

Networking: The Linking of People, Resources and Ideas

Table of Contents

Services Available	3	Disabilities	15
Notes From the Coordinator/Editor:		Child Welfare	15
Articles, Reviews and Reports		Social Services	15
Holistic Information Systems: Opportunities from New		General	16
Technology by Richard Reinoehl and Linda Iroff	5	Resources and Materials	
Reflections of a New Microcomputer User by F. Dean Luse	9	Electronic Information Utilities and Networks	18
Members Comments and Activities		Articles	18
Network Activities	13	Newsletters, Magazines & Journals	18
International	13	Books & Reports	18
Research Projects and Reports	13	Software Catalogues	18
Education	14	New Products	18
Health	14	Upcoming Events, Conferences and Meetings	19

About the Network

Computer Use in Social Services (CUSSN) Network is a nonprofit association of professionals interested in exchanging information and experiences on using computers in the social services. Members participate in the Network by:

- Sending materials for the CUSSN Newsletter, such as: (1) member needs, interests, hardware/software use, activities, etc.; (2) information on resources members have found useful; and (3) longer reports/articles on conferences, surveys, vendor products, ideas, experiences, computer applications, and events. Those wanting longer pieces to be anonymously reviewed by CUSSN advisory board members, should so indicate.
- Participating in the skills bank and software clearinghouse(see below).
- Distributing Newsletters to friends and at workshops and conferences. If you're attending a conference where participants may be interested in the CUSSN, let me know and I will send newsletters to distribute or place on a resource table.
- Referring vendors. If you think a vendor/consultant could benefit by exposure to CUSSN members, tell them, so they can advertise their services and products in the CUSSN Newsletter.
- Holding local CUSSN meetings. Local meetings in Dallas/Ft. Worth, Chicago and Baltimore have been successful. For those in a foreign country, Floyd Bolitho's work in Australia offers a model to follow. Write Floyd at La Trobe U., School of Social Work, Bundoora, Victoria, Australia 3083.

Network dues are \$5 for students and the poor, \$10 for individuals, and \$10+ for those willing to provide additional support. Those interested in joining the Network should write to Dick Schoech, CUSSN Coordinator/Editor, The University of Texas at Arlington, Box 19129, Arlington, Texas 76019. Make checks payable to CUSS Network. Please indicate if you do not want your name provided to those interested in using the CUSSN mailing list.

The CUSSN Newsletter is published approximately 4 times a year and is sent free to all network members. Institutional and library subscriptions are available for \$15 a year. For overseas air mail, add an additional \$5 for postage. All prices are in U.S. dollars. Back issues of the newsletter are available for \$2.50 each. Volume 1 has 2 issues; Volume 2 has 4 issues.

The CUSS Skills Bank allows members to locate or share specific knowledge, skills and experiences. At present the skills bank permits searches by state or geographic area, by information systems experience and by application at the total cost of providing information about yourself. Suggestions on applications and expansion of the skills inventory are solicited. For more information contact Gunther R. Geiss, Adelphi U., School of Social Work, Garden City, NY 11530, (516) 288-7915

The CUSSN Software Clearinghouse offers a computerized inventory of commercially available human service software, a software review file, and a software exchange (see article). For more information, write Walter LaMendola, Professor, School of Social Work, U. of Denver, Denver, CO 80208

Special Interest Group (SIGs) are subgroups of network members where significant networking is occurring on a special topic. For a description of the Educators SIG, see the description under "Member Activities—Educational" by Wallace Gingerich, U. of Wisconsin-Milwaukee School of Social Welfare, Milwaukee, WI 53201.

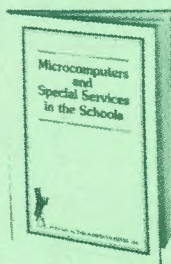
CUSSN Newsletter Editors:

Dick Schoech, Assistant professor, The University of Texas at Arlington, Graduate School of Social Work, P.O. Box 19129, Arlington, TX 76019.
Lynn Harold Vogel, Assistant Professor, U. of Chicago, School of Social Service Administration, 969 E. 60th St., Chicago, IL 60637.

CUSSN ADVISORY BOARD MEMBERS

- Floyd H. Bolitho, Assistant Professor, La Trobe U., School of Social Work, Bundoora Victoria, Australia, 3083
 Ray Carlson, PhD, Professor, School of Social Work, Dalhousie University, Halifax, Nova Scotia B3H 3J5 Canada
 Ram A. Cnaan, Lecturer, Tel Aviv U. School of Social Work, POB 39040, Jerusalem Israel, 69978
 Gunther R. Geiss, Associate Professor, Adelphi U. School of Social Work, Garden City, NY, 11530
 Michael Gorodezky, Consultant, 1401 Grizzly Park, Berkeley, CA 94708
 James Gripton, Professor, U. of Calgary School of Social Welfare, 2500 University Dr., N.W., Calgary Alberta, Canada T2N 1N4
 Walter LaMendola, PhD, Associate Professor, School of Allied Health and Social Work, E. Carolina U., Greenville, NC 27834
 Duncan Lindsey, Chair of the Board, Perfect Software Inc., 61 W 34th Ave., Eugene, OR, 97405
 F Dean Luse, President, Outpst Inc., 119 Wilson, Park Forest, IL 60466
 Laurence Moseley, Computer Science Dept., University College, Singleton Park, Swansea, United Kingdom SA2 8pp
 Thomas Neudecker, Director of Continuing Education, U. of Pittsburgh School of Social Work, 2225 Cathedral of Learning, Pittsburgh, PA 15240
 Richard Reinoehl & Linda Iroff, Consultant, Human Development Consortium, 25 N. 54th Ave., E. Duluth, MN 55804
 Lynn Vogel, Assistant Professor, U. of Chicago, School of Social Service Administration, 969 E. 60th St., Chicago, IL 60637

Two Practical New Books on Educational Computing!



Microcomputers & Special Services in the Schools

Randy Elliot Bennett and
Charles A. Maher, Editors

Articles in this forthcoming volume will explore the major uses of computers in special education settings. They will discuss the use of computers in special assessment, instruction, related services, personnel development, and administration. Articles will emphasize the issues and problems that must be addressed if computers are to be effectively employed in special education settings. This book will be appropriate for use in graduate and undergraduate special education training programs and as a resource for the professional special services provider.

TABLE OF CONTENTS:

Editors' Introduction

"Computer-Assisted Assessment, Analysis, and Reporting"
Jeff Grimes

"Computers in Direct Assessment of Handicapped Learners"
Ted Hasselbring

"Instructional Use of Microcomputers and Elementary-Aged
Mildly Handicapped Children"
Joseph K. Torgesen

"The Microcomputer as Perceptual Tool: Searching for
Systematic Learning Strategies by Handicapped Infants"
Richard Brinker

"Microcomputers in Related Services"
Roland K. Yoshida

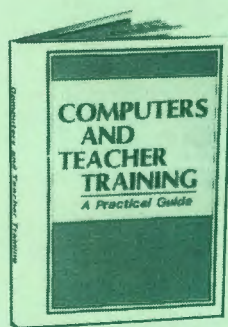
"Personnel Development Employing Microcomputers"
Mel Semmel

"Microcomputers and Administration"
David Hayden

"Evaluating Microcomputer Programs"
Randy Elliot Bennett

"Using Microcomputers: Organizational Readiness
and Program Durability"
Robert J. Illback and Linda Hargan

(A monograph also published as Special Services in the Schools, Vol. 1, No. 1) July 1984
\$17.95 hard. Order No. B297 ISBN: 0-86656-297-4



Computers and Teacher Training

A Practical Guide

by Dennis M. Adams, PhD
Department of Teacher Education
California State College, Bakersfield

Computers and Teacher Training: A Practical Guide provides an exploration of the computer presence in our society and its potential relationship to the school experience in a clear and non-technical manner. Geared to both pre-service and in-service use by both students and teachers, the book introduces terms, classroom applications, and provides explorations of programs and software. Key concepts are set up for use, and ideas are arranged in a manner that allows either a college level instructor or peer workshop leader to structure the training.

(A non-subscription supplement to Volume 1 of the journal
Computers in the Schools.) Fall 1984.
\$19.95 hard. Order No. B312 ISBN: 0-86656-312-1

"A sound and clear introduction to the computer experience . . . A significant contribution to the professional training of the teacher. The information and research in this book is both up-to-date and comprehensive . . . the procedures, ideas, and framework are very likely to be of value for some time to come."

Stephen Harlow
Professor of Special Education
University of North Dakota

This helpful book will serve as a resource for what teachers and prospective teachers need to learn about the technological literacy-intensive environment of the future, and will aid them in playing an active and imaginative role in the application and enhancement of computer instruction.

TABLE OF CONTENTS

"The Computer as an Agent of Change"
"Helping Teachers Direct Technological Change"
"Using Computers to Enhance Learning"
"Programming"
"Don't Buy Hardware—But a Solution"
"Computer Awareness Activities for Children"
"History and Future of Computers are Related"
"Resources"

Order from the Haworth Press, Inc., 28 East 22nd Street, New York, NY 10010.

Services Available

Vendor/Consultant	Contact Person	Services
California		
Applied Humanomics 1421 Chapala Santa Barbara, CA 93101	Bertram Chatham Director, Marketing (805) 965-0555	A computer telecommunication system, called neXus, which can be custom designed for networking nonprofits, human service organizations, and individuals; fund accounting software developed especially for nonprofits for use on micros; other software for nonprofits.
Illinois		
E&P Associates, Inc. 664 N. Michigan Ave. Chicago, IL 60611	Lynn Harold Vogel, Ph.D., (312) 962-1429 or 984-1815	Specialists in the provision of consulting and data processing services to the human services, health care, and insurance industries; Staff has average of over 14 years experience in assisting Fortune 500 and small organizations in addressing computer related and other managerial needs.
OUTPST, Inc. 119 Wilson Park Forest, IL 60466	F. Dean Luse, Ph.D., ACSW President, (312) 748-3854	Consultation: Training, Forms design & management, Accountability, Information & Decision Systems; Simulations for Human Service Training.
SPSS Inc. 444 North Michigan Ave. Chicago, IL 60611	Tom Ryan, Marketing, (312) 329-2400	SPSS provides software for human services survey and data analysis, and report-writing for mainframes, IBM PC, DEC Pro 350.
Synergistic Office Systems (SOS) 510 N. Lake St. Mundelein, IL 60060	Joseph Zefran, MSW, (312) 738-8545; David Kropp, ACSW, (312) 949-0100	Full-service vendor to human service agencies; consultation, systems analysis, training, hardware, software, and services.
Iowa		
Human Services Computer Systems 14 S. Dubuque Iowa City, Iowa 52240	Lucy Luxenburg, MSW Human Services Consultant (319) 354-7327 / 351-3956	Consultation for Human Service and other nonprofit organizations; software customized to meet individual needs.
Maryland		
KBL Group, Inc. 'Knowledge Based Living' 808 Pershing Drive, -100 Silver Spring, MD 20910	Karen Levitan, Ph.D., President, (301) 588-4633	Services to help you use information, technology, and systems as professional resources. We work for you; we work with you; we help you do it yourself.
Massachusetts		
Multicomp Systems, Inc. 222 Third St., Cambridge, MA 02142	Genevieve A. Shaw, Vice President, Non-Profit Division, 617/491-1780	The Budget Allocator, software for non-profits, combines the tasks of calculating employees' increased salary, allocating employees' time to funding sources, and developing personnel budgets. Minimal input generates budgets on four levels: corporate, programs' sites, programs, and funding sources. The program runs on MS-DOS systems (IBM compatible).
Minnesota		
Human Development Consortium 25 N. 54th Ave E. Duluth, MN 55804	Richard Reinoehl & Linda Iroff, Consultants, (218) 525-3669	Consultation for Human Service and other non-profit organizations in computerized information systems, informational needs assessment, training, research and evaluation.
Missouri		
Freeman Hospital 1102 W. 32nd Joplin, Missouri 64801	Anne Winegardner, Director, I&R, (417) 623-2801	Total package solution to computerizing the I&R: Apple III or IBM PC, custom-programmed software, staff training, LINKLIN I&R Training Manual, customer support, program consultation.

Services Available, cont.

New York

CWIS/Agency
Information Management
Service
251 Park Ave,
South New York,
New York 10010

Robert C. Gunderson,
Executive Director,
(212) 505-1180

Automation consulting services, automated fund raising management, mailing list services and membership (including quarterly newsletters on automation for nonprofits); regularly scheduled seminars and workshops: ADOPT-NET (automated adoptions information exchange system). Monograph available (\$3): "Is Computerization Right for My Agency?"

Gunther R. Geiss, Ph.D.
8 Meadowlark Ln.
Huntington, NY 11743

(516) 692-5414 or
489-2000

Consultation and Training (from executive to operators) Emphasizing Microcomputer Systems for Human Service Providers.

