com/os9under	The OS9 Underground Ezine
Lucy.ifi.unibas.ch	Anonymous FTP Site
OS9archive.rtsi.com	Anonymous FTP Site
http://www.microware.com	Microware Systems Corporation
http://www.mwsc.edu/~nesslafr/wcp/	Wittman Computer Products
http://www.acs.brockport.edu/mm1	MM/1 FAQ
http://www.physics.carleton.ca/~aland/interests/	Alan DeKok's Home Page

Minutes for Board of Directors Meeting September 6, 1995

A regular meeting of the OS-9 Users Group Board of Directors (BOD) was called to order at 7:12 PM CT on September 6, 1995 on Delphi. Present: Colin McKay, president and chairman of the Board, David Graham, executive vice president and member of the Board, and directors-at-large Ed Gresick, Ken Scales, and Eddie Kuns.

The first order of business was the approval of the minutes of the last regular meeting of the BOD held on July 05, 1995. Minutes approved.

The second order of business was the treasurer's report. No report being available the Board passed on to the next item.

OLD BUSINESS:

Item 1. Vendor's package:
Colin has sent to Ed Gresick a copy of an informational flyer that has been going to vendors. Colin ask Ed to look it over and email any comments he might have. There were no other comments.

Item 2. Joel's clipboard:
Brian Goers wasn't present to report so this was tabled.

Item 3. Presidential spending:
After a brief discussion the Board decided that no action was necessary. The consensus about presidential spending of UG funds is that there are sufficient safe guards. Item concluded.

Item 4. MOTD #4 1995:
The Board discussed and reviewed the final preparations to get this issue out before the Atlanta CoCo Fest.

Item 5. Library Status:
The UG library has been passed on to Howard Luckey, and since he wasn't present there was nothing to report.

Item 6. OS-9 Scholarship:
This is still in process. The Board discussed the necessity of getting Federal tax status so that charitable contributions can be made and counted as deductible donations. Colin and Boisy are working on this.

NEW BUSINESS:

BOD Minutes in the MOTD:
The Board accepted the idea for the minutes of its meetings to be published in the MOTD.

Meeting adjourned.

Howard Luckey, Secretary
Sunday October 01, 1995

| These minutes were approved as read at the November 22, 1995 meeting of the Board of Directors. |

Minutes for Board of Directors Meeting November 22, 1995

A regular meeting of the OS-9 Users Group Board of Directors (BOD) was called to order on November 22, 1995 on Delphi. Present: Colin McKay, president and chairman of the Board, and directors-at-large Ed Gresick, Ken Scales, and Eddie Kuns. Present as invited guest: Paul Jerkatis VP of Communications

Item 1. Approval of the minutes:
The first order of business was the approval of the minutes of the September 6, 1995 meeting. The minutes were approved as presented.

Item 2. Financial report:
No report was available. The Board expressed a concern about having financial reports in a timely fashion. The treasurer doesn't need to be present.

OLD BUSINESS:

Item 3. Vendor's package:
A sheet for corporate membership has been created with an abbreviated FAQ on the back for vendors to include in their shipments. This has been accepted for now.

Item 4. Joel's clipboard:
No report was available, and this item has been dropped.

Item 5. UG's library:
The library has been sent to Dave Kelly.

Item 6. UG's scholarship program:
The Board needs information about the UG's non-profit

status including financial reports for the past three years. No action taken at this time.

NEW BUSINESS:

Item 7. MOTD 9505:
This issue is in process. The Board discussed a concern about the MOTD printing articles that might compete with other OS9 magazines. Its probably not much of a problem since there is not that many publications. Presently Colin and Ken Scales are doing a lot of the work to help Joel Hegberg to get the MOTD out and they have received nothing but positive feedback. Any suggestions for making the MOTD better are welcome as long as the person making the suggestion is willing help produce the MOTD.

Item 8. UG mailbox:
The Board would like our mailbox checked for mail on a more timely basis. This would help the UG respond to membership application, membership renewals, and other queries in a more professional way. Director Kuns volunteered to contact Carl Boll and Howard Luckey to find a way to improve the service.

Item 9. UG email:
The president recommends that anyone on the Board or any officer of the club who can answer an email query should do so and send a copy to the UG address so that we know it has been answered. The Board recommends that the secretary find ways to take on more of this responsibility.

Item 10. Open forum:
Colin is planning to ask Mike Rowen to set aside a Monday in January so he can offer an open forum on the UG. It could be his State of the Union address.

Item 11. Chicago Fest:
Eddie Kuns, president of the Glenside CoCo Club, reported on the progress of the Chicago Fest on April 13 & 14, 1996. The club is slowly making all the preparations. The Board discussed when to have the annual meeting, some time during show hours or after them.

The meeting adjourned.

Howard Luckey
Saturday December 30, 1995

These minutes were approved as read at the January 3, 1996 meeting of the Board of Directors.

A regular meeting of the OS-9 Users Group Board of Directors (BOD) was called to order on January 3, 1996 on Delphi. Present: Colin McKay, president and chairman of the Board, and directors-at-large Ed Gresick, Ken Scales, and Eddie Kuns.

The meeting began with an informal discussion, and commenced formally at 20:27 once a quorum was established.

From the agenda:

Item 1. Approval of the minutes:
The first order of business was the approval of the minutes of the November 22, 1995 meeting. The minutes were approved as presented.

Item 2. Financial report:
No report was available. (Note: A financial statement was presented at the March 6, 1996 meeting.)

OLD BUSINESS: (From the agenda)

Item 3. UG mailbox:
In summary, the results were:
1. We want Carl to check weekly and forward all mail to the secretary.
2. We want a NULL report from Carl when there is no mail when he checks.
3. We need a record of past costs, mail forwarding and PO box costs.
4. We will provide a $50 petty cash for future expenses
5. We want to reimburse Carl for PO box expenses, and will do so upon receipt of past cost records by Br. Jeremy.

