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CCST Hotline (6200)
Mon - Fri : 9:00 a.m. - 12:45 p.m. 2:00 p.m. - 5:00 p.m.
Sat : 9:00 a.m. - 11:45 a.m.

Computer Barns (Rms 4402-4404, 1101, and 4580)
Opening hours :
Mon - Fri : 8:15 a.m. - 10:45 p.m.
Sat : 8:45 a.m. - 4:15 p.m.

Please note the following changes in room number:
* Rm 4382 becomes Rms 4402-4404
* Rm 1044 becomes Rm 1101
* Rm 4580 will be ready for open access in mid-September.

Business Computing Laboratory (Rm 4334)
Opening hours:
Mon - Fri : 8:15 a.m. - 10:45 p.m.
Sat : 8:45 a.m. - 4:15 p.m.

Editor's Notes

Channel is a bi-monthly publication of the Centre of Computing Services and Telecommunications (CCST) of HKUST. Prepared by the Computing Information Centre of CCST and printed by ETC, Channel provides information about CCST plans, developments, and services. Topics on new trends in computing technology and other related topics of general interest are also included. User contributions to Channel are welcome and should be sent to the Editor along with the author's name and department.

Channel is distributed to all University members who are registered users of CCST services. Other parties who would like to have their names added to our mailing list for Channel may complete and return the form on the last page to the Computing Information Centre.

Paul Kwan, Editor of Channel
Computing Information Centre
ckwanwh@usthk.ust.hk
Welcome to the Centre of Computing Services & Telecommunications!

With the start of a new academic year, we would like to express our warmest welcome to all new members of the University, as well as to welcome back all current users of our facilities. We would wish to take this opportunity to briefly describe below the services and facilities we provide.

**Off Hand You Have . . .**

As a member of the university community, you will be able to use various computing resources, including:

- Free computer access

  A variety of central facilities including minicomputers, workstations, and microcomputers (PCs and Macintoshes) at various locations

- Specialised equipments in various departments for use by staff and postgraduates

- A sophisticated computer network linking computers in all departments and housing quarters, both staff and students. Our network is in turn linked up to the Internet.

- A number of network services such as the electronic mail, electronic noticeboard, local and remote USENET newsgroups, file transfer capability across different operating system platforms, etc

- Authorized users can access administrative systems running applications developed in-house for student records, personnel information, payroll, purchasing and inventory, estate management, etc

- Several computer barns, teaching laboratories, and departmental terminal rooms for instruction and open access.

One of CCST's missions is to always maintain a good standard of service to our users. To help accomplish this objective, we have a group of engineers responsible for keeping our computing equipments and software systems running as uninterrupted as possible.

If you happen to encounter a problem when using our facility, be it on equipment or software, you can seek assistance from us by calling our Hotline service at ext. 6200 or send an electronic mail to the account, CCHelp. We would like to note in passing that our Hotline service is dedicated to staff, reporting problems of an urgent nature. For queries that do not require an immediate reply, please kindly channel them using CCHelp. We will make it a priority to attend to them as soon as possible.

To cope with the growing number of administrative users, we are revising our series of training courses, mainly on office tools, to be offered beginning from late September this year on a regular basis. Please refer to an announcement later in this newsletter for the list of training courses.

Training courses are meant to help you become productive with the office tools sooner. However, we also see the importance of comprehensive user manuals in one's mastering these tools. CCST maintains a small library of documentations, some of which were procured from vendors while others written locally by our own staff. Please ask at our General Office in Room LG4007 for more information.
Some Commonly Asked Questions

Q: Where is CCST?

A: The general reception of CCST is at Room LG4007, Academic Building, Phase 1. The nearest lift to LG4007 is Lift 6 which you take to access the Indoor Sports Complex. There you will also find the User Consultation Team (CIC), which is the front-end interface between CCST and our users.

Q: How and where can I get support from CCST?

A: You are welcome to call our Hotline service at ext. 6200 or send an electronic mail to the account, CCHELP. If you prefer, you may even come pay a visit to the User Consultation Team in Room LG4007. On the last page of this newsletter, there is a list of related phone numbers and e-mail accounts for your reference.

The operation hours of the Hotline service are as follows:

- Monday to Friday: 9:00am - 12:45pm, 2:00pm - 5:00pm
- Saturday: 9:00am - 11:45pm

Q: How can I apply for an account on CCST’s central computing systems?