New York/New Jersey

RFM/Associates, Inc.
P.O. 56
Edgewater, NJ 07020

Rod Monger, PhD,
(201) 224-9895

Microcomputer and mainframe software programming, management development, training (including video), consulting, feasibility studies including cost-benefit analysis and documentation. Specialists in managing relationships between users and technical people.

Texas

Dick Schoech, Ph.D.
1311 W. Lavender Ln.
Arlington, TX 76013

(817) 265-0459

Consultation and training on information systems feasibility, design, implementation and evaluation. Access to varied technical expertise of University setting.

Washington

Independent Consulting
Services
P.O. Box 1674
Tacoma, WA 98401

c/o Jim Buss,
(206) 272-6448

Services offered: Computing, consulting, cost-benefit analysis, soft-ware & hardware selection, vendor relations, training, human-computer relations, software.

Washington (District of Columbia)

Gibson-Hunt Associates
Suite 700
1331 H St., NW
Washington, DC 20005

Gail Gibson Hunt,
President,
(202) 737-5008

Planning and implementation support to health and human services organizations in the areas of program and project management, program evaluation, delivery system design and the application of information systems and computer technology.

Australia

Human Services
Information Systems
6 Chapman Blvd
Glen Waverly
Victoria 3150

Floyd Bolitho, Ph.D.,
(03) 687-6790,
(03) 459-1806

Consultation for Human Services, feasibility studies, training, systems design and implementation. Software Development and hardware vendor.

The above paid advertisements represent no endorsement or favorable review by CUSS. When choosing a consultant, remember the standard advice: (1) talk to more than one consultant, (2) obtain several comparable bids, and (3) ask for several recent clients and talk to them about their satisfaction.

In an effort to connect vendors and consultants with those who need their services, the CUSS Newsletter lists vendors and consultants by name, address, phone number, contact person and a description of the services offered. The fee for this listing is based on the length of the description as follows.

Description length	Rate per issue	Rate per year (4 issues)
under 15 words	\$5	\$18
under 30 words	\$8	\$28
under 45 words	\$10	\$34
under 60 words	\$12	\$40

Interested vendors/consultants should send payment along with their description. Larger advertisements (up to a full page) are available.

Notes from the Coordinator and Editor

Special thanks to Lynn Vogel for his editorial help with this issue. It's a pleasure to have a co-editor for the CUSS Network Newsletter.

This newsletter begins a series of "theme issues" developed by members of the CUSSN advisory board. Advisory Board members have agreed to take an area of interest/expertise and solicit short articles, reports, and comments. The series begins with an overview of the Human Service Computing field by Richard Reinoehl and Linda Iroff. Their article is a good statement of where we currently stand and how far we need to go.

The next newsletter will focus on MUMPS, the computer language

designed with health and human services needs in mind. Walter LaMendola has gathered several excellent short articles and other resources to provide an overview of MUMPS and its current use.

If anyone would like to coordinate a special issue of the CUSSN newsletter, please let us know.

Dick Schoech
Lynn Vogel
CUSSN Coordinator and Editor
April, 1984

Articles, Reviews and Reports

Holistic Information Systems: Opportunities from New Technology by Richard Reinoehl and Linda Iroff, 25 N. 54th Ave. E., Duluth, MN 55804.

Guest Editorial note: CUSS members are involved in work which can lead to some exciting global, socio/cultural change. This process is enhanced by our improved communication. We therefore invite and encourage readers to contact us for some collegial networking and mutual sharing of ideas, e.g., ongoing projects, speculations, etc., which relate to the concepts and directions presented here. The following represents the shared thinking of the two of us, and begins with a few of our general thoughts which we suspect are shared by most CUSS members.

Introduction: Philosophic and Value Orientation

New technology has been making some dramatic changes in how computers can become helpful tools. We in the human service community now have the opportunity to provide some of the most important impetus for computer impact at the individual, family, organizational, and community levels.

If human service professionals leave the major development of computers and computer systems up to the large corporations, banks, and military, we will have systems that reflect their goals: profit and militarism. Human service professionals must have the vision, motivation, and knowledge to develop computers to meet our goals: the betterment of individuals and societies.

The immediate challenge for human services is twofold. First, we must gain the ability to sort through the maze of computer jargon in order to make some coherent sense out of the technology. Secondly, we need to begin the creative process of applying this technology to the solution of problems and to the needs of human services and human service consumers (which many CUSS members are already doing).

The remainder of our discussion addresses this dual challenge. Presented first is a general approach, the Holistic Information System, in which we provide a conceptual break from traditional models used in many human service organizations. The second section looks at recent developments in hardware, some of which are currently in use in human services, and others of which hold promise for the immediate future. The next section views software as a crucial part of the new technology. We examine key developments and divide personal development software into several working categories. The last section returns us to the conceptual cornerstone of the Holistic Information System and to specifics of how this approach can enhance both organizations and communities.

I. Holistic Information Systems

We believe that opportunities from new technology can be approached best from a conceptual framework of a Holistic Information System. A Holistic Information System (HIS) can be defined as a computerized system which emphasizes meeting the interrelated information and service needs of all members of a particular organization or group. This can include family systems, informal groups, formal organizations, neighborhoods, and larger or more dispersed communities.

The conceptual basis for a HIS grew out of a desire for a practical solution to problems we encountered when we first began computer consulting. Our discovery was that many computers used in human service organizations were costly, but not particularly effective. This was surprising, as we were aware of the tremendous potential that existed for computer applications.

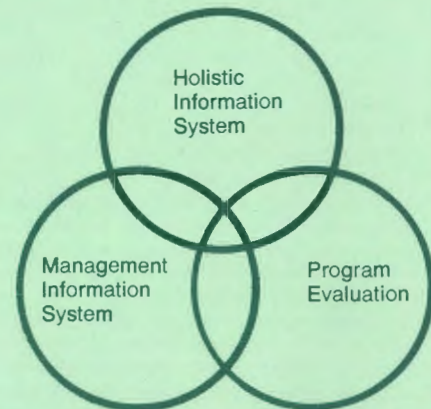
Progress in understanding this discrepancy was made when we began to recognize that two models, the Management Information System (MIS) and program evaluation were being used for computer development. The MIS was originally developed by the business com-

munity to meet the needs of profit seeking business. Traditionally, this model tends to focus on fiscal information, and uses a management, i.e., top down, approach to information flow (workers fill out the forms, management receives the information).

Although some recent developments in the MIS model have been in a more holistic direction, they are generally confined to businesses which provide service functions. For instance, law offices, where there is a client focus and the primary role, advocacy, is a role commonly performed by human service professionals.

The program evaluation model was developed by the research community and primarily meets the needs of that community. Emphasis is on the clients, but as aggregated data in descriptive and inferential format (chi squares, regression analysis, analysis of variance, etc.). Again, attempts have been made for a more holistic approach, but limitations are inherent in the basic structure of the model.

Figure 1.



One of these two approaches was usually chosen by a human services administrator for computerization of his or her organization. The particular model selected seemed to depend on whether a business manager or researcher was advising the executive.

Unfortunately, neither of these traditional models is completely appropriate for meeting the complex interrelated information needs of human service agency. Development of a third model, based specifically on the unique values and needs of human services, was clearly called for.

We developed such a model, and have called it the Holistic Information System. While this model shares many of the features of both MIS and program evaluation, it also has many unique characteristics (See Figure 1). These include:

- meeting the information needs of all levels of the organization including administration, on-line staff, and clerical and other non-professional staff; it may also include direct client interaction;
- software rather than hardware oriented;
- emphasis on client data, available both for individual cases and as aggregated data;
- ease of use;
- concern for both information flow (where the data comes from and where it goes) and formatting (form and timing of reports);
- flexibility to meeting changing requirements.

The primary factor in developing a food HIS is explicit in its name: holistic. Members, at all levels of an organization, have unmet information and communication needs and therefore should be involved in the planning and use of the computer system.

Articles, Reviews and Reports, cont.

The second key element is to go beyond the mere automation of the old system. Manual systems operate as they have due to the limits imposed by the old technology (pencils, papers, typewriters, etc.) Computers allow for a qualitatively different approach to handling information. For this reason it is important to look at organizational needs (based on the interrelated goals and objectives) rather than simply replacing the manual method. To not use the new media fully makes as much sense as buying a television and then only turning on the audio.

There are several secondary benefits from using a holistic approach besides the expected time and paper savings. For example:

- team building occurs from the process of communal planning;
- higher staff morale generates from a sense of mutual ownership, rather than resentment to a management imposed system;
- organization development can occur through role and structural changes that result in more effective functioning;
- better decisions are made (at all levels) due to increased communication, morale, and access to information.

Specific examples of how HIS can be used are discussed later, in the fourth section. The next two sections provide a view of the technology which makes a holistic approach concrete and realizable.

II. The New Technology: Hardware

There are several advances which have, and will continue to vastly modify human relationships with computers. The technology includes: "super" micros, portable computers, networking, and interactive videodiscs.

These advances are best discussed by comparison to the older technology. However, we admit that "older" is used somewhat tongue-in-cheek, as the new technology so rapidly becomes the old.

"Super" Micros

Micro computers have been defined in several ways. Two popular methods have referred to micros as single user systems, or as single processor systems. Both of these conventions have been broken with the advent of 16 bit processing chips (a bit is a single piece of binary data, usually represented in computers as "0" or "1").

Earlier micro computers, such as Apple II's, use processors which transmit information in 8 bit words. Although quite useful, there have been two principle limitations. First, the amount of information that can be carried at one time is small (compared to 16 or 32 bit words), consequently speed is impaired. Secondly, only 64K of Random Access Memory (RAM) can be directly addressed. Thus, larger programs must constantly swap memory back and forth between the chips and mass storage, e.g., disks, tapes. This also slows a computer down and keeps its usefulness limited to more simple tasks. A technique called "paging" can allow access to more memory, but the software written for 8 bit machines usually does not take advantage of it.

The 16 bit processors come in various models and styles. One of the hottest chips is the Motorola 68000, which uses 32 bit internal (within the processor) logic and 16 bit external communication. Chips like the 68000 operate several orders of magnitude faster than the processors in the early personal and business micros. Also, they can directly address megabytes (1000's of K) of RAM. Many so-called 16 bit computers, such as the popular IBM PC, have only 16 bit internal and 8 bit external and are not as impressive.

There are several implications from this technology. For a start, "super" micros can now support multiple users engaged in separate tasks. Additionally, uses that have been impractical can now be contemplated and accomplished. Among these are complex simulations and high resolution graphics which can provide moving, detailed, non-flickering images (see "Here Comes the Sun", *CUSS Network Newsletter*, Vol. 2, No. 3, Fall, 1982). These abilities have been available in more expensive mini and mainframe computers, but not on micros for micro prices.

Some computers are now using both 8 and 16 bit processors, which give users some of the speed of the 16 bit processor without having to lose access to the popular 8 bit software.

Portable Computers

There are three common sizes for portable computers: large, which fit under the seat of a commercial aircraft; medium, which fit into an attache case; and small, which can be easily held in the hand. Many of these do the same things their larger siblings do, just more compactly. Most portables come "bundled" with various software and some of the most recent entries use the 16 bit chips.

The advantage of portables is the ease with which they can be carried into the field, with a resultant savings of time and paperwork. Of these, hand held computers have a remarkably low cost and are the easiest to carry. Sometimes they can be used to directly communicate information with larger computers. This function is important in terms

of information sharing with the stationary computer(s), printers, and mass storage back at the office.

Portable micros can often use telephone lines to communicate from (or with) the most remote of rural sites. This can be used for transfer of data to or from the office, use of electronic mail and bulletin boards, accessing nationally available data bases (which cover every thing from child abuse to off shore oil leasing, see "Commercially Available Data Bases", *CUSS Network Newsletter*, Vol. 3, No. 3, Fall, 1983), or transferring millions of dollars to your Swiss bank account before leaving the country.

Networking

A half dozen or more micros in an organization can provide the same computing power as more costly mini. However, a mini computer can allow users to share data, software, and peripherals (printers, disk storage, etc.). Micro computers can conveniently do this only if they are tied together in a Local Area Network (LAN).

LAN's come in two types: baseband and broadband. Broadband networks are good for large systems with a lot of traffic, since they carry information on many channels. They can also transmit voice and video images. Unfortunately they are expensive and sometimes less reliable than baseband, but this should change as consumer needs increase and the technology is refined.

The startup cost of a LAN is almost as low as a single microcomputer system. As more computer power is required, new processors are added, sharing the same disk storage, printers, etc., as desired. Software for micros is a fraction of the cost of that for minis, and apt to be less powerful but more "user friendly." Thus, regular staff can run the computer, eliminating the need for programmers and other computer staff (though we recommend the use of specialists in setting up such systems). Furthermore, "super" micros now have as much power of many mini's thus providing the best of both worlds.

