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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
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Information Systems - an Update . . .

It has been some time ago since I last wrote to Channel. Over the last two years or so, a lot of activities had taken place in the Information Systems (IS) section of the Centre of Computing Services and Telecommunications (CCST), primarily in the developments of new application systems and enhancement of existing ones. We are probably at a point when we are ready for some shifting in our focus, and it may just be the appropriate time that we give a quick review of our course of development, both past and future.

Background

For those of you who joined our readership only recently and are unfamiliar with the organization of the CCST, the IS section is the unit within CCST responsible for the development, maintenance, and management of systems and databases to support the operational, administrative, and management information needs of the university. The building/provision of administrative information systems has therefore been a major area of concentration of IS efforts.

A bit of nostalgia

Readers who have followed our development will recall that, as a brand new university, we started off with nothing as far as administrative computing systems are concerned. For a quick start, we brought in a number of ‘packages’ and started off by building around them. This ‘start up’ strategy has the benefit of providing our administrators with some ‘basic’ system functions while giving CCST time to position itself and formulate longer term strategies. However, it had not been an easy task. Apart from having to go through a steep learning curve (both IS staff and our users), the packages did impose some serious limitations/boundaries, both functionally and technically, on our ability to respond to needs emerging from our rapidly changing environment.

In view of the constraints imposed by the packages and their associated development tools, we started the search for a alternative. Essentially we were looking for a CASE-based environment that offers not only productivity features/tools, but is repository driven, code and documentation generating, enforces structured/disciplined system delivery, and is built on a sound system development philosophy. In early 1991, after a period of searching, we finally decided on an integrated CASE system called CorVision.

Today, we have 15 major application systems developed on the CorVision platform, working in conjunction with the Digital’s Rdb/VMS relational database management system. The original packages, which have served their purpose of offering a quick start for the university, are also now being gradually replaced, a process which will likely be completed by the summer of 1994.

Just in time

Over the last couple of years, the university has rapidly gone through many major milestones in its brief history. Accompanying these milestones and in support of the efforts of all involved, many systems were delivered on extremely tight, often externally imposed, deadlines - just in time for particular events.

Users from the Office of Admissions, Registration, and Records (ARR) will recall the period when we put together our first admission system, just in time to interface with the newly introduced Joint University and Polytechnic Admissions Scheme (JUPAS); and our first release of the student registration system, just in time for our first intake of students; and the first version of the grade reporting system, just in time for our first semester examinations . . .
Estates management colleagues will recall the launching of the defect reporting system shortly after we settled in our campus, just in time to handle the many teething building defects/problems.

More recently and probably unaware to most staff, we have 'hooked up' our payroll system with a newly released backpay subsystem, just in time for the processing of backpay when the volume of staff activities (staff movements, leavers, starters, etc) has reached a record high and colleagues in the payroll unit are finding it practically impossible to keep track with PC-based tools.

This phenomenon is expected to continue. Today, for instance, we are working towards the completion of the graduation checking/degree audit system, hopefully just in time for our second batch of graduates, whose number will far exceed the first batch, to the extent that the availability of a full set of computer assisted auditing/validation functions is a must.

**COHESIVE, INTEGRATED INFORMATION SYSTEM**

**Being dynamic versus being chaotic**

The "Just in time" scenario described above may, quite justifiably, arouse questions as to whether we (IS) are running around reacting to situations, and, given the unstable situations that we are all confronted with regularly, may just result in chaos eventually (if not already). Some explanation of how the situations are managed may help ease the doubt.

I believe progressive organizations (like our university) invariably have to be dynamic. That is the only way we can move forward quickly and maintain leadership positions. Dynamic environments are necessarily unstable (in the traditional sense) because of changes. The difference between being dynamic and being chaotic essentially lies in how we manage change. And at the heart of all these is whether we have a clear vision of where we are going.
Since the early days of our inception, the IS section has been following a model for our systems development. In essence, we perceive the university eventually having a portfolio of diversified, independent, and yet fully integrated (but loosely coupled) information systems. Diversified systems will give the university a rich set of functionality for its diverse administrative/management activities, independent systems will give us the ability to tailor to needs specific to individual administrative operations while minimizing impact to other systems, and integration will ensure that all system pieces will function as one unified unit, providing consistent information and eliminating duplicated actions.

A high level model of this system portfolio is shown in the figure on "COHESIVE, INTEGRATED INFORMATION SYSTEM".