Item 4. Chicago Fest:
Colin to forward ad copy to Glenside. Glenside to send ad copy to Joel. Eddie to confirm a meeting space will be available, preferably on the Saturday.

The meeting adjourned.

Colin McKay
Wednesday March 6, 1996

These minutes were approved as read at the March 6, 1996 meeting of the Board of Directors.

OS-9 Community Network

From Dave Kelly:

We need some help. We are looking for some workers to help with making a catalog of the OS9UG/OCN/OSK software.

This project would entail opening the files, getting the author (if known) and a description of what the application does. Then putting this information into a format that can be printed.

This catalog will be printed in the MOTD, and will be make available for a small printing charge and postage to anyone who wants it.

If you can help please call me voice at (713)894-7444. Leave a message on the machine and I will get back with you if I'm not home.

Thanks.

Also thought you might be interested in the following message received on Fidonet:

```
From:     John Reece
To:       Dave Kelly
Subject:  Roll call
Conference: 5 -- Os9net

DK> How about a roll call. Sure would like to
know who is still around

I am still here in San Diego.  I haven't been on
the line much, however the Ribbs BBS is still
active.  Our local OS9 Users Group just finished
participating in the California Computer Expo
here in San Diego.  They had to use the conven-
tion center this year as it has grown quite
large.

We had over 34,000 people attend this year.  We
did have OS9000 up with G-Windows with some sup-
port from Microware. We also had a Philips CD-i
with a Coco terminal interface to it. Our drawing
card was an 8 foot long trolley layout, using
CoCo3, OS-9 Level 2, and Basic09 running 2 trol-
leys completely computer controlled with graphic
displays.

We are already planning for next year. Our club
has purchased a CD-i and we also purchased an
MM1B, that arrived in the middle of the show.
Therefore we should have a lot more to display
next year.

                              << John >>

* Origin: Coco Exchange, San Diego, Ca 619 272-
3643 (1:202/744)
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Microware News

The following items are excerpts taken from Microware Systems press releases. The complete text is available from the Microware home page http://www.microware.com, or by contacting Steve Simpson as steves@microware.com or at (515) 224-1929.

Microware Licenses Java and HotJava for Intelligent Consumer Products
Des Moines, IA - February 12, 1996
Microware Systems Corporation today announced that it has licensed from Sun Microsystems, Inc. their Java pro-gramming environment and HotJava dynamic World Wide Web browser. Microware will port Java and HotJava to the company's OS-9 Real-Time Operating System, as well as its MAUI graphics API. The combination of Java, OS-9 and MAUI will enable access to the Internet from a broad range of intelligent consumer products including wireless handheld devices, TV set-top boxes and other devices - beyond the constraints of a personal computer.

Java will be part of Microware's Real-Time Internet pack-age due out during the second quarter of 1996. Real-Time Internet provides a comprehensive Internet solution for consumer devices, including Java, networking protocols and a graphics API. The Java port will include all Java 1.0 components and the HotJava browser.

OS-9 for PowerPC Version 2.0
Des Moines, Iowa. February 19, 1996
Microware Systems Corporation today announced Version 2.0 of OS-9 for PowerPC. OS-9 is a highly configurable, high performance real-time operating system specifically targeting the PowerPC platform. OS-9's scalable architec-ture means it can be scaled to fit the needs of a particular design from small embedded devices to large networked systems. Additionally, OS-9's unique modularity allows system and application modules to be dynamically loaded while the system is up and running. This allows both the operating system and applications to be updated or extended, even when software resides in ROM. Dynamic loading is particularly important for consumer devices where transparent software updates are needed.

Microware Announces FasTrak V2.0
Des Moines, Iowa. February 19, 1996
Microware Systems Corporation today announced Fas-Trak V2.0, a comprehensive software programming and management environment designed to increase the effi-ciency of application development for the OS-9 Real-Time Operating System. FasTrak's V2.0 newly expanded func-tionality for Windows and UNIX platforms addresses all phases of software development from initial code creation

DELPHI OS-9 Late Night Conferences with Chris Perrault

Tuesdays at 10PM ET every week. Updated schedules posted on Delphi.

March 5, 1996   9:00 PM EST   Digigrade Productions
Dave Pellerito will start off the month of March with a special 'look' at Digigrade Production's new adventure game based on the MM/1. Judging from their ad in 'the world of 68 micros' this game sounds like it's a winner!

March 12, 1996   9:00 PM EST   Project Proposal:Lost and Found
One of the latest OS-9 User Group projects being proposed is that of the lost software('orphanware') collector. If you are interested in being a coordinator for this project and/or want more information regarding it please send me email at the address below or attend on the 12th.

March 19, 1996   9:00 PM EST   Open Forum

March 26, 1996   9:00 PM EST   New Tech Forum: Zip Drives
This is a brand new topic to OS-9 Late Night, and I hope to make it a bi-monthly regular. This conference will give us the opportunity to talk about the latest(or not so latest) hard/software products in the computer world and perhaps how they may be adapted for OS-9 use. Our first New Tech Forum will be dedicated to zip drives!

April 2, 1996   9:00 PM EST   See Ya in Chicago!
You know what this one's about!

April 9, 1996   9:00 PM EST   Open Forum

April 16, 1996   9:00 PM EST   Programming Forum w/ David Graham!

April 23, 1996   9:00 PM EST   Project Proposal: IDW
Another project being proposed for the OS-9 Users Group is the Interactive Developers' Workgroup. We need a coordinator to maintain this project, so if you are interested in the volunteer position, please send me email at "thetaurus@delphi.com". During the conference I will describe how I see the project, its possible structure, and how it could impact the OS-9 community!

April 30, 1996   9:00 PM   Open Forum

OS-9 Underground IRC Conferences

Conferences are held every Sunday at 5:00 PM EST.

Hosted by Alan Sheltra <zog@VAL.NET>

Once in IRC, type:

/join #os9under

Are there any other on-line conferences happening out there? If you know of other conferences or events that are taking place on other on-line services (AOL, Genie, CIS, etc.) please send mail to me at either address listed below. I will post any information I receive:

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Mike Rowen
VP OS-9/6809
OS-9 Users Group
mrowen01@delphi.com
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CDL BASIC Tutorial

by Michael L. Smith

This column marks the beginning of an ongoing tutorial for CDL Basic users. Mike Smith, the author of CDL Basic will be giving programming examples and answering any questions you may have. CDL Basic produces stand-alone program modules, and requires no runtime module.

In this tutorial we will explore a directory program written in CDL Basic which makes use of a number of CDL Basic's unique features. The program (entitled "cat") reads the directory specified on the command line (current directory if none specified), sorts the entries, displays the entries, and totals the number of valid entries.

The listing included here has line numbers. These are NOT CDL Basic line numbers, but are editor line numbers for reference in this tutorial.

Among the first things you will notice is the use of "*" as a comment indictor (exactly like assembler). Also, there are 2 examples of the #SET directive which are used to define constants (note that these are NOT variables and consume no program or data space). The other point to mention here is the "Start" label which indicates where program execution begins.

The #SET directive in line 7 defines the edition number which will appear when an IDENT is performed on the object module of this program. The #SET directive in line 8 defines "NameSize" which is used later to define the data type "DirRec" and several string variables.

Lines 13 through 23 are used to define the variables and data types to be used in the program. Notice here that several variable are defined as "SHORT" (16 Bit) integers. Also the variable "LastByte" is defined as a POINTER to type BYTE. Finally, the variable "Directory" is defined as a VECTOR to an array of directory entries defined as data type "DirRec". The array size is defined as "(1)" because it is not known when the program is written how large the array will be but it is required to declare some size in order to "tell" the compliler this is an array. Also the array size of 1 allows us to use the SIZE funtion later to determine the size of an entry.

Line 28 marks the execution starting point of the program. This label (Start) and the label "NoDir" (line 92) are the only labels used in the program. In the case of "regular" Basics, the "NoDir" label would have to be a line number which by its very nature would have no implied meaning.

Lines 33 through 36 are concerned with obtaining any command line argument (in this case a directory name). NextArg is a special string variable which is internally defined by the complier which points to the F$Fork argument area.

The code in lines 41 to 46 attempts to open the directory specified and, if successful, create a memory buffer which is the size of the entire directory. Notice here that this is impossible with regular Basics because you must "dimension" any varables when the program is written (at which time it is not known how large the directory will be). Next the entire directory is read into the buffer using the BUFREAD statement. The BUFREAD operates similarly to the GET statement except that the parameters are fully specified. (In the GET statement, the parameters are IMPLIED by virtue of the variable name given). Also, the VECTOR variable "Directory" is set to the base address of the buffer by the SETVEC statement. Once this vector has been thus set, it may by referenced as if it were a standard dimensioned variable (i.e. no pointer notation).

Lines 51 through 68 are concerned with sorting the directory entries in the buffer alphanumerically. Notice the use of the pointer "LastByte" to turn off the sign bit in the last character of the file name string. In CDL Basic, POINTERS are dereferenced by [pointer] rather than *pointer as in C. The "EXCHANGE" statement is used to "swap" the sort elements. This is not only more convenient but is also faster than conventional swapping methods. Not only can simple variables be exchanged but also user defined data types (as in this case) and whole arrays at one time.

Lines 73 to 91 are concered with displaying the sorted directory entries and outputting the total valid entries.

The label at line 92 (NoDir) is given control if the attempt to open the directory was unsuccessful and the error message is printed. The program ends after the error print-out even though there is no END statement.

It is hoped that this tutorial shows the power of CDL Basic in writing system utility software. For those of you not familiar with the product, the compiled output requires no runtime package and is in fact a standard OS9 object program module. This tutorial shows but a few of the many advanced features of the language. Upcoming tutorials will show many more features and applications. Stay tuned!

