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*Occasional thoughts to fill the space, added by the editor below the articles.... Keith.

*Thanks Cardy.
THE EDITOR WRITES...

Well, here it is three days past the deadline, and almost everything is here and ready for printing. Jim Gagne sent his stuff in on a floppy, which was a mixed blessing. It was non-trivial to sneak hardware to print the data, and his margins were too wide. So I am responsible for the funny looking quality of the stuff from the Library SIG.

I have arranged the entries in the order of their arrival, for lack of any better method to sort them by. I am impressed by the work that people have bothered to put into the entries, and angered by those of you who did nothing.

My goals for this newsletter: wide distribution. On-going debate. New product announcement (no ads). A LOGO! Inter-project/Inter-personal communication to prevent multiple inventions of the wheel across the world. And... whatever else comes up during my term as editor.

First things first. A LOGO. LOGO contest as follows:

1.) Send your concept of a logo to USUS News before November 1st.
2.) All entries (within reason) will be printed in USUS News 2.
3.) Cast your vote before February 1st.
4.) Winning LOGO will be used in USUS News 3.
5.) USUS will retain all logos sent for posterity, if for no better reason.

Wide distribution: tell a friend. Xerox the membership form, leaflet your company with them, use them for party favors!!

Inter-P communication: Write. Tell us what you are doing with/for/to the UCSD System Software Package.

New product announcement: Once you have gotten together with everyone that is working on the same goal you have, and have it working; let us know!

A note on documentation: One of the articles that Jim Gagne contributed is documentation-flavored. (Separate Segments) The more of this kind of article that we can get into the USUS News is going to speed all of our work toward whatever goal we are headed for. Three cheers for writing it down so that someone else can read it.

A Challenge: University types: Let's get some class projects going to do some of the stuff that the world at large needs. A screen oriented flier, that works. An ISO standard Pascal Compiler. API compilers, LISP compilers, or interpreters for the ambitious! A useable desk-calculator.

Another Challenge: Hobbyists: Games: A better, dynamic super-Pascal oriented ADVENTURE, a good fortune telling program [vis: CHING], GO, GOMOKU, and more!!!

Well, I've opened my keyboard a bit too far already, so I will cut the stream here. And close with...

REPLY!!!!!
Advanced Planning Committee Report:
The first meeting of the committee was well attended (31 attendees) many of whom were very vocal on subjects which are listed below. Randy Bush of Volition Systems was elected chairperson of the committee. It became clear that at least initially the committee will serve as a clearinghouse for ideas. In the longer term the committee will attempt to identify and focus on a subset of the key issues. The initial list of these issues (referred to as the 'laundry list' during the first meeting) are as follows:
ERROR RECOVERY
ADDRESS SPACE (need more than 64K)
FILE SYSTEM (# of files/directory, # of directories/device, sequential vs. random, etc.)
NUMBER OF SEGMENTS
METHOD OF ACCESSING CRT FUNCTIONS
ARITHMETIC PRECISION (32-BIT STANDARD?)
DEBUGGING
ACCESS TO SYSMREC VARIABLES
INDIRECT COMMAND FILES
AVAILABILITY OF DOCUMENTATION
also solicited: recommendations for NEW LANGUAGES
NEW PROCESSORS

Comments (in writing!) are welcomed by the committee and may be addressed to Randy Bush Volition Systems or David M. Allen Control Systems, Inc. 1317 Central Ave. Kansas City, Kansas 66102

The next meeting of the Adv. Planning Committee will be at PC 80 in Philadelphia this August, to be held shortly before the Executive Committee meeting. Visitors are encouraged to attend. Exact time and location will be announced by mail to Adv.Pl. Comm. members with addresses on file.

7-Jul-80

VEAH!! Go to it gang!
~
~
This disk is normally supplied in CP/M format, and includes my favorite CP/M utilities. For documentation see VOL.2B.DOC and DFDCO.DOC on Volume 2A.

BOOTER.ASM......Sophisticated FINIT and "fast" PRBS for Z-80 systems (can modify easily for 8080) to run 128- & 512-byte sectored single density and 512-byte sectored double density disks transparently. Requires Z-80-compatible assembler (extended Intel mnemonics), Western Digital-based floppy disk controller (eg., 1771, 179x series), and DFDCO-like disk formatter. May require attention to disk timing.

CAT.COM.........Part of Ward Christensen's CP/M cataloging system. From the CP/M Users Group Volume 25.

CLEAN.COM......Nifty Disk-like utility to back up disk files; easy to use.

D.COM...........Replacement for DIR that alphabetizes your directory & displays it in one screenful, along with file size & room on disk.

DFDCO.ASM.......Double/single density fast format and COPY, for disks of 128, 256, or 512-byte sectors, single/double sided. Requires Digital Research's MAC (or equivalent) and MACRO.LIB. All disk access is in the program for speed; Western Digital chip on your floppy disk controller is a must.

DUMP.ASM.......Fancy file/track/sector hex & ASCII dumps and patches for 3740-type disks. Accesses CP/M's logical groups directly.

FMAP.COM.......Makes a file of CP/M directory names. Part of Ward Christensen's disk cataloging system.

MACRO.LIB.......Fancy 8080 macro library for Digital Research's macromemonies. Used by DFDCO and DUMP.

PGEN.ASM.......Rewrite of UCSD's distribution PGEN to include booter and support multiple disk formats.

SAMPLEIO.ASM...Sample UCSD-compatible I/O routines for console and memory-mapped terminal. VERY fancy.

SPAT.ASM.......Extensive updating of CP/M Users Group SPAT (Vol. 1), for patching disks on systems with memory-mapped terminals. Nice.

TYPEUCSD.COM....Object file of UCS2CPM with assembler switch set to display UCS2CPM files on the console or printer of a CP/M system.

UCAT.COM.......Update the CATALOG; part of CP/M disk cataloging system.

UCSD2CPM.COM....Object (Z-80 only) of program to transfer UCS2CPM files to CP/M. Runs under CP/M.

UCSD2CPM.MAC....Source for program to transfer UCS2CPM files to CP/M. Requires assembler that accepts Bilog mnemonics (eg., Microsoft).

NOTE: Apple users and other non-8080/8085/Z-80 users, there is nothing of interest to you on this disk.

BLACKJACK.TEXT.....Now you can play it in Pascal. Appropriate for 1980: allows negative money.