Some additional areas of (software) concern in developing a LAN are simultaneous access to the same data base, data privacy, a queue for printing, and message sending/retrieval abilities. Anyone interested in developing a LAN should keep these issues in mind. For more information on hardware and organizational concerns, see "Local Area Networks: Computerized Sharing", *CUSS Newsletter*, Vol. 2/3, No. 4/1, Winter/Spring 1983.

Interactive Videodiscs

First, a note about magnetic media for mass storage. A computer's central memory, which is stored on chips, is erased when the power is off. The solution to this convenience is to "save" any necessary information on some other media, usually magnetic tape or disk. Tapes can store large volumes of information but are inconvenient for random access due to the sequential way in which information is stored. Consequently, tapes are usually used for system back-up and archive storage.

Magnetic disks are more limited in storage capacity, but reading and writing information from central memory is fairly fast. Floppy disk drives are fairly inexpensive (a few hundred dollars and up) but have limited memory. One fifth to 1/2 million characters is typical for a 5 1/4 inch disk, although some go up to one million and more.

Hard disk drives cost more than floppies, around \$1,500 and up, but their capacity begins at five million characters for a 5 1/4 inch disk. These disks also have much faster data access times, are more convenient to use, and do not suffer the wear of floppies. Hard disks come either fixed or removable whereas floppies are only removable. The most recent advances will soon have floppy disks performing like hard disks, and the latter operating at even more impressive levels.

Where memory capacity is concerned videodiscs are totally awesome. (Note the apparent convention of magnetic disk, but videodisc.) In contrast to the magnetic storage techniques used in tape and disk storage, the videodisc uses laser light to record and read optical data. The major advantage of this technique is the high density storage possible. A 4.7 inch disk can store around 200 million characters on a disc. The larger 12 inch versions have a capacity of one gigabyte (1000 million characters) and more per side. Videodiscs are presently read only (like a prerecorded record — you can't change what's on it), but read and write versions are in a research stage.

Most know videodiscs as a means of watching a movie at home. This is usually a sequential reading of information similar to use of a tape, although some videodiscs players allow programmed non-sequential access. More advanced systems give access to different parts of the disc depending on the response of the user to various options. Such interactive versions which use a computer as a controller can cost as little as \$3,000.

Several popular new arcade video games use this technology: at crucial points in the action, the response of the player determines what

sequence occurs next. The advantage over standard video games is the high quality of animation. There are also "write-your-own-movies", where the viewer can decide crucial plot changes. Human service applications could include learning how to work with abusive families by first interacting with some on a television screen. A person could also use videodiscs to practice facilitating a grass roots community meeting, or developing solutions to a tense situation between administration and staff. Interactive videodiscs can also be used simultaneously for both diagnostic and therapeutic applications with clients. There are many possibilities through creative application to current situations.

III. The New Technology: Software

A computer can have enough memory, speed and power to leap tall buildings, but it will not get off the ground until the appropriate software is available. There are some important technological advances (yes, software is a technology) which are relevant to human services. Some of the primary developments are: database management, integrated software, decision support systems, expert systems and personal development software. Some of these software developments will be explored in-depth in future issues of CUSS.

Data Base Management Systems

Data Base Management Systems (DBMS) are essential for organizations attempting to computerize. Human services have complex information needs based on some fairly convoluted relationships of form and reports. The most crucial concern is to create a data base system which has an internal structure congruent to organizational needs. This structure may correspond only partially with how information has been handled manually. Good holistic systems should significantly reduce paperwork, quickly complete old tasks, and perform new tasks that were previously impractical or not even imagined.

The old technology, file management systems, will frequently be labeled as a DBMS, but differs significantly from a true data base system. File management systems use internal structures similar to kitchen cupboards, e.g., some items go in one cupboard, some in others, and some items may get stored in several cupboards at once when you want to combine the items in different ways. For example, if you want crackers and sardines (or client intake information) you go to that cupboard (file) and take it out. If you want bagles and cream cheese (some particulars on client follow-up) you go to that cupboard. The problem occurs when you realize you want bagles and sardines (midnight cravings) and no one has built a file combining them.

This is not to say that file systems are not useful and important for work with client data. Human service organizations with less complex needs could find them more productive than a DBMS due to their relative simplicity.

True data bases use files for various functions, but data is placed in structures such as "stacks", "queues", or "linked lists". The information is not sequentially stored in files, but is linked by pointers or related by indexing. The internal result is more like a Lazy Susan, where all items can be accessed through positioning.

There are three ways to develop a data base. One way is to hire a programmer and have one created from scratch. Secondly, a copy of an existing system can be purchased from an organization that has similar information needs. Lastly, a generalized DBMS can be obtained and customized to meet the organizations existing needs.

The first method is similar to growing a garden in order to have a salad — and it has the same advantages and draw backs. When it is completed, it's usually pretty good; unfortunately it takes a long time and uses considerable resources. Purchasing an existing system is cheap and quick, much like ordering a salad in a restaurant. The problem, of course, is that you can't always get exactly what you want.

The third method, customizing a generalized DBMS, is preferred for most applications. You inform the data base of the variable names and characteristics you need, and how you want them related in terms of output. The result is reasonably fast, inexpensive, and can be modified for changing needs. In terms of our infamous salad analogy, a generalized DBMS is much like a salad bar — you get to pick and choose to meet your own unique needs, and at a price close to a non-customized product.

Anyone using a computer for very long knows that putting information in a computer is the easy part. The difficulty is to get it out in useful ways. For this reason selecting the proper DBMS (salad bars are different, too) and using it to create the appropriate information structure is one of the most crucial issues in developing a new system.

Integrated Software

Another important concept for human services is integrated software. Previously, data bases, word processor, mailing lists, electronic spreadsheets, and other software were used as separate programs, with

minimal data or text sharing between programs. Report output from a data base or file management system was sometimes massaged by a text editor before going to the printer, but little else was done.

The first attempt at integration can be thought of as a type of automated file sharing between programs. An example of this can be seen in the use of mailing list programs to personalized form letters, where a list of names and other information is automatically integrated into a letter (as in much junk mail). Another example is the ability to transfer a completed budget projection from an electronic spreadsheet to the appropriate place in the Annual Plan, which was created by the word processor.

A true integration is where there is actually shared data and programming code between a variety of software functions (rather like siamese twins). In this case, changes made on a specific budget in a spreadsheet would simultaneously occur for the data in an appropriate word processing file. An additional enhancement is the use of "windows", in which portions of several applications are present on the screen at one time, rather like a cluttered desk. This allows for easy movement from one program to another.

Integrated software of this type is more rare and not as refined as it could be. Examples can be seen in the Apple Lisa and in Visi On. Although this is a more sophisticated approach to integrated, it does not necessarily make the former method obsolete in terms of usefulness.

Decision Support Systems

Decision Support Systems (DSS) are more common in business and the military, but can be a handy item when used in human services. A DSS is a computerized method of providing a person with information relevant to a particular problem, which then aids the person in reaching the best possible solution.

One existing DSS helps with foster care placement. A social worker enters information (which should normally end up computerized anyway) on a child. If requested, the computer can then search all the foster home vacancies for possible matches of key items, e.g., religion, education, race, etc. Foster homes which provide the closest correspondence are then displayed. Additional information can be queried if desired before reaching a final decision to contact a home regarding possible foster placement.

A DSS can be used in virtually any human service situation where decisions on consumer care are involved. Recently, professional staff of a moderately sized school district indicated to us how useful a DSS would be for individualized educational planning. A few weeks ago, a medical doctor stated that a DSS, integrated with normal patient/medication data, could greatly enhance care in his family practice center.

Expert Systems

Beyond a DSS are expert systems, which can make decisions for the computer user. They are more sophisticated in that the actual decision making process of "expert" practitioners must also be programmed. Some experimentation with expert systems has shown that computer decisions regarding clients can be as reliable as decisions made by experienced human service professionals. For example, one expert system has been shown to predict suicide attempts by clients with the same accuracy as expert therapists.

The reliability of these systems should not be too surprising, since a human thinking process has been incorporated into the software. Expert systems appear most useful in human services when used as a decision "checker" in order to validate or question (not replace) human decisions. This could be a valuable tool for inexperienced staff or administrators, and might additionally be used to project solutions to potential problems at various organizational levels.

Personal Development Software

Personal Development Software is a general term we have used to refer to several emerging groups of computer programs. These groups include, but are not limited to, enabling, educational, assessment, and self-help software. Although there is some conceptual overlap, these categories are useful for identification and discussion:

Enabling Software are programs, frequently using special hardware, which help people manipulate and communicate with their environment. Examples include communication devices for people with severe communicative disorders, computerized wheel chairs, and other motor and perceptual aids. A specific example is Minspeak a language prosthesis for the speech impaired. A person using Minspeak can create thousands of clearly spoken sentences with a few strokes on a board of less than 50 keys. Such a system allows previously isolated people to control and communicate with their environment.

Educational Software includes a number of sub-categories, such

Articles, Reviews and Reports, cont.

as drill and practice and simulations. Unfortunately, much of this educational software is poor quality. A third category of educational software is emerging in which students teach the computer. This category holds some pleasant surprises; a well publicized program in this group is LOGO, a programming language designed for children and based on Jean Piaget's theories of development. Although originally designed for mainstream classroom education, it also has found immediate use with physically, emotionally and learning disabled children.

Assessment Software are basically tests on computer, including psychological, perceptual, vocational, and educational. These programs are becoming more common because computers can quickly and inexpensively administer and score the tests, as well as providing summaries and statistics. Examples include the Minnesota Multiphasic Personality Inventory (MMPI) and the Bipolar Psychological Inventory.

Self-help Software offers a do-it-yourself approach to such issues as stress management, assertiveness training, intimacy, alcohol and drug abuse, and interpersonal communication. This type of software has direct impact on the consumer, and therefore may have the most power for either positive or negative psycho-social effects (especially if integrated with videodisc).

High quality self-help programs could be used effectively in conjunction with professionally designed treatment programs, or used to reach individuals who feel too threatened to ask for direct aid from another human being. Some of the dangers are that poorly designed programs could actually lead individuals into damaging behaviors, or provide a type of placebo effect (i.e., the individuals think they are being helped when they are not) and real treatment is thereby delayed.

We feel that self-help software should be given serious attention by professional organizations, such as the National Association for Social Workers and the American Psychological Association. There is need for local, national, and international policies, guidelines, and evaluative criteria which should be soon developed. We additionally feel that CUSS members, who cross geographic and professional boundaries, would be a logical group to initiate and coordinate such discussions, and urge members to take action on this issue (this cooperation seems consistent with holistic philosophy).

IV. Holistic Information Systems: Applications

As computers become more powerful and easier to use, interaction with them can occur within a broader spectrum of human systems. We will discuss applications of the holistic approach at the organizational (agency), community, national and international levels.

Organizational

All members of an organization require information to do their jobs. Traditionally, however, it has been administrators, accountants, and researchers who have had the primary benefit from computerized systems, with data processing personnel having the primary computer access. Using a Holistic Information System, the access and benefits can extend to both professional and non-professional staff, as well as clients. Some of the ways in which computers can be used by organizational members have been discussed in the section on software; others are discussed below.

Administrators and Board Members can use computers for financial information (budget summarizing, general ledger, accounts receivable and payable, etc.); personnel records and payroll are also normally among the first items to be computerized. Other uses are:

- Client Statistics
- who's being served
- who's not being served that might be eligible for services
- correlations between applications for services and outside factors
- geographic and demographic effectiveness of outreach
- Word Processing Uses
- organizational policies and procedures
- annual report
- grant writing
- mass mailings for public relations, fund-raising and legislative actions
- letters and memos
- newsletters
- Electronic Spreadsheet
- budget development
- cost analysis
- personnel scheduling
- loan amortization and depreciation rates

One administrator has told us that the electronic spreadsheet is the most useful single tool he has used (besides the telephone). Within the first few weeks of having a computer, he has used the spreadsheet for half a dozen different functions and saved several days of work.

Professional Staff often must make the most changes when a new computer system arrives. Unfortunately, the traditional computerization models don't allow staff to immediately see the fruits of their labor, even though they have the most pressing need for specific, up-to-date information. Some of the ways in which decision support and expert systems, and interactive videodiscs can help professionals have been discussed in previous sections. Other uses of a HIS can include:

- information on current or past clients, retrieved by any characteristic, integrated with word processing for reports;
- Tickler files for reminders of appointments and deadlines;
- Client eligibility (not only for services applied for, but for other services that might aid clients);
- information and referral (other community and volunteer resources)
- helping clients with family budgeting using an electronic spreadsheet.
- access to national on-line services (bibliographic searches, information and material resources, governmental agencies, etc.).