```
Regards, Mike
Computer Design Lab
```

LISTING 1

```
00001 ***************************
00002 *
00003 * Simple directory program
00004 * using a buffer to read in the entire directory
at one time
00005 *
00006
00007 #SET Edition=2
00008 #SET NameSize=28
00009
00010 ***************************
00011 * Define Variables
00012
00013  DIM i:SHORT\ 16 Bit INT
00014  DIM j:SHORT\ 16 Bit INT
00015  DIM k:SHORT\ 16 Bit INT
00016  DIM FileCount:SHORT\ 16 Bit INT
00017  DIM LastByte:BYTE POINTER
00018  DIM FileName:STRING[NameSize]
00019  DIM TempName:STRING[NameSize]
00020  TYPE DirRec=FN:STRING[NameSize];FDPtr:LONG
00021  DIM Directory(1):DirRec VECTOR\ (1) not actual
size, but declares this as array
00022  DIM FNum:BYTE
00023  DIM DirName:STRING[NameSize]
00024
00025 ***************************
00026 * Begin execution here
00027
00028 Start
00029
00030 ***************************
00031 * Get filename (if any) from cmd line
00032
00033  DirName=NextArg
00034  IF len(DirName)=0 THEN
00035    DirName="."
00036  ENDIF
00037
00038 ***************************
00039 * Try to open directory and create buffer here
00040
00041  ON ERROR GOTO NoDir
00042  OPEN #FNum,DirName:DIR READ
00043  BUFFER FileBuf=FILSIZ(#FNum)
00044  SETVEC Directory=BUFADR(FileBuf)
00045  BUFREAD #FNum,BUFADR(FileBuf),FILSIZ(#FNum)
00046  ON ERROR
00047