CHASE.TEXT......A good implementation of an old favorite. Get away from the robots, but don't get zapped by the electric fence.

DEBTS.TEXT.......Home finance program, keeps track of your bills. Nicely menu driven, easy to use.

OTHELLO.TEXT.....VERY nice implementation of OTHELLO, the best I've seen.

OTHEL11.TEXT

OTHEL12.TEXT

OTHELINIT.TEXT.....Subfiles of OTHELLO.

PROSE.DOC1.TEXT

PROSE.DOC2.TEXT.....A subset of the documentation of Prose, copied from the Pascal News No. 15. What you really need to know to use it.

PROSE.TEXT.......A copy of the fancy text-formatting program from the Pascal News, No. 15, adapted for UCSD Pascal by its author, J. P. Strait, of the University of Minnesota. Requires most of 64K of memory to compile.

PROSE.A.TEXT

PROSE.B.TEXT

PROSE.C.TEXT

PROSE.D.TEXT

PROSE.E.TEXT

PROSE.F.TEXT.....Subfiles of Prose.

PROSE.I.S.CODE.....Object version for those without sufficient memory to compile; will run under UCSD versions 1.4 and 1.5.

REQUESTS.TEXT.....Some ideas for some very needed programs and routines.

SNOOPY.TEXT.......Snoopy calendar, featuring the W.W. I flying ace.

STORE.DATA.......Sample data file for DEBTS.TEXT.

UNIVERSAL.TEXT.....Suggestion for a UNIT that will let us use each other's programs without having to edit in hardware-specific routines.

* All programs should be self-documenting, though you'll have to fix hardware-specific procedures in the same programs (see UNIVERSAL.TEXT for a discussion of this subject); as a rule, any code your system does not support (eg., KeyPress or a system clock) can just be deleted.

Apple volumes feature the same software.
The long-awaited Bowles Database seed, plus other utilities.

<table>
<thead>
<tr>
<th>Name</th>
<th>Blocks</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBBUILD. TEXT</td>
<td>38</td>
<td>Part of K. Bowles' database seed.</td>
</tr>
<tr>
<td>DBUNIT. TEXT</td>
<td>4</td>
<td>The major data accessing routines, allowing records of variable size and user-defined linkage &amp; nesting.</td>
</tr>
<tr>
<td>DBUNIT.1. TEXT</td>
<td>18</td>
<td>Subfile of DBUNIT &quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>DBUNIT.2. TEXT</td>
<td>32</td>
<td>&quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>DBUNIT.3. TEXT</td>
<td>34</td>
<td>&quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>DBUNIT.4. TEXT</td>
<td>30</td>
<td>&quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>KB.DATABASE.DOC</td>
<td>74</td>
<td>A detailed class manual to show you how to use it.</td>
</tr>
<tr>
<td>KB.DBDemo. TEXT</td>
<td>4</td>
<td>Demo program to further document the system.</td>
</tr>
<tr>
<td>KB.SCUNIT. TEXT</td>
<td>16</td>
<td>Screen control unit with some very nice screen i/o.</td>
</tr>
<tr>
<td>KB.STARTER. TEXT</td>
<td>30</td>
<td>Help set up the data structures.</td>
</tr>
<tr>
<td>KB.TESTDB</td>
<td>32</td>
<td>A test database data file, used by DBDEMO.</td>
</tr>
<tr>
<td>COMPARE. TEXT</td>
<td>34</td>
<td>From the Pascal News No. 12; prints out textfile diff's.</td>
</tr>
<tr>
<td>COMPRESS. TEXT</td>
<td>8</td>
<td>Compress leading/strip trailing blanks; shrink files.</td>
</tr>
<tr>
<td>INDEX. TEXT</td>
<td>24</td>
<td>Expanded index to Jensen &amp; Wirth--now you can find it.</td>
</tr>
<tr>
<td>VOLUME.4. TEXT</td>
<td>14</td>
<td>Commentary on the files on this disk.</td>
</tr>
<tr>
<td>WUMPUS. TEXT</td>
<td>28</td>
<td>The game of Wumpus, elegantly implemented.</td>
</tr>
<tr>
<td>TEACH.WUMPUS</td>
<td>10</td>
<td>Documentation on the wunders of Wumpus.</td>
</tr>
<tr>
<td>WUMP.CAVE0. TEXT</td>
<td>4</td>
<td>One of several cave configurations you can select from within the game; if you get bored with one, try another.</td>
</tr>
<tr>
<td>WUMP.CAVE1. TEXT</td>
<td>4</td>
<td>... This one's hard.</td>
</tr>
<tr>
<td>WUMP.CAVE2. TEXT</td>
<td>4</td>
<td>... This one's hard, too.</td>
</tr>
<tr>
<td>WUMP.CAVE3. TEXT</td>
<td>4</td>
<td>... This one's hard.</td>
</tr>
<tr>
<td>WUMP.CAVE4. TEXT</td>
<td>4</td>
<td>... This one's hard.</td>
</tr>
<tr>
<td>WUMP.CAVE5. TEXT</td>
<td>4</td>
<td>... This one's hard.</td>
</tr>
</tbody>
</table>

NOTE: All software on this volume is relevant to Apple users, and is available on one dual-disk minifloppy volume.
At the first meeting of the UCSD System User's Society (USUS) a special interest group was formed for people concerned with business applications.

As its first activity, this group decided to compile a list of commercially available software, and to publish the list in the USUS newsletter. The purpose of the list is to encourage the use of the UCSD system by making known the wide variety of applications that are available.

If you are currently marketing any application software packages and would like to participate, please send a brief description of each program to: USUS Business Applications SIG, C/O Dr. Michael R. Posenh, 1492 Windsor Way, Livermore, CA 94550, (415) 455-4034.

If you have any ideas on the future direction of this SIG, please join us at the USUS meeting in October.

**UCSD System Applications Software**

Helmers & Associates, Inc., P.O. Box 41, Hancock, NH 03449, (603) 525-4038

*Pascal-407*, by Carl Helmers: A unit-record accounting system. A simple UCSD Pascal report generation program interpretively operates on "TERM" files prepared with the UCSD System Editor. The program is in source form, with illustrative examples of its use and notes on customization.