This high level model gives us a picture of our eventual system configuration as well as provided us with a framework for measuring our progress. In the latter aspect, the rate of development are essentially determined by two major factors - time and resources.

As a new university, demands for information system support/services understandably come from all directions, and naturally everyone would like to have everything right away. In this regard we have adopted a 'successive version' approach to our system releases. In other words, while we will plan for the overall functionality of an application area (e.g., personnel/payroll) from the start, delivery of such functionalities will typically be in stages, as time/resources permit - the first version will likely provide only basic, time-critical, and/or operationally-crucial functions, the second version will deliver essential functions which are less time-critical, and so on.

By planning/designing for the overall system from the start, we ensure that the functions in each release of a system will interface/integrate properly with functions in subsequent releases, and by releasing a system in stages we can put more functions in the hands of our users at the earliest time possible.

Under this approach some of our existing systems, especially those in the student related area, have gone through 5-6 releases over the past 2-3 years. In general, our target is to deliver system releases in roughly 90-day 'time boxes'. The 90-day time window gives us sufficient time to develop system functions of some substance while ensuring that our users do not have to wait too long for critical facilities.

I could go into many more details of this system delivery strategy (e.g., change control and version management), but this is probably not the proper forum to get into such a discussion.

Finally, I should mention that IS projects are not just picked at random. Rather, the worthiness of a project is carefully considered by a CCST MIS Priorities Committee (see the previous article on the work of this committee) before they are undertaken by IS staff.

Meta - Stages

The combination of a long term model, a delivery strategy, and a priority determining body ensures that every piece of system we deliver will contribute to our overall system portfolio, either as a long term building block or as a consciously installed interim holding pin. From this perspective, while our work may appear very dynamic on the short term, operational side, the overall environment/strategic direction is in fact quite stable - or 'meta-stable' as someone may prefer to call it.

So, where do we go from here ...

The plan described above will probably remain as our guide as we move into 1994. One anticipated change, however, is a gradual shift from being development-intensive and data-collecting to an emphasis on information dissemination.
I expect the efforts of the IS section will be dedicated to 3 major areas of activities in the new year:

**Expanding the system portfolio and consolidating existing ones**

There are still a lot of user requests for system functions and this will continue to be the main area of concentration of our efforts. As more 'pieces' are added to our system portfolio, building on links that were previously desined into the existing pieces, I believe the benefits of 'integration' will begin to emerge more and more. Indeed one of the IS targets for 1994 will be to fully exploit and extend such benefits as new system functions are introduced.

**End user access to stored information**

One of the ultimate goals of IS is to provide information to everyone (who is authorized) in the university community and this will be one of the major targets of accomplishment for the IS section in 1994.

While the objective appear simple at first glance, the implementation of such a goal is really not a straightforward matter. Several issues must be addressed before we have an environment that is mature enough to support such an undertaking. I would like to highlight some of these below.

- First of all, properly maintained information must be there. This means that systems (computer functions and user procedures) must be in place to capture the necessary data, correctly, consistently, and in a timely manner.

- Secondly, the meaning and the relationship of the information being accessed must be clear.

This means that we need to provide both adequate documentation and training to users of the information. Training in this context is not just teaching people which key to push, which file (or 'table' for the technically inclined) to load, and which function to invoke, but providing a thorough understanding of the nature of the data, the process/stages by which their states undergo changes, and how individual pieces of data may combine/be related to provide a higher level of information.

- Thirdly, an access authorization/control mechanism must be in place to ensure that only those authorized can have access.

- Finally, a set of tools has to be available to make the data easily available to users.

Such tools may generally be grouped under 2 categories - those facilities provided under application control and those under user control. The former category of tools will be those 'standard functions' supplied by IS applications (eg. specific enquiries, standard reports, etc.). The latter category of tools will be those software which can be used by the user to formulate their own queries, data extraction, ad hoc reporting, etc.

With respect to the above 'pre-requisites' for end user access, I believe we have now accumulated a sufficient base core of both data and functions. With the introduction of more systems in 1994, the information content of our databases will further expanded and enriched. The informational aspect is therefore mature enough for end user access at this stage.

On the access control side, we have been working on an access control system/scheme since summer this year. The scheme is now in pilot test stage and will be gradually incorporated into all existing IS applications over the coming couple of months. By the end of the first quarter 1994, the access control aspect should also be in place.
As for user tools, most of the enquiry and reporting functions in existing systems can be released to end user, and more will be introduced in 1994 as new systems are completed. For end user controlled tools, we are now in the final stages of evaluating/testing a software which we believe satisfies most of our basic requirements (e.g., user friendly, can interface with our databases and technical platforms). We will inform our users once we concluded our study. Training will, of course, need to be provided if we proceed with the tool.

