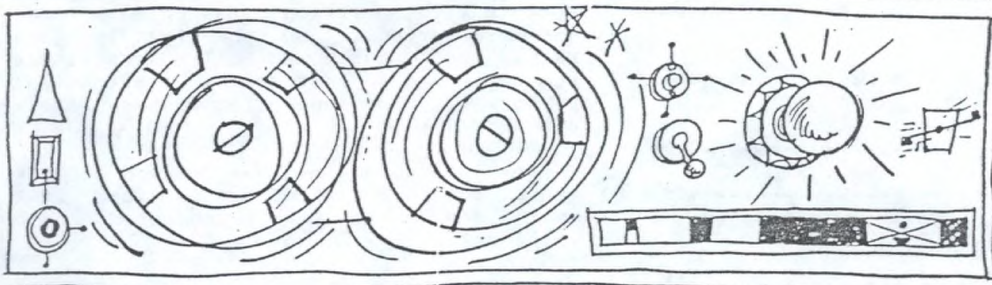
COMPUTER RESOURCES Newsletter



VOLUME 1

NUMBER 3

83:01:04

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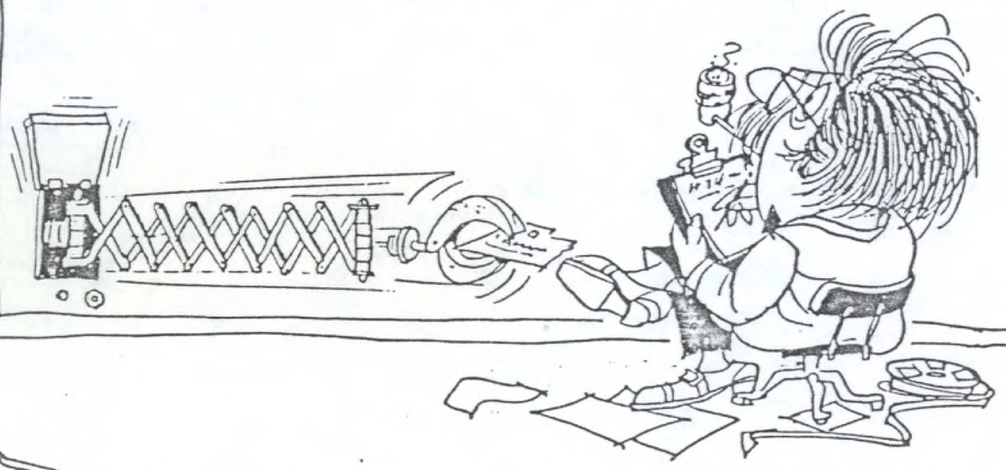

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

3700 WILLINGDON AVENUE, BURNABY, BRITISH COLUMBIA, CANADA, V5C 3H2, AREA CODE (604) 434-5734

BCIT

PERSONNEL

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

Locals shown are for BCIT's central number: (604) 434-5734.

Director, Ron Siddaway.....245

Secretary, Jean Smith.....452

Academic Support Analysts

ACADEMIC DUTY ANALYST.....351

Ingrid Campbell.....268
Lee Herberts.....798
Dan Low.....268
David Thomson.....798

Supervisors

Academic Support, Neil McLagan.....680

Administrative Support, Neil McLagan.....680

Data Administration, Erica Westley.....454

Data Control, Rita Richardson.....(2N209)456

Data Entry/Keypunch, Carol Tkach...(2N212)618

Processing Services, Ron Sproule.....708

COMPUTER ROOM.....246
after 1700 and weekends.....434-5746

DATA ENTRY/KEYPUNCH.....(2N212)618
after 1700.....434-5754

DIAL-UP TO COMPUTERS
off campus.....430-3370/3371/3372
on campus.....448/449

PUBLISHING INFORMATION

The Computer Resources Newsletter is published by the Computer Resources Department of BCIT.

