

COMPUTER RESOURCES

Newsletter

William

86:09:02 VOLUME 5 NUMBER 1

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PERSONNEL and SERVICES

Computer Resources Department staff are located in Room 2N214 unless otherwise shown below.

To call from outside BCIT, dial (604) 432-<local>; e.g. (604) 432-8818.

ENQUIRIES Administration:	CONTACT	LOCAL
Reception Secretary	Shirley Smith Jean Macdonald	8818
ID Codes		8561,8628
	Ron Venne	8629
Computer Operators Computing Languages Course Evaluations Data Communications Data Control Data Entry Documentation Equipment Loans Exam Generation Exam Scoring Hardware Facilities	Anna Haydu David Thomson Valma Reeves Anna Haydu Receptionist Anna Haydu Anna Haydu	3,8560,8629 8618 8560 8456 8618(2N212) 8818 8561,8628 8618
Hardware Problems		.8407
Numerical Analysis Online Administrative S (CHRIS,DOBIS, ISIS,GLOBAL) Optical Scanning	Systems Rita Richardson	.8456
PROFS	Michele Becket David Thomson Dan Low Dan Low Zdenek Prochazka Dan Low	.8561(2N202) .8560 .8268 .8561,8628 .8680 .8268 .8578 .8680 .8268
Tape Mounts Tours Training	Lee Korman	.8351
off campus (300 bps (1200 bps on campus (300 bps) 430	-3371
MANAGEMENT: DIRECTOR (Acting) Data Administration Facilities & Networks Processing Services (Ac Systems Development Technical Support User Help Centre (Actin User Liaison	Jim Coss	.8482 .8578 .8351 .8680 .8453

FACILITIES

IBM 3083-JX2

- 24 megabyte main memory
- seven IBM 3380 disk drives with 2.5 gigabytes each

- three IBM 3880 disk drive controllers
- four 1600/6250 BPI tape drives
- 340 terminals
- VM/CMS and VSE operating systems
- batch and online processing
- academic and administrative processing

Hewlett-Packard (HP) 3000/64 minicomputer

- 2 megabyte main memory
- 64 terminals
- one 404 megabyte disk drive
- one 64 megabyte disk drive
- one 1600 BPI tape drive
- · MPE-V operating system
- introductory programming and application package training

Microcomputers

- twenty (20) Apple II+
- seven (7) IBM PC
- twelve (12) Zenith Z-150
- student instructional use

LOCATIONS

IBM 3083:

Student T	ermina	al La	ab	s:											
IBM	3161	ASC	I	t	er	m	in	na	ls	s.				. 2N4	21
IBM	3178	and	I	BM	3	32	79							. 2N3	327
IBM	3278													. 2N3	29
Mem	orex a	2078.												.2N4	19
Tel	evided	950).											.2N4	20

Faculty Area (Computer Resources Foyer): one HP 125 terminal, one IBM 3178 terminal.

one Televideo 950 terminal 2N210

HP 3000:

Student Terminal Labs.....2N322/2N325

Microcomputers

APPLE Student Lab 2N321
IBM PC/Zenith Student Lab 2N318

PUBLISHING INFORMATION

The Computer Resources Newsletter is published by the Computer Resources Department of BCIT and is mailed to faculty and staff users at BCIT. If you wish to be added to the mailing list or if you have address changes, please complete the form on the last page and return to Computer Resources or send a PROFS note to the Editor (EDITOR).

Contributions to the Newsletter and comments from our readers are welcome. Address correspondence to:

Editor, Computer Resources Newsletter, BCIT Computer Resources Department, 3700 Willingdon Avenue, Burnaby, B.C. V5G 3H2

The next issue is planned for 86:11:25.

EDITORIAL MESSAGE

Welcome back! We hope that you have had a great summer and have enjoyed Expo86. While you may have been enjoying the sunshine standing in the pavilion queues at Expo, Computer Resources has been busy preparing the computer systems for the new term.

During this last summer, many software changes have been effected. The new version of VSE, VSE 2.1, has been installed on the academic system. As a consequence, VS FORTRAN and SPSSx were updated to be compatible. Minitab, an interactive statistical analysis package on the HP 3000 minicomputer, has been upgraded to version 5.1. These changes and other hardware changes are described in this issue.

As with all things associated with computers, this Newsletter is constantly evolving. The personnel listing has been revised to emphasize applications and services. The primary support person, if appropriate, for each service is listed. Except for PROFS, the services named are not names of software packages or hardware systems. In most cases, the services are supported across all hardware systems (the IBM 3083, the HP 3000/64 and IBM PC and Zenith 150 microcomputers) operated by Computer Resources. For a list of software supported by Academic Systems, refer to the BCIT Software Support Levels (85:11:28) A revised version will be available soon. Software supported by the User Help Centre is described in this Newsletter.

Hopefully, this listing of computing services and applications will help you to think in terms of applications and services rather than, simply, in terms of computer hardware. This list is not static but will evolve with the changing needs of BCIT and changing technology.

For the past few issues, we have been highlighting a support group within Computer Resources to improve the understanding of the functions of each group. In this issue, the focus is on the Computer Operations Group. While the functions seem obvious, this group is often maligned for poor turnaround, unworkable terminals, etc. In the article, the Group describes the total span of their responsibilities. We also take this opportunity to describe the services of the Data Entry Group, an associate group of Computer Operations.

Dan Low, Editor

NOTICES

HP 3000 Password Change

All faculty passwords on the HP 3000 were changed on 86:08:15. The Computer Resources Receptionist has the new password you will need in order to log in.

We apologize for any inconvenience caused by this change.

Attention! Instructors Using VSE Disk Files

Instructors using VSE disk files should contact Dan Low (8268) for procedures to recatalogue their data sets (or provide Academic Systems with the source files for recataloguing). The installation of VSE 2.1 involved the conversion from IBM 3370 Fixed Block Architecture (FBA) disk drives to IBM 3380 Count Key Data (CKD) disk drives. What this means is that the disk addresses and volume names are different. Consequently, the ASSGN, DLBL and EXTENT statements referring to the data sets have to be revised.

Many catalogued procedures from the previous VSE system accessed disk files with expiry dates prior to 1986. Please contact Dan Low (8268) to establish the current ownership of these data sets and new expiry dates. Academic disk files, as stated in the <u>BCIT VSE User's Gui</u>de are deemed to expire on May 31 each year unless the owner (or instructor using the data set) contacts Academic Systems.

ZSTEM Now Available

Copies of ZSTEM, the terminal emulator program for IBM PC and compatibles, may be obtained from Ted Parten of Computer Resources. Please fill out a cross-charge form before contacting Ted (8453). Your cost centre will be cross-charged \$35 per copy. Documentation is included.

ZSTEM makes an IBM PC (or compatible) function as a full-screen terminal on the IBM mainframe, or a line-at-a-time terminal on the HP 3000. It supports the Kermit protocol for file transfer.

Staff Changes in Computer Resources

Lee Herberts, Assistant Manager of Academic Systems, has left BCIT to accept a new challenge. Lee is responsible for setting up and managing a service group much like our User Help Centre.