I should stress that this is only a starting point in this regard. Our intention is not to limit our users to just one such tool but to eventually incorporate access to our databases into tools that our users are most familiar with.

Documentation and training is something that we have not done too much on so far, and is expected to consume quite a bit of our time in 1994 when we start releasing end user functions.

Technical environment

The third and final area of focus is our technical environment (i.e., hardware, network, etc.) and operational procedures (e.g., operating hours, backup and archives). It must be able to sustain a level of performance sufficient for the expected increase in activities in the new year.

Here, we have started work as early as September this year. We have embarked on a series of activities including system upgrades, reconfiguration, expansion of our disk storage capacity, etc. (see separate article on the configuration of the administrative computing environment elsewhere in this issue). This reconfiguration process is being done in stages and will likely continue through the summer of 1994. The eventual administrative computing equipment will be based on a cluster of Digital's Alpha machines.

Accompanying hardware upgrades, system performance monitoring and tuning will also receive higher attention in 1994, especially on the data base side (our data volume is growing at an tremendous rate). A number of performance software/tools have recently been installed and more are being evaluated/tested.

Beyond 1994...

We will be looking at integrating IS functions into our office environment. At that time, IS will gradually disappear to the backstage and our users will be using administrative system functions together with other office tools and information service tools, unconscious that they are actually using IS functions. This is part of the 'seamless integration' that CCST have been striving to accomplish.

We will also be further exploring the benefits of technologies to help our users further increase their productivity and efficiency. Better use of optical (e.g., bar code) technology, incorporation of touch tone/voice response systems, images, and archiving/retrieval systems are just a few of these.

Mr. William Tung
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Who's Responsible ??

Activities in the Information Systems section of CCST are very much "project driven". As a result, staff assignments are also very much project oriented. It is not unusual that a staff member may be assigned to more than one system development/support projects. There had also been occasions when a large proportion of staff in the section were working on a major/large project.

This kind of arrangement gives us a large degree of flexibility in utilizing our limited resources, especially when we are faced with time-critical projects.

While the movement/assignment of staff within the section may be dynamic at times, we have organized ourselves in such a way that, to our users, the division of responsibility and the contact points are always clear.

Generally, the areas of responsibility are divided according to the nature of supported applications/functions. Currently, there are 2 functional units which work directly with users and 2 internal supporting units. (Refer to the chart below for the management hierarchy)

The responsibilities of each of these units are briefly described below:

1. Student and related systems

This functional unit is responsible for development and support of all systems related to student matters.

Some of the systems currently under development and/or being supported include:

- Undergraduate admission systems, including direct admissions and all interfaces with the Joint University and Polytechnic Admission Scheme (JUPAS)
- Postgraduate admission system
- Class scheduling and student registration systems
- Academic records and associated systems (such as grade reporting, academic progress tracking/student advising, and graduation processing)
There are many more related systems awaiting development, including systems related to student grants/loans, student receivables, hall application processing, student placement, examination time tabling, etc.

Ms Annie Au is the project manager responsible for this functional area. Some of the departments Annie works with directly include the Office of Admissions, Registration, and Records, the Office of the PVC for Academic Affairs, Student Affairs Office, and indirectly all academic departments/schools.

While different staff may be involved in different project undertakings, there are designated individuals supporting specific production functions. These individuals are identified in the following chart, along with their telephone extensions and email addresses:

2. Administrative and Business Systems

Basically, all systems that are not directly related to student matters fall under the responsibility of this functional area.

Information systems currently being developed and/or being supported by this functional unit include:

- Financial reporting system and related subsystems (such as general budget enquiries)
- Payroll system and associated subsystems (such as backpay, tax reporting)
- Personnel management system and related subsystems (such as leave, recruitment)
- Purchasing System and related subsystems (such as vendor/commodity enquiries, receiving)
- Inventory and related systems (such as store management and physical stock taking)
- Estates and laboratory defect reporting systems

Apart from the above, other systems awaiting development include requisition, payment, research project tracking/enquiries, budget forecasting/cost projection, and many others.