Contributions to the Newsletter and comments from our readers are welcomed. Address correspondence to: Editor, BCIT Computer Resources Department, 3700 Willingdon Avenue, Burnaby, B.C. V5G 3H2.

Subscription changes to the Newsletter may be requested by completing the form on the last page. You are subscribed if your name appears on the label attached to the Newsletter. Next issue is planned for 83:03:01.

FACILITIES

The major BCIT computer is an IBM 4341 Model Group 2 with 8 million bytes of main memory, 8 IBM disk drives, and approximately 80 terminals. Both batch and online processing for academic and administrative applications are performed. The operating systems are VM/CMS and DOS/VSE.

There are two Hewlett-Packard 2000/ACCESS minicomputers, called System A and System B, which are used for introductory computing instruction.

A Hewlett-Packard 3000/44 minicomputer has recently been installed for training on standard application packages.

Fourteen Apple II Plus microcomputers are available for student instructional use.

Two Apple II Plus microcomputers, an HP125 microcomputer (terminal to the HP3000), a DEC writer, an IBM 3278, and a Televideo 950 are available for exclusive Faculty use.

Further information on our facilities is available from the Duty Analyst, or the Supervisor of Processing Services, Ron Sproule.

Locations

IBM 4341

Card readers.....2N209
Keypunch Room 2N327
Student Terminal Labs:
(IBM 3278).....2N329
(Memorex).....2N419
(Televideo).....2N420/421

Faculty Area.....2N210

HP2000

System A Terminals.....2N322
System B Terminals.....2N323A

HP3000

Terminals.....2N319

*Microcomputers

Apple Cart.....Library
Faculty Resource Lab..... 2N327A
Student Lab.....1A220

*Access to the Apple Cart and the Faculty Resource Lab can be arranged through the Listening and Viewing desk in the Library. The Apple Cart may be used within the Library by students but they must relinquish the unit to any instructor desiring to use it.

The Student Lab (Room 1A220) may be booked through the Timetabling Department (Room 2N208, local 386). In non-booked times, the lab is open for scramble use.

EDITORIAL

We have now reached the halfway mark for this academic year. This newsletter is a new vehicle for communication by the Computer Resources Department. To date, we have been giving information on the use of all the computer systems supported by Computer Resources and some general computing science/data processing articles.

Requests for subscriptions have increased our known readership by over 10% since the first issue in September 1982. We hope that this is an indication that the information provided is useful to the user community.

Suggestions for improvement of future issues are welcome. Please address all correspondence to:

The Editor, Computer Resources Newsletter
Computer Resources Department
British Columbia Institute of Technology
3700 Willingdon Avenue
Burnaby, B. C. V5G 3H2

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CMS VERSION OF NEWSLETTER

If you have a CMS ID, you can access a copy of the Newsletter through one of the terminals. This file will be updated with each issue of the Newsletter.

The procedure is as follows:

1. Logon to CMS
2. Type 'NEWS' and the current version will be displayed at your terminal through XEDIT.
3. Use the standard XEDIT commands to scroll through the Newsletter.
4. Type 'QUIT' when you have finished viewing the Newsletter.

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HOURS OF OPERATION

The computers are scheduled to be available during the following times for the period 83:01:04 to 83:02:28. Any changes to these hours of operation will be posted prominently and displayed on the terminal logon message as far in advance as possible.

IBM 4341

0800 - 2300 Monday to Friday
0900 - 1700 Saturday and Sunday

Weekend hours will start on 83:01:08, 09.

HP 2000 System A and B

0700 to 2400 Monday to Sunday

System backups will be performed at approximately 1630 on Saturdays and Sundays. Service will be interrupted for 30 to 45 minutes.

Preventative maintenance (including system modification) is scheduled for the systems as follows:

System A - 83:01:12 1130 to 1430
System B - 83:03:16 1130 to 1430

HP3000

0700 to 2400 Monday to Sunday

Regular system backup times have not yet been finalized but will be scheduled outside of booked class times.