Michael Marriott, Manager of Technical Support, has also accepted a new position outside the Institute in which he will have responsibility for both Technical Support and Operations.

John Fairley, Released Faculty, returns to Mining Technology in the fall after his one year position in Computer Resources. John's departure makes room for Ron Venne (Marketing) to join the Department as this year's Released Faculty. More information on Ron's projects will appear in the next Newsletter.

Mark Mickens, Operator, $\mbox{ resigned}$ and has returned to Portland, Oregon for family reasons.

-

Peter Siermacheski, an Operations Management Techology graduate (1986), has joined the Administrative Systems group as Junior Systems Analyst. Peter will initially be working on the DOBIS (Library) system.

John Slater (1984 Computer Systems grad) joins the Technical Support group on 09:03 as Software Programmer. John will provide technical assistance for microcomputers.

Shirley Smith joined the Department on a temporary basis as Receptionist.

So, good luck and best wishes to those leaving the Department, and a hearty welcome to those joining us.

User Help Centre Fall Training Schedule

The User Help Centre (UHC) will be holding regularly scheduled training sessions on the following topics:

-	Beginner's CMS	(3 hrs)
*	Beginner's SCRIPT	(3 hrs)
	Beginner's PROFS	(1.5 hrs)
-	Advanced PROFS	(2.5 hrs)
-	PC DOS - level one	(1.5 hrs)
-	PC DOS - level two	(2 hrs)

These courses will be run every second week. Space will be limited to a maximum of 4 people per session. For registration or further information, please phone the UHC at 8561 or 8628.

User Help Centre Services

The User Help Centre (UHC) is a service department of Computer Resources offering support and education for both administrative and academic staff in the following areas:

- CMS/XEDIT (on BCIT's IBM Mainframe System)
- PROFS (office automation)
- SCRIPT/GML (text processing)
- Operation of mainframe Terminals and Printers
- Introduction to the IBM PC
- ID Requests

Support and education for the above areas includes:

- classroom education
- written documentation
- help-line
- drop-in support
- consultations and referrals

As well, the following are available for loan:

A. PC Software

Operating Systems: Zenith MS-DOS 3.2

Word Processing: - Word Perfect 4.1

- Displaywrite III

- Multimate 3.3

Spread Sheets: - Lotus 1-2-3

- Sideways (for the IBM)

- 20/20 Integrated Spreadsheet

model

- Spread Sheet Auditor

Programming Languages: - IBM BASIC

- Zenith GW-BASIC

Other: - IBM 3278/9 Emulation Control Program

Note: Not all of the above software is completely supported yet. For a current list of supported software, please drop by the User Help Centre.

B. PC Software Tutorials

- Exploring the IBM Personal Computer

- Teach Yourself Personal Computing Concepts
- Teach Yourself PC-DOS
- Teach Yourself Multimate
- Teach Yourself Displaywrite
- Teach Yourself Lotus 1-2-3

C. IBM portable PC's (upgraded to 640K) with printer and modem ports.

All of these are available for loan up to one week at a time. To ensure that you can borrow the software or PC's when you need them, please try to book in advance.

The User Help Centre is located temporarily in Room 2N2O2 and is staffed by the following people:

Larry Ferguson (UHC Acting Manager) - 8758 Michele Becket - 8561 Carol Berg - 8628

Computer System Availability Report

HP 3000	April	May	June	July
Scheduled hrs Actual hours Availability	- 501.5	503.5		502.0
VM Scheduled hrs Actual hours Availability	- 463.5	480.0	462.75	449.0
ISIS Scheduled hrs Actual hours Availability	- 273.0	260.25	276.66	203.75
GLOBAL Scheduled hrs Actual hours Availability	- 211.5	207.0	201.5	215.75
DOBIS Scheduled hrs Actual hours Availability	- 376.75	395.0	318.66	196.75
CHRIS Scheduled hrs Actual hours Availability	- 205.5	207.0	201.5	199.7

Summary - General Statistical Information

DOUED	lobo	Submitted	1
PUWER	1005	Submitted	3

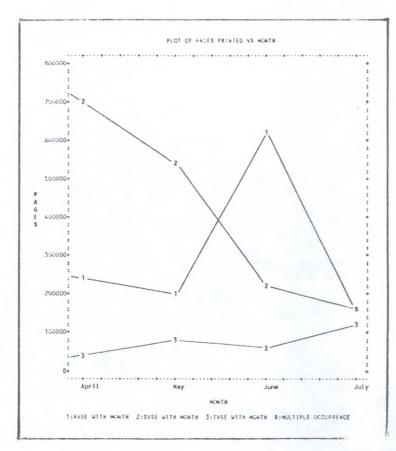
		April	May	June	July
AVSE	-	1,868	1,487	2,295	1,638
SVSE	-	17,567	12,491	4,600	3,619
TVSE	-	453	629	1,086	1,364
TOTALS	S	19,888	14,607	7,981	6,621
=====	==	=======	======	=====	=====

Pages Printed

		April	May	June	July
AVSE	-	236,685	206,361	162,708	162,598
SVSE	-	704,189	531,373	216,451	162,220
TVSE	-	48,504	83,698	58,290	121,456
				-	
TOTALS	5	989,378	821,432	437,449	446,274
=====	=	=======	======	======	======

AVSE = Administrative VSE system SVSE = Student VSE system TVSE = Test VSE system

The graphs of the jobs submitted and the pages printed shown below were prepared with the assistance of the SPSSx PLOT procedure. The dramatic drop in student work load after May is clearly shown by these graphs.



Hardware Problem Report

During May, there were 11 different incidents affecting the tape drives. These incidents resulted in several jobs being re-run.

own T	1 me
	own I

86:06:02 (0700-1445) EVENT: IBM 7171 would not power

up.

ACTION: IBM replaced blown power

supply unit.

86:06:16 (0800-0930) EVENT: MEMOREX 1270 did not

power up due to power

surge.

ACTION: Unit was powered up and

line to Downtown Education

Centre reset

86:06:17 (0800-1100) EVENT: MEMOREX 1270 - downtown line could not be reset.

ACTION: Cards were replaced.

86:06:19 (0000-0130) EVENT: IBM 3380 disk drive

dropping READY status. ACTION: IBM replaced a card to

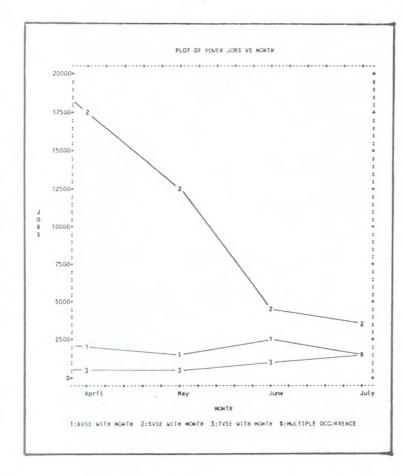
correct the problem.

86:06:19 (1545-1555) EVENT: MEMOREX 1270 down caused

by power surge.