Miss Sylvia Lau is the project manager responsible for this area. Some of the departments that she works directly with include the Finance Office, the Personnel Office, the Purchasing Office, the Estates Management Office, the Library, the Office of Laboratory Services, Internal Audit, and other sections within CCST.
Similar to the student-related area, there are individuals designated to support various production systems, as shown in the chart below:

3. Data Administration and Technical Support

This is an 'internal' unit which provides support for the previous two functional areas. Its responsibilities include:

- overall database administration
- support, and maintenance of all IS development, testing, and production environments
- technical consultation
- development/maintenance of a library of common functions/routines
- development/maintenance of IS system development standards
- development/maintenance of IS related security, backup, and recovery systems and procedures
- act as central liaising point with CCST Systems and Operations colleagues in such aspects as hardware/software upgrade/reconfiguration, performance tuning, etc.

4. Administrative Functions and Special Projects

Activities performed/supported by this functional area include:

- initial screening/estimation of user requests for IS services
- tracking/reporting of status of various projects (for management report)
- requests for computing equipment and related resource (for administrative departments)
- special projects involving system integration, special technology, and/or concerning interdisciplinary applications

- evaluation and recommendation of software tools

Mr. Peter Au (x6224, email: ccpetera) is responsible for this unit and he is assisted by Mr. Johnny Woo (x6237, email: ccjohnny).
This area is currently supported by Mr. William Tung (x6221, email: ccbtung), with Mr. Wayne Yung (x6228, email: ccwayne) assisting in special projects, drawing resources from other staff members as needed.

**IF ALL THESE SOUNDED TOO CONFUSING**

The above description is intended to provide an overview of who is responsible for what in the Information Systems section.

Users who work regularly with IS staff will most likely know who to talk to and when already. For users who deal with us only occasionally, and who found all these too confusing, you may want to note that staff at the CCST Hotline (x6200) will either be able to help you right away or to refer you to the right support person in IS. Alternatively, an IS enquiry line (x6400) can also be used.

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**Software Workshop**

CCST will be organizing two software workshops for faculty, research staff, and postgraduates in mid January, 1994. Enrollment is limited, and interested parties should contact their respective Office Managers for an application form.

Descriptions of these workshops are as follows:

**Programming in Mathematica**

This workshop presents both the programming techniques and the MathLink protocol in Mathematica. Applications of numerical and symbolic programming in science, engineering, and business will be presented. Demonstration on communications between Mathematica and "external" program (i.e., calling Mathematica from a C program or vice versa) will be given. Major topics include:

- Procedural programming
- Functional and rule-base programming
- MathLink communications protocol

**Date (Time) and Venue**

January 18, 1994 (2:30 - 5:00 p.m.); Room 4580

**Introduction to SAS (Statistical Analysis System) Programming**

Major topics include:

- Introduction to the SAS system
- Fundamental concepts, data steps, and proc steps
- Reading and writing data
- Enhancing proc print outputs
- Iterative processing
- Introduction to Graphics

**Date (Time) and Venue**

January 19, 1994 (2:30 - 5:00 p.m.); Room 4580

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**Software Support**

The HKUST computing environment has already grown to a moderate size. In the coming years, the growth will be dramatic. Many more software will exist than CCST can effectively support at a good level. In order to provide a guideline for CCST's internal work levels, training, and to better inform our users concerning their reasonable expectations for support, we have adopted the **CCST Software Support Policy**.

The CCST Software Support Policy, the lists of available software on various operating system and hardware platforms, and the contacts for technical support are available in "CCST Online Information". Please refer to the "Software List" folder for details.
The CCST MIS Priorities Committee

The CCST MIS Priorities Committee is a decision making body formed just 2 years ago to determine the type of information systems projects that the Information Systems (IS) unit of CCST should undertake.

The committee was formed in the light of the rapidly increasing demands for system development work/services throughout the university, which far exceeded the resources available at the CCST/IS. Requests for services therefore need to be ranked and prioritized to ensure that resources are devoted first to those projects which are critical to the success of the university.

The committee currently consists of 5 members:

Chairman: PVC-AA, Professor S D Kung
Co-chairman: APVC-AA, Dr Henry Liu
Members: PVC-AB, Mr Ian Macpherson
DPC, Professor Peter Dobson
DCST, Dr Max Ivey

CCST/IS serves as secretary to the committee and as implementor of its decisions.

Apart from an initial period of frequent meetings (to get the large backlog of cumulated demands organized/prioritized), the committee now meets about once every quarter to review CCST’s progress and determine which project(s) are to be worked on next as current projects are completed. Urgent requests for IS services which arrived in between committee meetings are reviewed by circulation. When necessary, requesting departments are invited to brief the committee regarding their specific needs/urgency.