A: At present, our central computing systems include both networked VAX/VMS and UNIX servers.

To access any of the VAX/VMS servers, you need to have a valid user account on the system. To use the resources on the UNIX servers, a separate user account is required.

The followings are some simple steps that you should take to apply for a staff account on either of VAX/VMS or UNIX system:

1. Obtain an "Application For Use of Central Computing Systems" form from the Office Manager in your department.
2. Fill in the required information on the application form.
3. Get your Departmental Computer Coordinator's (DCC) signature on the form as an authorization.
4. Send the completed form to CCST's General Office.

Once the account is created, we will send an electronic mail to your DCC with other relevant information.

For further details on the application procedure, please kindly refer to the articles, "Application of Email Account (for staff)" and "Application of Email Account (for student)", inside the CCST-NEWS folder of the HKUST Electronic Noticeboard.

For information on how to get to the HKUST Electronic Noticeboard, please refer to the related section in the article, "Network Services", later on in this newsletter.
Q: How many CCST administered computing laboratories can I use?

A: When classes commence again in September, CCST will altogether administer three Computer Barns and one Business Computing Laboratory. Certain areas inside these computing laboratories have been set up to support classroom instruction and tutorials. Booking is required in advance for such use by contacting CCST's General Office either in person or by phone.

The followings list the different kinds of equipments and the number of units in each of the computing laboratories. These information, however, are subject to change in the coming months.

1. Computer Barn (Room 1101) -

Previously being Room 1044, this Computer Barn is equipped with the following equipments:

- 95 Porro 486/PC
- 24 Epson LQ550 Dot Matrix Printer
- 2 HP 3SI Laser Printer
- 10 Mac LCII
- 2 Apple ImageWriter II
- 1 Apple LaserWriter NTX

At the time of writing this newsletter, we are trying to work out a plan for replacing around 20 486/PCs with an equal number of Sun Classics workstations.

2. Computer Barn (Rms 4402-4404) -

Previously being Room 4382, this Computer Barn has been partitioned into two zones:

- Zone A is normally an open access area with 40 Porro 486/PCs. Facing these PCs in the front, there is a big RGB projection screen which has been installed to facilitate classroom instruction and tutorials.

- Zone B houses around 44 PCs with two of them being 286/PCs rather than 486s.

In addition, we have the following equipments set up inside this laboratory:

- 32 Epson LQ550 Dot Matrix Printers
- 2 Epson LQ1070 Dot Matrix Printers
- 2 HP 3SI Laser Printers

Renovations are being done to the interior of this laboratory to improve its use for classroom instruction.

3. Computer Barn (Room 4580)

This is CCST's third and newest open access laboratory. Unlike the other two, we are going to equip this laboratory with a greater number of Sun Classics workstations than the 486/PCs.

The number and types of equipments to install are given in a later article on Academic Computing at HKUST.

4. Business Computing Laboratory (Room 4334) -

Equipped with 32 Mac LCII, 9 Apple ImageWriter II, and 2 Apple LaserWriter NTX, this laboratory is open for class booking by departments as well as open access.
Q: Can I connect my personal computer to the university computer network?

A: Both staff and students may apply to connect their personal computers to the university computer network if they reside in staff quarters or student halls.

Interested staff should contact their respective Office Managers for information on applying for the connection.

Students, however, must complete an application form obtainable from the Student Affairs Office.

Details on how to apply for connection, as well as the terms and conditions for connecting a computer in student halls to the campus computer network are described in the article, "Connection of Machines from Student Dormitories to Campus Network" inside the CCST_NEWS folder of the HKUST Electronic Noticeboard.

Q: What should I be aware of when using central computing facilities?

A: Central computing facilities administered by CCST are solely for use by members of the university. Users must abide to rules and regulations governing the use and provision of central computing facilities and services. This will help ensure that equipments, software, as well as data are being protected against damage, unauthorized use, theft and fraudulent manipulation.

Amongst others, misuse of central computing facilities include:

- Using one's account for unauthorized non-university related purposes
- Pirating copyrighted software
- Spreading computer viruses maliciously

The Director of CCST reserves the right to restrict a user's access to the central computing facilities and services as deemed necessary. Unauthorized use of any computing resources and malicious destruction, removal, or modification of equipment and software may cause suspension of use of the Centre's facilities. Whoever is responsible for such misuse of computing resources might face prosecution.