**International Medical Systems Inc.,** 190 South King St. #1990, Honolulu, HI 96813, (808) 536-1041

*SMART CHART*: An integrated medical information system for small private practices. It provides billing/insurance, complete medical chart preparation, and practice analysis.

**Necros Computing Company,** 615 Third Street, San Francisco, CA 94122, (415) 495-7440

*DATELEX*: Data entry software includes a formatted-CRT language (callable as a UNIT), batch maintenance, listings and remote communications with any asynchronous computer.

**Organic Software,** 1492 Windsor Way, Livermore, CA 94550, (415) 455-4034

*DATEBOOK*: An appointment scheduling program for physicians, dentists, attorneys, or for any situation where time management is critical to office efficiency.

*SCREENUT*: A screen control unit that makes applications programs totally terminal independent. Includes a selection program that lets the user pick his terminal from an extensive list of the most commonly used terminals.

**PDI Systems, P.O. Box 143, Penn Yan, NY 14527, (315) 536-3734**

*MEDOFFICE*: Program designed for small medical offices (1-5 practitioners). Handles billing and accounts receivable, insurance form preparation, appointment scheduling, collection lists, patient recall; stores diagnosis/problems lists and medication lists for each patient. List price is $2995.00, not including installation.

*MAILER*: Nailing list program which stores name, company, address, phone and any user defined category assignments on disk. Includes a sort by any field, function, and mailing label printout. Source code included with program, $79.95 each (8" single or double density).

**DISASSEMBLER*: A Pascal 2-80 disassembler with ASCII or hexadecimal printout.

**Renaissance Systems Inc., 10639 Roselle St., San Diego, CA 92121, (714) 457-2700**

*PROFF & FOMIL*: Word processing software. PROFF is a Pascal runoff program patterned after NEDOFF in UNIX. FOMIL is a form-letter generation program compatible with PROFF.

**Type TTT, 3031 German Trap Drive, Naperville, IL 60563, (714) 938-0177**

*REPS*: REPS is a record keeping and sales analysis tool for manufacturers representatives (agents). It performs comparative analysis by salesman, principal, or customer.

*WICS*: WICS is an inventory control system for a public warehouse. It records all incoming and outgoing shipments and computes monthly charges based on storage and handling rates for individual products.
APPLICATION SOFTWARE
DESCRIPTION

Vendor Name ____________________________________________________________

Address ______________________________________________________________

City ___________________________ State ___________ Zip ________________

Phone ____________________________

Product Name __________________________________________________________

Description ____________________________________________________________

Product Name __________________________________________________________

Description ____________________________________________________________

Product Name __________________________________________________________

Description ____________________________________________________________

Return to: USUS Business Application SIG
C/O Dr. Michael R. Posehn
Organic Software
1492 Windsor Way
Livermore, CA 94550

( )
USUS Educational Applications of Computing SIG

What's in a name? After a recent trip to the east coast, spreading the good word about Pascal and educational applications of computing using it, I discovered that certain colleagues had arranged to have me named "Chairman/Contact Person" of the USUS "Computer Aided Instruction SIG." Without discussing the appropriateness of the first piece of nomenclature, I do propose we change the latter name to "Educational Applications of Computing SIG" on the grounds that this name better describes the scope of this group. All of which brings me to the main point of this note: some ideas about the scope and activities of this group.

In "educational uses of computing" (EAC), I include the following areas:

- Computing as an object of study (Computer Science, programming, "computer literacy", social impact, etc.);
- Problem solving with computers (to develop problem solving skills or because the solution is important in itself or both);
- Drill and practice;
- Tutorial programs (initial presentation, "guided inquiry", remediation);
- Testing (generation, administration and direct feedback);
- Simulations and "facilities" (e.g., plotting and statistics facilities).

This list is not complete and the taxonomy is inadequate. What I hope to suggest by it is that we should view "EAC" much more broadly than the label "SIG" is usually construed.

In a similar informal and suggestive spirit, I offer the following list (in no particular order) of some reasonable activities for this group.

- Exchange information about current EAC using UCSD Pascal (tm),
  --by maintaining a list of active workers their areas of
  interest, addresses and phone numbers,
  --by publishing descriptions of such work in this newsletter
  (more about this below),
  --by including in this newsletter references to articles of
  interest published elsewhere.

- Provide SoftTech Microsystems with information, from the EAC point
  of view, on what features of the UCSD Pascal System (tm) are
  useful, what features we don't like and what we changes would
  be useful (and, in all cases, why).

- Support (through this newsletter or other mechanisms) a general
  bulletin board for EAC using UCSD Pascal(tm):
  "Does anyone know...?", "Does anyone have...?", "Hey, guess
  what we discovered/are doing?"

- Hold meetings/birds-of-a-feather sessions at USUS meetings and at
  some of the various meetings where computers and education is

a primary topic (e.g., NECC, AEDS, ADCIS, ACK SIGCSE, ACK
SIGCUE, etc.).

Publish informative and stimulating articles. My experience
indicates that one can often judge the value of a SIG by its
publications. Such articles are thus hereby solicited.

Address the problems of distributing educational software
("courseware" to some). A number of different models have
been proposed, each with its own advantages and shortcomings.

As a start on some of these activities, let me encourage, indeed
exhort, interested readers to send me short notes describing their
educational applications of UCSD Pascal (tm) and indications of what
activities they would like to see USUS in general and this SIG in
particular pursue. Longer communications are even more welcome. The
response to these requests should provide both a mailing list and an
ample amount of material worth mailing.

Stephen D. Franklin
Computing Facility
University of California
Irvine, California 92717
714/832-5164

--- Jul-80 ---

Some notes on machine comparisons... No one will admit to these,
so I am putting them here, with my neck under the guillotine...

The following is information on 'actual' comparisons between
the processors which run UCSD Pascal(tm). These figures are normalized
comparisons to the BP microengine(tm) which is given the base
figure 1. The program is QuickSort (e.g. Bubbles) NSort is
iterative, RSort is recursive.