00048 ***************************
00049 * Sort Directory in buffer
00050
00051  For i=1 TO FILSIZ(#FNum)/SIZE(Directory)-1
00052   k=i
00053   FileName=Directory(i).FN
00054   FOR j=i+1 TO FILSIZ(#FNum)/SIZE(Directory)
00055    IF LEN(Directory(j).FN<> THEN
00056     TempName=Directory(j).FN
00057     LastByte=ADDR(FileName)+LEN(FileName)-1
00058     [LastByte]=LAND([LastByte],$7f)
00059     LastByte=ADDR(TempName)+LEN(TempName)-1
00060     [LastByte]=LAND([LastByte],$7f)
00061    ENDIF
00062    IF FileName>TempName THEN
00063     FileName=Directory(j).FN
00064     k=j
00065    ENDIF
00066   NEXT j
00067   EXCHANGE Directory(i),Directory(k)
00068  NEXT i
00069
00070 ***************************
00071 * Display Directory on screen.
00072
00073  PRINT
00074  PRINT "Directory of ";DirName
00075  PRINT
00076  FOR i=1 TO FILSIZ(#FNum)/SIZE(Directory)
00077   FileName=Directory(i).FN
00078   LastByte=ADDR(FileName)+LEN(FileName)-1
00079   [LastByte]=LAND([LastByte],$7f)
00080   IF  LEFT$(FileName,1)<>"" AND LEFT$(File
Name,1)<>"." THEN
00081    INC FileCount
00082    IF POS<63 THEN
00083     PRINT FileName,
00084    ELSE
00085     PRINT FileName
00086    ENDIF
00087   ENDIF
00088  NEXT i
00089  PRINT
00090  PRINT FileCount;" files"
00091  END
00092 NoDir
00093  PRINT "no such directory"
```

<EOF>

Jim Vestal's *Entry Level C* column may return next issue.

The following article contains highlights from the OS-9 Sculptor Database Conference held on Delphi, 2 October 1995. Permission has been granted by the participants for reproduction in the OS-9 Users Group newsletter, and posting to Internet newsgroups.

The Conference was hosted by Kurt Johnson, President of the KD Consulting Group. Thanks also to Chris Perrault for arranging the conference. This text was heavily edited for brevity and clarity. Thanks to Sherry Sitzler from KD Consulting for editing the article.

The transcript includes comments from the following:

KurtJohnson:	Kurt Johnson, KD Consulting Group
Chris:	Chris Perrault (organizer)
KenS:	Ken Scales
Ed@Delmar:	Ed Gresick
JohnW:	John Wainwright
Mike_Rowen:	Mike Rowen

This is not a complete list of attendees, of course; it only includes those who made comments captured in the transcript.

OS-9 Sculptor Conference
Held on Delphi, 2 October 1995

Chris> Kurt, maybe you could start it with a little history/summary of Sculptor and KD Consulting Group.

KurtJohnson> Sure! Sculptor was started in 1981 by MPD Ltd. in London, England. They built the product for Uniflex, and moved it to other platforms. It was designed as a simple 4GL with a built-in database. The database system was originally designed as a flat file system, without any form of RDBMS support.

Once it had been ported to UNIX and MS-DOS, it was moved to OS-9 at the request of possible customers. Sculptor is a full-featured fourth generation language with program generators which make it very easy to build rapid applications. The main feature of Sculptor is that any applications and database are totally portable between EVERY supported system. This can be done without converting, recompiling, translation, or re-coding.

KD Consulting bought out the North and South American rights to the product in 1991, after MPD (now Sculptor Ltd.) decided to close its own U.S. office. I had five years' experience with Sculptor then, and had managed large computer projects in manufacturing systems.

Anyway, let's open this to others' questions now.

KenS> Kurt, the original product went by the name "Sage," didn't it? Why was the name changed?

KurtJohnson> It was originally called Sage. In fact, the program for the screen is still called sage. However, the name was already taken in the U.S.

Chris> Kurt, NASA is a well known Sculptor user. Who are some other companies that use or have used Sculptor over the years?

KurtJohnson> Chris, for your information, Sculptor is very big on the shuttle program. Do you mean OS9 only, or other well-known ones?

Chris> Well, OS-9 and other platforms.

KurtJohnson> The City of Cleveland runs their electric company billing completely on Sculptor/OS-9. They have 75 concurrent users hitting the database, along with automatic meter reading by telephone. Confertech is another large user, with complete conference calling systems controlled by Sculptor applications. The data is then pulled off by DOS machines for analysis.

Dean> Is Sculptor mainly used on OS-9 systems or ???

KurtJohnson> No, Sculptor is on many operating systems. OS-9 is just one of many. UNIX in its many flavors is number one. DEC, IBM, and SCO account for a majority of systems. OS-9 is ahead of MS-DOS, though.

Chris> When you say that apps written in Sculptor are portable, does the end program have to be recompiled on the next system or does the run time package on the next destination platform take care of it automatically? Example, if I compile a Sculptor app on an OSK box, can it run automatically in that form on the target through the run time module, or does the source need to be recompiled?

KurtJohnson> The portability does require a Sculptor runtime on the target machine. You can compile on OSK, and then run on VMS or DOS, UNIX, etc.

Ed@Delmar> You can compile on a CoCo (version 1.16) and run as Kurt described on other platforms.

Mike_Rowen> Can you tell us about the OS-9 Level 2 version, and how much it costs?

Kurt Johnson> We are offering a special through Delmar of $295. This is for a complete Development System. Then we are also offering an upgrade to OSK (Sculptor version 2.2) with many more features for $1725 (instead of $3650 as usual).

Chris> Not a bad deal. 2.2 is the latest?

KurtJohnson> 2.2 is the latest on OSK. We are in the process of porting 2.4 to the ULTRA-C compiler. This will give us 2.4 on OSK as well as OS-9000. Ed, could you answer the system requirements for LII.

Mike_Rowen> What are the system requirements for a CoCo 3 system?

Ed@Delmar> OS-9 Level II, 512K memory, a floppy drive, and a hard drive.

Mike_Rowen> Full documentation?

Ed@Delmar> Yes. The package also includes some demo programs to help you get started.

KurtJohnson> We also provide full tech support, using 800 number, e-mail, fax, phone, etc.

Chris> Speaking of docs, this is kind of related. Are there any books out there that have been released that cover Sculptor? 'An Idiots Guide to Sculptor'? <G>