Non-Professional Staff can benefit from computers, too. Of course, secretaries use word processing, and bookkeepers use accounting systems, but other staff have information needs, especially in a residential setting. Possible uses include:

- keeping track of inventory and supplies
- maintenance ticklers
- monitoring maintenance costs
- menu planning

Clients can interact directly with the computer using the personal development software (enabling, educational, assessment, and self-help) discussed above. Many of these would occur in an agency setting, where clients could also use computers for:

- information and referral (finding out what other services they are eligible for).
- filling out own intake forms (there is evidence which indicates that some people would prefer to give this information to a computer rather than a human worker);
- diagnosis and/or treatment of emotional or learning disabilities.

Not all clients, of course, could or would want to interact with a computer, no matter how "friendly" it seemed. Common sense and some experimentation is needed for computer applications in this controversial area.

We believe that there is considerable potential for the use of high resolution computer graphics in the treatment of autistic children. However, this application seems to be virtually unexplored.

Peoples Networks

Electronic mail and bulletin boards are becoming popular communication tools for businesses, government agencies, and people and groups with special interests. A local call can link a user's terminal or computer into a national system (such as Telenet) where you can read your mail (printing hard copy if desired), create and send letters, check the bulletin board for items of interest (good deals on used micro's are frequently found here) or leave communications yourself.

Congressman Edward Markey (D-Massachusetts) has recently begun on-line discussion of nuclear weapons on The Source, a nation wide electronic information service. Users can read the Congressman's statement, vote on questions, and leave their own comments. One of the questions asked by Markey is "The United States and the Soviet Union have been in a nuclear arms race for more than three decades. How would you get both sides to stop?"

This national level use of the computer as an electronic communication medium is as important and vital as the questions asked by Congressman Markey. Unfortunately the cost of using such a system denies access to the less affluent; nor is it set up to conveniently deal with local concerns.

We believe there is a need for this type of service at local levels, under local control and at low cost. The technology exists for the creation of inexpensive community computer systems. The missing element is the necessary socio/political structuring of resources.

Technologically, we envision a start-up system using one or more super micro-computers networked around a hard disk(s). Access would primarily be through telephone lines using home computers and terminals as the initiation point. Terminals could also be located in public

places such as libraries or even the local food co-op. Software would be fairly standard with appropriate menus, 'helps' and read/write protects.

Socially, we see a community system as a way for people to be networking around issues of common concern. Working parents with newborn babies may wish to contact others for development of a support group. A person who wants to organize a car pool can leave an inquiry. Your spouse is out on the town and all your friends are busy, but you "just know" that there must be somebody "out there" who would love to play a game of chess tonight. Individuals who have impaired mobility can meet new people. A community network could also have significant impact in the direction of more open and democratic political processes due to increased communication and information.

Problems that could emerge from a community computer system are primarily tied to issues of abuse and sabotage. "Hackers" recently penetrated Telenet's Telemail and allegedly destroyed data and sent phony messages. Pornographic limerics or personal slander could be left on the bulletin board. There are some technology responses to these antics, but negative sanctions locally imposed are also necessary.

A holistic approach is also needed at an international level. Governments and multinational corporations use satellites for the global transmission of computerized information. Again, the problem is high cost combined with limited access.

In 1986, an international group of amateur radio operators will be paying \$10,000 to the National Aeronautics and Space Administration (NASA) to push their satellite out of NASA's space shuttle. The satellite will carry a communications computer and will act similar to a base-band LAN with twelve channels for contact with any ham radio operator. The computer will have four megabytes of mass storage and provide both an electronic bulletin board and electronic mail. This amateur group is also designing a low cost (\$700) transceiver for Earth bound communication with the satellite.

This attempt may well open the door to low-cost international contacts for grass roots interests. It stimulates the imagination to think of what possibilities could emerge if a community computer system added a transceiver for world wide communication.

Conclusion

Our goals have been (1) to sort through the new computer technology in a way that makes it understandable, and (2) to enhance the creative process of computer applications in human services. In this regard, we first presented a conceptual approach, the Holistic Information System, which is unique for human and social service applications. Secondly, we discussed the new hardware and software technology with a sense of how it can be applied to human services. Lastly, we gave some specific examples of how a holistic approach can be used in organizations and communities.

Some of the hardware and software innovations discussed are in a beginning phase of use in some human service organizations. Other innovations have not been yet applied, and are fertile ground for grant proposals. Of course, the main thrust of our editorial is toward the manner in which technology is applied.

We wish good fortune to our fellow CUSS members, and hope that our efforts here are of some use to you.

Reflections of a New Microcomputer User by F. Dean Luse, President, OUPST, Inc., 119 Wilson, Park Forest, IL 60466.

I have been a mini and mainframe computer user for 15 years, and do much of my own programming, and extensive word processing and statistical work on SPSS. Not until this year, however, did I venture into the world of the micro computer as a user. I was skeptical of the glib computer ads on TV and the whoopla in the mass media. When my own experience and that of a few friends confirmed by doubts, it seemed appropriate to pass on a few choice bits of advice to my colleagues who had yet to experience the pleasures and frustrations, in the hope that the experience will be less troublesome and painful.

First a few notes on operating systems and disks. The ads, the media, and sales persons give the impression that there are only a few fundamental issues and then everything falls into place easily. Well, it isn't really true.

The operating system is a critical component of any system. It is the traffic cop which controls access to the screen, memory, tape or disk storage, printer, communications, etc. To a great extent software written on one operating system will not work on another, without modification. Sometimes the changes are quite trivial, and at other times require rewriting the program. But even with the same operating systems there are different size disks 8 inch and 5.25 inch predominate, and now there are 3.5 inch disks. There are single and double sided, single,

double and quad density (that is, how much data they pack on a disk).

To make it even more confusing and less obvious, the way the data is stored on the disk is different, from one manufacturer to another. What this means is that a disk for an 8 bit Kaypro cannot be used on (or read by) an 8 bit Osborne. The space on disks is assigned to tracks and sectors and a directory. The number of sectors varies as does the way in which data is assigned. In some systems a file will be contained in contiguous tracks in the same sector until end of the file. In other systems the file will cross sectors following the same track.

The 8 inch disks are much more standardized and more easily interchanged. The power of the IBM PC in the market place has brought about a sort of de facto standard in the 16 bit 5.25 inch market. There are, however, some anomalies. For example, the DEC line of 16 bit micros leading with the Rainbow, are not compatible with anything else and until recently those machines could not format their own new disks, as most other micro computers can do. (Incidentally, new disks are blank and must be formatted for the machine on which they will be used. This involves assigning the directory space and the sectors and tracks on which the data will be stored.) Another example is the new powerful Poppy by Durango. It is a 16 bit machine which can read double density IBM format, but since it operates with quad density, it cannot write back out in the IBM format.

So what all this means is that before you buy, INVESTIGATE what you need. Is compatibility with other machines important? Will you need to interchange disks between office and home, between colleagues on campus or in agencies? If so, time spent before purchase matching your needs with what is available is a good investment. Tell the salesperson, technician, etc. just what you want to do and how, and the more detailed you can be, the better. Ask questions. Do not make assumptions; this will usually get you into trouble. Try to find an experienced user doing what you want to do. Ask if they were doing it again, what would they do differently? Why?

Startup & Configuration of Printer

At the computer store completing the purchase of my new COMPAQ portable computer, I learned it was in the box it was shipped in. The technician had unpacked and bench tested it for the prescribed time, and repacked it in the box. The sales person was not pleased when I asked to see the computer and test it in the store, but we did. The screen would not come on. When I returned to pick it up later, I was told that a wire was disconnected on the communication board that the technician had installed for me. He had also neglected to replace the shipping spacers in the disk drives. These are to protect the read/write heads while the computer is being transported.

At home the printer would not print. I had not yet selected a printer but was in need of temporary use of a printer so I planned to use my old trusty DECWriter. The normal printer port (plug) on the AST (the manufacturers name) communication board (comboard) is for a parallel printer (this is designed as COM1), but the DECWriter is a serial printer, so an extra serial port had been ordered on my comboard (this is COM2).

A trip back to the computer store revealed that COM1 is at the back slot #5 and COM2 is slot #4, not the most logical arrangement. Printer still didn't work.

Another trip. This time I was told that the pins on the cable must be changed as the DECWriter has a different pin configuration. Checking with a DEC technician confirmed this. So at a \$40 charge to modify the cable 2 pins were changed. Printer still didn't work.

Now in exasperation and after many hours of testing, phone calls to the salesperson and the technician, I read the technical manual I received with the comboard. I learned that the AST people knew the pins needed to be changed for a printer rather than a modem (the normal use of the port) and had neatly provided a 'dip' switch on the comboard for that contingency. Unfortunately the technician had not switched it properly. I then had to convince the technician and insist that he redo it. The refund of the pin modification charge was the next hassle. The printer finally worked. Hooray! It was now 3 weeks and many, many hours of effort, and 6 trips to the computer store later. (The trips were necessary as the DECWriter was not portable, and the computer store had none nor any comparable equipment).

Later when I selected and installed my parallel printer (Epson FX-100) it went perfectly smoothly.

Support and Help to Users

I have found that sales persons in computer stores come in a wide diversity of levels of knowledge and ability to help. As in many other fields the really goods ones have moved up into management and have little contact with the customer. The salespersons rarely have more than

Articles, Reviews and Reports, cont.

a rudimentary knowledge of their own hardware and software, and are unlikely to know anything besides what they handle, and if they do are less likely to tell you. There are of course exceptions, and in fairness the salespersons are not really educators, although that is much needed by many of the customers.

If you are interested in a typical configuration of equipment and a standard installation, they may be of help, but if it is atypical, you will be on your own or will need skilled consultation, which is not easy to find. The field is so big and such like a cottage industry, that even the so called "consultants" are specialized and tend to have experience limited to a few manufacturers or software distributors.

Telephone help is available from the computer store, but my experience with it has been dismal. This is echoed by a number of my colleagues. To save time I am most likely to call the hardware manufacturer or the software house for help. Some have 800 phone lines to facilitate the process. Some of these technical persons are well equipped for the job, but some lack the broad experience which would help you. Just keep trying. Ask for the persons name, and when you find a good one ask for that person on subsequent calls. If all else fails, write to the top personnel in the company, the marketing manager, customer support manager, or president.

Another potential source of support is the computerized bulletin

boards that have sprung up. They tend to focus on users of a particular machine, Apple, IBM PC, etc. Using your computer, modem, and a communications software package you can dial into the bulletin board through the telephone system. You can leave a message with your problem or question, and your phone number. You may pick up a reply a few days later if someone has chosen to respond, or they may even call you. There are many eager and very talented users who regard such questions and technical 'problems' a personal challenge. They often are correct, and you can hardly beat the price. These bulletin boards also have much public domain software in the files and all that is necessary is to download the program to your own disk. Sometimes they are short on instructions and documentation, but then you can return to the source with questions.

The personnel at campus computer centers tend to be knowledgeable about the mainframes and mini computers and not experienced with the micros. As in business, until recently they have tended to ignore the micro users, preferring to keep control of the system in their own house. The rapid spread of micros on campus and the need to interface the central system and the distributed systems has forced the computer professionals to be more accommodating and supportive of the micro user on campus.

Software Reviewers Needed

Anyone willing to review human service software for the new journal **Computers in Human Services** should send their name, address, equipment available and software areas of interest to Walter LaMendola, U. of Denver, GSSW, Denver, CO 80208. Suggestions for software to review are also welcome.

**The Program in Management
and
Information Systems
announces**

**A New Publication for NonProfit Agency
Managers, Consultants and Students**

**Documenting
Your Organization's
Information System**

This new MANUAL provides an approach to the documentation of existing information systems—helps managers understand their management tasks as information processing tasks, assists agency staff to understand their roles from an information systems perspective, and provides a general educational model for teaching staff at all levels about information processing. The MANUAL responds to the challenge that introducing computers into nonprofit organizations is not a purely technical problem; in fact, it may be overwhelmingly a management and organizational problem.

PRICE: \$8.95

AVAILABLE FROM:

The Production Center
The School of Social Service Administration
The University of Chicago
969 East 60th Street
Chicago, Illinois 60637

**Computers
in
Psychiatry/Psychology**

A clinical resource newsletter featuring
computer applications for diagnosis, testing,
research, office management, and therapy.

Bibliography and program library
Volumes I-IV \$40/year
All four volumes: \$125

Volume V (quarterly commencing January 1983): \$40

Computers in Psychiatry/Psychology
26 Trumbull Street
New Haven, CT 06511

Please send me Vols. _____ of CP/P
(add \$10 for outside USA & Canada)

My check for \$ _____ is enclosed.

Name _____

Address _____

City _____ State _____ Zip _____

Are You Willing to Share Your Talents?