<table>
<thead>
<tr>
<th>Hardware</th>
<th>NSort</th>
<th>RSort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microengine</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>GA440</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>77/36</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Z80(48mhz)</td>
<td>6</td>
<td>4.5</td>
</tr>
<tr>
<td>GA220</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>LS111(Tenah)</td>
<td>5.1</td>
<td>6.6</td>
</tr>
<tr>
<td>9900(3mhz)</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>6502(1mhz)</td>
<td>9.5</td>
<td>9.9</td>
</tr>
<tr>
<td>8080(2mhz)</td>
<td>9.6</td>
<td>9.9</td>
</tr>
<tr>
<td>6800(1mhz)</td>
<td>11</td>
<td>22</td>
</tr>
</tbody>
</table>

*not official*
THE USUS WORD PROCESSING COMMITTEE --
PLENARY MEETING

by Randy Clark

On Saturday, 21 June, as planned, the Word Processing Committee first met. The intention was to begin a special interest group as a resource for members of USUS. Twenty-one conference attendees showed up; in view of the fact that the meeting was at 3:00 PM on Saturday, this must be considered a large turnout.

The first item of business was to take the traditional roll, and to circulate a handout describing a few word processing related programs which have already been made available to the USUS contributed library. Richard Kaufman, author of the UCSD Screen Oriented Editor, volunteered for the dual post of committee chairman and contributing editor to the USUS newsletter, and was so acclaimed.

The committee moved on to informal discussion. In the course of this, it was agreed that the committee's prime function should be to evaluate and disseminate information on various word processing products, both hardware and software. In the first connection, the committee intends to work closely with an as-of-yet hypothetical committee on host systems. To disseminate software, the committee intends to work closely with the contributed library committee, on which Richard Kaufman is serving as reviewer of word processing tools. The committee also decided to create some reviews of existing products usable with the UCSD Pascal System, and publish those reviews in the USUS newsletter.

As a secondary function, the committee intends to coordinate the updates of word processing software in the user library, so as to maintain a consistently supported set of tools.

It was agreed that while word processing software is not restricted to textfiles post-processors, those are the most visible items currently available. None of the committee was familiar with any word processing editors compatible with the UCSD system. It was decided to search for and promote the creation and contribution of: spelling correctors, index and table-of-contents generators, text comparators, cross-reference generators, KLIC generators, and graphics tools.

The committee enrolled some volunteers for the authorship of reviews of text formatters (those reviews appear in this issue), and then dissolved into the USUS general wrapup session.

A REPORT ON THE UCSD SYSTEM USERS' SOCIETY SOFTWARE LIBRARY

A number of interested users formed the USUS Software Library Policy Group, which has decided upon the following means of implementing a library of programs that would serve users of the UCSD system.

1. All authors donating software to the USUS library must include with it a standard form (to be designed by the chairperson and cleared by the USUS president) releasing the software for all noncommercial use, certifying that: a) it is the original creation of the donor; b) the donor indemnifies USUS from all damages resulting from any allegations of stolen or copied copyrighted material; and c) the author releases his/her work to USUS for distribution and noncommercial use, but that the USUS cannot guarantee that unauthorized users will not occur. A description of the software's intended application, hardware dependencies, etc., should be included. Finally it was agreed that only programs in source form would be accepted, although if certain source files were unduly lengthy or otherwise tricky to compile, they could also be included in the library in object form. Only software compatible with the UCSD system (Pascal, FORTRAN-77, etc.) will be distributed. Finally, all submissions should be in machine-readable form, preferably 8-inch, UCSD "standard" disks (see below), although Apple and NorthStar disks will also be welcomed.

2. Software will be collected by the library chairperson and distributed to two or more members of a panel of software reviewers, who will try it out, generalize it, tune it up, etc., as necessary. Current review categories include utilities, software tools, word processing, educational applications, health care applications, and games. It will then be collected on disk volumes and sent to regional volunteers for distribution. The volunteers will be responsible for copying the software, perhaps switching media, and accepting orders processed by the USUS secretary. The contents of software volumes will be published in the USUS newsletter as they are ready.

3. Software may be purchased only by members of USUS, although we included an escape provision that anyone willing to pay a surcharge on each order (currently $20, the annual dues) will also be able to make a purchase. Software may be then re-sold by USUS members only to other USUS members, free or at cost. All primary orders will be sent to the USUS secretary, currently Chip Chapin, who will record them and send them to the nearest regional distributor who supports the format desired. Current prices are $10 per 5-inch disk and $15 per dual 5-1/4 inch floppy postpaid (plus sales tax for California addresses), all of which (except taxes) will be paid by the USUS treasurer to the regional distributor, who will be responsible for procuring disks, copying them, processing orders sent to him, freight or postage fees, and guaranteeing that the software arrives in usable condition.
The extraction process has encountered an error or limitation, making it impossible to accurately represent the text in a natural language format.
The thing that will be cleaned up is the compilers system (following lingo at Intel). Intel's compiler policy is changing. The compiler is used for the whole system, not just the operating system. The compiler will be made available as a separate product.

Dr. Ken Bowers will be on sabbatical leave next year, and he is making no secret of his intention to leave Intel. His departure will result in the loss of a key figure in Intel's development work. His expertise and efforts will be sorely missed by Intel and the industry as a whole.

In other news, a new assembly language has been developed. The 'assembly language' is a term used to describe a set of instructions that can be directly translated into the machine code of a computer. This new assembly language is designed to work with Intel's current processors and will be backward-compatible with existing software. The language will be easier to use and will improve the efficiency of the software.

The future holds a number of exciting possibilities and challenges for the compiler. A major emphasis will be placed on portability and efficiency. The compiler will be designed to work with a variety of different platforms and architectures.

In conclusion, the Intel compiler is a crucial tool for the development of software and will continue to play a vital role in the advancement of computing technology.
A WORD ABOUT SEPARATE PROCEDURES AND SEPARATE UNITS

One of the deliberately undocumented features of UCSD Pascal is the existence of "separate procedures" or procedures that are compiled separately from the program that uses them. They are undocumented because they were implemented only after the system was essentially complete so that they would not clutter the documentation and make it more difficult to understand.

They are used in two different ways: first, to provide a basic level of grouping for procedures that are intended to be called by the programmer to perform some task. Second, they are used by the compiler to separate the code for a procedure from the rest of the program. This allows the programmer to reuse the code for a procedure without having to write it again.

The separate procedures feature is implemented by the compiler as follows: when a procedure is called, the compiler creates a new program that contains only the code for the procedure. This new program is then linked with the rest of the program to form a single executable file.

The separate procedures feature is particularly useful for large programs that contain many procedures. It allows the programmer to divide a large program into smaller, more manageable pieces.