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MAINTENANCE

The Computer Resources Department is responsible for maintenance of all terminals on the IBM and Hewlett Packard systems, the Apple II microcomputers, and the two North Star Horizons. Terminals are checked twice daily.

Please report any terminal or microcomputer malfunctions to the Operations staff at local 246 or, after 1700 and on weekends, at 434-5746.

Student keypunch machines are also maintained by Computer Resources, and are checked twice daily.

Problems with keypunch machines should be reported to the Data Entry staff at local 618 or, after 1700, at 434-5754. If you receive no answer, please contact the Operations Staff as listed above.

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SUPPLIES

The Computer Resources Department stocks supplies for all terminals. Ribbons, paper, etc. will be replaced during daily checks. Supply shortages should be reported to the Operations staff at local 246 or, after 1700 and on weekends, at 434-5746.

Computer cards and Print Layout Sheets are supplied to students by Computer Resources and are available in Room 2N327. Coding forms are NOT supplied, and students may purchase these through one of the campus TNT (This 'n That) stores.

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HARDWARE PROBLEMS

An unscheduled power outage of 45 minutes on 82:11:26 resulted in two hours of system downtime on the IBM 4341. During the power outage, an attempt was made to install an IBM 3274 terminal control unit but was unsuccessful and the unit had to be removed, accounting for additional downtime.

On the same afternoon, one student card reader malfunctioned, requiring parts to be ordered from Toronto. IBM personnel worked on it all day Saturday. Unfortunately, on Sunday, 82:11:28, the other student card reader also malfunctioned. IBM and Computer Resources personnel worked Sunday evening and Monday morning to get one reader fixed. The other reader was repaired by Tuesday.

On Tuesday, 82:12:07, an unknown problem occurred on the HP2000 "A" system. A "cold start" was performed to restart the system which resulted in the loss of all changes made to disk files during the day. (In a "cold start", all system and user disk files are restored from the previous day's backup tape.)

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HARDWARE AND SOFTWARE CHANGES

HP3000:

New Health Care Software Package

Students in the Health Division will soon benefit from the installation of the Central Registry/Admission, Discharge and Transfer (CR/ADT for short) package recently loaned to BCIT by the Health Care Systems Division of Systemhouse Ltd. Two Systemhouse people (one from Ottawa and one from their Vancouver office) visited BCIT for a week to install the package and teach us how to use it. CR/ADT gives admitting, discharging and emergency staff a tool for rapid and efficient entry and inquiry of patient information. This is Systemhouse's first installation of CR/ADT and BCIT's first opportunity to teach automated procedures for managing patient information.

An additional module of the package, for abstracting of medical records, is expected to be installed later.

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IBM 4341:

NEW APL EXEC

A new exec, APLGO, for invoking the APL interpreter is now available. It simplifies the process of entering APL by accessing appropriate software and by setting switches automatically. APLGO also provides easily understood error messages.

The procedure for using APL and APLGO is outlined in the new APL User's Guide (82:12:01) available from the Duty Analyst.

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FEATURES

MICROCOMPUTER USER'S GROUP

The Microcomputer User's Group is an informal inter-disciplinary group of interested users, providing a forum for discussion of issues related to the use of microcomputers and providing recommendations to the Information and Computing Committee (ICC).

A major project of the Group in the spring will be to prepare a report to identify the support structures, resources, and equipment required to facilitate the use of microcomputers. If you are planning to use, or have used, microcomputers at BCIT, please write down any suggestions that you may have and send them to Frank Knor, Library - Chairperson of the Microcomputer User's Group.

In the coming term, formal meetings will be held on 83:01:18, 83:02:15, and 83:04:19 in Library Room 201D at 12:30. Microcomputer software demonstrations will be held on 83:02:01, 83:03:01 and 83:04:05 in the Faculty Resource Lab (Room 2N327A) at 12:30. The topic for 83:02:01 is word processing on the microcomputers.

Please see page 2 for announcements regarding the use of the student microcomputer lab (Room 1A220) and the use of the "Apple cart". In addition, students will be allowed to use the software packages available from the Listening and Viewing desk while they are in the Library. Students will be allowed to borrow the software packages for use outside the Library through their instructor.