KurtJohnson> None that I know of. Sorry. [Editor's note: The University of Wollongong in Australia did produce

Sculptor textbooks for their own internal use in programming classes. The original books are out of print at this time, although the London office may have an office copy. New books have been commissioned by the London office for Sculptor 3.]

Ed@Delmar> There is some info in the libraries of the OS-9 sig of CIS.

Chris> Ok, just wondering. Also, Ed, there aren't any known incompatibilities with the 6309 chip, are there?

Ed@Delmar> Chris, I have no idea. So long as the 6309 supports the instructions of the 6809, there should be no problem.

KurtJohnson> NASA is a good example of a company using Sculptor on multiple platforms. They compile on MS-DOS, test on SCO UNIX, and then move the application to the OSK box to retrieve all test data while the shuttle is on the ground.

Chris> There is a good article on that in Pipelines btw, for those who don't get PL.

KurtJohnson> I am happy to send reprints to those who would like them.

Chris> Why not just do it all on an OSK box?

KenS> Kurt, so the run time module handles all of the differences in file systems, etc. between the different operating systems?

KurtJohnson> Yes, it also handles byte order between Motorola and Intel machines. The only problems can be if someone has coded in operating system-specific calls.

Ed@Delmar> Kurt, is there a timetable for porting to Ultra-C and then OS9000?

KurtJohnson> I know that it is currently in the works. But that does not guarantee a time. This is because the work is done in London, and not in the U.S.

KenS> Could you explain what aspects of Sculptor categorize it as a "4GL"?

KurtJohnson> Sure. The language is high-level, in that it has database and screen handling functions built-in. All of the external commands for I/O are device independent. We provide a complete set of Terminal and Printer definitions which allow programs to work based on logical expressions, and not hard-coded ones.

Chris> What other high level languages might Sculptor's resemble? Does it cross different languages or is it more of a different animal altogether?

KurtJohnson> The code looks a bit like a cross of 'C' for power and Basic for simplicity. It currently includes access to the Sculptor database, as well as external files and devices, through either byte or line oriented I/O. It includes a full set of structured programming constructs such as while, for, ifdef, include, define, etc.

Chris> So it is also very structured . . .assuming the programmer does HIS job. :-) (I might have asked Ed that last one last week.)

KurtJohnson> Yes, but the program generators always provide a strong base for the programmer to build on.

Chris> Do you know of any commercial or public shareware programs released that were written in the Sculptor language (video tape organizers,etc.)?

KurtJohnson> We provide many utilities for customers to use, as well as a local library of shareware routines. One new one is a Library system.

JohnVV> I have an older version (bargain) on this machine -- seems as easy as Basic to write programs.

Chris> It seems like a promising tool for the programmer working on a big app, who doesn't want to do the database functions in C or Basic, to do that part in Sculptor, and then do the interface in C.

Ed@Delmar> One feature Kurt hasn't mentioned is the robustness of the database files themselves. It is pretty hard to corrupt them, and if they do get corrupted they are fairly easy to rebuild.

KurtJohnson> The Sculptor datafiles are very difficult to cause problems to.

Chris> Do you mean in terms of accessibility (sorting and key records, for instance)?

KurtJohnson> The data is stored packed. The index(es) are always sorted, and kept in balanced trees. This means that a report can walk the index if available, and get the data out in that order, without re-sorting.

I can answer a last couple of questions.

KenS> In terms of multi-user access, does Sculptor rely upon the "native" mechanisms of the operating system to provide record locking, etc., or does it handle this itself?

KurtJohnson> The record locking is handled native on each operating system. This means that a non-locking DOS program can work on OSK, Novell, UNIX, etc.

Chris, thanks for this opportunity. I will need to be going.

Chris> Kurt, thanks for coming! This has been great.

KurtJohnson> Thanks. I would enjoy doing this again sometime.

Chris> One more question. What is the name of your newsletter? [Editor's note: Sculptor News] I'm definitely looking forward to it, Kurt! I'm glad you became a part of the activity going on around the UG. Hopefully more industrial users will become more aware of the benefits of Sculptor in the weeks to come, when more information is made available in the MOTD. This is the kind of participation OS-9 users and vendors need.

KenS> Yes, thanks, Kurt. Colin McKay, the Users Group president, had hoped to make it online tonight, too, but something must have come up at the last minute.

Chris> And I'm looking forward to the CoCo version of Sculptor. Definitely good to rewrite the sourcebook in!

Thanks for everything, Kurt.

<EOF>

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This article is a continuation of the Basic09 tutorial by Bob Devries from Australia. One or two articles from the series will appear each issue, depending on space. (Real Queen's English spelling mode enabled...)

Part 4 of 14

Ha! I'll bet you thought you got rid of me with the last article I did on Basic09 conversions! Nope! Here I am to (de)bug you some more. This month I will start looking at the GFX2 commands. First I will cover those that appear in the Basic09 Manual, and give some example programme code to show how it is used. Then I will tell you about the extensions that were added to GFX2 by Kevin Darling. The section of the manual to read starts on page 9-31 of the Basic09 manual.

I will start off by describing the antics needed to create a graphics window so that you can actually use some of the GFX2 commands. First, decide which type of graphics window you want. I will use a type 8 graphics window. Here is how you open the window.

