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Please forward your correspondence to:

Editorial Committee, ACIS Plug-In
Fax: 6896 9108
Email: nnoorman@nie.edu.sg

ACIS Plug-In is available online at:
<http://libris.nie.edu.sg/pubn/idxacis.htm>

Email Security

Cordelia Chee, ACIS

Electronic mail is one of the most popular features of the Internet, thanks to the sheer convenience of being able to send a message, whether to one individual or to a thousand, anywhere (or almost anywhere) in the world, within seconds. Unfortunately, as with many technological advances, the problem of misuse then comes to the fore. Misuse and abuses of the email system include:

1. Email spoofing

Email spoofing is the forgery of an email header so that the message appears to have originated from someone or somewhere other than the actual source. Email spoofing can cause serious problems and security risks. For example, a spoof email may purport to be from someone in a position of authority, asking for sensitive data, such as passwords, credit card numbers or other personal information, any of which can be used for a variety of criminal purposes.

Safeguards:

- Do not provide sensitive information via email. If you are unsure of the source of the email, forward it to itsecurity@nie.edu.sg
- Do not transmit classified information using email
- Use cryptographic signatures if necessary

2. Spam & Unsolicited Email

A survey conducted by the Gartner Group indicated that about 90 per cent of email users receive spam or unsolicited email at least once a week. Besides consuming bandwidth and slowing down email systems, spam is a frustrating timewaster, forcing us to sift through and delete mounds of junk mail.

Safeguards:

- Do not forward spam or chain mail
- Do not reply to spam or unsolicited email. Delete it instead.
- Do not subscribe to free "stuff" on the Internet (e.g. newsletters)
- Do not post personal information or corporate information on the Internet (e.g. chat rooms, bulletin boards)

3. Information Leaks

Employees, unaware of IT security, might use email to send out or share classified corporate information. Contents sent via email are in clear text if no encryption is used and can be intercepted and/or modified in transit.

Safeguards:

- Do not transmit classified information using email
- If absolutely necessary, encrypt documents before transmitting them via email

4. Viruses & Worms

Viruses & worms are often embedded in email attachments. Users are generally unaware that they have received a virus until they open the infected attachment. By this time, it is too late. To reduce the risk of virus infections, and of inadvertently triggering or spreading them to other users, install anti-virus software on your personal computer.

Safeguards:

- Install and regularly update your anti-virus software
- Do not open suspicious email attachments
- Watch for and respond to official virus warnings by ACIS Helpdesk



Remember: prevention is better than cure!

A New Search Engine for Web Portals

Win Nwe Ni, LIBRIS and Eric Bonneau, CSC

Over the past years, the LIBRIS web site has evolved to become a full-featured information hub today. The site offers online users information and services ranging from OPAC searches, online databases and forms and floor plans to the latest news and announcements and events pertaining to LIBRIS.

Although constant efforts have been made to ensure that information within the site is well-organised and easily accessible, the increase in online content makes it more difficult for users to find what they are looking for. New tools need to be put in place to ensure that information is easily accessible.

A new search engine for LIBRIS online content

A search engine would index the LIBRIS web pages and allow users to enter keywords in order to display relevant pages. The new engine would complement the existing OPAC search used to find items within the LIBRIS online catalogue.