If so, participate in the CUSS Network Skills Bank. The Skill Bank, operated by Gunther Geiss of Adelphi University, New York (516) 228-7915, is designed for those wanting to share or obtain specific knowledge, skills and experiences. To share your talents, complete this form, fold, staple and mail.

Name _____
First Middle Last

Title _____ Degree _____ Rank _____

Address: _____

Office and/or home phone number(s) () _____ () _____

Check all the boxes adjacent to the item(s) which apply to you.

1. General Areas of Interest in Computer Applications:

- | | |
|---|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Administration and Research |
| <input type="checkbox"/> Education | <input type="checkbox"/> Education and Research |
| <input type="checkbox"/> Administration | <input type="checkbox"/> All of These |
| <input type="checkbox"/> Research | <input type="checkbox"/> Clinical |
| <input type="checkbox"/> Education and Administration | |
| <input type="checkbox"/> Other (Specify) _____ | |

2. Current Experience Status

The following items listed under system design experience refer to your personal experience in the conceptualization, design, implementation and operation of information systems (both manual and automated) for human service agencies. They are intended to summarize your overall experience rather than any single experience in detail.

System Design Experience

- | | |
|--|---|
| <input type="checkbox"/> Unknown | <input type="checkbox"/> Voluntary - Not for profit |
| <input type="checkbox"/> Public | <input type="checkbox"/> Proprietary |
| <input type="checkbox"/> Quasi-Public | |
| <input type="checkbox"/> Other (Specify) _____ | |

3. Organization's Field

- | | |
|--|--|
| <input type="checkbox"/> Unknown | <input type="checkbox"/> Aging |
| <input type="checkbox"/> Mental Health | <input type="checkbox"/> Corrections/Justice |
| <input type="checkbox"/> Medical/Rehab. | <input type="checkbox"/> Combination of these |
| <input type="checkbox"/> Welfare/Social Services | <input type="checkbox"/> Child Welfare |
| <input type="checkbox"/> Homemaker | <input type="checkbox"/> Advocacy/Comm. Action |
| <input type="checkbox"/> Educational (other than your institution) | |
| <input type="checkbox"/> Other (Specify) _____ | |

4. Your personal responsibility:

- | | |
|--|---|
| <input type="checkbox"/> Unknown | <input type="checkbox"/> Operation |
| <input type="checkbox"/> Conceptualization | <input type="checkbox"/> Translator/Facilitator |
| <input type="checkbox"/> System Design | <input type="checkbox"/> Total Responsibility |
| <input type="checkbox"/> Program Install | |
| <input type="checkbox"/> Other (Specify) _____ | |

5. Your personal role:

- | | |
|---|--|
| <input type="checkbox"/> Unknown | <input type="checkbox"/> Admin./Manager of Org. |
| <input type="checkbox"/> Consultant to Organization | <input type="checkbox"/> Educator for Org. Staff |
| <input type="checkbox"/> Staff Member of Organization | |
| <input type="checkbox"/> Other (Specify) _____ | |

6. Purpose of system:

- | | |
|--|---|
| <input type="checkbox"/> Unknown | <input type="checkbox"/> Tracking/Referral |
| <input type="checkbox"/> Monitoring/Evaluation | <input type="checkbox"/> Clinical Diagnosis Evaluations |
| <input type="checkbox"/> Record Keeping | <input type="checkbox"/> Treatment Planning |
| <input type="checkbox"/> Research | |
| <input type="checkbox"/> Other (Specify) _____ | |

7. Size of the largest system you are involved in:

- | | |
|--|--|
| <input type="checkbox"/> Unknown | <input type="checkbox"/> State Wide |
| <input type="checkbox"/> Single Agency | <input type="checkbox"/> Regional |
| <input type="checkbox"/> City/Town Wide | <input type="checkbox"/> Nation Wide |
| <input type="checkbox"/> County | <input type="checkbox"/> International |
| <input type="checkbox"/> Multi County | |
| <input type="checkbox"/> Other (Specify) _____ | |

8. System(s) type:

- | |
|--|
| <input type="checkbox"/> Unknown |
| <input type="checkbox"/> Manual |
| <input type="checkbox"/> Computerized Batch (Regularly scheduled updating) |
| <input type="checkbox"/> Computerized - Interactive (On demand - inquiry) |
| <input type="checkbox"/> Manual Computerized |
| <input type="checkbox"/> Distributed Processing (Local compute tied to a larger one) |

9. Size of computer(s), if used:

- | | |
|--|--|
| <input type="checkbox"/> Unknown/N.A. | <input type="checkbox"/> Mini (PDP-8, DG NOVA) |
| <input type="checkbox"/> Maxi (Mainframe) | <input type="checkbox"/> Micro (PET, TRS-80) |
| <input type="checkbox"/> Other (Specify) _____ | |

10. Manufacturers of computer(s) used:

- | | |
|--|---|
| <input type="checkbox"/> Unknown | <input type="checkbox"/> Prime |
| <input type="checkbox"/> IBM | <input type="checkbox"/> Radio Shack |
| <input type="checkbox"/> Burroughs | <input type="checkbox"/> Commodore - Pet |
| <input type="checkbox"/> Univac | <input type="checkbox"/> Apple |
| <input type="checkbox"/> DEC | <input type="checkbox"/> Alpha - Micro |
| <input type="checkbox"/> HP | <input type="checkbox"/> Altair |
| <input type="checkbox"/> Data General | <input type="checkbox"/> Dynabyte |
| <input type="checkbox"/> Harris | <input type="checkbox"/> Intertec |
| <input type="checkbox"/> Perkin Elmer | <input type="checkbox"/> Cromemco |
| <input type="checkbox"/> Control Data | <input type="checkbox"/> A combination of these |
| <input type="checkbox"/> Other (Specify) _____ | |

11. Source of software used:

- | | |
|---|---|
| <input type="checkbox"/> Unknown | <input type="checkbox"/> Created - Original |
| <input type="checkbox"/> Canned - Purchased | <input type="checkbox"/> Combination |
| <input type="checkbox"/> Canned - Purchased and modified or adapted | |
| <input type="checkbox"/> Other (Specify) _____ | |

12. Have you produced any publications on the system(s) you developed?

- | | |
|--|---|
| <input type="checkbox"/> None/unknown | <input type="checkbox"/> Journal article(s) |
| <input type="checkbox"/> Internal documents only | <input type="checkbox"/> Monograph(s) |
| <input type="checkbox"/> Paper presentation(s) | <input type="checkbox"/> Book - chapter |
| <input type="checkbox"/> Other (Specify) _____ | |

13. Can we put your name on our mailing list? (Permission for this information to be shared with group members)

- | | |
|-----------------------------|------------------------------|
| <input type="checkbox"/> No | <input type="checkbox"/> Yes |
|-----------------------------|------------------------------|

The following items (14-38) relate to educational computer applications that you have developed or used in human service education.

Is the computer used in

	Use	Used by school
	personally?	or agency?
	Yes	Yes
14. Teaching?	<input type="checkbox"/>	<input type="checkbox"/>
15. Research work?	<input type="checkbox"/>	<input type="checkbox"/>
16. Research courses?	<input type="checkbox"/>	<input type="checkbox"/>
17. Administration courses?	<input type="checkbox"/>	<input type="checkbox"/>
18. Policy/Macro courses?	<input type="checkbox"/>	<input type="checkbox"/>
19. Clinical/Micro courses?	<input type="checkbox"/>	<input type="checkbox"/>
20. Field work administration?	<input type="checkbox"/>	<input type="checkbox"/>
21. Computer Class scheduling?	<input type="checkbox"/>	<input type="checkbox"/>
22. Financial administration?	<input type="checkbox"/>	<input type="checkbox"/>

The following items relate to more detailed information regarding educational use of computers by yourself. For example, you may use a computer for a research course, specifically for data analysis or for computer aided instruction, etc.

Is the computer used for

	Use	Used by school
	personally?	or agency?
	Yes	Yes
23. Applications - Data Analysis?	<input type="checkbox"/>	<input type="checkbox"/>
24. Applications - Computer aided instruction?	<input type="checkbox"/>	<input type="checkbox"/>
25. Applications - Decision analysis?	<input type="checkbox"/>	<input type="checkbox"/>
26. Applications - Simulation/Gaming?	<input type="checkbox"/>	<input type="checkbox"/>
27. Applications - Exam administration and/or grading?	<input type="checkbox"/>	<input type="checkbox"/>
28. Applications - Information system demonstration?	<input type="checkbox"/>	<input type="checkbox"/>
29. Applications - Course and/or faculty evaluations	<input type="checkbox"/>	<input type="checkbox"/>
30. Applications - Student records?	<input type="checkbox"/>	<input type="checkbox"/>
31. Applications - Advisement?	<input type="checkbox"/>	<input type="checkbox"/>
32. Applications - Admissions	<input type="checkbox"/>	<input type="checkbox"/>
33. Applications - Clinical Records	<input type="checkbox"/>	<input type="checkbox"/>

Yes

34. Are you interested in micro computer applications?
35. Is a micro computer available?
- Planning on acquiring one?

When _____

Where - dept. _____

School _____

College _____

University _____

36. Brand of micro computer available or planning to acquire

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> No/NA | <input type="checkbox"/> IBM |
| <input type="checkbox"/> Commodore Pet | <input type="checkbox"/> Alpha Micro |
| <input type="checkbox"/> Apple | <input type="checkbox"/> Cromemco |
| <input type="checkbox"/> Radio Shack TRS 80 | <input type="checkbox"/> Dynabyte |
| <input type="checkbox"/> Radio Shack Business System | <input type="checkbox"/> Intertec |
| <input type="checkbox"/> DEC | |
| <input type="checkbox"/> Other (Specify) _____ | |

37. Micro computer applications explored

- | | |
|--|---|
| <input type="checkbox"/> No/NA | <input type="checkbox"/> Practice |
| <input type="checkbox"/> Education | <input type="checkbox"/> Administration |
| <input type="checkbox"/> Research | |
| <input type="checkbox"/> Other (Specify) _____ | |

38. Do you have a background in engineering or physical sciences?

- No
- Engineering
- Chemistry
- Physical Science

If you are aware of others in academic or agencies interested in participating, please write down their names, affiliations and phone numbers and I will follow up by engaging them in this survey.

Name _____

Title _____

Affiliation _____

Address _____

Phone: _____

Home _____

Business _____

Name _____

Title _____

Affiliation _____

Address _____

Phone: _____

Home _____

Business _____

Gunther R. Geiss
 Adelphi University School of Social Work
 Garden City, NY 11530

Members Comments and Activities

Network Activities

100 Attend Baltimore CUSS Meeting (From Bob Elkin, U of Maryland School of Social Work, 525 W. Redwood St., Baltimore, MD 21201)

More than 100 persons attended an organizing meeting of CUSS co-sponsored by the Health and Welfare Council of Central Maryland.

Catherine Seipp, Assistant to the Director of Baltimore County Department of Social Services made an outstanding presentation on her experience with a microcomputer—a TRS 80, Model II and Radio Shack packaged software. During that period, with about one-fourth of her time and no programming skills, she brought up 13 discrete applications. While these applications ranged from simple mailing lists to relatively complex monitoring and record systems, all resulted in substantial efficiencies for the Department.

The applications included the calculation and reporting of work productivity for income and maintenance, maintaining an up-to-date file of all center and family day care providers for information and referral file, updating and printing 8,000 mailing labels monthly and issuing talleys for the Food Stamp program, and a system for mailing monthly questions to high risk AFDC clients, and tracking and recording responses for monthly reports.

Participants in the meeting indicated a strong interest in continuing to meet and to form a regional group of CUSS. The School of Social Work and Health and Welfare Council are committed to running two additional meetings (probably in February and April, 1984). By that time, we all hope that the group will take off on its own as an independent activity.

Plans for next steps call for a survey of interests, hardware, and software (so that those with like interests can contact each other). The February meeting will probably include a discussion on how to buy a computer—including some discussion of the limitations on governmental organizations.

Any interested person in Maryland, Washington, D.C., and the rest of the region, (people from Harrisburg and Wilmington attended) please get in touch with Dr. Robert Elkin.

International

Singapore — Problems with Client Data BASE, Drop by if passing through. (From Ong Kwee Hong, Deputy Director (Information and Systems) for Permanent Secretary, Ministry of Social Affairs, Singapore).

We have installed a mini-computer (HP 3000) in the Ministry of Social Affairs since Feb 83. We are developing a client data base for the Social Services. While the ideals for the systems are there, so far we have been facing a number of setbacks and progress appears to be slow. I am, therefore, keen to learn from other systems that have been developed in the Social Service field. Just to name some of the problems we have been grappling with:

- Data Capture;
- Lack of interest among users;
- Difficulty in identifying at the management level the type of reports/tabulations to be generated - we are capturing on computer massive number of data items.