```
OPEN #wpath,"/w":UPDATE
RUN GFX2(wpath,"DWSET",8,0,0,40,24,0,1,2)
RUN GFX2(wpath,"SELECT")
```

Here's what it all means: First, I opened a path (using an INTEGER variable wpath) to the GENERIC window descriptor "/w". I did this so that my programme will work no matter what window descriptor is in use, as long as one of them is available. If I had written the programme like the example on page 9-87 of the manual, and "/w3" was in use, my programme would have quit with an error. The MODE is UPDATE (not WRITE as in the example), so that I can get input from the window as well being able to draw on it.

Next I used the DWSET call to tell OS9 what size etc to make the new window. The numbers following the DWSET word are:

8 is the window type. This gives a 320 x 192 16 colour graphics screen.
0,0 is the location of the top left corner of the window.
40,24 is the width and height of the window in characters.
0,1,2 are the foreground, background and border palette register numbers.

OK, so now I have created the window, but one thing is still missing....I can't see it yet. The next command, SELECT, takes care of that.

Right, now we can start to use some of the graphics commands. The ARC command draws an arc (part of a circle or ellipse) on the screen. Here's a sample:

```
run gfx2(wpath,"ARC",50,20,100,10,1,0,1,0)
```

I must admit that it took me quite a while to work exactly how the numbers in this command worked, but I think I've got it. Here goes. The first two numbers are the location of the centre point of the ellipse. The next two numbers are the X and Y radii of the ellipse. So far so good. Now the next four numbers form the two sets of coordinates which, when you draw an imaginary line through them, form the start and end points of the arc where the ellipse touches that line. This is approximately only, probably due to inaccuracies in 8 bit maths. The manual says: 'ARC begins drawing from the point on the screen closest to the first set of coordinates (xcor1, ycor1). It stops at the portion of the screen closest to the second set of coordinates (xcor2, ycor2).'

If you try something like this:

```
run gfx2(wpath,"ARC",20,10,10,20,30,50,27,15)
run gfx2(wpath,"LINE",30,50,27,15)
```

You will find that the line is parallel to a line drawn through the two ends of the arc. Have a play with that, and try the example on page 9-51 of the manual. It works as long as you add the code to open the window around it. By the way, to close the window and return to your normal screen, this is the code you should use:

```
run gfx2(0,"SELECT")
run gfx2(wpath,"DWEND")
close #wpath
```

The next GFX2 command in the manual is the 'BAR' draw. This one will draw a filled box like the one in RSDOS that goes 'LINE(x,y)-(x1,y1),PSET,BF. The parameters passed are exactly the same. This is what it looks like:

```
run gfx2(wpath,"BAR",50,20,100,130)
```

So, let's have a look at some more graphics commands. I guess the box draw should be next. It goes like this:

```
run gfx2(wpath,"BOX",xcor1,ycor1,xcor2,ycor2)
```

If the first set of X and Y coordinates is left out, the box will be drawn from the current graphics cursor position, where you left off drawing with the last command.

The circle command, unlike RSBASIC, ONLY draws a CIRCLE! So it is simpler than the basic one:

GCCCI News Release

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```
run gfx2(wpath,"CIRCLE",xcor,ycor,radius)
```

Again if the X and Y coordinates are omitted, the circle is drawn at the current graphics cursor position.

The draw command is somewhat different from the basic one, in that its direction sub-commands are compass points, instead of arbitrary letters. So, N5 is north(up) 5 pixels, S8 is south(down) 8 pixels, and SE10 is south-east (down-right) 10 pixels. As well as that, the orientation of the compass may be rotated by 90 degrees at a time, so A0 is normal, A1 is 90 degrees, A2 is 180, and A3 is 270 (clockwise, of course). Next we have the draw relative command. U23,45 will draw a line from the current position to coordinates 23,45 without changing the cursor position. With this, it would be fairly easy to implement the 'rays' draw that is so popular with drawing programmes. Simply set the cursor to the required centre point, and then draw lines, using the 'draw' command, out to the mouse location. Here's a bit of sample code.

```
repeat
run getmouse(wpath,mouse)
run gfx2(wpath,"PUTGC",mouse.AcX,mouse.AcY)
until mouse.cbsa <> 0

xcor=mouse.AcX
ycor=mouse.AcY

repeat
run getmouse(wpath,mouse)
run gfx2(wpath,"PUTGC",mouse.AcX,mouse.AcY)
U$="U"+str$(xcor)+","+str$(ycor)
run gfx2(wpath,"DRAW",U$)
until mouse.cbsa=0
```

I'll try to explain this programme sample. Please note that not the whole programme is depicted here, for example, the procedure 'getmouse' is not shown, also the variable mouse is a complex variable set up with the TYPE command. The first repeat-until loop is used to mark time, and move the graphics pointer around (PUTGC) until a button is pressed (the left one). Next a new repeat-until loop draws lines from the point at which the button was pressed out to the current location of the graphics cursor, until the button is released. Unless you know how the rest of the code works, (and you don't, else you wouldn't be reading this) don't try to use this code. I will supply a full working example in a later article.

These next few commands are used for text printing, except for the bell command, which, of course, can be used at any time.

```
run gfx2(wpath,"BELL")
run gfx2(wpath,"BLNKON")
run gfx2(wpath,"BLNKOFF")
```

The first sends a beep to the speaker, the second will set any following text to blinking. NOTE! this only works on a TEXT window. That is, only types 1 and 2 screens. Blinking characters are NOT supported on a graphics screen. The last example above is the blink off call.

This next one is only for GRAPHICS screens. It changes the character set to BOLD printing.

```
run gfx2(wpath,"BOLDSW","ON")
```

and off again...

```
run gfx2(wpath,"BOLDSW","OFF")
```

I will now take some commands out of sequence, but since they belong together, I think it is justified. The commands are used to change the foreground, background and border colours respectively. Here they are.

```
run gfx2(wpath,"BORDER",palreg)
run gfx2(wpath,"COLOR",fore,back,bord)
run gfx2(wpath,"PALETTE",palreg,colour)
```

In the first one, the variable 'colour' is a palette register number, that is, a number from 0 to 15 inclusive. Be careful, the manual seems to suggest (on page 9-58) that it is the colour in the border palette register that is changed, but this is not so. The second line also uses variables to represent the palette registers to use for the foreground, background, and border register. Here is the call you may use to change the actual colour in the individual palette registers. The first value is the palette register number (0 to 15), and the second is the colour value to place in it (0 to 63).