Linux based search engine

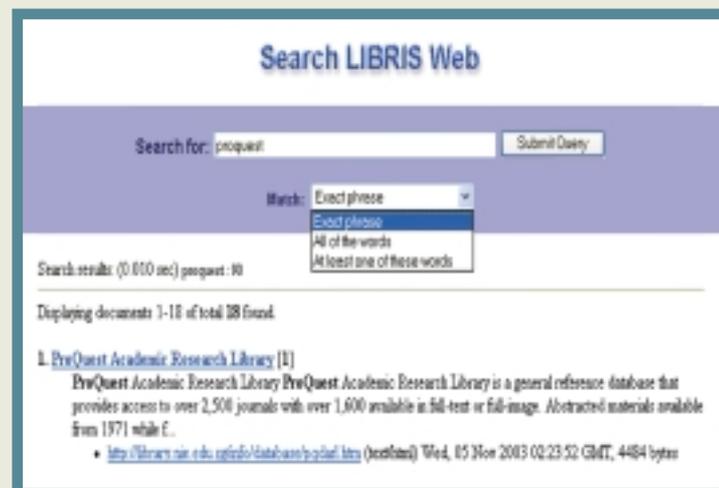
After reviewing a number of search engines on the market, the LIBRIS and CSC team decided to implement an open source solution based on the Linux operating system. The team hoped to limit the cost of setting up a server and therefore a virtual server designed to host the search engine was the preferred choice. For more information on the virtual server, please read the article featured in *ACIS Plug-in Volume 1, Issue No. 4 (October 2002)*.

Search engine features

Open source software, apart from being inexpensive or free of charge, can also provide the functionalities found in more costly commercial packages.

The search engine that was implemented offers three different search methods, and users have the option of choosing the one that most suits their needs. Searches are not case-sensitive and the indexes are rebuilt on demand or based on a defined schedule. The default search method available in the LIBRIS web search engine is the "Exact Phrase". With this method, the search engine will display results that contain at least one occurrence of the exact string of words entered.

First Method – Exact Phrase



Second Method – All of the words

The second method "All of the words" will display results containing at least one occurrence of every single one of the keywords entered.

Third Method – At least one of these words

The last method "At least one of these words" will return results containing at least one of the keywords entered. Not all the keywords need to be present for the result to be displayed.

Ordering the search results

The search engine will select the results based on the search method and then display those results following an algorithm called the weight factor.

For the search engine, a web page is divided into 4 major sections (Description, Keywords, Title and Body). The administrator of the web site decides what sections are the most important and in the case of the LIBRIS web site, more weightage was given to the title of the web documents.

The search results will be presented in order on the screen based on the number of occurrences of the search words and also in which section of the document these search words are found. Search words found in the most important section of a document are given priority.

A search engine as an added feature to your web site

This open source search engine can bring more value to your web site as your users will be able to find information more easily and rapidly. The search engine can also be configured to index selected internal and external web sites.

For more information on the search engine software currently being used on the LIBRIS web site, please visit: <http://search.mnogo.ru/>.

Café at LearningHub@LIBRIS

Yvonne Yin

Welcome to the new Café at LearningHub@LIBRIS!

The LearningHub@LIBRIS was set up last year with the idea of providing an interactive and collaborative environment for our users. To this end, the latest in educational technology and ICT (Information and Communications Technology) facilities were installed, including a touch screen interactive white board and two plasma screens for viewing videos, VCDs, DVDs, etc. Wired and wireless technology enabled students to plug into the campus network to carry out research or group projects at the LearningHub.

However, we had always planned to include that essential feature of the Singapore lifestyle (whether wired or not) – food! After exploring various means of café operation on a self-service basis, ranging from the honour system of payment to coin or cash-operated machines, LIBRIS decided to out-source the service. A tender was called, and in July 2003, the Café at LearningHub began operating.



To attract customers, coupons were given out for a free cup of cappuccino for every cup of coffee purchased. This promotional period lasted till the end of the month. Business has been brisk, with customers averaging about 100+ daily, although traffic is lower during the evenings and on Saturdays.



So, what are the most popular items on the menu? Besides coffee, the operator, MiniYummi, serves tea, fruit juices, cakes, pastries, sandwiches and other snacks. A little survey was conducted amongst staff and students, and of the beverages, the cappuccino came out tops: “Best in town, better than Starbucks,” said one respondent. The sandwiches and muffins were also popular. However, serious work was also carried out at the LearningHub; most of those surveyed said they did use the café for project work and as a meeting point for brainstorming. Some lecturers have also conducted lessons/tutorials at the LearningHub, thus providing a refreshing change for trainee teachers.

And, finally, what other items did respondents wish to see on the menu? There were requests for hot meals, pasta, sweeter café mocha, ice cream, and, believe it or not, French fries!