Here is how they work:

1. The programmer writes a new procedure that contains the code for the desired task.
2. The programmer calls the new procedure from the main program.
3. The compiler creates a new program that contains only the code for the new procedure.
4. The new program is linked with the main program.

This process can be repeated as many times as desired, allowing the programmer to divide a large program into smaller, more manageable pieces.

In conclusion, separate procedures are a useful feature of UCSD Pascal that allow programmers to divide large programs into smaller, more manageable pieces. They are implemented by the compiler in a way that makes it easy to use them.

Jim Gayne, President, DATAMAR RESEARCH, Los Angeles.
host program with a (** file <filename>*)) compiler directive, where
"<filename>" is the name of the library file.) Then refer to the
separate procedures and functions by a full procedure/function
heading, including the parameter list in parentheses and the data
type of the function, then the usual semicolon, then the
declaration "EXTERNAL;".

Here's an example:

SEPARATE UNIT XYZ;
PROCEDURE ClearScreen; BEGIN Write (CHR (12)); END;
FUNCTION Sum (a, b: real): real; BEGIN Sum := a + b END;
END.

After you compile the preceding testfile and stick it into
your library, you can refer to the routines therein by including
one or both of the following declarations in your calling
program:

FUNCTION Sum (a, b: real): real; EXTERNAL;
PROCEDURE ClearScreen; EXTERNAL;

Then just use the procedure/function identifiers in the
usual manner.

CAVEATS

Some systems have a linker bug, wherein it tells you it is
linking in a separate procedure, but doesn't actually transfer
code. The result is random code, which has a habit of writing
randomly to disks. The linker bug occurs only when more than one
separate procedure/function in a given separate unit is called by
the host program, and may be indicated by an abnormal order of
procedure/function name callouts (with respect to the SEPARATE
UNIT) by the linker while it is doing its thing.

HARDBITS REVIEW

System: The ibs Multi-User Pascal System
Supplier/ Manufacturer: Independent Business Systems, Inc.
5476 Cleo Court
Livermore, CA 94550

Contact: Alfred A. Pease, President
Features:
*UCSD Pascal
*Up to 8 Users
*IEEE S-100 BUS
*5½" or 8" Disks
*10 Mbyte Harddisk
*Back-up System
*Multi-User Interlocks
*RAM Disk
*Pseudo-Terminal Set-up
*30 Amp, 12 Slot Board
*4MHz Z-80 CPU

This is the first in a series of ibs Systems capable of
multi-user operation which offer UCSD Pascal as the standard
language. The next generation will be of the multi-processor
variety, i.e., one CPU (Z-80) per user. A single user system,
actually the first system produced by ibs, is also available with
UCSD Pascal.

At the present time, there are at least a half dozen
micro-processor based systems, either available or nearly so,
that offer multi-user capability. However, micro-based systems
are not readily amenable to multi-user conversion, and this fact
has been a considerable obstacle in their development. Ibs
overcomes the memory access problem by utilization of a concept
known as "bank switching." This means simply that "banks" of
memory are switched in and out of the computer's memory space
with simple I/O instructions. The P-code interpreter, the "kernel"
of the system, is not switched; memory above 16K is allo-
cated to users by "banks," and the "banks" are switched in and
out of operative status on an alternation basis. Each user's
"bank" contains his programs, data spaces, peripheral tables,
Z-80 machine registers, interpreter, and I/O temporaries. Each
user appears to have at least 64K of memory at all times, as if
he were on a single user system. There is, of course, some
degradation in operational speed as more users are added to the
system. Thus, depending on the application, from four to eight
users are recommended.
In networking, secondary gain of "point-to-point" communication is often expressed as a function of the network interface and protocol. However, for initial information and preliminary processing, a network interface and protocol can be considered a separate entity. This paper presents an approach to answer questions regarding the system, but more importantly, it provides a basis for understanding the "point-to-point" communication framework.

II. 20TH-CENTURY PERSPECTIVE ON "POINT-TO-POINT" COMMUNICATION

In the context of "point-to-point" communication, the main challenge is to ensure that data is transmitted efficiently and accurately between two points. This involves considering various factors such as network topology, protocol design, and error correction techniques. The "point-to-point" communication framework is a critical aspect of network design, providing a structured approach for data exchange between two endpoints.

III. 21ST-CENTURY PERSPECTIVE ON "POINT-TO-POINT" COMMUNICATION

In the modern era, "point-to-point" communication has evolved significantly. With the advent of the internet and cloud computing, the traditional point-to-point model has been augmented with additional layers and protocols to support diverse applications. This evolution has led to the development of more sophisticated communication architectures that can handle a wide range of data types and transmission speeds.

IV. FUTURE PROSPECTS FOR "POINT-TO-POINT" COMMUNICATION

As technology continues to advance, the future of "point-to-point" communication is likely to focus on improving efficiency, security, and scalability. This will involve the development of new protocols and standards that can accommodate emerging technologies such as 5G, IoT, and blockchain. The ongoing evolution of "point-to-point" communication will be a critical factor in shaping the future of networking and communication technologies.
SECRETARY’S REPORT

August 1, 1980

What’s In a Name?
I have been asked several times this month, by folks who didn’t make it to the first meeting, what the purpose of USUS is and what sorts of things we are going to do. Now I can’t blame people who want to know what they’re getting for their twenty bucks, so I will try to lay it out. The UCSD System Users’ Society is not an organ of SofTech Microsystems’ marketing staff (despite the fact that your Secretary used to be half of said staff). We are a completely independent organization: unlike DECUS, Microsystems doesn’t even own our name. We are grateful for their assistance in getting us started, because without that recognition and initial push we wouldn’t be here; nonetheless, we are a Users’ Society: our role is to represent the users of UCSD Pascal. One way in which we will effective is in coalescing the requests of users for enhancements to the UCSD software, presenting those requests to Microsystems in a structured fashion and following through until some action is taken. Another vital function is to serve as the chief information and software exchange body for the UCSD [Pascal] System community. Have you ever wondered how you could get hold of one of those text post-formatatters you just know are out there in UCSD Pascal? As USUS, we hope to collect that sort of information. As the Users’ Society we will respond to the needs of the users.