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**Training News**

CCST will launch a series of computer training courses for staff beginning from late September this year. Those who are interested may register with us when a particular course is announced. Application forms should be obtained from the respective Office Managers.

Tentatively, these are the courses we will offer:

1. Introduction to Network Services
2. Macintosh Basics
3. Introduction to HKUST's Window Environment
4. Introduction to Microsoft Word for Windows
5. Introduction to Microsoft Excel
Academic Computing at HKUST

HKUST is a technological university with a strong research orientation. Needless to say, besides having very high quality academics, an advanced, state-of-the-art computing environment for teaching and research is also important for the University to establish herself as one of the best universities worldwide. CCST has the mandate to develop such an environment.

Academic computing support can broadly be classified into two main areas - teaching support and research support.

On the teaching side, the Centre currently operates three computer barns/laboratories for teaching and student use, providing a total of around 230 units of 486/PCs and Macintoshes. A new computer barn in the Phase II area is due to open in a month or so which has around 100 units of Unix-based Sun Classics workstations and high-end PC's. All the machines are connected to the FDDI campus network, providing desktop computing power as well as serving as windows to a vast array of information and computing resources, such as the Library System and various scientific and business packages, on the University's own network or that of other institutions in Hong Kong, and through the Internet, on networks of educational and research institutions worldwide.

We strongly believe in the need for our students to have early exposure to the latest computing technologies and we turn our beliefs into actions. Two years back, we made Microsoft Windows our standard environment for PC's in the computer barns as soon as we considered that the software was stable and could work reliably on the campus network. This year, we are targeting to make Microsoft Windows NT, which was launched only a couple of months ago, available to the students on a limited scale.

Making the machines and network available is not the only thing we do to support academic teaching. A wide spectrum of academic software on different hardware platforms has been made available for use. We also provide students and faculty with in-house written user guides on different computing tools and services. We see that as the University enters her third year of operation, there is a need for us to continue expanding our facilities and services to meet the expanding user base and the ever-increasing demands.

Providing computing support for research is a challenging task. Each research project has its own characteristics and objectives to be achieved. Each researcher has his/her own expertise and experiences, and thus may have different ideas on what resources, computing or otherwise, should be made available in this University. With many new faculty members joining the University every month, each with different needs and expectations, our Centre must act cautiously but at the same time aggressively in planning the support for academic researches.

In this age of rapid technology advancements, CCST, being responsible for developing and managing the University's computing environment, must have the foresight in adopting computing technologies and be able to do so at the right time. Overall speaking, the objective is to ensure an effective adoption and utilization of computing resources that can benefit most research endeavours.

On the support side, instead of stretching our limited personnel resources to provide superficial support to many specific areas, it is more effective for us to focus our efforts in implementing an advanced, general purpose high performance computing environment and to develop a high level of support in a few generic computational areas.

Danny Tang
ccdanny@usthk.ust.hk
A High Performance Computing Environment (HPCE)

As hardware and software technologies advance, many applications can now take advantage of today's high-end workstations in solving problems which were not practical, if not impossible, not too long ago. To support high-end computation, our Centre is developing a high performance, distributed and parallel computing environment consisting of a collection of powerful computation and graphics workstations with FDDI interface and interconnected by a super high-speed gigaswitch. Initially, on an experimental basis, four HP735 workstations are being put into a cluster. The software system PVM (Parallel Virtual Machine) allows users to utilize the workstation cluster as a single computational resource.

The network cluster provides an environment for users to learn and gain experience in parallel programming based on the message-passing paradigm. We consider it important for both the users and our Centre to get into this technology as early as possible so that we will be able to make good utilization of any parallel technology that the University may acquire.

Scientific Computing

A generic term which refers to the application of computer and network technologies to solve computational problems in sciences, engineering, and business. Advances in scientific computing are allowing mathematical models and simulations to become increasingly complex and detailed. This results in a closer approximation to reality which enhances the possibility of acquiring new knowledge and understanding. To support scientific computing, the Centre has the expertise and can provide advice to users in developing large scale scientific programs in C and Fortran, to be run on a single workstation or on the workstation cluster described above. Various numerical and statistical libraries (IMSL, NAG) and packages (Mathematica, Matlab, and SAS) are also supported.