ACTION: Powered up and downtown

line reset.



Hardware Problem Report (Cont.)

Date Down Time

86:07:18 (1250-1310) EVENT: IBM 3880 I/O controller

halted all systems with an EQUIPMENT CHECK fault.

ACTION: Unit was taken offline

and IML-ed.

UNDOWNDE OUNNOED

HARDWARE CHANGES

New Hardware Additions

Over the summer the following changes were made to the student terminal labs. All Televideo terminals in Room 2N421 that previously accessed the IBM system have been moved to Room 2N325 replacing some of the LA34 Decwriter terminals on the HP 3000 system. This is a great improvement over the typewriter-style terminals.

In place of the Televideo terminals in Room 2N421 several new IBM 3161 ASCII-type terminals have been installed. These terminals access the IBM system via the IBM 7171 protocol converter which translates ASCII characters into EBCDIC characters recognizable by the IBM mainframe.

SOFTWARE CHANGES

New VSE System Installed

A new VSE batch processing system running VSE version 2.1 was installed and brought into production on 86:08:01. SVSE replaces the SDOS system which ran VSE version 2.0. All files and procedures stored in the "BCIT" libraries on SDOS (BCITCLB, BCITPLB, BCITRLB, and BCITSLB) were copied to SVSE. Most of the catalogued procedures were converted. However, procedures from SDOS that accessed expired disk files were NOT converted. If this affects you, please contact Dan Low (8268).

One significant feature of the VSE 2.1 Job Control Language (JCL) is the availability of conditional job control. You can decide what steps are to be performed when one step is successfully completed or aborted.

Another major change is the merger of the source statement library the procedure library, the relocatable library and the core-image library into one library. SVSE has two major libraries -- the BCIT library which cannot be modified by students and the STUD library which can be modified by students.

The * \$\$ SLI statement to retrieve source files is changed to the following form:

* \$\$ SLI MEM=<member name.file type>

where member name is the name of the source statement file and file type corresponds to the "book". The keyword "MEM=" was mistakenly printed as "MEMBER=" in some copies of the <u>BCIT VSE User's Guide (86:08:01)</u>. Please note this correction.

Further details of VSE 2.1 are described in the revised <u>BCIT VSE User's Guide (86:08:01)</u>, available from the Computer Resources Receptionist.

Please refer problems with SVSE to Dan Low (8268).

VS FORTRAN Updated

A side-effect of the conversion to VSE 2.1 was the need to install a new version of VS FORTRAN. Programs that were catalogued as executable phases in the coreimage library of previous versions of VSE may have to be recompiled and recatalogued with the new VS FORTRAN compiler. The executable phases were copied over to SVSE but may fail to run properly. The FORTRAN source programs that were available to Academic Systems were recompiled and catalogued on SVSE. Unfortunately, the FORTRAN source programs were not available for many of the executable phases. If you have problems in running FORTRAN programs on SVSE, please contact Dan Low (8268).

SPSSx Release 2.1 Installed

For the interest of the many SPSS users at BCIT, SPSS version 9 was removed on 86:05:31! Its replacement, SPSSx (SPSS version 10) - Release 2.0, has been upgraded to Release 2.1 due to the installation of VSE 2.1.

Some installation parameters have been changed. For example, the ${\sf SPSSx}$ command ${\sf UNNUMBERED}$ is no longer required.

For information on SPSSx, see the <u>BCIT SPSS User</u>'s <u>Guide (85:05:29)</u> (available from Computer Resources) or the <u>SPSSx Reference Manual</u> (available for reference from the <u>Library</u>). A revision of the <u>BCIT SPSS User's Guide</u> will be available soon. If you run into difficulties, contact Dan Low (8268).

Minor Change to CMS Login Procedure

In the past, after logging in to CMS on the IBM mainframe it was necessary to hit the <ENTER> key once before typing a command. This caused your PROFILE EXEC to be executed but was a source of confusion for many users. This step will no longer be necessary for faculty and student IDs.

For those who are curious about how this will be accomplished, we are now including the "AUTOCR" parameter on the IPL commands in the VM directory to generate the extra <ENTER> keystroke automatically.

Changing Your CMS (or PROFS) Password

Computer Resources has installed a new system at BCIT to allow you to change your own password. This allows you to control the security of your ID. This is particularily important if someone else has had to use your ID (such as vacation coverage) but should no longer have access to it or if you simply suspect that someone else has been using your ID without your authorization.

How to change your password:

From CMS (or a PROFS Main Menu) type:

PASSWORD (press <ENTER>)

The screen will request you to type:

- your OLD password
- your NEW password (press <ENTER>)

You will be requested to type the NEW password a second time for verification (then press <ENTER>).

Your request will be processed and a confirmation message will be displayed.

Things to Remember:

- * DO change your password whenever someone else has used your ID
- * DO use a minimum of 6 characters for your password; otherwise it will not be accepted
- * DO memorize your password immediately -- it will be in effect for the next time you LOGON.
- * DON'T use your surname or any other word that would be easy for others to guess
- * DON'T use non-alphanumeric characters (i.e. special characters or blanks)
- * DON'T try to enter your OLD password again as your NEW password -- it will not be accepted!

PLEASE REMEMBER YOUR NEW PASSWORD - you are responsible for it! If you have any questions on changing your password, call the User Help Centre at 8561 or 8628.

WATFOR77 Replaces WATFIV

In September, the WATFIV compiler will be removed and replaced by the WATFOR77 compiler.

WATFOR77 supports the 1977 FORTRAN standard with extensions for structured programming. For example, WATFOR77 provides the CASE statement (which is not in VS FORTRAN or the 1977 FORTRAN standard) to select one action from many alternatives.

A major benefit is that all FORTRAN language compilers supported by Computer Resources -- VS FORTRAN, WATFOR77 and Microsoft FORTRAN -- will be at the 1977 FORTRAN standard. This makes it easy for the student to move from an easy-to-use academic compiler (WATFOR77) to a commercial compiler (VS FORTRAN) or to a PC-based

compiler (Microsoft FORTRAN) that is accepted by industry.

A <u>BCIT WATFOR77 User's Guide</u> will be available soon. For assistance with WATFOR77, contact Dan Low (8268).

Minitab Release 5.1 Installation

Release 5.1 of Minitab has been installed. A new access procedure is required. Instead of typing

RUN MINITAB.PUB.MINITAB

now type: MINITAB

New features of Release 5.1 include:

- * FORTRAN-like format specifications for input and output statements
- * new commands:
 - COPY replaces the USE and OMIT subcommands
 - STACK replaces the JOIN command
 - CODE replaces the RECODE command
- * extended capabilities -- e.g. the DELETE command now deletes rows as well as columns
- * multiple time-series plots

More details will be published in a revised <u>BCIT Minitab User's Guide</u> soon. For assistance with Minitab, contact Dan Low (8268).