Since its formation, the committee has reviewed over 80 requests for information systems development/services. Over this period CCST/IS has undertaken close to 30 major projects of various complexity/magnitude (10 - 100+ man weeks), in addition to numerous ‘small’ ones (less than 1 week), with 8-10 active projects in progress at any point in time.

The work/decisions of the committee has been extremely valuable to CCST in that our limited resources can now be focused instead of being spreaded and pulled in different directions.

How to raise a request for CCST/IS services

Request for CCST/IS services may be initiated with the preparation of a request. Apart from a summary description of the request, other pertinent information (e.g., significance of project, department ranking, essential/desired dates, etc.) should also be provided.

Such information is outlined in a specific form for this purpose entitled “Request for CCST Information Services”, which can be obtained from the IS section of CCST (by phone at x6440 or by email to CCIS). Requests can be either submitted on this form (to the Manager of Information Systems) or by email (to CCIS).

Depending on the administrative area of the request, requesting departments are advised to raise their requests via/with one of the following ‘custodian’ departments:

- Student related - Office of Admissions, Registration, and Records
- Financial/Purchasing - Finance Office
- Personnel/Establishment - Personnel Office
- Estates/Inventory - Estates Management Office
- Others - CCST/IS

CCST will assign a request number to the request and track it in our project control system until either the request is completed, or is rejected (by the MIS Priorities Committee), or is withdrawn by the requesting department.
Upcoming Changes in the Administrative Computing Environment

Information Systems Team

Since September 1993, the administrative computing environment has been undergoing a series of changes. Apart from adding more processing and storage capacities to the equipment, the reconfiguration is intended to make the system more self-contained, easier to manage, tune, and secure.

The current administrative computing environment is made up of a cluster of 2 Digital VAX 4500 machines - referred to as ADMIS1 and ADMIS2. Normally, our production systems are run on ADMIS1 while systems under user acceptance and CCST integrated testing are run on ADMIS2. When production activities are high or to cope with special events (eg. walk-in registration, financial year end), processing could be shifted to ADMIS2 to ease the loading on ADMIS1.

A third VAX 4500 (ADMIS3) is used solely for IS development work.

Access to the administrative systems currently is via a separate VAX machine (USTCC1) on a different cluster (USTHK). This machine basically serves as a front end which 'filters' accesses to the administrative systems.

The current configuration has served us well over the last couple of years, but with our changing environment it has started to show signs of inadequacies.

On the ADMIS cluster, machine loading has consistently been high over the last 6 months, especially on the production side (ie. ADMIS1) and shifting of processing to ADMIS2 is not a smooth task. Besides ADMIS2 is also busy on its own with user acceptance and CCST testing activities. It is apparent that we cannot sustain the activities of running 3 environments (production, user acceptance, and testing) under the current configuration.

Changes in user access requirements/patterns have complicated things further. Under the current setup, all access to the administrative environment are secured under application control. In other words, users cannot log on directly and manipulate things on their own, they must do it via an IS system. While secure, the restrictions imposed by such an approach is now being felt with respect to some user activities (eg. file service). To balance between user access and controlled access, a 2-tier access control structure is needed by which user can have ‘some’ capability to access/manipulate their own data without jeopardising the need to exercise control on the contral databases.

The figure below illustrates the current configuration of the administrative computing environment.

Access to administrative information systems

USTHK Cluster
Staff Mail Server and academic use

ADMIS Cluster
Administrative systems (production, user acceptance, and IS integrated testing environments)

IS development environment
Finally, the use of USTCC1 on the USTHK cluster as the main access point to the administrative systems is also beginning to show signs of problems. The USTHK cluster of machines, by their designated functions, is necessarily more volatile and vulnerable to fluctuations in system load (e.g., mail activities) and outside influences (e.g., internet access). This, in turn, affects the performance and stability of the administrative systems. The need to 'de-couple' ADMIS from USTHK is becoming more urgent.

With the above considerations (and many others), staff in our systems and operations (S&O) and information systems (IS) units have worked together and come up with a revised configuration for our administrative computing environment. This is depicted in the figure below.