Scientific Visualization

The rapid growth of large-scale computing in the basic sciences and the steady accumulation of high-bandwidth data sources (e.g., satellites) are largely responsible for the recent interest in scientific visualization as a computational technology. Tremendously large collections of numerical values, which contain a great deal of information, are being produced (e.g., from simulations) and collected (e.g., from satellites and physical measurements). The purpose of scientific visualization is to gain insight of the data, and it finds applications in almost any areas of scientific researches. Recognizing its importance to the University, the Centre has embarked on a project to establish a graphics environment to support interactive visualization of data.

Data Management

Before data can be processed, they must be stored. There are many ways for managing data. One such way is to base on a relational database. The Centre has adopted the Sybase database management system for general and academic applications. Sybase has many features of an efficient database server. A wide variety of front end data processing tools can access data stored in a Sybase database. These tools include Microsoft Excel and Microsoft Access (office tools), SAS (statistical package), and IFProlog (Expert System). For those who have the need to develop their own code can also access data stored in Sybase using programs written in the C programming language.

Academic Computing Support
The above is only a short account of what the Centre is working on. If you would like to know more details, please contact the persons listed below.

<table>
<thead>
<tr>
<th>Contact</th>
<th>Phone</th>
<th>E-mail</th>
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<tbody>
<tr>
<td>Teaching Support</td>
<td>Mr. Patrick Leung x6245 cpleung</td>
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<td>HPCE</td>
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<tr>
<td>Scientific Computing</td>
<td>Dr. Robert Luk x6244 cckhluk</td>
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<td>Scientific Visualization</td>
<td>Mr. K.K. Tam x6246 cckktam</td>
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<tr>
<td>Data Management</td>
<td>Mr. Paul Kwan x6251 cckwanwh</td>
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Last but not least, our Centre is organizing an Academic Computing Week in early October. There will be many informative presentations given by CCST staff, academic colleagues, and outside speakers. Please watch out for it.

**Network Services**

From any computer connected to the campus network, members of the University can utilize the various computing services available through the network, including access to the Administrative Systems for certain authorized personnel, the electronic mail facility, network laser printing, the HKUST Electronic Noticeboard, etc. The following sections contain brief descriptions of some currently available services.

**Administrative Systems**

These include, among many others, student related systems, financial related systems, personnel/manpower related systems, etc. Authorization schemes are in place to control access to the information maintained by these systems.

**Electronic Mail**

Electronic mail is ideal for exchanging information among a small group of people on the same or different computers. An electronic mail could be forwarded to another user, or being filed for future reference. At HKUST, you can also send and receive electronic mails from anywhere in the world.

**Network Laser Printing**

With a valid user account on any of the CCST's central computer systems, you could issue a print command and have your files routed to any laser printer connected to the campus network.

**HKUST Electronic Noticeboard**

The HKUST Electronic Noticeboard has a wealth of information kept in its various folders, including notices on advertisements, class schedules, student affairs, library information, computer-related matters, etc.

This application is available on different hardware platforms including PCs, Macintoshes, as well as UNIX workstations and timesharing machines. For information on how to access the HKUST Electronic Noticeboard, please call our Hotline service at ext. 6500 or send an electronic mail to the account CCHELP.
Announcements

On September 1, all printouts prior to August 1 found in the pigeon holes outside the CCST printer room will be removed. This will include files being sent to queues **SYSPRINT** (band line printer) and **CCLQ** (laser printer). The printer room is at Rm 2034, accessible from Lift 2, 13-15, and 17-18.

CCST will enforce a procedure for cleaning up the pigeon holes regularly. Any printouts that are older than two weeks will be removed by our operator on duty. This is to ensure that printing to our central laser and band line queues are carefully utilized, and to accommodate the increasing population of our users.

Software News

**MATLAB 4.0 on SUN**

**MATLAB** (Matrix Laboratory) is an integrated environment for numerical analysis, matrix computation, signal processing, and graphics.

The following is a brief description of the current setup.