Our research branch is using the SPSS package. I will be interested in meeting Social Services professionals who have been involved in the use of computers and who can offer useful advice to us. If you know of any such persons who are passing through Singapore, please encourage them to call me at telephone number 914111 Ext 117 for a discussion.

OAPSW Branch of CUSSN (From Camille Lambert, U. of Toronto, 246 Bloor St., W., Toronto, Ontario, Canada M5S 1A1)

Just finished reading the 83/84 issue of CUSS. Congratulations! It's the best ever; packed full of useful information. CUSS is growing by leaps and bounds, which is testimony to its relevance.

In my workshops through Ontario, I've been promoting CUSS, so you should be receiving inquiries as well as enrollments. Currently, I chair a 'computer committee' of the Ontario Association of Professional Social Workers. We're working towards automating that organization, and as well are hoping to develop an OAPSW branch of CUSS. Many members of OAPSW have micros, and through affiliation with CUSS they might be instrumental in moving their agencies towards computerization.

Research Projects and Reports

The Digital Social Worker Project (c/o Leo de Groot, Family Therapy Program, Alberta Children's Hospital, 1820 Richmond Rd., S.W., Calgary, Alberta T2T 5C7)

In September, 1983 the National Welfare Grants Directorate announced funding "The Digital Social Worker: Microcomputers in Clinical Social Work Practice". The sponsor of this demonstration project is the Alberta Children's Hospital in Calgary; project committee is made up of Leo de Groot of the Family Therapy Program, Alberta Children's Hospital; Dr. Jim Gripton of the Faculty of Social Welfare, University of Calgary, and Dr. Paul Licker of the Faculty of Management, University of Calgary.

Front line social workers in a family service setting will be involved in testing the use of microcomputers in their everyday work, particularly in assessing client needs and preparing treatment plans. The social workers will also use the microcomputers in monitoring treatment effectiveness. The project as a whole will be assessed on the quality of the services being provided as well as potential usefulness in other social work settings.

Project to Transfer Exemplary Management Technology (From Gail Gibson Hunt, Gibson-Hunt Assoc., LTD, 1331 H. St., N.W., Suite 700, Washington, D.C., 20005).

The Children's Services Monitoring Transfer Consortium has been funded for a third phase, with Gibson-Hunt Associates as the Consortium contractor. The Consortium includes the states of Michigan, Pennsylvania, California, Texas, West Virginia, and the City of New York. It is funded under an DHHS grant to demonstrate the potential of the transfer of exemplary management technology among these Consortium members and beyond.

In 1984, the Consortium will be developing microcomputer-based compliance monitoring tools for day care and other children's services. The application will be for an IBM-PC and will make extensive use of graphics and menu-driven screens.

We would like to hear from C.U.S.S. members who have developed systems for licensing/monitoring in any social services area using any manufacturer's microcomputer.

Program to Bridge the Gap between Researchers, Developers and Disabled Users (From Martha R. Redden, American Assn. for the Advancement of Science Project on the Handicapped in Science, 1515 Massachusetts Ave., N.W., Washington, D.C., 20005).

The American Association for the Advancement of Science (AAAS) Project on the Handicapped in Science is beginning a new program, funded by the National Science Foundation (NSF), to bridge the gap between the researchers and developers of technologies and the disabled people who are potential users of the technologies.

When disabled people are not adequately involved in the analysis, design, and evaluation of technologies, the results are often unworkable. For instance, a voice-activated wheelchair was designed to respond to user commands; but when used in the outside world, the device responded to environmental and other noises as well as to the user's voice, making it unsafe. When researchers do include handicapped people in the development process, too often they rely solely on the hospitalized population rather than on independent disabled persons living and working in the community.

To create a more useful system of information exchange, during the next two years the AAAS Project on the Handicapped in Science will be working closely with consumer and other groups that serve disabled persons or research disability issues. The project also will draw heavily on the expertise provided by over 1,000 disabled scientists and engineers who are members of the AAAS Resource Group.

As a first step, the project will review completed and ongoing research and development work to aid handicapped persons. This will include identifying research projects funded by NSF and other federal agencies, searching scientific literature to locate other disability related R&D projects, and organizing information from disabled user groups and individuals.

Disabled persons or groups are encouraged to share individual case experiences of working with a scientist or engineer who helped in the design, modification, or repair of assistance devices or other technologies. Of interest also are identification of projects at universities, Independent Living Centers, or other locations where scientists and engineers are doing research or development of technologies for disabled persons. The AAAS is especially interested in identifying places which are not usually thought of as primarily focused on disability technology.

The Project on the Handicapped in Science hopes to call attention to the field of disability research and to expand the benefits it offers to disabled individuals by more widely involving the scientific and engineering community in disability research, including disabled individuals in the R&D process, and increasing the public's awareness of these issues. The project will be directed by Martha Ross Redden and Virginia Stern of the AAAS Project on the Handicapped in Science.

Individuals or groups who have information which might have ap-

Members Comments and Activities, cont.

plication to the project should write or call Redden or Stern at the AAAS Project on the Handicapped in Science, (202) 467-4496 (Voice or TTY).

Research in Social Welfare Agency Implementation and Use of Computer Technology (From John M. Gandy, Faculty of Social Work, U. of Toronto, 246 Bloor St., W., Toronto, Ontario, Canada M5S 1A1).

CUSSN readers may be interested in our research project.

This research will examine the experience of a sample of social welfare agencies in the implementation and use of computer technology. The objectives of this research are: 1. To determine the human and social implications of the introduction and use of computer technology in social welfare agencies; 2. To assess the internal and external factors which limit the use of computer technology; 3. To enhance our understanding of the potential of computer technology for increasing the efficiency of social welfare agencies; and 4. To develop hypotheses for further research on social and human issues related to the use of computer technology.

These objectives will be achieved through an analysis of the adoption and use of computerized information systems in social welfare agencies in order to determine: 1. The quantity, quality and use of information for decision making; 2. The impact of computerization on the staff; 3. The impact of computerization on clients and potential clients; and 4. The impact on the social structure of the organization. In the analysis special attention will be given the themes of efficiency, equity and social control. Our analysis rests on the proposition that these four groups of factors will largely determine the range and intensity of problems encountered in implementing a computerized system, the different levels of use, and the quality of the data finally provided by the system.

Research Needed (From Michael A. Turk, 1592 Roddard Ave., Rocky River, OH 44116)

As a practicing social worker, I've been active for at least the last 3 years in promoting the scientific application of data processing for our field. I'm particularly interested in learning about any scholarly work being done by social workers to show the efficacy of using computers. There is much anecdotal materials in the literature, but my experience has shown that the profession is suffering a great deal attempting to convert to an automated office place. We need to be able to show our funding sources that these systems are practical, not just offer an intellectual argument for their use.

Education

Social Welfare Computer Assisted Lessons (From Consuelo G. Lopez, Social Work Department, California State Polytechnic University, 3801 West Temple Avenue, Pomona, CA 91768).

I am interested in developing computer assisted lessons as an adjunct to classroom teaching, in courses within our undergraduate curriculum which might lend themselves to this medium. I am beginning with Introduction to Social Welfare.

Survey of Computer Use in Education Administration (From Donald E. Maypole, University of Northern Iowa, Department of Social Work, Cedar Falls, IA 50614).

We hear a great deal about how social and health agencies can benefit from appropriate computerization, both in terms of client care and administration. Over the last couple of years, CUSS and others have talked about computers and teaching applications. I've yet to see anything on the application of computers to the administration of social work education programs. Accordingly, I'm considering a survey of programs to see what their state of development is in relation to administrative computer applications. I'd appreciate CUSS members sharing information on what MISs, hardware and software they are using in their programs with me, to serve as pilot project.

Health

Health Related Software (From Dennis Garvin, Cpt. U.S. Air Force U.C., 165 Palisades, Apt. 1004, Universal City, TX 78148).

A recent survey of software in the areas of nursing and medicine came up with the following results which may be of interest to CUSSN members.

• Diet Modification

DINE, the Diet Inventory of Nutritional Experiences, allows for the analysis of daily diets. The program is interactive and is based on behavioral learning principles to change or reinforce dietary habits. The package includes instructional manual, slides and transparencies. Available from: The DINE System, 724 Robin Road, West Amherst, New York. Price: \$137. System: Apple with 48k and Franklin Ace 1000.

Healthy Meal Planner, is a program to assist a dietician to pro-

vide nutrition information to Type 1 and Type 11 diabetic patients, and is based on the American Diabetes Association Exchange List. Available from: Abt Associates, 55 Wheeler Street, Cambridge, Massachusetts. Price \$500. System: Apple with 64k.

For additional programs, see "Body Management", *Personal Computing*, Vol. 7, No. 8, 1983.

• Health Risk Profiles

Two programs were located which provide health risk profiles based on the entry of data related to health habits and lifestyle. One is available from some local American Cancer Society offices, and relates risk factors to various types of cancer. The other, entitled *Wellness Check*, is a more general appraisal of health risks for adults and teens. For more information, contact the Rhode Island Department of Health, Office of Health Promotion, 75 Davis Street, Providence, Rhode Island.

• General Data Bases for Health

1. Bioethicsline - indexes literature on the ethical aspects of medicine and experimentation, drawing from the fields of health sciences, philosophy, law, religion, psychology, and the popular media.
2. Health Planning and Administration - indexes literature on health planning, organization, financing, management, manpower and etc.
3. Medline - indexes over 3,000 biomedical journals on the health sciences.
4. National Information Sources for the Handicapped - a directory of services, and for organizations serving the handicapped.
5. National Institute of Mental Health - abstracts from mainly journal literature and dissertations on mental health, behavioral sciences and social services.

Another data base is the AMA/NET, a part of the GTE Telenet Medical Information Network.

1. Drug information - contains up-to-date, information on the clinical use of drugs.
2. Disease information - current, succinct descriptions of diseases, disease disorders and conditions.
3. MED/MAIL - provides a means of electronic mail within the medical and health community.
4. Medical Procedure, Coding, and Nonmenclature - provides a uniform coding and nonmenclature system, contains more than 6,000 descriptions of procedures, with their identifying codes.
5. Socio/Economic Bibliographic Information - serves as a guide to locating current articles on the non-clinical aspects of health care.

Additional information on the network services is available from GTE Telenet, Medical Information Network, 8229 Boone Boulevard, Vienna, Virginia.

Hospital Social Service Department Needs Help Automating (From Ganet Popper, University Hospital, 75 East Newton Street, Boston, MA 02118).

I read of The Computer Use in Social Services Network in the January 1984 NASW News. The Hospital Social Service Department where I work is interested in computerizing our Department. As Chairman of the Computer Committee, I would be interested in any information you could provide me with to help us computerize our Department with a system which would best serve our needs. In addition, how can I obtain the latest literature in automating a small Social Service Department.

Help Needed by Hospital Social Service System (From Aileen, Gitelson, Director, Social Service Department, Northern Westchester Hospital Center, 400 East Main Street, Mount Kisco, NY, 10549).

I am the Director of a ten person Social Service Department in a medium-sized community hospital. Currently, I am gathering information on the use of computers in hospital social work departments preparatory to introducing them into this department.

I am interested in written material of the "how to" nature. Perhaps you might also be aware of similar sized hospital social work departments in the New York area which have already introduced computers. Any contacts of this sort would be most appreciated.

Advice Needed by Acute Care Hospital Social Service Dept. (From Ron Melancon, MSW, Director, Social Service, Slidell Memorial Hospital, 1001 Gouse Boulevard, Slidell, Louisiana 70458).

I am director of Social Services at a 180 bed acute care Hospital. Right now I am a department of one. The DRG's are on us and everyone is trying to gear up for their impact.

This is my first assignment in an acute care setting, and it was immediately evident that a computer system would make my job easier

Members Comments and Activities, cont.

and more efficient. Much of what I do involves recording and retrieving data quickly, and then analyzing it after a period of time.

I have scouted the local retailers, have some bids submitted on hardware. But I would be in a much stronger position, both for proposing to the Administration and satisfying my own need to be economically cautious, if I had some good advice from the Social Service field.

Computerizing a Chronic, Long-term Care Facility (From G. Edward Pfenninger, Assistant Director, Medical Social Services, Monroe Community Hospital, P.O. Box 905, Rochester, New York 14603).

My expertise in data processing is limited, but my experience and reading suggest that there are ways that computers can ease the demands made on our staff, as well as provide useful, up-to-date information heretofore not easily available.

Currently, I am working on the skeleton of a project to move some, and eventually all, of our record-keeping to an electronic file. At the same time it would be nice to build an accountability system into the process. This facility is a chronic, long-term care facility with several levels of care including Ambulatory Clinic, Health Related, Skilled Nursing and a small acute hospital. Currently, although the facility has a computer, it is used only for book-keeping purposes, and is not available to our department. I am considering the purchase of either an Apple IIe or IBM PC.