MiniYummi promises that there are plans afoot to introduce more “trendy” drinks and greater snack variety. Also, if you need a cake for a birthday or other celebratory occasion, you can place an order at the café.

The only reminder from MiniYummi is: please do not “cheop” (hog) seats at the café! Other than that, come, enjoy yourselves at the only legal snacking section in the Library!

Congrats! LIBRIS WIT Wins Silver

Yvonne Yin

Congratulations to the LIBRIS WIT team, PAGES (Providing A Good and Effective Service), which won a silver medal at the National IQC (Innovation and Quality Circle) Carnival held from 18 to 27 August 2003.

This was the second time this year that they were presenting their project, “Reducing time spent in generating book spine labels”, the first time being at the NIE WIT Convention Awards in March. See *ACIS Plug-In*, volume 2, Issue No. 2 (April 2003), for the detailed write-up.

The team members put in a lot of hard work for both presentations, and did well to win a silver award at the national level. However, they are not resting on their laurels—they will be presenting their project a third time!

This will be at the PS21 ExCEL Convention scheduled for November 2003. While the IQC is open to both the public and

From left to right: Selina Chan, Lucy Ng, Chung Siew Cheng, Pauline Ang (team leader), Desmond Leong, Clarice Thu and Eunice Lee
Absent: Siti Fauziah (facilitator), Sean Lee and Rehana Banu



private sectors, the PS21 ExCEL Convention is for WITs teams in the government ministries, including the statutory boards within each ministry.

They will be refining and re-tuning their project, and so it just remains for us to wish them all the best!

Afternote: Congrats to the LIBRIS WIT team again! They have won a silver award at the PS21 ExCEL Convention!

Centre for IT in Education Services

Ast/P Tan Seng Chee, CITE

Introduction

CITE (Centre for IT in Education) has been providing e-Learning and media services to NIE (National Institute of Education) staff since 1999. In view of the rapid changes in educational technologies and their applications in education, we have recently re-examined our strategic directions and workflow. CITE will focus on providing **e-Learning** services and helping NIE staff to enhance their instruction through the use of Information and Communications Technology. In addition to the Blackboard learning management system, we are in the process of installing a video-based online instructional system as well as acquiring new content development tools. We will also continue to provide video recording and production services for major NIE events.

Help Us to Provide A Better Service

To improve the workflow, we have developed an online work request form. You can now request for CITE services simply by filling in your basic work requirements through <http://www.cite.nie.edu.sg/services.htm>. We will follow up with your request within 2 working days. Since we usually have a number of concurrent requests, we will discuss with you to work out a realistic schedule for your project. To avoid disappointment, please send in your request well in advance. Also, the more details you can give in the request form, the less time we need to confirm the work requirements.

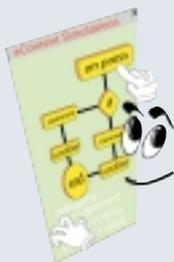
We have also found some repetition of work requests. For example, some academic groups have requested our assistance in recording video footage of real classroom scenes. Such resources will be extremely helpful to all NIE staff. We will help you to share and publish these resources online, so that other staff can access and use them within NIE. With this approach, we will find our resources growing tremendously within a short time.

Our Services

Below is an overview of our services. For details, please refer to <http://www.cite.nie.edu.sg>.

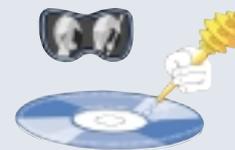
1. Instructional Design Services

We can assist you in the design and development of e-learning content including web-based lessons, simulations, and animated visualisation. We adopt a learn-together principle: you function as the subject matter expert and we provide the design and development services. In this way, you can learn to develop some of these courses yourselves. In addition, our instructional designers can provide e-learning consultancy and technical consultancy for instructional software applications. To see a sample of what we have done for PESS (Physical Education & Sports Science), visit <http://courses.nie.edu.sg/gym2/>.