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CONFERENCE OF HP3000 USERS

During November, David Thomson of Academic Support attended a conference of users of HP3000 computers, members of the "Northwest" Region (southwest from a Canadian point of view) Users' Group. About 90 people attended, meeting in the informal atmosphere of the dormitories and classrooms of the University of Oregon to compare notes, discuss common problems and see some new software and hardware products which were displayed by HP and "third party" suppliers. With 10,000 HP 3000 machines installed worldwide over the past ten years, a lot of expertise has developed. Attending user group conferences is a good way to take advantage of the experience of these people.

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WHAT IS CAD?

In recent years, general interest in Computer-Aided Design (CAD) systems has been growing. The most evident application is in engineering design, but there are other areas where CAD could be applied, such as architectural design. Generally, engineering design includes drafting. This can be emphasized by the acronym CADD, Computer-Aided Design and Draughting. Manufacturing systems can also be integrated with the design system. Such systems are then referred to as CAD/CAM (Computer-Aided Design and Computer-Aided Manufacturing) systems.

Why has CAD/CAM recently come into prominence? First, the hardware and software costs have dropped significantly. CAD use is no longer the exclusive domain of the General Motors, the Fords and the Lockheeds of this world. Second, the systems are marketed as "turn-key" systems, that is, users no longer need to be computer hardware or software specialists to use the system. Theoretically, all they need to do is turn on the power switch and they can do useful work. As a result, the efficiencies of automated drafting are being realized by industry. CAD/CAM functions apply directly to profit-related activities in engineering and architectural firms. "Computer models" are less expensive to build and test. An integrated CAD/CAM system provides consistent quality and higher productivity.

There have been several proposals to the Ministry of Education for funding for a CAD system at BCIT. In the spring of 1982, Sid Todd, Department Head of Mechanical Technology, together with Peter Hobbins of Mathematics and John Lancaster of Building Technology, defined some courses and associated class hours required on a CAD system.

The latest project group, chaired by Paddy O'Reilly of the Training and Development Centre, had the objective of obtaining funds from the Skills Growth Fund of the National Training Program of Employment Canada. The final report has been submitted and the results should be known in the spring of 1983.

Despite the lack of an industrial CAD system at BCIT, Peter Hobbins and John Lancaster have introduced CAD content into their courses using the APPLE II microcomputers and the HP2000.

The Training and Development Centre of Industry Services has conducted several successful seminars on the CAD/CAM concept with the leading consultants Sylvan Chasen (of Lockheed-Georgia) and Carl Machover (of Rensalaer Polytechnic Institute).

Some engineering applications of CAD are the following:

- architectural design and drafting
- air conditioning layout
- electrical and electronic design and drafting
- electronic printed circuit board design
- very large scale integrated (VLSI) circuit chip design
- forest management
- mechanical design and drafting
- surveying drafting and mapping

Business management applications of a CAD system could include drafting of:

- PERT or CPM charts
- graphs (line graphs, histograms, and pie charts)
- computer system flow charts
- general network diagrams

As CAD system costs continue to decrease, an increasing number of businesses will take advantage of the capabilities offered. Some firms in the Vancouver region already using CAD systems are B.C. Hydro, Burnaby Municipality, Burrard Yarrows Drydock, H. A. Simons (International), MacMillan Bloedel, and the City of Vancouver.

To sum up, CAD/CAM is revolutionizing engineering and manufacturing, and many B.C. firms are already using this technology. The project group is hopeful that BCIT will receive the funding to become a leader in the teaching of this technology.

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BASIC - The Universal Language (at BCIT)?

This article is adapted from articles in the University of Alberta's Computer Services Bulletin (82:10:26).

Of the many computer languages supported by Computer Resources -- COBOL, FORTRAN, PL/I, PASCAL, RPG, APL, etc. -- the language BASIC stands out as being available on all the computer systems at BCIT.