New Release of Powerhouse

Release 5.01 of Powerhouse, the 4th generation language (4GL) available on the HP 3000 minicomputer, will be installed in September A new set of documentation will be placed on reserve in the Library. Powerhouse 5.01 addresses four major areas:

- * performance -- 15-30% CPU usage reduction
- * reliability -- most outstanding problems from earlier releases have been fixed.
- * new features (146)
 - e.g. on-line help and new data manipulation facilities. These are explained fully in the "Differences Document".
- * compatibility -- source code compatible with previous release

Powerhouse is a widely-used 4GL on minicomputers with over 5000 installations -- primarily HP 3000 and DEC VAX. It includes an easy report generator, data base creation facility and full screen application generator for updating data bases.

Contact Craig Larman (8629) for more information.

<

New Critical Path Program Ken Wong, Challenge '86

A new project management program was requested by the Operations Management Technology to replace the old BASIC program, GCPM1, on the HP 3000 mini-computer. The new program was written in Business BASIC (BBASIC).

The program produces a schedule of activities, a Gantt chart, a network diagram and an estimate of the completion time of all activities.

In addition to performing PERT/CPM analysis, the program also allows the user the following options:

- A. Viewing a sample network analysis
- B. Selecting PERT or CPM analysis
- C. Selecting the format of the output
 - text
 - graphics
 - both text and graphics
- D. Selecting the destination of the output
 - terminal
 - line printer
 - disk file
- E. Selecting the source of the data
 - keyboard (interactive)
 - data file
 - data statements
- F. Changing the data and re-running the analysis
- G. Changing options B E and re-running the analysis

One major problem faced during the development of the program was BBASIC's limited workspace. As a result, the PERT/CPM program was written in modules and each is retrieved and appended to the main program in memory when necessary.

Another problem was BBASIC's inconsistency of handling mixed-case spelling of keywords. BBASIC assumes the keyword is a variable if the case is mixed. Nevertheless, BBASIC's editing functions were very useful.

The program is almost complete at this time, with just the network diagram module, documentation, and instructions remaining. Scheduled completion date for the project is early September.

For details, contact Dan Low (8268).

HP 3000 BASIC to Business BASIC (BBASIC) Conversion

Many of the BASIC programs in the public libraries needed to be converted to the new Business BASIC language because of the removal of BASIC/3000 from the HP 3000 mini-computer on 86:12:31.

At that time, the PUB.LIB1, PUB.LIB2 and PUB.LIB3 libraries will disappear. Programs from these libraries are being converted and moved to PUB.BLIB, BCIT's Business Basic library.

Anyone using the old BASIC language on the HP 3000 (i.e. if you type BASIC rather than BBASIC to start) is urged to start learning Business Basic, Hewlett-Packard's latest version of that language.

BBASIC offers many new features not found in BASIC. For example, BBASIC has better facilities, such as IF..THEN..ELSE, CASE, WHILE..DO, and REPEAT..UNTIL constructs, to produce more structured programs. Another useful feature is BBASIC's editing commands. With these, you can edit any line and not have to retype it. Furthermore, BBASIC can also save your programs as ASCII files which can then be used with QEDIT.

However, BBASIC does have one major drawback -- the limited size of its workspace. Producing large programs in BBASIC is difficult but possible.

For further information on accessing programs in the "public" libraries or assistance in converting your "private" BASIC/3000 programs to Business BASIC, contact Dave Thomson (8560). For more information on Business BASIC, refer to the <u>BCIT HP 3000 User's Guide</u> available from the Computer Resources Receptionist.

CMS VERSION OF NEWSLETTER

If you have a faculty or staff CMS ID, you can access a copy of the Newsletter via a terminal connected to the IBM mainframe. This file is updated with each issue of the Newsletter.

The procedure is as follows:

- 1. Logon to CMS.
- Type 'NEWS' and the current version will be displayed at your terminal.
- Press <Enter> to scan through the Newsletter or press <PF1> for instructions.
- Press <PF3> or type "QUIT" when you have finished.

FEATURES

FEATURES

Computer Operations

Consider the following scenario with these two characters:

Joe - your average non-computer type of person Sam - your average computer type Operator

The following conversation ensues:

Joe: So - What do you do for a living ?

Sam: I'm a Computer Operator !

Joe: Well, what do you do? Key in data? Are you a Data Entry Operator or Word Processor Operator?

Whenever I talk to an individual who is unfamiliar with a computer environment that is the response I receive when asked what I do for a living. Then I start to explain Computer Operations and Operators but soon they become bored and start to talk about their Aunt Bessie's bunion. Needless to say, if I continue, I am categorized as one of those individuals who is so wrapped up in his work that he can't see past his nose to talk about anything but computers.

In the previous CR Newsletter, there was an article about the Technical Support group of Computer Resources. The Computer Operations and the Technical Support groups both work with the operating system. Technical Support modifies, installs and tests these systems. Computer Operations then takes over and monitors the systems to ensure that applications using the resources (e.g. tape drives, printers and CPU) are being allocated effectively and efficiently. This is done so that an uninterrupted level of service can be provided to you. In other words, Operators

- * Shutdown all on-line systems (ISIS, DOBIS, GLOBAL, CHRIS) as per scheduled shutdown time for each system; perform tape backups of the database files for these systems; run batch production jobs; perform restores of the database files from tape; bring up the online systems before the next day's scheduled time.
- * Run batch production jobs on a regular basis. Ensure that adequate tape resources are available and that the production jobs will not hinder the performance of the system.
- * Allocate two high speed printers to four different systems as required. Print and distribute student output, administration reports and special forms. Perform minor maintenance and cleaning of the printers.
- * Allocate tape drives to the various systems, mount tapes on the drives as required for various application programs, system backups and for individuals that have a CMS ID that wish to backup their files to tape.
- * Monitor the telecommunications network; perform problem determination as required. Currently, Operations has data links to the BCIT Downtown Campus, Maple Ridge Campus and, soon, to the Sea

Island Campus. The on-campus network consists of printers and terminals in every corner of BCIT.

- * Receive and handle phone inquiries concerning ... anything mostly problems related to terminals not working; not being able to sign on to a specific online system; terminals "hanging up" after signing on. All of these problems and many more require time to resolve; most of them can be resolved over the phone as the Operators have procedures available to assist them in determining what the problem is and how to resolve it.
- * Check student terminal labs daily for missing, damaged or broken terminals, printers, and PC's. Performing minor problem determination on these units as required; placing service calls to maintenance vendors and ensuring that the units have been fixed within a reasonable time frame.

As with any job in Computer Resources, nothing remains stagnant. Programs need modifications as per requests from users. Operating systems, online systems, system monitoring programs, etc, are constantly being updated to reflect current changes as required from the various software vendors. With these changes come procedural changes which unavoidably affect one area in particular -- Operations. Most changes are invisible to the users of the system but in Operations, manuals are being changed and updated, training is being performed and procedures are being constantly reviewed to ensure that each system remains available 100% of the scheduled time.

All groups within Computer Resources play a significant role in design, development, implementing, maintaining and controlling the different activities that when put together constitute a Data Processing (DP) centre. They all play a significant role in maintaining service to the users, and no one group can be deemed to be more important than the next. Operations, in particular, provides a service to all users, whether it be Computer Resources, Personnel, Finance, Registration, etc. There would be no BCIT without the students. Hence, the service provided to administrative departments becomes secondary at any time when students become involved.