"My RX02 Followed Me Home"
Things have been pretty busy for your USUS Secretary! In order to keep tabs on all those who attended the June meeting as well those who have written and called asking for information, I have installed a DBMS on my LSI-11. So far I have 241 names on file and have already received the twenty bucks from thirty people. That’s pretty good considering the first membership coupons were mailed only a couple of weeks ago. To those of you who may be hesitating I say "Remember, membership is for an academic year (ending July 1, 1981), so you might as well join now instead of putting it off!" Incidentally, I am planning at some point to issue special "plaques" to the early birds — as soon as I can get my Printronix to jump through the requisite hoops. Request for assistance is hereby made to anyone who knows how to make a nice plaque on a Printronix.
LMR Pitches In
The accounting firm of LaChance, Mack & Rosa of San Diego, finds a large portion of their clients in the computer business. Many of these are actively involved with Pascal in some way. Therefore, Mr. Rick Rosa of LMR has kindly offered to handle our incorporation proceedings gratis (except for state fees of course). With all the other expenses we are facing at this time that has been welcome news. Rick’s company has also offered to serve as our permanent mailing address, thus sparing us the expense of renting a P.O. box. I don’t mind receiving USUS mail at my own address, but it will be best in the long run to have and use this permanent address. So...address your USUS correspondence to

Chip Chapin, Secretary
UCSD System Users’ Society
c/o LaChance, Mack & Rosa (or just "LMR")
4805 Mercury, Suite A
San Diego, CA 92111

Thanks Rick!

October Meeting
The October meeting will be the first "official" meeting for UCSD System Users’ Society, Inc. At that time, the members will elect a board of directors which will itself elect our officers. They may be one and the same. Our June meeting went extremely well and has served to push us along a certain course. The October meeting will confirm and formalize the directions that have been established and because so many details of how we are going to go about being USUS have yet to be determined, it is vital that as many of the members and potential members be there as possible. Suggestions for interest groups and for discussion topics are solicited.

Chip Chapin, Secretary

Remember...
October 16, 17 & 18 in San Francisco!

Secretary’s Report
OFFICERS
(interim)

President
Jim Bandy
Texas Instruments
12860 Hillcrest
M/S 370
Dallas, TX 75230

Vice President
A. Winsor Brown
Point 4 Data Corp.
2569 McCabe Way
Irvine, CA 92714

Secretary
Chip Chapin
University Pascal
Consulting Service
3960 La Jolla Village Dr.
La Jolla, CA 92037

Treasurer
Jon Bondy
Type III
1275 Drummer Lane
Wayne, PA 19087

COMMITTEES and GROUPS

<table>
<thead>
<tr>
<th>Committee</th>
<th>Chairman/Contact Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Planning Committee</td>
<td>Randy Bush</td>
</tr>
<tr>
<td></td>
<td>P.O. Box F</td>
</tr>
<tr>
<td></td>
<td>North Bend, OR 97459</td>
</tr>
<tr>
<td>Apple Users' SIG</td>
<td>Arley Dealey (Interim)</td>
</tr>
<tr>
<td></td>
<td>3000 Hood St.</td>
</tr>
<tr>
<td></td>
<td>Dallas, TX 75219</td>
</tr>
<tr>
<td>Commercial &amp; Vendors</td>
<td>Michael Posehn</td>
</tr>
<tr>
<td></td>
<td>Organic Software</td>
</tr>
<tr>
<td></td>
<td>1492 Windsor Way</td>
</tr>
<tr>
<td></td>
<td>Livermore, CA 94550</td>
</tr>
<tr>
<td>Compatibility &amp; Communications</td>
<td>Bob Peterson</td>
</tr>
<tr>
<td></td>
<td>Texas Instruments</td>
</tr>
<tr>
<td></td>
<td>P.O. Box 1686</td>
</tr>
<tr>
<td></td>
<td>Plano, TX 75074</td>
</tr>
</tbody>
</table>
Computer Aided Instruction SIG
Steve Franklin
Computing Facility
University of California, Irvine
Irvine, CA 92717

European Group
John Ash
Discoll Data Systems
Kingsland Estate
Bond Close
Basingstoke, Herts
UNITED KINGDOM

Industrial SIG
Joe DeVita
Western Digital Corp.
Box 2180
Newport Beach, CA 92663

Newsletter
Pat Horton
ACI
17751 Sky Park East
Irvine, CA 92714

Editor: Keith A. Shillington
SofTech Microsystems and ICS
5153 Via Cinta
San Diego, CA 92122

Real Time SIG
John R. Van Roekel
Xycom
750 N. Maple Road
Saline, MI 48176

Software Exchange Library
Jim Gagne, MD
Datamed Research
1433 Roscomare Road
Los Angeles, CA 90024

Standards
Dennis Nicholson
Type III
3021 Germantown Pk.
Norristown, PA 19409

Word Processing SIG
Richard S. Kaufmann
6308-30 Regents Road
San Diego, CA 92122
MINUTES OF THE MEETING

June 20 & 21, 1980

These are the official minutes of the organizational meeting of the UCSD System Users' Society. Those of you who have received the so-called "Newsletter #0" (the brief notice that we have been sending in response to enquiries) will recognize them from that publication. Please don't ignore them if you read that earlier version, however, as they have been elaborated upon since then.

The meeting took place at the Stardust Hotel in San Diego, June 20 and 21, 1980, convened by SofTech Microsystems in response to many long-standing requests for such a group by users of the UCSD software. Over 100 people attended.

The first day was spent largely in presentations by various individuals and by SofTech Microsystems staff on the future of the UCSD System and the potential role of a users' group. It was clear that we had on hand a group of people who were willing to make strong commitments to an official body that could influence the future growth of this particular software. Nearly all of the attendees were involved with UCSD Pascal in some professional capacity, a fact to which we can attribute the seriousness with which we all took our task. Aside from informal politicking, the only activity of the users' group per se on this first day was the "election" of the nominating committee. All those who expressed a willingness to serve on the nominating committee were allowed to be on it. The names of nominees for the offices of President, Vice President, Secretary and Treasurer were gathered from the meeting as a whole.

The real work of the group began in earnest early on the second day. Prior to the meeting, a set of committees
and Special Interest Groups (SIGs) had been proposed by SofTech in response to requests from many users. These groups began to meet at 7 AM and continued at various times during the second day. The reports which these groups submitted to the plenary session are summarized below. Prior to the election of officers, the nominating committee proposed the name "UCSD System Users' Society" (USUS) for the new organization and it was agreed upon by the attendees. The name may be pronounced "USe US".