Originally developed at Dartmouth College in New Hampshire in the 1960's as a small, efficient language for use in teaching introductory computing, BASIC (an acronym for Beginners All-purpose Symbolic Instruction Code) has become very popular, especially on microcomputers and minicomputers.

There is no "standard" BASIC, unlike FORTRAN and COBOL. While all versions differ, there is a core subset of statements that is similar. If a person uses only this subset, the programs will run without changes on a large number of different computer systems.

The "dialects" of BASIC available at BCIT are Waterloo BASIC on the IBM 4341 CMS system, HP3000 BASIC and HP2000 BASIC on the respective HP computer systems, and APPLESOFT BASIC on the APPLE II microcomputers.

HP3000 BASIC is very similar to HP2000 BASIC but with additional capabilities and commands. Many of the BASIC statements are the same, so that those who know HP2000 BASIC should find the transition to using HP3000 BASIC relatively easy. HP2000 BASIC, itself, is easy to learn.

Waterloo BASIC (WBASIC) is an extended version of BASIC which incorporates many structured programming concepts. Consequently, WBASIC programs are often much easier to read. To use WBASIC on the CMS system at BCIT, refer to the BCIT Waterloo BASIC User's Guide (82:08:31) available from the Duty Analyst, and the Waterloo BASIC Primer and Reference Manual by Graham, Welch, and McPhee.

APPLESOFT BASIC is a subset of Microsoft BASIC available only on the APPLE II microcomputers. Microsoft BASIC, developed by a leader in the software industry, is a popular BASIC on many microcomputers.

The table below compares some of the features of the BASIC translators available at BCIT.

FEATURE	WBASIC	HP2000	HP3000	APPLESOFT
Built-in Editor	Yes	No	No	No
Help Facility	Yes	No	No	No
Structured Programming	Yes	No	Yes	Yes
Single-line User Functions	Yes	Yes	Yes	Yes
Multi-line User Functions	Yes	No	No	No
Recursive Functions	Yes	No	No	No
Matrix Operations	Yes	Yes	Yes	No
Formatted I/O	Yes	Yes	Yes	Yes
User-defined Error Handling	Yes	Yes	Yes	Yes
Built-in Sort	Yes	No	No	No
Maximum String Length (chars.)	65,535	255	255	255
Arrays of Strings	Yes	No	Yes	Yes
Maximum Length of Variable Names (Chars.)	72	2	2	2
Simultaneous Multi-file Handling	Yes	Yes	Yes	No
End-of-File Testing	Yes	Yes	Yes	No
Sequential files	Yes	Yes	Yes	Yes
Random or direct files	Yes	Yes	Yes	Yes
Indexed Sequential files	Yes	No	Yes, (KSAM)	No

By "structured programming", we mean the implementation of "if ... then ... else ..." constructs where the "then" and "else" clauses can be one or more BASIC statements, "begin ... end" type constructions and "case" constructions.

A "recursive" function is a function that invokes itself. For example, the factorial of a number N is equal to N times the factorial of (N-1). (The factorial function is the product of all numbers up to and including N.)

A sequential file has records stored in the sequence in which the records are received. An indexed sequential file is a sequential file which allows access via some key field that is used as an index. A direct or random access file has the record stored in a specific disk location based on the information located in a field of the record. Access to this stored record is also by this key field.

End-of-file testing refers to a BASIC statement of the form "IF END file" or "ON EOF file" that explicitly tests for the end of a file. The end-of-file can be treated on the APPLE Disk Operating System as an error condition with the ONERR statement.

This is a short comparison of the various versions of BASIC available at BCIT.

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PASCAL

> This article is adapted from an article in the University of Alberta Newsletter by A. Supynuk (82:10:26) and from an article in the University of B.C. Computing Centre Newsletter by B. Jolliffe (82:10).

The computer language Pascal was designed by Professor Niklaus Wirth in 1968 at the Eidgenossiche Technissche Hochschule in Zurich, Switzerland. His first compiler for Pascal was finished in 1970.