Computer Operations services all groups. Based on that statement, the Operations area can be considered to be the "HUB" of any DP centre. Operations is not a 7-hour a day job. Currently, the hours of operation extend from 07:00 on one day to 01:00 the next day (18 hours), Monday through Friday, and 09:00 to 17:00 on weekends. During this time, Operations has had or could have contact with every group within Computer Resources and every department at BCIT.

If you find Computer Operations as intriguing as I do, please feel free to contact me to arrange for a tour or perhaps to spend some time in the Operations area and learn more on what is involved in the daily activities. On the other hand, if you find Aunt Bessie's bunion to be more interesting, to each his own.

Lee Korman (432-8351) Assistant Manager, Computer Operations

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Data Entry Services

The Data Entry (DE) group provides the following services:

- Keying for all departments using ISIS, DOBIS, FOCUS, etc. DE enter all work such as mailing lists (creation and updating) inventory lists, SPSS programs, numeric work, mailing labels, in other words everything except letters.
- 2. DE will help set up survey questionnaires or evaluations to be keyed in or set up for the optical scanner. DE will type questionnaires and either enter the results manually or read it through the optical scanner which will tabulate the results automatically via the computer.
- 3. DE can create a data base of questions to be used for exams, either from hand-written documents or from books. This would make it very simple at exam time to extract questions from an existing data base. Questions can be added (or deleted) to this data base at any time. Once this data base is created, all that has to be done is to mark the question numbers that are required on the exam. DE would extract these questions from the data base and then have the exam printed (any number of copies).
- There are two services for the Sentry 7001 optical scanner (opscan):
 - a. DE will enter exam questions and print them in a scrambled or unscrambled form. A maximum of 120 questions are allowed per exam. Each question is limited to 30 lines. The computer will scramble 50 questions 50 different ways and will unscramble according to a specified code when it marks the papers.
 - b. Marking of opscan test and evaluations: DE will mark all the exams and evaluations, whether DE prints them or not. Several programs are available for marking exams. The most popular one is PAT which gives an item analysis, two copies of marks (raw and percentage) sorted by student name and two copies of marks sorted by student ID and a histogram. Another program, TEST ANALYSIS, provides a detailed item analysis in which each question is analyzed and a difficulty index given. The other option is the item response summary which provides an analysis in graphical form.

For further information, please contact the Data Entry group of Computer Resources at local 8618.

The Price of SOFTWARE PIRACY

From the time microcomputers were introduced into BCIT, the illegal copying of commercially-developed software has been difficult to prevent. Even though many instructors have become aware of the legal and ethical implications of such practices, we know that illegal copying continues. Many articles have been published in trade publications concerning the legal aspects of software copying and software copyright. In this article, we present an alternative approach that

you could use to convince your students not to copy software -- the reduction of their employment opportunities after graduation.

The BC provincial government's efforts to transform BC from a resource-based economy into "Silicon Valley North" has highlighted high-tech industries such as computers and software development. To be viable, a company has to develop and maintain a healthy cash flow. Copying software is one way of robbing startup companies of much needed cash flow!

Many microcomputer-related businesses -- such as computer system retailing and servicing, software development, distribution and retailing -- have been established, survived for some time and have gone bankrupt. What this means for BCIT is reduced employment opportunities for BCIT graduates! From a purely self-interest point of view, BCIT intructors condoning or promoting the practice of copying commercially distributed software are simply "shooting themselves in the foot"! If BCIT students cannot get employment after graduation, then BCIT's attractiveness as a training centre diminishes (which, in turn, affects the employment of BCIT instructors)! Hence, it is not in the interest of the BCIT instructor to allow copying of software, ethical and legal considerations aside!

The state of microcomputer-related businesses in the Lower Mainland has been quite volatile. The following data, gathered from various sources (an annual computer-industry census publication (CHIP), the latest telephone directories and a telephone survey), indicate the number of firms dealing primarily in microcomputer software in the various categories.

	Sep. 85	Jul.86	% Change
Software developers	100	68	- 32 %
Software distributors	46	34	- 26 %
Software retail outlets	139	89	- 19 %

As the percentage change figures indicate, the picture is pretty grim. Granted that the local corporate market may be nearing saturation, the widespread copying of software in the home market (potentially the largest market) and the educational market does affect the cash flow situation for the software firm. Illegal copying in the corporate environment is minimal due to the severe consequences -- immediate dismissal of the employee or threat of litigation for the company.

Until the attitude towards software piracy changes, the future for the BC software industry remains bleak!

Access to BCIT Computer Resources Policy (revised)

The Access to BCIT Computer Resources Policy has been revised to include a statement on Copyright. The full Policy statement follows this article but the statement on copyright reads:

"Do not pirate software, and do not use any pirated software on Institute computer facilities."

The federal government is still considering changes to copyright law for computer software. A white paper has been issued, and summarized in a document titled "From Gutenberg to Telidon". However, while legislative changes are in the works we must consider both moral and legal issues as well.

As pointed out in the Newsletter (Vol. 2, No. 3) "Institutions such as BCIT that teach use of microcomputers have a responsibility to avoid making any illegal copies of diskettes and printed documentation for at least two good reasons: the Institute's image and employability of our graduates will suffer if we routinely ignore copyright statements, and we (as individuals, possibly!) may be sued."

Last year, Federal Bill C-18 strengthened the provisions for prosecution of those who misuse computing services and provided penalties ranging up to ten years imprisonment. It is expected that copyright changes will be approved in the fall sitting of Parliament.

Most vendors attach some kind of software protection statement to their software. They also normally indicate when you remove a seal, or open the packaging that you automatically agree to be bound by this statement. While many of these statements have not yet been tested in court, you should be aware that they exist, and there may be some considerable risk (perhaps personal) involved in ignoring them.

More and more, vendors are starting to offer multilicense price discounts or "site licenses" which permit an unlimited number of copies to be used. Others are offering inexpensive (but function restricted) copies of their software for educational use. Some also provide a "network" price for use on a network linking a defined number of PC's.

Whatever your personal feelings are about copyright, please do not place Computer Resources in the position of having pirated software running on PC's owned or managed by us.

Access to BCIT Computer Resources Policy (Revised) Statement

This policy governs use of computing resources at $\ensuremath{\mathsf{BCIT}}$.

In the following statement, a "user" is any person who makes use of any computer owned or operated by BCIT. A "password" is a code word or number which identifies a user to a computer; that is, knowledge of a password which is recognized by a particular computer allows a person to use that computer (just as knowledge of the correct combination allows one to open a safe).

Access to BCIT computer equipment is authorized only for those persons doing work for which that equipment was acquired. Users should be guided by the following:

* Do not attempt to discover other users' passwords, or to use any password discovered by chance. Take all reasonable precautions to prevent anyone from discovering your password. Report immediately any suspected "leak" of a password so that it may be changed. (Where two or more persons use the same password, which may be necessary on group projects, all those persons share responsibility for that password).