Well, that will be enough for now, next time I may present a complete working set of examples for you to type in and run. Until then, keep practicing writing Basic09 programmes. It is really not very difficult. By the way, if any of you have any problems, or don't quite understand how to do a particular aspect of Basic09 programming, please write to me care of the newsletter, and I will answer them if I can.

```
Regards, Bob Devries
(bob@paxnet.com.au)
```

Part 5 of 14

I decided that I would digress from my tirade about the CGFX2 library calls to explain the answer to a problem that was posed by one of the Brisbane members of the Australian OS-9 Usergroup. I can see he has a red face. He asked me if I knew of a programme to read text file originating from MS-DOS WordStar or Word-Perfect "and-the-like" word processors. These word processors

set the eighth bit in some characters in the file. I said to him, 'why don't you write one in Basic09?'. He gave me a queer look.

The problem is really not very difficult. What is needed to change the character from high-bit-set to normal? Here's a bit representation of a character 'B' ... 01000010. If the high bit (bit 7, starting at 0) then the bit pattern is like this... 11000010. So the hexadecimal goes from $42 to $C2, and the decimal from 66 to 194.

To get rid of that extra bit, we use the Basic09 LAND operator. Land does a Logical AND operation between the two numbers passed in its parameter variables. The first parameter is the character you want to alter, and the second is the mask to be ANDed with. First, let's look at how binary and works. When two binary bits are ANDed together, the result only if BOTH the bits are set to 1. So in our example numbers here's what happens:

```
   $C2     11000010
   $7F     01111111
           --------
result:    01000010
```

which is 42, the value we really want.

Notice how we made sure the bit we want to discard is left as a 0 in the mask, hence the $7F.

OK, so now the easiest way to filter the files required is to read and write standard in and standard out, and use input and output redirection. In Basic09, that is easy. Here is the code:

```
PROCEDURE filterhibit
0000       DIM a:STRING[1]
000C       DIM b:BYTE
0013       WHILE NOT(EOF(#0)) DO
001D          GET #0,a
0026          b=ASC(a)
002F          b=LAND(b,$7F)
003B          a=CHRS(b)
0044          PUT #1,a
004D       ENDWHILE
0051       END
```

See, only ten lines of code! First, dimension an input/output variable, 'a' as a single character string, and a byte variable 'b'. Remember, we only need 8 bits, so a BYTE value is required. We then use a while/endwhile loop to read path 0 (standard in) until an EOF (End Of File) is detected. Read the character into 'a', convert to ascii value in 'b', Logical AND 'b' with $7F, and change it back to a character value with CHR$. Lastly, PUT it out on path 1 (standard out), and let OS9 worry about where it goes. When EOF is detected, we quit. That's all there is to it.

So you can see that Basic09 is really easy to use for even small tasks like this. The command line for using this programme is this:

```
filterhibit <msdos.txt >os9.txt
```

Note that you can only use it once it has been PACKed by Basic09, and stored in your CMDS directory. Well, that's all for now.. keep trying those little programmes in Basic09.

Regards, Bob Devries
(bob@paxnet.com.au)

to software version control. It reduces developer's time-to-market schedules and improves project management by focusing on all aspects of the project development cycle.

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<EOF>

As noted in *From the President* on Page 3, there will be an election for one Director position on the Board of Directors at the OS-9 Users Group Annual General Meeting during the Chicago Fest on Saturday, April 13, 1996.

The Director position is currently held by Ken Scales, whose term will expire at the AGM. The new Director will be elected for a three-year term.

Nominations, signed by the nominee and two other members should be submitted in writing to the UG address given on page 2, with the envelope marked "Nomination".

The following text is taken from the UG bylaws:

Article IV. Elections

Section 1. Eligibility

A. Any Individual Member in good standing who is at least 21 years of age may run for any elected position.

Section 2. Nominations

A. The date and location of the General Meeting of the OS-9 Users Group at which the election will be held will be published in the periodical.

B. Nominations shall be submitted in writing to the Secretary prior to the beginning of the meeting. All nominations shall be signed by two nominators who are Individual Members in good standing, and by the candidate.

C. In the event that there are no written nomi-

nations submitted for a position, nominations for that position may be made orally at the annual meeting of the OS-9 Users Group.

D. Oral nominations are to be made from the floor. A seconder is required. Before closing nominations, the Chair should inquire if there are any further nominations, and if there is no response, the nominations are closed. The candidate must agree with the nomination.

Section 3. Procedure

A. If there is only one candidate nominated for a position the candidate shall be declared elected by acclamation.

B. All elections shall be conducted by secret ballot of the regular members in good standing present at the General Meeting of the OS-9 Users Group. The individual acting as secretary at the meeting shall read off the names nominated for each position, and the vote taken.

C. If a quorum is not present at the General Meeting of the Group, then the election shall be delayed until the next annual meeting.

D. Ballots shall be counted by two members of the Board of Directors present at the meeting.

E. In the event of a tie for first place between two or more candidates, a run-off ballot will be held between the tied candidates only. If the candidates remain tied after the second ballot then the election for that position will be postponed until the next annual meeting of the OS-9 Users Group unless one candidate agrees to step down.

F. Once the election has been completed, and the results posted, a motion should be made from the floor that the ballots be destroyed.