Disabilities

Center for Computer Assistance to the Disabled [C-CAD] (From John Dycus, C-CAD, c/o Jack Kishpaugh, 2501 Ave. J., #100, Arlington, TX 76010).

C-CAD has been organizing for the last year to provide the disabled services such as job placement, customized hardware and software, computer literacy and programming. This description is a summary of a story which first appeared in the Dallas Morning News.

More than 60 people attended the first meeting, and close to 75 are showing up at the others. The board of directors is blessed with excellent credentials — a co-inventor of Radio Shack's breakthrough home computer, the TRS-80 Model 1; the man who popularized the acclaimed LOGO computer language for youngsters; biomedical experts from The University of Texas at Arlington, Baylor Medical Center and the University of Texas at Dallas; advertising and accounting professionals, at least one politician, one speech pathologist, one lawyer, one physician and an executive assistant to a Dallas multimillionaire.

The goal is employment for the handicapped as technicians, data enterers, operators or programmers, working in their homes and linked to their offices through computer terminals and modems.

The employer saves on office cost and has an employee who can work at low-demand times for the main frame and data bank. The employee saves on transportation, wardrobe, food and time spent commuting.

It's a song Jack Kishpaugh, the center's board chairman, has been singing a dozen years.

The handicapped are a tremendous underutilized resource, at a time when computer costs are coming down and demand for computer skills is way up," he says. "There's a 40 percent shortfall of technician/programmer demand over supply. Why can't a physically impaired person, who's otherwise very capable, be equipped to write programs in his home and send them to the company via a telephone hookup?"

Kishpaugh, 54, is a former regional manager for Allis-Chalmers construction mining and machinery division; a diving accident 12 years ago severed his spinal column between the fifth and sixth vertebrae.

Kishpaugh, as a quadriplegic whose daily "up time" gets shorter every year (he currently must recline 18½ hours of every 24), knows frustration from the other side. He also knows ways around it, such as with a 16-function environmental system operated either by a radio-controlled device when he's in his wheelchair or by breath-activated diaphragm switches when he's lying down.

"Someone who's disabled spends a lot of time alone. You can get off by yourself with one of these devices, and before you know it you're doing magic — and you've hardly touched your potential for doing something productive. A normally inquisitive person will start getting into the books and want to go even farther."

If developments proceed, this center for computer assistance will lead the handicapped to those books, find the best ones for their unique needs, then help them acquire the equipment to make a living with their newfound knowledge.

Using Apple IIe with Speech Synthesizer and Voice Input (From Don Mack, Chairman, Prescribed Studies Department, Laramie Senior High School, 1275 North 11th Street, Laramie, Wyoming 82070).

We are presently utilizing an Apple IIe in our EMR classroom at

Laramie High School. The Apple has been modified to include an Echo II speech synthesizer and MCE Voice Input Module to allow interaction with the computer by students who are not able to utilize a keyboard effectively nor read the screen presentations accurately. If you or others with whom you are acquainted are involved in similar research, we would be interested in comparing outcomes.

Information needed on Distributed System for Community Group Homes (From Jahice M. Arps, 2300 Midvale, Ypsilanti, MI 48197).

My particular interest is in reducing the enormous amount of duplication in data collection in my current position as "casemanager" of services to Developmentally Disabled, within the State Department of Mental Health, Wayne County. I have queried the administration regarding their support for such a venture and they have given me verbal support for at least investigating various options.

Do you know of similar situations in which data collection, information retrieval and general communication between several "Satellite offices" (in this case, community group homes) has been effected through the use of microcomputers?

Using Computerized Conners Questionnaire (From Daniel W. Hamilton, Children's Hospital Medical Center, 295 Longwood Ave., Boston, MA 02115).

I am currently using the computerized versions of the Conners Questionnaire with children with attention deficit disorders as well as exploring other computer uses with psychological testing. I am finding very little information available and was encouraged to hear of CUSS. Any information would be appreciated.

Survey of Sheltered Workshop Computer Use (From L. Charles Miller, Jr., 1409 37th Ave., Seattle, WA 98122).

We conducted a survey of 129 sheltered workshops in Region X (Alaska, Washington, Oregon, Idaho) in 1981. The response rate with quite good (better than 65% in every state). We found that 36% of the facilities used computers at that time, although most (24%) used a service bureau. Payroll, General Ledger, Accounts Receivable-Payable were the most extensive functions using computer support.

DD Agency Using Dec and Apple IIe (From Donald R. Runyan, 2724 S. Carey, Marion, IN 46953).

I am very interested in the uses of computers in social service agencies. I recently joined a Developmental Disability Agency as the Director of Social Services. Our facility is just beginning to put financial and client data on a DEC Computer. We also have an Apple IIe available for client instruction and staff use.

With my MSW degree in Administration and Program Evaluation, I would like to move my career into the area of computer use in social service agencies. To that end, I am currently investigating the possibility of earning a degree in Computer Science while continuing to work.

Child Welfare

Multiuser Microcomputer System in Juvenile Justice and Neglect Services (From Philip J. Hamlin, ACSW, Adoption Referee/Supervisor, Kent County Juvenile Court, 1501 Cedar Street, N.E., Grand Rapids, MI 49503).

This Court is very involved in the development of information systems in juvenile justice and neglect services and in the use of multiuser microcomputer to implement those systems. The Network could certainly assist us in our projects.

Child Welfare Software Needed (From William J. Barger, Program Coordinator, Children's Aid Society, POB 2306, Walkerville Postal Station, Windsor, Ontario N8Y 4S3).

Our agency is presently in the process of computerization. We have a commitment to the utilization of the computer as a case work management tool and are looking to obtain software which would be appropriate for our needs.

We are a Child Welfare agency responsible for the care and protection of the Roman Catholic children and their families in Essex County, Ontario, Canada. Type of cases may involve child abuse, family therapy, children in care, supervision of children in their own homes, adoption, fostering and so on.

Social Services

Microcomputer Based Statewide System (From Louann Kimball, Data Manager, New Hampshire Social Welfare Council, Box 1255, Concord, New Hampshire 03304).

We are currently endeavoring to develop a microcomputer based human service knowledge system to support state and local decision-makers in our state of New Hampshire. (Ms. Kimball included a copy of the program narrative describing this project. It is based on a set

Members Comments and Activities, cont.

of nine interrelated random access file types, and eight district text file types. The project anticipates eventually collecting information on approximately 1,250 separate social services agencies, 6,000 social programs, 500 funding sources, 400 decision units and 600 social indicators.)

Managers Software (From Vicky Taylor, 1201 Cindy, Crowley, TX 76036).

My survey of software for human service managers came up with the following which may be of interest to CUSS readers.

Data Banks: PC Telemart, headquartered at Fairfax, Virginia, is set up to aid users to search and purchase software in a single operation. Their data bank contains information on over 30,000 packages.

The Federal Government provides a vast amount of computer support information for the would-be-users. For example, for the mental health user, they offer guides for MH personnel to follow in identifying their information needs and ways to document these needs in a manner which facilitates the work of systems analysts. Guides are offered to aid in the designing of information systems to support decision-making processes. For a copy of a report in this area, send \$5.00 to: Louise Levy, School of Information Studies, Syracuse University, Syracuse, NY 13210.

Transportation: Passenger and route analysis is the focus of a package from the Time Support Center, Department of Civil Engineering, Rensselaer Polytechnic Institute, Troy, NY 12181.

Paratransit Planning is a program which estimates the ridership to be expected and the cost incurring in providing specific types of transportation services. Contact Dr. Thomas Adler, Thayer School of Engineering, Dartmouth College, Hanover, NH 03755.

Paratransit Scheduling Package is a scheduling and reporting systems for small paratransit operations. Contact William G. Barker, Transportation Computer Group, 1009 W. Randol Mill Road, Arlington, TX 76012.

Data Analysis: Telo Facts is a questionnaire/response gathering and statistical analysis package. Contact Wynne Ramirez, Marketing Assistant, dlithium Press, 8285 SW Nimbus, Suite 151, Beaverton, OR 97005.

Demo Scan accesses and reports census data. The package produces demographic summaries for any census area, such as zip codes or user-defined geographic area. Compatible with Demo Scan is Map Scan. This microcomputer mapping is done of group areas of data classes. Maps are produced which display the classes using shades, symbols or class numbers. The program has a scaling option which provides the ability to plot the entire map to any pre-printed base map (example, one that already shows rivers and roads).

For both Demo Scan and Map Scan, contact Keith Satter, Claritas Corporation, 1911 N. Ft. Myer Drive, Arlington, VA 22209.

Designing Software for Social Service Agencies (From Lucy Luxenberg, MSW, 306 Post Road, Iowa City, Iowa 52240).

For the last three years I have been involved directly with social service organizations in our community, and have been working on designing software appropriate to their needs. The funds for setting up computerized systems is coming in very slowly which has given me lots of time to work on this project.

I would like very much to subscribe to your newsletter and to participate in any way possible in the development of computerized systems for human service organizations. I don't want to re-invent the wheel so to speak and would like to know what kinds of software packages are available right now.

Software for Social Service Programs Needed (From Carmen C. Bruer, Administrator, Regional Inter-Faith Association, P.O. Box 2301, Jackson, TN 38302).

Our agency which includes several social service programs is making plans for a multi-terminal computer purchase.

We have four programs in addition to administrative usage, i.e., book-keeping, word processing, mailing labels etc. They are:

1. Chore Services for Older Adults,
2. Housing Counseling,
3. Volunteer Hospice Service,
4. A food bank,

We will appreciate any suggestions you might have.

Ideas Needed for Using a TRS-80 Model 4 (From Carl W. Christensen, Clinical Social Worker, Southwestern Oregon Community Action Committee, Inc., P.O. Box 427, North Bend, OR 97459).

Our agency recently installed a TRS-80 Model 4. Besides the typical bookkeeping and inventory kinds of uses, we hope to see it in some more sophisticated research and management information system applications. We do not know much about how to go about this yet and would be very interested in getting connected with others who are also involved in implementing computers in social service agencies.

Computerizing a private, non-sectarian Children & Family Service Agency (From Mark Molitor, Management Analyst, Maryland Children's and Family Services, 303 W. Chesapeake Ave., Baltimore, MD., 21204).

I am a management analyst at Maryland Children's and Family Services, a private, non-sectarian human services agency in central Maryland. I am currently directing the agency's effort to computerize its information systems. The RFP was sent out a couple of weeks ago and we are awaiting responses.

Also, I would like to share with you that the first regional meeting of the CUSS Network held at University of Maryland at Baltimore went very well. The turnout was much larger than anticipated. I think Bob Elkin is doing a fine job.

Aging Agency Client & Services Tracking and Therapeutic Computer Uses (From Marc Stowbridge, Community Counseling Center, 622 Congress St., POB 4016, Portland, MI 04101).

I am a therapist in a sexual abuse treatment program and am also involved with another area agency for senior citizens. In both settings, particularly the senior citizen agency, I am using computers to keep track of clients and services. I have written the software for these tasks, as the functions of each are fairly unique. I am sure, however, that they are similar to tasks done in many social service agencies. I would be quite pleased to be able to share ideas with other social service workers with an interest in computers, so that we might not each "reinvent the wheel".

I am also interested in using computers directly with clients or students to effect a change in their methods of problem solving. I have already done some work in this area and have been encouraged by the results. I would be interested in learning about other direct client uses and I would be willing to share my experiences.

General

Technology Cooperative Offers Discounts (From June Bailen, Director of Membership Telecommunications Cooperative Network, 370 Lexington Avenue, Suite 715, New York, NY 10017).

TCN is a technology cooperative of over 300 not-for-profit organizations nationwide. TCN's programs are designed to help non-profits maximize their use of new communications technologies and minimize communications expenses.

The Long Distance Savings program has reduced TCN members' long distance phone bills by an average of 15% through a combination of service recommendations and cooperative group discounts. The Equipment Consulting program is designed to help non-profits acquire the best telephone and computer systems for their needs at the lowest possible cost.

Of special interest to CUSS subscribers would be Computer Communications Center, which provides discounted rates on access to electronic mail networks, specialized databanks, and an electronic bulletin board exclusively for non-profits.

Membership Records & Billing System Needed (From Nadya Tarasoff, Program Assistant, Ontario Association of Professional Social Workers, 185 Bloor St., E., Suite 701, Toronto, Ontario M4W 3J3).

Last August I moved from the Social Planning Council of Ottawa-Carleton to the Ontario Association of Professional Social Workers (OAPSW). One of my more exciting projects is to facilitate conversion of our information processing from a manual to a computerized system. Two CUSS members are on our Advisory Group: Kim Lambert, who is also the Chairman, and F.C. Hansen. Are you aware of any membership associations (approx. 5,000 members) who are using micros for their membership records and billing? We would appreciate making contact with them.