- * Do not attempt to discover or change any user's charges.
- * Do not attempt to read or copy any information stored on the computer systems unless explicitly authorized to do so. This includes information which has been stored by Computer Resources, by other computer users, by a commercial vendor, or by any other party. Access to administrative systems (eg. ISIS, DOBIS) will be granted or denied to individual users by the owner of the system (e.g. Registrar, Director of Finance) and controlled by Computer Resources.
- * Do not knowingly consume excessive resources.
- * Do not use Institute computer facilities for non-institutional projects or for personal or commercial purposes, unless written authorization has been received from Computer Resources, a vice-president, or the president.
- * Do not move any computing equipment, and be extremely careful to avoid damage.
- * Do not pirate software, and do not use any pirated software on Institute computer facilities.

Users of the computer systems are cautioned that violation of the above rules may disrupt service to themselves and others. Furthermore, it could violate a copyright or other non-disclosure agreement into which BCIT has entered. Any violations of the rules and/or unauthorized use of a computer will be dealt with severely, including legal prosecution.

Computer Resources staff who have access to information owned by users of the system will treat all such information as strictly confidential. Penalties for breach of the Revised Access Policy will be determined by Computer Resources in consultation with the BCIT Administration and RCMP (where necessary). Typical penalties will range from loss of computing privileges for a period of time, to legal prosecution.

Note: Federal Bill C-18 (passed 85:04:24) in section 301.2 states: "Every one who, fraudulently and without color of right, obtains, directly or indirectly, any computer service, by means of an electromagnetic, acoustic, mechanical or other device, intercepts or causes to be intercepted, directly or indirectly, any function of a computer system, or uses or causes to be used, directly or indirectly, a computer system with intent to commit an offence under paragraph 1, or 2 or an offence under section 387 in relation to data or a computer system is guilty of an indictable offence and is liable to imprisonment for a term not exceeding ten years, or is guilty of an offence punishable on summary conviction..... The act goes on to define terms used in the Act.

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DOBIS UPDATE -- Release 1.4 Merrilee Mackinnon, Library

A new release of DOBIS (1.4) is being tested. When installed, users will note a number of differences in the public access screens, changes which should simplify searching the catalogue. The most notable improvement is that the long information screen will display the location of the first 2 copies of a title and their loan status. More copy information can be found by going further into the record, but having key information on the first screen is a major enhancement.

In the new release, users will be able to look at their own personal borrower record. This feature should increase user satisfaction and confidence.

Catalogue records and DOBIS

Catalogue records are one of the major expenses in a library's technical services budget. Online charges for remote databases are high and increasing every year. For this reason, the library is reviewing alternate sources of catalogue records. The two frontrunners in this search are:

1. Library of Congress (LC) Source Tapes.

These LC source tapes can be loaded directly into our DOBIS facility in what is called the "bibliographic pool". This pool would hold thousands or even millions of potentially useful records, for both acquisitions and cataloguing.

2. CD ROM

Companies are embracing this technology as an answer to the problem of storing large amounts of data and retrieving it easily with virtually no communication costs. The Library Corporation and the Western Library Network offer CD ROM's with 1-2 million records. CD ROM systems require a microcomputer and disk player. The equipment is relatively inexpensive and would reduce the load on the main system.

A cost-benefit study will be conducted to see which of these two methods would give us catalogue records for the least cost.

DOBIS dial-up

DOBIS is now available to external users on a limited test basis. Vancouver Community College and Douglas College are our first applicants. Opportunities for other prospective dial-up users will be available later when CR determines what load the ports will bear.

Evaluation of SYMPHONY software package Karen Li, Challenge '86

Symphony is a micro software package that offers database management, spreadsheet, word processing, and communication features all in one package. It is currently one of the more popular integrated software on

the Canadian market today and retails for approximately Cdn. \$1000 (or \$466 from BCIT Central Stores).

I compared selected features of Symphony with various popular stand-alone packages (e.g. dBASE III, Lotus 1-2-3) and found Symphony's spreadsheet capabilities to be comparable to the stand-alones. However, Symphony's database and word-processing features are relatively weak and hard to use.

New computer users will find Symphony quite difficult to learn. The problem lies in the overall design of Symphony's menu directory system. To perform a command or function, you have to delve through many levels of command menus, to a point where you may lose track of which menu you originally started with.

However, Symphony's capabilities should not be underestimated. It has some powerful features that you can put to use once you have passed the difficult hurdle of learning how to use the package.

For a detailed report of the Symphony evaluation, drop by the User Help Centre in Room 2N202.

N.B. The User Help Centre does NOT currently support Symphony. This evaluation was performed by Academic Systems in response to a request from John Fairley (Mining).

User Help Centre Education Tracking System Karen Li, Challenge '86

The User Help Centre (UHC) will be using a computerized registration system to keep track of courses offered as well as the participants who take part in these courses. The tracking program will provide a more accurate and up-to-date record of specific courses offered by the UHC, their scheduled session date, time, location, and class size.

UHC staff will be able to provide fast and up-to-date answers to telephone inquiries on upcoming training sessions. As well, the program will provide an on-line registration system to sign up participants registering over the phone or dropping by the office.

The course tracking program is written in FOCUS and can provide more accessible statistical reports for UHC in terms of:

- overall demand for training by department/technology
- popularity of specific courses
- effectiveness of training based on participant feedback
- areas where department/technology may need additional education.

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Understanding the CONFIG.SYS and AUTOEXEC.BAT files

(The following is taken from an article authored by Jim Horne, which appeared in the April 1986 issue of the University of Alberta <u>Computing Services Bulletin</u>. It has been adapted for BCIT and is printed with permission).

The moment you power up your PC, you set in motion a sequence of events that ends with your computer waiting patiently at the DOS prompt (usually A>) ready to fulfill your every command, if only you can remember the correct incantation. Advancing from the start-up state of ignorance, the PC first reads a section of read-only memory (ROM), which tells it, among other things, where to find the operating system on the disk. After loading the ROM portion of the operating system, it knows how to do basic DOS tasks such as reading files. In particular, it looks for two special files CONFIG.SYS and AUTOEXEC.BAT, which, if they exist, will have more start-up information. You can create these files but they must be on your boot disk (the disk used to start up your PC).

CONFIG.SYS contains information about your computer's system configuration. You can create your own CONFIG.SYS file using EDLIN (an editor that comes with DOS) or any text editor but it is usually easier to just copy from the keyboard directly into the file.

Some programs (dBase III, for example) require that FILES and BUFFERS parameters be set in CONFIG.SYS. You can also turn BREAK on to allow you to escape from within a program. To add this information to your already existing CONFIG.SYS file, enter these commands:

COPY CONFIG.SYS+CON: CONFIG.SYS
BREAK=ON
FILES=10
BUFFERS=10
(press the <F6> key and then the <Return> key)

Another use of CONFIG.SYS is to install "device drivers". A driver is an executable file which controls a particular piece of hardware. Device drivers are loaded into your computer's memory and remain there until you turn the computer off. They usually reside on a file having an extension of .SYS, such as VDISK.SYS and ANSI.SYS.