Programming with Solder

This column will appear from time to time as articles become available. Submissions of hardware articles are welcome. Unless otherwise noted, designs are for personal use only.
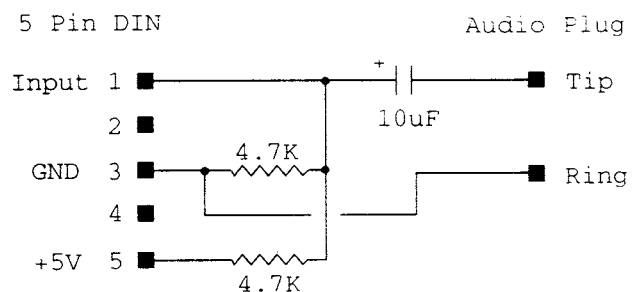
Oblique Triad's Color Computer Sound Recording Cable

Several people have enquired lately about digitizing sound files on the Color Computer. Here is a design for the sound capture cable created by Oblique Triad for use with their Studio Works package. The cable works fine with public domain sound sampling programs such as DIGITZ for DECB by Zygo Blaxell which should be available on any Color Computer/OS-9 BBS.

The cable plugs into the left joystick port. With careful construction, the two resistors and the capacitor will fit inside the housing of the joystick connector, making a neat and clean appearance for the cable.

The samples can be played back through the Color Computer's speaker using the play command under OS-9. A simple program to use this circuit to sample sound under OS-9 should also be a snap to write. Any takers? We'll

publish the source for any submissions in an upcoming issue.

```
5 Pin DIN                              Audio Plug

Input  1 ■────────────┬──────┤├───────■ Tip
                      │    + 10uF
       2 ■            │
                 4.7K │
GND    3 ■──┬──/\/\/──┤         ┌──────■ Ring
            │         │         │
       4 ■  └─────────┼─────────┘
                      │
+5V    5 ■──────/\/\/─┘
              4.7K
```

Notes: The capacitor should be a small tantalum (5-10v)
        The resistors should be 1/8w if possible else use
        1/4 watt.

<EOF>

> The Users Group is undertaking a project to establish a centralized OS-9 information resource, containing data ranging from OS-9 Users to Bulletin Boards to Vendors. This information will be available to both individual and corporate Users Group members for a nominal charge. The co-ordinator for this project is Chris Perrault.

The OS-9 Club Scene

In this installment of the OS-9 Users Group Sourcebook, we're going to look at local user groups and clubs. At the end of this article will be the entry form for clubs to fill out and return. Those who respond will be added to the Sourcebook's user group database. Keep in mind, as always, that membership to the UG is not required to be added to the Sourcebook. You are however always encouraged to join and to participate in the UG.

OS-9 was first introduced to the personal computer market back in the early 1980s, when Tandy released it for the Color Computer. At that time there were many clubs dedicated to the Color Computer. As the power of OS-9 became apparent, the number of OS-9 users within these clubs grew, and included many of the big names in the community now. Some of the clubs still in existence today include the Glenside Color Computer Club, Chicago OS-9 Users' Group, Atlanta Computer Society, and DalTRUG.

In the early days of personal OS-9 computing, these clubs had a big impact on the community and how OS-9 progressed. Through third party developers and clubs the full power of OS-9 was realized. This remains true today for both the local clubs and the OS-9 Users Group as a whole.

There were several reasons for the success of clubs in those days. The availability of many public domain and shareware programs made it important to belong to a club as it allowed you easy access to them through other members. Now many online services and bulletin boards have those programs available for download. Being a member also would at times get you discounts from some of the software companies through their promotions.

The main reason for the success of local clubs (and it still holds true today) is that it lets you meet directly with other users, share ideas, and complete projects that would be unachievable or unrealistic on your own. There are many users who move to other operating systems because they feel there is no support, and this is especially true to those who still do not own modems.

We are trying to collect the names of as many users and clubs as possible to add their names to the Sourcebook database. The more responses we get, the better we will be able to help users find clubs in their area. Likewise, we will have a list of individual users that clubs may contact locally. That in turn may bring in a few members from 'out of the cold' who may not have known they had such a club in their area, and it also brings some much needed new blood to that club.

That is the aim of the whole Sourcebook in the first place. We want to keep as many people as possible in touch, whether they are vendors, industrial or personal users, BBS sysops, and club members. We want to make information flow in a way that everyone can feed off each other's success, but the only way to do that is to get EVERYONE INVOLVED. The ball is in your court -- let's keep it rolling.

<EOF>

The Toolbox

The Toolbox was full of bugs at the deadline for this issue, but will be fumigated in time for the next issue.

The OS-9 Users Group Sourcebook
Local Club and User Group Entry Form

Club Name _____

Contact Name: _____

Voice Phone: (_____) _____

Club BBS: (_____) _____

Email Address: _____

Address: _____

City _____ State _____ Zip Code _____ Country _____

Do you support any of the following areas? Please check all that apply.

o OS-9000   o OS-9/68000   o OS-9/6809

Club Newsletter [title] _____

We would appreciate a short summary that gives a little background on your club, such as what is commonly supported, how often do you meet, what activities go on within the club, and what some of the club's accomplishments are (ie: going to local computer shows, helping new software get written, etc...)

_____

_____

_____

Would you like more information on the OS-9 Users Group?   o Yes!

The OS-9 Users Group, Inc.
6158 West 63rd Street
Suite 109
Chicago, Il. 60638
U.S.A.

The OS-9 Users' Group Sourcebook
Individual User Entry Form

Name: _____

Business: _____

Address: _____

City: _____ State: _____ ZIP: _____

Country: _____ Telephone:(_____) _____

EMail Address: _____

Signature: _____ Date: ____/____/____
                                        DD   MM   YY

Would you like information on
joining the OS-9 Users Group?   o Already a Member!   o Yes   o No

Can this information be passed to OS-9 vendors?   o Yes   o No

Are you available to act as a volunteer for OS-9
projects from time to time? This isn't a commitment.   o Yes   o No

Please indicate your area(s) of interest:

o OS-9/6809   o OS-9/68000   o OS-9000

o Programming   o Hardware   Other _____

You use OS-9 primarily for what purpose:

o personal use   o industrial system   o both

Please describe briefly your OS-9 computer system(s): _____

_____

Please describe briefly your computer and OS-9 experience: _____

Please describe your OS-9 interests (things you would like to see the UG do, or see in the MOTD), or list any other questions or comments: _____

_____