IBM-PC & Mainframe Data Analysis (From Kathryn F. Kennedy, 661 Pering Drive, #102, Houston, TX 77057).

Upon receiving my M.S.W. from the University of Houston last May, I entered the M.B.A. program on a part-time basis and have recently started my own consulting business aimed directly in this area. I own an IBM-PC and have been working on a project with the Mental Health Association of Harris County and the Texas Chapter of N.A.S.W., performing data analysis via tying into U of H's mainframe.

Agency Computerized Information Exchanges (From Robert Snider, Central Information Exchange Operations Specialist, Community Service Council of Broward County, Inc., P.O. Box 22877, Fort Lauderdale, FL 33335).

For background, my agency has been involved in computerized information exchange within and between human service agencies in Broward County, Florida, since 1979. Our systems have matured to the point where they have been successfully implemented in other com-

Human Service Educators Special Interest Group (SIG)

Course Outline and Teaching Aids Inventory

Editors Note: Due to the large number of requests for teaching materials, Wallace Gingerich is forming a CUSSN Educators SIG. As leader of the Educators SIG, Wallace will collect and distribute listings of course outlines and teaching materials.

Please complete this form for each course you teach which (1) deals with the use of computers in human services, or (2) uses computers as an instructional aid. (Make additional copies as needed.) Return the completed form along with copies of your course outline(s) and related materials to:

Wallace J. Gingerich, School of Social Welfare, University of Wisconsin-Milwaukee, P.O. Box 786, Milwaukee, Wisconsin 53201

A. Biographical Data

Name _____
Organization _____
Address _____
City _____ State _____ Zip _____
Phone: Office _____ Home _____

B. Course Information

Course Title _____

Level (circle one):

(U) undergraduate

(G) graduate

(UG) undergrad/grad

Applications Included (circle all that apply):

(A) client/management information systems

(G) telecommunications

(B) clinical assessment, interviewing and testing

(H) programming languages

(C) word processing

(I) simulations

(D) research and statistical analysis

(J) computer aided instruction

(E) budgeting, accounting, office management

(K) other _____

(F) decision support, expert systems

C. Teaching Aid

Please complete a teaching aid form for **each** computerized teaching aid you use to teach: (1) a computer application or (2) other substantive content. (Make additional copies as needed.)

Name of software program _____

Company of person who developed the program _____

Description of program _____

Cost _____

Hardware requirements _____

Operating system requirements _____

This program is an instructional aid to teach or demonstrate:

(1) a computer application in one or more of the following areas (circle all that apply):

- (A) client/management information system
- (B) clinical assessment, interviewing and testing
- (C) word processing
- (D) research and statistical analysis
- (E) budgeting, accounting, office management
- (F) decision support, expert systems
- (G) telecommunications
- (H) programming languages
- (I) simulations
- (J) computer aided instruction
- (K) other _____

OR

(2) substantive content in one of the following areas:

- (L) practice methods
- (M) Human Behavior/Social Environment
- (N) Policy and services
- (O) research
- (P) field practice

Overall Evaluation of Program _____

Members Comments and Activities, cont.

munities but we are very interested in other perspectives and approaches.

Technical Assistance Provided (From David Lansky, Director of Research, Columbia Research Center, 530 S.W. Harrison Street, Portland, OR 97201).

Our organization provides consulting, systems design, program evaluation, and time-sharing services to a number of non-profit organizations in the Northwest. I hope that some of them can become involved in the network as well.

I am also teaching several workshops for non-profit agency staff and management on information utilization. Among these programs is a two and one-half day retreat which assists managers in making decisions about and introducing computers into their organizations.

Skills for Hire (From Bill Flemming, 5040 Bosum's Way B-4, Ypsilanti, MI 48197).

After reading several back issues of the newsletter, I was much encouraged by the support offered by the network. I was beginning to feel very lonely trying to find either a position suited to my interests and abilities or support for my efforts. Michigan's economy is such that the

human service field can't afford basic services let alone computing systems.

I am enclosing my vita as a start toward a nationwide job search.

Software Information Needed (From Warren T. Raymond, Partner, DATA/TRAC Associates, 8008 S.E. 36th St., Mercer Island, WA 98040).

We are interested in hearing whatever others can tell us about the following software:

- programs to train developmentally disabled adults in a group home setting in social and living skills (nutrition, banking, survival skills, etc.);
- integrated accounting programs for general ledger, payroll, A/P, and A/R which accommodate fund accounting for not-for-profit agencies and permit the allocation of individual salaries and expenses over more than one cost center and more than one program within each cost center;
- programs based on the United Way chart of accounts for accounting and budgeting.

Operating systems can be MS-DOS, Apple 3.3DOS, Apple Pascal, or CP/M.

Resources and Materials

Electronic Information Utilities and Networks

LOGIN (Local Government Information Network) is a computer-based information exchange system containing over 18,000 solutions to local city problems, 2171 of which are in the Health and Human Service area. Call 800/328-1921 for information.

Special Net, Special Education Communication Network provides electronic mail, bulletin boards, and systems for data collection and information management for workers in special education. Details are available from the National Association of State Directors of Special Education, 1201 Sixteenth Street, N.W., Washington, DC 20036.

ARC NET is the official electronic mail network for ARC of the United States (National Headquarters) and ARC/Governmental Affairs Office. It allows ARC state and local units access to Headquarters and Governmental Affairs information on a near instantaneous basis. It also allows affiliates and members the ability to communicate cheaply and rapidly with each other and the US Headquarters and GAO. Write ARC/US, 2501 Ave J., Arlington, TX 76011.

Educational Technology PMS (People's Message Service), sponsored by the San Diego State University Department of Educational Technology; computer access phone is (619) 265-3428.

Handicapped Educational Exchange (HEX), c/o Richard Barth, 11523 Charlton Dr., Silver Spring, MD 20902; computer access phone is (301) 593-7033.

Living Bulletin Board System for Educators sponsored by Computer-Using Educators and the Far West Regional Educational Laboratory; computer access phone is (415) 565-3037.

Notre Dame Bulletin Board System, "The Leprechaun"; computer access phone is (219) 239-5875.

Articles

Evolution of the Micro-Computer: Technological Implications for the Private Practitioner Psychotherapy and Private Practice, (3) (Fall 83) 59-69.

Interactive Video: The State-of-the-Art Teaching Machine, by W. Levin, *The Computing Teacher* 11 (2) (September 83) 11-17.

Newsletters, Magazines & Journals

AAMSI News is the quarterly newsletter of the American Association for Medical Systems and Informatics, Suite #402, 4405 East West Highway, Bethesda, MD 20814.

Computers for Social Work Practitioners, a special issue of *Practice Digest*, 12 articles, 39 pp., \$5, c/o NASW, 7981 Eastern Ave., Silver Spring, MD. 20910.

Books and Reports

Personal Computers and the Disabled—A Resource Guide, 1984, 22pp. from Apple Computer, 20525 Mariana Ave., Cupertino, CA 95014.

Decision Support Systems for Policy and Management Papers from the annual conference of the Urban and Regional Information Systems Assn. 4720 Montgomery Rd., Bethesda, MD 20418, August 1983, 500pp.

Is Computerization Right for my Agency, (\$3) and **Computers for Fund Raising Management**, (\$6) Monographs from CWIS/AIMS, 251 Park Ave., So., NY, NY 10010.

Micro Computers for Small Social Service Agencies, 1983, (\$6) 75pp. Monographs from R.G. Chandler, School of Social Work, U. of Windsor, Windsor, Ontario, Canada N9B 3P4.

Home Computers, Families and The Mental Health Professions, 1984 (\$12.50) 36pp. from American Family, Cardinal Station, Washington, D.C. 20064.

Computer Terminals and Terminology Made Easy, 1984, 75pp. A Primer by the Dept., of DHHS, Cheyenne, WY 82002.

Computers and Mental Health Care Delivery: A Resource Guide to Federal Information, 1983, (\$5) 40pp. from Louise Levy, School of Information Studies, Syracuse U., Syracuse, NY 13210.

Software Catalogues

MARCK (Educational Software for Microcomputers), 280 Linden Ave., Branford, CT 06405.

In-Site Software (Psychological Software) Applied Innovations S. Kingstown Office Park, Suite A-1, Wakefield, RI 02379 800/272-2250.

New Products

Client Tracking & Case Management system for Head Start Programs, contact Seymour Rosenthal, School of Social Administration, Center for Social Policy and Community Development, 1500 N. Broad St., Philadelphia, PA 19122.

Budget Allocator for MS-DOS, contact Multicomp Systems Inc., 222 Third St., Cambridge MA 02142 (see services available listing).

Upcoming Events, Conferences and Meetings

Easter Seal Society are listed below. For more information, contact Cheryl Van Zandt, National Easter Seal Society, 2023 West Ogden Ave., Chicago, IL 60612.

Orlando, FL, June 25-27, 1984 *Strategic Planning* by McDonald Management Training Group.

6th Annual National Educational Computing Conference, June 13-15, 1984, Dayton, Ohio. Write L.A. Jehn, Computer Science Dept., U. of Dayton, Dayton, OH 45469.

Teaching about the Computer, June 28-29, 1984, Seminar sponsored by the Council on Social Work Education, by Lynn Vogel, write c/o U. of Chicago, School of Social Service Administration, 969 E. 16th St., Chicago, IL 60637.

Microcomputers in Special Education: Today's Challenge, July 16-20, 1984, at Lesley College Graduate School, Education Division, Cambridge, MA. Write Joy Nikkel, 29 Everett St., Cambridge, MA 02238.

24th Annual National Workshop on Welfare Research and Statistics, July 29-Aug 1, 1984, Hartford CT, write Patricia Day, Connecticut Dept. of Income Assistance, 110 Bartholomew Ave., Hartford, CT 06106

22nd Annual Conference of the Urban and Regional Information Systems Assn. (URISH) August 12-15, Seattle, WA. Write URISA, 1340 Old Chain Bridge, Suite 300, McClean, VA 22101.

Computer Technology for the Handicapped, September 13-16, 1984, Minneapolis, MN. Contact c/o Closing the GAP, P.O. Box 68, Hender-son, MN 56044.

The Evaluation Network and the Evaluation Research Society announce their 4th Annual Joint Meeting in San Francisco, October 11-13, 1984. The theme is *Toward the Excellence: The Role of Evaluation*. For further information, contact Dr. Robert Ingle, 571 Enderis Hall, P.O. Box 413, University of Wisconsin-Milwaukee, Milwaukee, WI 53201 (414-963-4729).

International Conference on Rural Rehabilitation Technologies, Oct. 23-25, 1984, write ICRRT, Box 8103, U. of N. Dakota, Grand Fork, ND, 58202.

Symposium on Computer Applications in Medical CARE (SCAMC) November 4-7, 1984, Washington, D.C., Hilton. Write AAMSI, Suite 4021, 4405 East West Highway, Bethesda, MD 20814.

World Conference on Computers in Education/85, July 29-Aug 2, 1985 Norfolk, VA. Paper deadline is August 1, 1985. Write John McGregor, Computer Science Dept., Christopher Newport College, Newport News, VA 23606.

APPLIED INNOVATIONS, INC.

is pleased to announce the availability of

IN-SITE SOFTWARE

for

Mental Health Professionals

- Compatible with popular microcomputers
- Software available for
Standardized Assessment
Psychological Testing
Office Information Management

For more information, call or write:



Applied Innovations, Inc., South Kingstown Office Park,
Wakefield, Rhode Island 02879, (401) 789-5081, (800) 272-2250

Note: The date of your last paid issues is On Your Mailing Label.
Check it to make sure your membership is current. Other codes are as follows:
Due means you requested to be billed, your bill has been sent and CUSSN is waiting for your payment.
Ex means you receive the CUSSN Newsletter because of your position or in exchange for services. However, dues are still welcome.

.....
I wish to join the CUSS Network. Send to:

Dick Schoech, UTA, POB 19129, Arlington, TX 76019.

In Australia, send to Floyd Bolitho, La Trobe U, Social Work, Bundoora, Victoria, Australia 3083.

In England, send to Lawrence Moseley, Computer Science Dept., University College, Singleton Park, Swansea, United Kingdom SA2 8pp.

In France, send to Alain Mazart, 10, Boulevard Gambretta, 87000 Limoges, France.

Name _____ Title/Occupation _____

Organization _____

Address _____

City _____ State _____ Zip _____

Dues: I enclose _____ (see front cover). Make checks payable to CUSS Network.

4/1

Dick Schoech
CUSS Network Coordinator
The University of Texas at Arlington
P.O. Box 19129
Arlington, TX 76019 - 0129

Non-Profit Org.
U.S. Postage
PAID
Arlington, Texas
Permit No. 81

Address correction requested
56-184