VDISK.SYS, which comes with DOS versions 3.0 and later, is a driver which uses part of RAM ("random-access" memory) as a fast but volatile disk drive ("RAM disks" were discussed in the 85:05:15 issue of the BCII Computer Resources Newsletter). Another IBM-supplied driver called ANSI.SYS is required for correct screen-handling by some programs. Enter these commands to add two lines to your CONFIG.SYS file:

COPY CONFIG.SYS+CON: CONFIG.SYS
DEVICE=VDISK.SYS 64
DEVICE=ANSI.SYS
(press the <f6> key and then the <Return> key)

The first creates a 64K RAM disk which you can access as either drive C: on a double-floppy drive system or drive D: on a system with a hard drive. The second loads the ANSI.SYS driver. Remember that both these driver files must also be on your boot disk.

After the CONFIG.SYS file has been processed, your computer turns to the last part of the start-up procedure, the AUTOEXEC.BAT file. A batch file contains one or more DOS commands (commands that can be entered from the DOS prompt, e.g., A>) that are executed in sequence. AUTOEXEC.BAT is just a special batch file that is automatically executed on power up. If no AUTOEXEC.BAT file is found, the computer asks for the current date and time; when you create your own AUTOEXEC.BAT file, you can add commands to do this, or to read your real-time clock if you have one. Any DOS commands are allowed in this file.

To carry the discussion one step further, here is a suggestion which originated with Michael Marriott, formerly with Computer Resources. On a system with two diskettes and no hard disk, include

DEVICE=VDISK.SYS 25

in your CONFIG.SYS file, and

COPY COMMAND.COM C:>NUL SET COMSPEC=C:COMMAND.COM

in your AUTOEXEC.BAT. This tells the system to look for the COMMAND.COM file (part of the operating system) on the RAM disk. Then when you exit from certain applications packages such as dBase III or Autocad, you will no longer receive a message instructing you to insert your system disk in the A: drive. This can save time and reduce the number of times you have to change diskettes.

PCDOS for the IBM PC XT

When playing with the new IBM Personal Computer XT, some interesting discoveries were made. This machine is not completely compatible with previous PC's or previous PC XT's !

While the original PC XT would run with PC DOS 2.0, the new XT requires PC DOS 3.1 or higher. Although version 2.1 or 3.0 programs may work, they occasionally cause problems.

Users who have version 3.0 system diskettes will find it easy to make the change. Simply boot up version 3.1, place the 3.0 system diskette in drive B: and enter the commands

A>SYS B: A>COPY COMMAND.COM B:

This will work only if your diskette was formatted under PC DOS 3.x with the /S (or /B) parameter.

If your system diskette was created under PC DOS 1.x or 2.x, you will have to start with a new diskette, format it on a PC DOS 3.1 system using the /S parameter and then copy files from the old diskette to the new one. (Do not copy your old COMMAND.COM !) Since PC DOS 3.x occupies about 60K bytes, compared to 40K for PC DOS 2.x, you may run out of space on the new diskette.

To edit the previous command from the keyboard, PC DOS 3.x uses the right and left arrow keys differently

from previous versions; the right arrow brings up the characters of the previous command, one at a time, just as the F1 key does (the F1 key is unchanged in this respect from previous versions). The left arrow now erases (just as the the <BackSpace> does). Since the old technique of hitting <Esc> after displaying the entire command no longer works, users who have been depending on these editing features will have to learn a few new tricks.

The XT keyboard is much different; if you have been using an overlay for Lotus, Symphony etc., you will find it will not fit the new function key locations.

<u>Coping with Errors</u> When Sending A NOTE or PHONE MESSAGE in PROFS

Occasionally when sending a phone message or a note an error message or "?" will appear, preventing you from sending your note or phone message. There are several reasons for this:

- The recipient of the note or phone message may not be on PROFS.
- 2. You have typed the person's name incorrectly.
- You may have a copy of the BCIT NICKNAME file on your personal storage disk.
- N.B. In the following section, the symbols "< ... >" are used to indicate keyboard keys.
- I. To remedy this situation if sending a PHONE MESSAGE:

Check the PROFS Directory Main Menu (press <PF6>) for the correct spelling or to see if the person is on PROFS.

If the spelling is correct, follow procedure III.

- II. To remedy this situation when sending a NOTE:
 - From the screen that tells you to press <ENTER> to bypass the incorrect name or press ? to look at the directory of names.
 Type ? (press <ENTER>)
 - From Screen T00 (press <PF2>) to "Look at the nickname" file.
 - On Screen T10 (press <PF4>) to look at the list of names for the correct spelling.

When finished looking at the list (press <PF8>) then <PF12> to go back to the screen where you typed in the ?. From this screen, type in the correct spelling of the person's name and press <ENTER>

If PROFS will still not accept the correct spelling of the person's name, you will have to press <ENTER> to bypass the unaccepted name. The note will be sent to everyone else on your distribution list.

If the situation is still not remedied, the following procedure will be necessary.

III. From the Main Menu of PROFS, type:

ERASE BCIT NICKNAME A

If you still cannot send the note, please call the UHC (8561 or 8628).

DOCUMENTATION UPDATE

The following user guides have been revised:

В	CIT	CMS User's Guide	(86:08:01)
В	CIT	HP 3000 User's Guide	(86:08:12)
В	CIT	Mainframe Introductory Kit	(86:08:01)
В	CIT	VSE User's Guide	(86:08:01)

The following are new user guides currently available:

BCIT	FORTRAN User's Guide	(86:05:12)
BCIT	MS-DOS User's Guide	(86:08:01)

One copy of each User Guide is available to faculty (or staff) users from the Computer Resources Receptionist in Room 2N214. For a list of user guides published, refer to page 24 of the <u>Computing Services at BCIT.</u> (85:09:01).

BCIT MS-DOS User's Guide Ken Wong, Challenge '86

This user's guide was requested by the Mining Technology for the purpose of introducing non-computer students to the basics of MS-DOS. Although the guide was originally targeted for first-time users, a section on hard disk usage was also included because of the increase in the number of hard disk users at BCIT.

Documentation in BCIT Bookstore

The BCIT Bookstore has agreed to distribute documentation to BCIT students at cost. The price varies with the length of the document, ranging from \$1.00 to \$3.00. Students may find these documents a helpful resource. Please let your class know about them.

Documents being sold through the Bookstore are:

BCIT FORTRAN User's Guide
BCIT Mainframe Introductory Kit
BCIT CMS User's Guide
BCIT HP 3000 User's Guide
BCIT MS DOS User's Guide
BCIT VSE User's Guide
Waterloo BASIC User's Guide
Waterloo Pascal User's Guide

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DUTY ANALYST'S CORNER

Logging on after a ABNORMAL SYSTEM SHUTDOWN (or pulling the plug)

In the event of a power failure, shutdown or pulling the plug. The normal procedures for logging back onto the system do not completely apply. After entering your ID and password, the screen will display the Computer Resources "bulletin board". At the end of this, the word RECONNECTED AT 09:25 (for example will appear).