The election of officers began at 11 AM with the office of President and continued through to Treasurer. New nominations were accepted if offered. A tie required a second vote for the office of Secretary. The voting was carried out by the raising of hands and the results are summarized below.

<table>
<thead>
<tr>
<th>Office</th>
<th>Nominees</th>
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<tr>
<td>President</td>
<td>Jim Bandy</td>
<td>24</td>
<td>*</td>
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<td></td>
<td>Jon Bondy</td>
<td>20</td>
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<td></td>
<td>Chip Chapin</td>
<td>20</td>
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<tr>
<td>V. President</td>
<td>Jon Bondy</td>
<td>17</td>
<td>*</td>
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<tr>
<td></td>
<td>A. Winsor Brown</td>
<td>&quot;a lot&quot;</td>
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</tr>
<tr>
<td></td>
<td>Chip Chapin</td>
<td>13</td>
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</tr>
<tr>
<td>Secretary</td>
<td>Jon Bondy</td>
<td>21</td>
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<td></td>
<td>Chip Chapin</td>
<td>21</td>
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<td></td>
<td>J. Greg Davidson</td>
<td>10</td>
<td></td>
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<tr>
<td></td>
<td>Bob Peterson</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Treasurer</td>
<td>Jon Bondy</td>
<td></td>
<td>unanimous</td>
</tr>
</tbody>
</table>

After the voting, and again at 4 PM, plenary sessions were held at which a variety of issues were discussed pertaining to membership in USUS. It was agreed that we try setting the annual dues at $20.00. There is, at present, only one category of membership -- individual. Although there was considerable interest in group rates and corporate rates, there was no agreement on how they could or should be handled. It was suggested from the floor that the officers look into the possibilities. Special student rates were rejected by vote. The Society's treasury was given a potential boost by SofTech's offer to donate to the Society.
whatever money was left over from the registration fees of the meeting after all expenses were paid [Note: To date, the accounting has not yet been completed, but the subsidy promises to be a substantial amount].

The various Special Interest Groups and Committees reported to the plenary session at 4 PM. Here are their reports:

**European Group** -- Did not formally meet, but they continue to hold "discussions".

**Standards Committee** -- (Dennis Nicholson) They see their role as being to observe and report upon current standardization efforts.

**Newsletter Committee** -- (Keith Shillingston) The chairman will take care of budgeting matters and getting the Newsletter printed. The Editor will provide camera-ready copy to the Chair. The Newsletter will appear quarterly for now. Anybody can make submissions to the newsletter; they should be addressed to the Editor or to the USUS Secretary. Text should be a maximum of 7 1/2 inches wide and 10 inches high, clean and printed in "normal" type. Each SIG or Committee should have a contributing editor, default being the chairman.

**Industrial SIG** -- (Michael Hadjiaannou) Their immediate objective is a wishlist to be presented to the Advanced Planning Committee.

**CAI SIG** -- (Tim Shimeall) Their main objective will be to establish a system of communicating between "the various groups" [I believe he meant CAI groups].

**Software Exchange Library** -- (Jim Gagne) They established the following policies: Catalogs of available software will be published in the newsletter. Disks will be available primarily to members. Non-members must pay a $20 surcharge per order. Only UCSD-compatible files will be offered. Software will be available by several different media, (1) Apple and Northstar minidisks (2 disks per volume), (2) Telemail, (3) IBM 3740 format 8" disks using the DEC RT-11 interleave scheme (so-called "UCSD standard" interleaving). Other media will be added as it becomes feasible. Disk contents are donated by interested users, who must sign a release form. All programs will be distributed in source form; object code will be included only if the program is too big to compile.
easily. Documentation will be included on the disk. It was suggested that there be standard naming conventions to facilitate review and documentation. There will be three categories of software release by authors: (1) Public Domain, (2) Non-commercial use only (with copyright protection) by USUS members, (3) Any use (also with copyright protection) by USUS members.

Chairman Jim Gagne will work with USUS President Jim Dandy on a suitable legal release form. The cost to members will be $10 for an eight inch volume or $15 for a minidisk volume (2 disks). Probably all funds will go to the software distributor.

Advanced Planning Committee -- (Randy Bush) They perceived three main areas of work for their group: (1) a technical wishlist to present to SofTech Microsystems, (2) Some marketing gee-whiz, e.g., what new languages, what new processors are people looking for, (3) Politics, i.e., "Information Exchange" and encouraging SofTech to provide a technical description (user level) of the forthcoming IV.O release. John Ash of Dicoll will serve liason with folks in Europe and Dave Allen of Control Systems will feed information to the Newsletter.

Medical Applications SIG -- This group saw its charter as being the distribution of medical and health-care programs. In particular, they would like to see if something useful can be done with the large volume of public domain software available on 9-Track tape, and requested SofTech's assistance in transferring these programs to floppies.

Word Processing SIG -- (Richard Kaufman) Their goals are to publish a list of available post-formatters with reviews. In the longer term, they wish to place interesting text formatting software into the Library. They see lots of coordination with the Advanced Planning Committee and the Library Committee. They are even considering evaluating terminals and printers.

Compatibility and Communications SIG -- (Bob Peterson) They wish to encourage compatibility between different implementations of the UCSD System, as well as communications between hosts running UCSD software. For the present, they would like to see an ability to access SYSCOM in a [presumably clean] machine-independent manner, and are soliciting comments on incompatibilities between, say, PDP-11 and Z80 versions of the UCSD System. Contact Chairman Bob Peterson.
The door is open to new SIGs. Please contact the Secretary if you would like to see one formed around your particular pet project/peeve. You will be the temporary Chairman.

Carolyn Chase has been appointed by SofTech as their contact with the Users' Society.

Chip Chapin, Secretary

Following you will find some Product descriptions which I squeezed out of people over the past few weeks. I would like to create a section full of approximately half-page descriptions of what people are doing!

SEND IN

Minutes of the Meeting -- June 20, 21
Thank you for your interest in our Pascal Development Software for the Motorola MC68000 microprocessor. Enclosed for your review is a description of each program and a copy of our capabilities brochure. Please note that we are supplying stand-alone systems which utilize the MC68000 microprocessor as the CPU. The software that comes with these systems includes the Pascal Development Software, as well as ROS, the Renaissance Operating System. The Pascal Development Software for the MC68000 has the following characteristics:

* Provides for the generation of MC68000 native code from Pascal source statements.
* Runs under either UCSD Pascal or ROS.
* Semaphore and asynchronous process primitives have been added to RSI PASCAL.
* Supports large memory capacities.
* Allows for assembly language routines to be called from Pascal programs.
* Allows for separate compilation of Pascal modules.