By 1974, the University of California at San Diego (UCSD) became a major force in the development of Pascal. They were looking for a high-level structured language that could be easily implemented on a number of different computers, including microprocessors. UCSD Pascal quickly became quite popular on a variety of microcomputers.

After UCSD Pascal had been available for some time, many other companies developed their own Pascal translators. Unfortunately, each company added their own features. This resulted in programs that would run only under one company's translator. (A translator is a program that converts the Pascal language statements into machine instructions for a particular computer.)

Currently, the International Organization for Standardization (ISO) is still working on a universally-accepted standard for Pascal.

What makes Pascal worthy of our consideration? After all, we've been doing just fine with COBOL and FORTRAN.

First, Pascal is a structured language allowing many fundamental concepts of programming to be apparent. Building a program in layers (the top-down programming methodology) is something that seems almost foreign in FORTRAN and COBOL, but is easy and straightforward in Pascal. Furthermore, while Pascal is in many ways a superset of FORTRAN (hence you can use a FORTRAN style of programming), the program would look awkward and funny to anyone who was used to seeing Pascal programs written as intended. Pascal programs are meant to be easy to read.

Pascal allows you to have true constants in your program. For example, suppose you name a constant, PI, that contains the value 3.14159. If you try to change the value of this constant, Pascal will complain. This differs from other languages where you can assign an initial value to a variable and use the variable like a constant. However, the language compiler will not complain if you change the value of your "constant" at some later point in your program.

Pascal can provide a high degree of data abstraction. You can define a variable, BLOSSOM, for example, that can only be assigned the values RED, GREEN, or BLUE. An attempt to assign a value not in this set, such as PURPLE, would result in an error when you run the program.

Pascal diagnoses many problems during compilation. Few programming errors make it past the compiler.

Extensive checks can be made on a program while it is running. (Many translators allow you to turn error checking off when you have the program fully debugged.) Most errors are caught when they happen, not when the error causes your program to bomb completely.

As a programming language, Pascal is becoming well known, as it is now the first language for many students of computing science. It is available on many microcomputers and is starting to emerge on the main-frame systems such as CMS.

Under CMS, Computer Resources offers Waterloo PASCAL. Its main features include fast compilation, readable compile-time diagnostics, a run-time diagnostic environment, debug facilities, and elementary concurrent programming facilities. (Concurrent programming is the designing of a program to execute tasks simultaneously to improve computer performance.) Waterloo Pascal is close to the ISO Working Draft 3 Standard. It does not aim to provide facilities for the professional programmer. In other words, it does not aim for fast execution and for optimized translated code. In addition, there is no facility to save the translated code. The source program has to be compiled each time the program is run.

Under CMS, the Waterloo Pascal compiler can be invoked by first linking to the Waterloo disk:

```
LKPASCAL
```

when it asks for a password, respond with

```
PASCAL
```

Then, to run a PASCAL program, enter

```
PASCAL filename
```

The CMS editor, XEDIT, is used to create and edit the PASCAL source program.

Documentation for PASCAL is available in the Pascal Reference Manual and Waterloo Pascal User's Guide by Boswell, Welch, and Grove.

Time spent in learning Pascal may be very informative as it may well be the basis of the universal programming language of the future. At one time, before the proliferation of different versions, Pascal was touted as the universal programming language.

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SOME DO'S AND DON'TS

> This article is adapted from a similar article in the October 1982 issue of the York University Computing News.

If your students will be using the computing equipment provided by the Computer Resources Department, please present to your students the following short list of Do's and Don'ts.

For brevity, the term "work station" will be used to refer to a keypunch, a terminal, or a microcomputer.

DON'T Sit in front of a work station while trying to develop a program.

DON'T Hog work stations by leaving personal articles on them.

DON'T Eat or drink in the lab rooms. A liquid spill on a work station causes severe damage.

DON'T Play games at the work station. Others may be trying to access a work station to do important work.

DON'T Attempt to correct work station malfunctions. You will probably cause more damage.