2. E-Learning Systems Support

NIE has adopted Blackboard® as the basic Learning Management System. A Centra video-conferencing system is also in the pipeline. To help you get started with online courses, CITE has created a lot of user-friendly facilities on the NIE Blackboard® homepage <http://courses.nie.edu.sg>. Staff members are strongly encouraged to use these facilities to create learning modules and to enrol students. Our e-learning support team is also sourcing for applications of emerging technologies in education. For example, we have acquired Impactica that can turn your Powerpoint into Multimedia self-running narrated presentation in Flash format. We are also in the process of getting LearningDirector that allows you to create multimedia tutorials.



3. Video Recording and Production Services

CITE provides technical support to assist you in producing, recording and editing videos for instructional, documentary and publicity programmes. We also help to create digital sound and video effects for video or multimedia applications. If you need to convert your video to another format, you can call CUS (Centre for User Support) at ext 3033. They will be able to provide a fast service for video conversion.



4. Graphics Design and Photography Services

If you need to create 2D/3D graphics or animations, or other forms of image enhancement, our graphics designers and artists will be here to help you. In addition, we will continue to provide photography services for NIE events and for developing instructional materials.



Final Comment

We are living in this IT age, enjoying the excitement and convenience that technology can bring into our lives. We are not advocating the use of IT just because it is there; like you, we want to promote responsible and sensible use of IT to enhance teaching and learning. Let's work together to make that happen!

Learning Objects Competition 2003

Netty Salmiyati Senawi, ECC



To raise awareness of standards-based learning objects, the ECC (E-learning Competency Centre) joined hands with the ITSC (Information Technology Standards Committee) to launch the first-ever nationwide Learning Objects Competition on 4 August 2003.

“We want to encourage the use of e-learning standards here, and learning objects are instances of good usage of these standards. Not only should we ensure that they are technically reusable and interoperable, they must also be pedagogically sound to bring out the educational value expected from these learning objects. After all, learning objects are really about good instructional design practice,” explained Mr. Lim Kin Chew, Executive Manager of the ECC.

Seventy-six teams have registered ninety learning objects to be submitted for the competition. All entries must be uploaded by 26 September 2003 into a repository known as the Gateway to Learning Objects in Singapore, or GLOS in short. GLOS is a repository of reusable learning objects that has been set up so that participants can upload, search and reuse these objects in different learning contexts. Participants will learn to share and reuse digital learning resources for various purposes and adopt the best practices in instructional design.

A panel of well-known e-learning practitioners from tertiary institutions and corporate industry will judge the entries. The judging criteria will be based on factors such as educational value, reusability, creativity and interface design. The general public can also view all the learning objects submitted for the competition and vote for their favourite learning objects from 29 September to 13 October 2003. The public online voting constitutes 10% of

the overall score for the learning object.

Participants are not only recognised for their creativity but can also look forward to winning the first prize of \$2,000, second prize of \$1,000 or third prize of \$500.

Three additional awards for Best Educational Value, Most Innovative, and Best Macromedia Learning Object will be picked from the submissions. Online voting will be conducted through the official competition website at <http://www.ecc.org.sg/loc> and results will be announced at a Prize Award Ceremony during the Learning Objects Conference, 12 November 2003.

About e-Learning Competency Centre (ECC)

The ECC is a non-profit national centre set up with funding from the IDA (Infocomm Development Authority) and the MOE (Ministry of Education) and support from industry. It promotes the use and adoption of international e-learning standards in Singapore with the aim of making Singapore the e-learning standards centre in this part of the world. The ECC is hosted by the NIE (National Institute of Education). For more information, please go to <http://www.ecc.org.sg>.

About Information Technology Standards Committee (ITSC)

The ITSC is an industry-led effort supported by SPRING (Standard, Productivity and Innovation Board) Singapore and IDA. It is a neutral and open platform, which enables the private, public, academic and research sectors to participate in the local infocomm standardisation programme, as well as to represent Singapore in international activities. For more information, please visit the website at <http://www.itsc.org.sg>.