Because we are also a consulting organization, we welcome requests for customization. If we can be of any further assistance to you, or if you have any questions, please do not hesitate to call upon us at anytime.

Sincerely,

C. Max Kemp
Vice President, Marketing

enclosures
Thank you for your order of the documentation on the RSI word processing packages. Enclosed please find the documentation of the packages, an order form and a software licensing agreement.

To place an order just complete the order form, configuration check list, and licensing agreement and send them along with the correct payment amount less the amount already paid for the documentation to the address indicated on the order form.

Please note the following:

1) The MICROENGINE, TERAK and APPLE II computers are now supported.
2) The Qume and NEC Spinwriter printers are supported in addition to the Diablo Hytype II.
3) Purchase of the system entitles the user to one year of updates and support.

Source code is available for large volume accounts with dealer agreements. Renaissance could assist in the installation of software on your system if requested.

If you have any questions or would like additional information, please feel free to contact me at any time.

Sincerely,

Craig Davidson
Software Products Manager

Encl.
UCSD SYSTEM USERS' SOCIETY SOFTWARE LIBRARY
SOFTWARE ORDER FORM

Name ____________________________________________________________

(Company) _______________________________________________________

Street __________________________________________________________

City, State _______________________________________________________

ZIP or country ___________________________________________________

Computer system(s) in use ___________________________________________

Format desired ___________________________________________________

(Please use one order form for each disk format desired.)

Please list the numbers of the volume(s) you wish to order: _____________

$15 each: $ ______________ CR $10 each: $ ______________

OR

Sales tax (6% if California address): ______________

Surcharge if NOT a UCSD System Users Society member, $20: ___________

TOTAL FOR ORDER: $ ______________

I agree that the software I receive from the Library will be utilized for
noncommercial purposes only. Except with the express written approval of the
software's authors, I will not sell it for profit to anyone, incorporate
it within any product for sale for profit, nor give copies to anyone
other than members of the UCSD System Users Society. I fully understand that
USUS makes no warranty of any kind regarding this software, including but not
limited to warranty of fitness for any purpose, and that it is quite possible
that the programs I am ordering will require extensive alteration by a person
expert in programming before they will fit my needs.

(Signed) ___________________________________________ Date _____________
UCSD SYSTEM USERS' SOCIETY SOFTWARE LIBRARY
SOFTWARE DONATION STATEMENT (August 5, 1980)

In donating the enclosed program(s) or other software or information (the "Programs" listed on the back of this page) to the UCSD System Users' Society library, the undersigned hereby certify that I/we understand and agree with all of the following provisions:

1. If the material has been written by more than one individual, the following statements shall apply to each individual author, except as otherwise noted.

2. The Programs will be reviewed by one or more reviewers and may or may not be included in a volume of the Software Library. As a rule, anyone whose donation is not accepted will, upon request, be shown a copy of a signed review, although this is not guaranteed. Programs that violate Library policy (e.g., are not original or are not in source form), are not in accessible machine-readable form, or duplicates a function already amply served by existing Library Programs will not be reviewed. Further, Programs that are accepted will frequently be altered by reviewers to improve their utility for the USUS membership.

3. Once included in the Library, all Programs may be distributed to any interested USUS member, as well as others, according to Library policy, as detailed on the USUS Software Order Form. I have reviewed a current copy of the Software Order Form, and agree with its provisions. I agree that USUS will have no liability for the failure of any person who obtains the Programs to comply with any provisions of the Software Order Form or any other use of the Programs.

4. I certify that I have taken portions of the Programs from the USUS Library or public-domain sources listed below and on the back of this page (if none, write "none"; if from the Library, identify volume and file name; if you are listing public-domain material, state its source and why you believe it is in the public domain):

   and that no other software materials have been utilized. Thus, except for these sources I am the original and sole author of the Programs.

5. I agree to assume full responsibility and indemnify and hold USUS harmless against and in respect of all claims and liabilities resulting from my copying, utilizing or plagiarizing any parts of the Programs.

6. I agree that no remuneration or other consideration is expected from the USUS Library in return for my donation, and that my disks or other material will probably not be returned.

On a separate sheet of paper (or, preferably, in a documentation file on the disk with each program) please write a brief description of:
   a) the purpose of each program,
   b) to whom it would be useful, e.g., "people with one-drive systems",
   c) hardware and software dependencies,
   d) implementation notes (what one must do to get it running),
   e) unusual compilation requirements, e.g., assembly-language files,
      a certain UNIT, an Apple-style linker, etc., and
   f) bugs, if any are known to you.

Please sign and date this form below, and PRINT legibly or TYPE your name(s) and address(es) in the space below the signature or on the back:

(x)_________________________________ Date________ (x)_________________________________ Date________
MEMBERSHIP COUPON

Please enter me as a member for the year ending June 30, 1981.
I enclose a check for $20.00, payable to

UCSD System Users' Society
Jon Bondy, Treasurer.

Name

Company

Address

Phone

X

OK to print phone # __Y__N

Computer System
Memory size _______ K Bytes

Processor __Z80 __8080 __PDP/LSI-11 __6502 __6800 __9900

Manufacturer/Description

Disk Drives __8 inch __5 1/4 inch Floppies

Format/Description

Terminal(s)

Interested in following committees/groups (see enclosed list):

Adv. Plng ___ CAI SIG ___ R. T. SIG ___
Apple SIG ___ Euro Grp ___ Xchng Lib ___
Cmrc1&Vndrs ___ Ind. SIG ___ Standards ___
Cmpat&Comm ___ News1tr ___ W. P. SIG ___

Mail to: UCSD System Users' Society
Chip Chapin, Secretary
C/o LMR
4805 Mercury, Suite A
San Diego, CA 92111
Next Meeting
October 16..18
San Francisco

Please Come

USUS News
c/o LaChance, Mack, & Rosa
4805 Mercury, Suite A
San Diego, CA 92111 USA

Bulk Rate
U.S. Postage
PAID
Santa Ana, California
Permit No. 555