****

DO Program development at home or in the Library, away from the lab rooms.

DO Extend common courtesy to fellow students. Remember you're not the only one trying to get to a work station.

DO A trace of the program to determine where the problem occurs and try to correct it yourself.

DO Try to consult class notes, texts and manuals to correct program errors.

DO Show respect for BCIT property as well as for the property of others. Take unclaimed articles found in the lab rooms to the Lost and Found (Trailer 2T110).

DO Report any work station malfunction to the computer operator so that it maybe corrected as soon as possible.

These are some suggestions on how students should conduct themselves in the computing labs. Please remember that there are a lot of students trying to access a limited number of work stations.

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DOCUMENTATION UPDATE

In the September Newsletter (Volume 1 Number 1), a list of User's Guides available from the Academic Support Group was published. Errors or omissions in currently-available user's guides will be documented in the form of Technical Notes. Depending on the general applicability of the content, they may be included in revisions of the appropriate user's guide.

The following Technical Notes, applicable to DOS/VSE users, are available from the Duty Analyst.

Technical Note #1 - 82:09:09 - Cataloguing to the SDOS 'STDSSL' library

Technical Note #2 - 82:11:09 - Using DYNAM/D with multi-step DOS FORTRAN jobs

Please refer to the Technical Notes by number and date. They will be numbered sequentially as they are created.

The BCIT SPSS USER'S GUIDE (82:11:01) has been revised for Release 9.0 of the SPSS statistical programming package. Please see the Duty Analyst for the revised copy.

The following new User's Guides are available from the Duty Analyst:

BCIT APL USER'S GUIDE (82:12:01)

BCIT FTC USER'S GUIDE (82:12:01)

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AN EASY INTRODUCTION TO COMPUTING

The Computer Resources Department is developing an introduction to computers course for faculty with no computing experience to be held during the lunch hours.

Due to limited resources, enrollment is restricted to twelve people per session to provide maximum benefit. The course will be repeated as many times as it requires to meet the demand. The time and place for these courses will be advertised when finalized. Please inform the Duty Analyst if you are interested in attending a session.

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SUBMITTING DOS JOBS FROM CMS (IBM SYSTEM)

A simple way of sending CMS files for running by DOS is the BATCH exec. Simply create a file called "BCIT CARD" and put your "BCIT" card in it. you can then submit CMS files by typing "BATCH" followed by the file name.

For example, if the file "BCIT CARD" contains:

```
* BCIT $FLDI821 1234 SDOS/VSE *
```

and the file "PL1 JOB" contains:

```
* $$ JOB JNM=PROG1,CLASS=A
// EXEC PROC=PLIOPT
     .
     .
     .
/*
/&
* $$ EOJ
```

then typing

BATCH PL1 JOB

will submit the file PL1 JOB for execution by SDOS.

BATCH is simple to use and well documented. It also secures your ID by keeping it in a single file.

Documentation on BATCH is available by typing "BATCH".

<>

WARNING TO CMS SPOOL FILE USERS

Spooling of CMS files should be kept to a minimum. (Spooling is the sending of CMS files from one CMS virtual machine to another virtual machine.) Serious problems occur when the number of outstanding spool files is large. If you must spool, make sure the receiving ID soon reads the file into his/her CMS disk.

To control the number of spooled files, those files which are seven or more days old will be deleted. Spooled console files will be deleted after three days.

If your students need to access the same information, it is preferable for them to use the File Transfer Control (FTC) facility. FTC allows many IDs to access the same disk. Its use is documented in the FTC USER'S GUIDE (82:12:01) available from the Duty Analyst.

<>

STUDENTS MODIFYING CMS PROFILES

Problems have been occurring with students modifying and exchanging CMS profiles (on the IBM system).

When an ID is created for a student, he is given a CMS profile suited to his particular course needs. For example, if WATFIV is required, a statement to access the Waterloo disk will be included in his profile. Students could eliminate their ability to use WATFIV if they change their profiles.