**Version:** 4.0a  
**Available on:** SUN (SunOS 4.1.x)  
**How to start:** It can be accessed either from an ASCII terminal or in X-window. To invoke the software, type this command at the '%' prompt:

```plaintext
% matlab
```

**How to exit:** To quit, you could simply type:

```plaintext
>> quit
```

**Help:** To invoke on-line help in MATLAB, type:

```plaintext
>> help
```

To invoke the tutorial, type:

```plaintext
>> intro
```

An example is also available as demonstration. To run it, simply type "**demo**" in MATLAB. User Manuals are available for borrowing from the CCST Library in Room LG4007.

Tips & Hints

I have both a VAX/VMS and a UNIX account. How can I avoid forgetting to read mail messages from one of these accounts?

To handle this, we recommend that you keep all your incoming mails in one of these accounts. When you were used to reading mails from UNIX, you would want to redirect incoming mails from your VAX/VMS account to the UNIX account. The steps are shown as follows.

**From VAX/VMS to UNIX**

**Step 1.** Login to your VAX/VMS account.  
(Please refer to the VAX/VMS User's Guide)

**Step 2.** Invoke Mail by typing this command at the '$' prompt:

```plaintext
$ mail
```
Step 3. Inside Mail, you will type the following command:

```
MAIL> set forward
_Address: "IN%""name@uxmail.ust.hk"
```

where name is your UNIX account.

Step 4. When done, exit Mail by typing:

```
MAIL> exit
```

To disable forwarding to your UNIX account, you would execute this command inside Mail:

```
MAIL> set noforward
```

From UNIX to VAX/VMS:

Step 1. Login to your UNIX account.
(Please refer to the UNIX User's Guide)

Step 2. Create the file “.forward” by typing these commands at the ‘%’ prompt:

```
% cd
% echo "name@usthk.ust.hk" > .forward
```

where name is your VAX/VMS account.

To disable forwarding to your VAX/VMS account, simply delete the file “.forward”.

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**Documentation**

Updated Manuals/Information Leaflets:

INTERNET User's Guide
UNIX User's Guide
PATHWORKS MAIL User's Guide

** ** **

Dial Up Service for Staff of HKUST
Dial Up Service for Students of HKUST

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**Staff News**

Since July, we have had several additions to our staff while a few familiar faces have left us.

Welcome on board to Robert Luk who joined us in July as Computer Officer, working in the Computing Information Centre. Following shortly, we had Karen Chan, Lam Sai Cheung, and Wong Kit Pui. They work as Assistant Computer Officers, also in the same team as Robert.

Former Student Programmers, Antony Chan, Chan Yat Cheong, Alex Lam, Edmund Mak, and Ivan Yeung, were succeeded by Samuel Chan and Cindy Leung in early July.

** ** **

On the down side, we had Esther Chan and Rita Chu left us in July after working faithfully with us for three years. We wish them success in their future endeavours.
CCST Contact Points

User Consultation Coordinator -
Mr. Tony Chan - 6243 ccanny

Telephone Services Coordinator -
Ms. Christine Cheng - 6190 cccheng

Training Courses Registration -
Ms. Anna Mak - 6189 ccanna

Requests for Computing Resources -
(Admin & Business)
Mr. William Tung - 6221 ccbtung
(Others)
Mr. Danny Tang - 6241 ccdanny

Problem Reporting E-mail Account -
CCHELP -
For users to send in their problems and difficulties via e-mail. A consultant will respond to messages sent to this account as soon as possible.

Suggestion E-mail Account -
CHANNEL -
For users to send in their queries, ideas, suggestions and comments concerning services we provide. A consultant will respond to messages sent to this account as soon as possible.

Phone E-mail

Centre of Computing Services and Telecommunications . . . .

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Assoc. Director & Mgr. Systems & Operations Mr. Lawrence Law 6201 ccclaw
Mgr. Information Systems Mr. William Tung 6221 ccbtung
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Computer Operation 6220
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The telephone extensions are (852) 358-xxxx.
The Internet addresses are E-mail address@usthk.ust.hk

Channel Mailing List

A mailing list is maintained for the distribution of Channel. To be placed on the mailing list*, fill out this form completely and mail to the Computing Information Centre, CCST, Hong Kong University of Science and Technology, Clear Water Bay Road, Hong Kong. Please print clearly.

☐ Add my address to the mailing list
☐ Address change (write new address below)
☐ Remove my name from the mailing list

Name: ____________________________
Organization: ____________________________
Address: ____________________________

*Registered users of the CCST services are placed automatically on the mailing list.