This new configuration offers a number of improvements over the current setting:

- The administrative computing environment will now be totally self-contained (de-coupled from USTHK).
- ADMIS1 and ADMIS2 will be dedicated solely to user activities (i.e., production and user acceptance). Combined with a different way of setting up our software, we will be able to do some load balancing between the 2 machines.
- ADMIS0 is introduced as a third machine in the ADMIS cluster. Apart from serving as a security filtering front-end, it will also fill the role of being a user services machine, running applications that do not require full application control. In conjunction with ADMIS1 and ADMIS2, this will provide the 2-tier access control architecture mentioned earlier.
- Environments that are used by IS staff (i.e., development as well as integrated testing) will now reside solely on ADMIS3.
- The capacity of all machines will be gradually enhanced. Apart from memory upgrades and additional storage, ADMIS1 and ADMIS2 will be upgraded from the current VAX 4500 to VAX 4700. Eventually we will settle on Digital's Alpha platform.

Accompanying hardware upgrades, our operating software and data base software will also be undergoing a series of upgrades.

The entire re-configuration process will be completed over several months. The undertaking necessarily means that IS services may be interrupted from time to time, and we have to apologise to our users for resulting inconveniences. Following CCS1's usual practice of minimizing impact on our users, the upgrades/changes will be carried out in the evenings and over weekends/holidays as much as possible.
Announcement

ClariNet News available

ClariNet is a new electronic publishing network service that provides professional news and information, including live UPI wireservice news, in the USENET file format.

ClariNet allows you to read an "electronic newspaper" right on your own computer. You can also get timely computer industry news, technology related wirestories, syndicated columns and features, financial information, stock quotes, and more.

To invoke the news reading system, please resort to the following command:

For Unix: "rn" or "tin"
For VMS: "netnews"

If you need further help on using this service, please contact us by sending an email to CCHELP or calling our Hotline at ext. 6200.

Notice for "CPU Demanding" users

Recently, we noticed an increasing number of users running CPU intensive jobs on CCST's Unix timesharing system, ustsu3, resulting in a degradation of response time to general users.

Please be reminded that a Sparc10/42, ustsu6, has been made available for such purposes. This Unix machine is equipped with dual 40Mhz Sparc processors and 64M memory. Its performance is about 10% higher than ustsu4, which is a Sparc10/30. It is being rebooted weekly on every Friday morning and is especially suitable for running overnight jobs.

CCST also makes available two HP Unix machines, usthp5 and usthp6, for the very demanding users. Both of these machines are equipped with a single 99MHz PA Risc processor with floating point performance about 4 times that of a Sparc10/40. With 112M memory installed, these machines are most suitable for running floating point intensive programs which require large memory space.

Software News

Matlab 4.0 on MS Windows

Please be informed that Matlab 4.0 on MS Windows is now available on staff and student PC servers. Users are advised not to invoke more than one session at a time, and be sure to quit from an active session when the software is not in use.

NAG Fortran Library Mark 15 on SUN
SPLUS 3.1 on SUN

Please be informed that the captioned software are available on SUN with immediate effect. For details on how to access these software, consult the "Unix Software - Getting Started" folder of "CCST On-line Information".

Staff News

We are happy to have Miss Lyon Cheng joining our clerical staff in early November. Following shortly, Mr. Steve Yau and Mr. Kenneth Chik came to work with us as Assistant Computer Officer in the Computing Information Centre and the Information Systems team respectively.

In early December, we had an addition to the Systems & Operations team with Miss Virginia Chan coming on board as Assistant Computer Officer.

However, we regretted to have Mr. Alex Lau left us in mid November. He was previously Assistant Computer Officer in the Computing Information Centre.
CCST Contact Points

<table>
<thead>
<tr>
<th>Role</th>
<th>Ext.</th>
<th>E-mail</th>
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<tbody>
<tr>
<td>User Consultation Coordinator - Mr. Tony Chan</td>
<td>6243</td>
<td>cctony</td>
</tr>
<tr>
<td>Telephone Services Coordinator - Ms. Christine Cheng</td>
<td>6190</td>
<td>cccheng</td>
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<td>Training Courses Registration - Ms. Anna Mak</td>
<td>6189</td>
<td>ccanna</td>
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<tr>
<td>Requests for Computing Resources - (Admin &amp; Business) - Mr. William Tung</td>
<td>6221</td>
<td>ccbtung</td>
</tr>
<tr>
<td>Requests for Computing Resources - (Others) - Mr. Danny Tang</td>
<td>6241</td>
<td>ccdanny</td>
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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.

Centre of Computing Services and Telecommunications

Centre 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 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.