Keep the Team Spirit Going!

Nenny Noorman

For the first time, ACIS staff participated in the Annual NIE Triangle Challenge Staff Relay Run. The cold, drizzly weather did not dampen the determination of the ACIS team to give of their best at the race. Given that the only training they had was the regular walk / jog sessions held as part of the ACIS Health Programme every Wednesday and Friday, the team did not fare too badly, receiving a middle placing. Kudos to the team for a good team effort and sporting attitude!

From Left to Right: Stephen Seow, Cham Chian Moh, Eddie Lim, Tan Lee Wei, Yap Fui Yin, Chong Hock Yong, Ng Kim Chew and Quek Kia Yong



e-Carnival

Nenny Noorman

An e-Carnival will be held on 6 February 2004. In previous IT events, usually only academic staff were involved. Next year, however, the event will involve all staff – both academic and non-academic, as well as trainee teachers. The increased level of involvement is intended to create a more diverse range of activities, complementing the theme (ET)² which stands for ‘Enhancing Teaching, Embracing Technology.’

The major activities planned include projects and exhibitions of IT-related products. Staff and trainees are invited to participate in a competition to showcase their projects and share on how IT has helped them in their instruction or work. Details of the competition have been announced and there will be exciting prizes to be awarded to the best entries in order to recognise the efforts of the staff/trainees in sharing their experiences. In addition, the Staff Portal will be launched during the e-Carnival. Also in the works is a demonstration of Centra, a video-based learning management system which NIE has recently acquired.

The e-Carnival 2004 will indeed be an opportunity for staff and trainees to show off their projects and creative ideas! We are looking forward to your entries!!!

ACIS Baywatch!

Nenny Noorman

No, no, no, there were no bikinis involved in this exercise. As part of its teambuilding efforts, the ACIS (Academic Computing and Information Services) Teambuilding Committee organised ACIS Baywatch - an activity which incorporated the spirit of working together as a team while challenging staff to maximal efficiency in the limited time period given to them.

What was ACIS Baywatch all about? After a few words by Philip Wong, staff were organised into groups of about ten members each, and asked to appoint a group leader. The five teams formed were all raring to have a go at the games. In the first game, teams were asked to count from 1 to 100, the catch being that they had to say “buzz” whenever they hit a multiple of 7 or any number with the digit 7 in it.

Of course, in their excitement to complete the count, some staff inadvertently uttered the ‘forbidden’ numbers, and the team had to count from 1 all over again. It certainly required a lot of patience from the teammates and teams exercised greater care after having to start again when one of their members made a mistake. The team led by Lee Hon Wai finished first and so bagged the most number of points.

The teams then used the points gained to purchase items for the construction of a boat that could make it across the swimming pool. As the team members brainstormed and chipped in to build the boat, judges A/P Philip Wong, Mr Tan Hoon Chiang and Ast/P Tan Seng Chee made their assessments.

The teams were given a limited time to plan and build their boats. The committee members had fun observing the frenzied boat-

building that went on! As creativity and teamwork were two awards awaiting the teams, each team displayed lots of imagination in the construction and decoration of their boats and co-operated very well with one another. As a penalty was imposed on unused items, the teams made sure that they used everything.



Finally, it was time for the most exciting part of the exercise – the boat race. The teams placed their boats at the edge of the pool, and the race was started. The staff had plenty of fun as they observed their boats sailing across the pool – some moved fast, while others faced problems getting started at all! It was clear from the shouting and cheering throughout that the staff were enjoying this part of the teambuilding exercise tremendously. In the end, the race was won

by the team led by Quek Kia Yong. The Most Creative award was won by Lee Hon Wai’s team and the Best Teamwork title went to Eric Bonneau’s team.

The ACIS Teambuilding Committee would like to thank Heads, PESS (Physical Education and Sports Science) and DED (Development and Estate Department) for their kind approval to use the pool and canteen areas respectively. Special thanks to all ACIS staff for making the programme such a memorable and enjoyable event in ACIS’ calendar.