The problems that arise as a consequence are time consuming for students, faculty, and Computer Resources staff.

To prevent recurrence of these problems, please advise students of the consequences of changing their profiles and that Computer Resources can not accept responsibility for investigating problems created by these changes.

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FACULTY KEYPUNCHING

As of 83:01:04, all faculty keypunching output will be put in the pigeon holes located in the Computer Centre foyer (Room 2N210). This is an attempt to reduce the traffic in the data entry area.

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BOOKING POLICY - HP3000 TERMINAL LAB

As of 83:01:04, the HP3000 terminal lab (Room 2N319) will be open on a scramble basis with limited booking available. Priority on booking will be given to groups using the CR/ADT and MM/PM packages. Secondary priority will be given to other groups. For the unbooked time, Room 2N319 will be open on scramble basis for the operating hours given on page 3.

Booking of Room 2N319 may be arranged with the Timetabling Department.

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DUTY ANALYST UPDATE

The primary objective of the Computer Resources Academic Support Group is to effectively serve BCIT's academic community. A recent innovation in service (at BCIT) is the Duty Analyst concept. This position rotates among the four analysts in the Academic Support Group.

The Duty Analyst will provide:

- current information about Computer Resources to faculty to pass along to students,
- consultation to faculty on short-term problems,
- a single contact point when problems of a more complex nature require reference to specialists other than the Duty Analyst,
- continuity of development time for analysts not performing Duty Analyst duties.

We encourage faculty members to use the Duty Analyst service and to provide feedback on this and other aspects of Computer Resources services. You should note that this service is provided only to faculty members and not to students directly.

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DUTY ANALYST'S CORNER

Printed below are a few problems and solutions that may be of general interest.

Q: How would one create a CMS file which requires a logical record length (LRECL) of more that 80 characters?

A: The answer is easily illustrated by the following example.

To create a file with LRECL of 100 characters:

1) enter:
   Xedit <fname> <ftype> <fmode> (WIDTH 100

2) when in XEDIT, enter:

```
SET LRECL 100
SET TRUNC 100
```

Q: I often send text files to CMS from my home computer using either XEDIT, or FILEDEF and MOVEFILE. CMS treats a null line as an end-of-file My text files often contain empty lines to improve readability but I am forced to remove them in order to send the entire file to CMS. Is there a way around this?

A: You can use the WATFIV program COPIER on the P-disk. If you list the program, the comments will tell you how to use it.

Q: When I send a file from home to CMS using FILEDEF and MOVEFILE, CMS converts all lower case characters to upper case. Can this be avoided?

A: There seems to be no way with MOVEFILE. Using XEDIT, you can either use CASE MIXED and/or a filetype such as MEMO which defaults to mixed case.

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ODE TO DUE PROGRAMS - An Anonymous Computer Systems Tech. Student

Here I sit inside the room
My terminal glowing bright:
And all my friends are sitting, too,
As if they have naught else to do
But sit there staring, feeling blue
This dismal Thursday night.
Amidst this atmosphere of doom
I code with all my might!

Oh that this work might end itself
Before the morning's light!

And with all diligence forsworn
"GIVE TAPSCM" I submit
And with anxiety pervailing
All thought of sleep and rest curtailing...
Oh Joyful rest! Thy thought assailing
This mortal's mind
permit
Me but one hour's toil,
Then I shall rest a bit.

And so I shall again de-bug
Some more before I quit

But when my output manifests
Ten errors flagged by DOS,
My diligence again rewarded
Not even once but with a sordid
Endless loop, my job aborted.
Yea, I am at a loss
At what to do.
It doesn't work!
I give a coin a toss.

Heads! I Win! I'm going home!
Because I'm my own boss.

Ho! Youthful inexperience,
Wait not until date-due!
But start all things immediately,
Start coding most expediently,
Then happy, HAPPY shall ye be
When assignments become due
But there you sit, relaxed, reposed...
WITH NOTHING LEFT TO DO.

and if ye harken to this prose
you'll write good programs, too.

<>

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