CP READ will appear at the bottom right hand corner of your screen.

Type: b press <ENTER>.

RUNNING will appear at the bottom right hand corner of your screen.

Press <ENTER> to return to the screen you were last in when you were disconnected.

If this procedure does not work, type: "logoff" at the bottom of your screen (press <ENTER>) and start the normal logon procedure again.

If you are still unable to logon to the system please call the UHC (8561 or 8628) for assistance.

PROFS Tips

The User Help Centre will be implementing a new service for PROFS User's called "PROFS Tips". These tips will be sent out on a regular base via PROFS and will contain helpful information on using PROFS more effectively. If you have any "tips" that you think other PROFS User's could use, please send a PROFS note to Michele Becket (MBECKET).

CMS SUGGEST EXEC

We would like to remind you that the CMS SUGGEST EXEC (courtesy of York University) is available to faculty, staff and students (with CMS IDS) to send suggestions or questions to Computer Resources. These suggestions/questions and responses may be posted to a bulletin board which can be browsed by others.

To use, type SUGGEST and then fill in the screen presented to you. Press <PF5> to send the suggestion/question to Academic Systems which will answer questions at the beginning of each day. An answer will be sent to your CMS ID and may be posted on the bulletin board.

To browse the bulletin board, type SUGGEST BROWSE.

HOURS OF OPERATION

I. ACADEMIC SYSTEMS

Regular Hours -- Academic Systems

System	Hours	Days
IBM 3083	0800 - 2300	Monday - Friday
	0900 - 1700	Saturday & Sunday
HP 3000	0700 - 2400	Monday - Thursday, Saturday & Sunday
	0700 - 2130	Friday
Micros	0700 - 2300	Monday - Sunday

On weekends, the HP 3000 runs in UNATTENDED mode from 1700-2400 during the school year.

Computer Operations Statutory Holiday Hours:

Thanksgiving Day, 86:10:13 : (0900 - 2300) Remembrance Day, 86:07:01 : (0900 - 2300)

II. ADMINISTRATIVE SYSTEMS

Regular Hours -- Administrative Systems

System	Hours	Days
GLOBAL/CHRIS	0800 - 1800	Monday - Friday
	unavailable	Saturday, Sunday
DOBIS	0730 - 2230	Monday-Thursday
	0730 - 1900	Friday
	1000 - 1800	Saturday, Sunday
ISIS	0830 - 2030	Monday-Thursday
	0830 - 1630	Friday
	0830 - 1230	Saturday
	unavailable	Sunday
PROFS	0730 - 2300	Monday-Sunday

Hours of Operation for all systems (academic and administrative) and exceptions to posted hours are noted on the CMS Logon message.

The CMS Logon message display is in two parts. The first will be displayed every time you log on. Temporary changes to scheduled hours, system downtimes, or new releases of system software packages will be noted on this part.

The second part of the CMS Logon Message will only be displayed when Q LOGMSG is entered. This will display all regular system scheduled hours and any long term information about scheduled holiday hours, system downtimes for maintenance, planned system software or hardware upgrades, etc.

MAINTENANCE

Computer Resources maintains equipment in the table below. In case of problems, call 432-8407.

Micro/Terminal Labs	Locations	
APPLE II+	2N321	
IBM PC / Zenith	2N318	
IBM 3083 system	2N419, 2N420, 2N421 2N329, 2N327, 2N319	
HP 3000 system	2N322, 2N325	

Scheduled Preventive Maintenance:

HP 3000 -- 86:12:23 (0700 - 1400)

Moving of Terminals (CRT's) and/or Printers

Relocation of terminals/printers used on the IBM mainframe should only be performed by Computer Operations. For assistance, contact Lee Korman (432-8351) or Computer Operations (432-8407).

There are three reasons for this request:

- These terminals have been set up to access the different systems (PROFS,DOBIS,etc.). If the device is moved without FIRST notifying Computer Operations, there is no guarantee that it will work. The BCIT logo may be present but the systems previously accessed could now be unavailable.
- Terminals and printers are cross-charged. If a device is relocated without FIRST notifying Computer Operations, the last known department or individual who had the terminal would continue to be charged.
- 3. Maintenance calls for problem terminals/printers are recorded by serial number (which is cross-referenced with the device's location). If the device is moved without notifying Computer Operations, considerable delay could occur in servicing the problem device.

IBM Terminal (CRT) Trouble Shooting

The following procedure applies to IBM 317x, 327x and Memorex terminals. If the terminal is not working, please follow the steps outlined below to correct the problem. If after checking these items and the terminal fails to display the BCIT logo, contact Computer Operations (432-8407).

- 1. Shut the terminal off.
- Check that the power cord is plugged in at the electrical outlet and at the terminal.
- Check that the COAXIAL CABLE connection at the back of the IBM 3178/3179 (or front of the IBM 3278) terminal is secure. The connector is a PUSH-TWIST type.
- 4. Turn the terminal on.
- 5. Check that the BRIGHTNESS control knob is turned on. It is marked by the o symbol. On IBM 3278/3178 terminals, it is on the lower right hand side of the screen bezel. On IBM 3179 terminals, it is a thumbwheel below the screen.
- If the screen is blank with only the CURSOR at the top RIGHT HAND CORNER and a line at the bottom going straight across the screen, this could indicate a communication problem. Call Computer Operations (432-8407).

LAB BOOKING

The IBM terminal labs and the HP terminal lab 2N322 are for scramble use only.

The HP 125 CRT terminals in Room 2N325 may be reserved by instructors of courses which use packages requiring the use of the HP 125 terminals.

Room 2N325 and the Microcomputer Labs (Rooms 2N318 and 2N321) may be booked through Timetabling (Room 107, Trailer 2V, local 5386). In non-booked times, Room 2N321 is open for scramble use.

SUPPLIES

Computer Resources stocks supplies for the student labs -- 2N318,2N321, 2N322, 2N325 and 2N329. (Other labs are maintained by other departments.) Report supply shortages to Computer Operations (432-8407).

Coding forms are NOT supplied but may be purchased at the campus TNT (This 'n That) stores.

Central Stores provides:

- 5 1/4 inch diskettes (single or double-sided double density)
- paper and ribbons for microcomputers
- scanner sheets (5-bubble and 10-bubble)

NEWSLETTER SUBSCRIPTION	
ADD my name to	your MAILING LIST
	ing label information ed my mailing label and indicated the .)
REMOVE MY NAME	(I have attached my mailing label.)
MAILING LABEL INFORMATION	(Please print.)
NAME/TITLE:	
NAME/TITLE:last	first
Postal/ZIP Code	
Business Phone:	
Date:	Signature:
FEEDBACK	
services, we would li	or a suggestion about any of our ke to hear from you. Please take wn and return this form to us.
-	

TO: Editor, Newsletter
BCIT Computer Resources Department
3700 Willingdon Avenue
Burnaby, B.C. Canada V5G 3H2

Please fold