



## HKCS New Office At Shun Tak Centre

The Council is pleased to announce that a new Hong Kong Computer Society office will be officially opened on 18 January 2001. The new office location is:

Room 1915  
China Merchants Tower  
Shun Tak Centre  
168 Connaught Road Central  
Hong Kong

While all telephone and fax number remain the same:

Tel: (852) 2834-2228  
Fax: (852) 2834-3003  
E-mail: [hkcs@hkcs.org.hk](mailto:hkcs@hkcs.org.hk)  
URL: <http://www.hkcs.org.hk>

The existing office will continue operation as a support office.



## Hong Kong Computer Society Council:

Mr. Daniel Lai, Dr. Louis Ma, Mr. Sunny Lee, Ms. Julia Wong,  
Mr. Dennis Pang, Mr. H.P. Sune, Mr. Bill Fok, Ms. Evon Ying,  
Mr. Clement Tong, Mr. S.W. Cheung, Mr. John Li, Prof. K.H. Lee,  
Ms. Annie Lok, Mr. Paul Kwan, Mr. Joseph Leung

## Strong Viewership for IT Files II

**IT Files II**, the long-awaited 12-series documentary has received an overwhelming support from viewers ever since it was first aired in mid-December 2000. Over 1.3 million people have watched the programme. The five series which have been aired so far are "Future Home", "Wireless Society", "Movie Industry", "I.T. in Education" and "Entertainment Industry (Game)". Jointly produced by the Hong Kong Computer Society and Radio Television Hong Kong with funding from the Innovation and Technology Fund, this informative documentary has achieved a viewership rate of 22 points on average, with "Wireless Society" scoring the highest rating of 23 points.

The success of this TV series is a result of amazing teamwork. Special thanks to the Organizing Committee chaired by Mr. Raymond Cheng with Mr. Alan Chan, Mr. Joseph Leung, Mr. Raymond Yu and Mr James Cheung serving as members. Our thanks also to Professor Roland Chin, Head of the Department of Computer Science of the University of Science and Technology, and to Mrs. Agnes Mak, Fellow of HKCS for serving as advisors to the Committee. Their invaluable assistance to the production of the documentary has ensured that the programme is accurate, informative and entertaining.

In order to attract even more viewers, we have commissioned the Journalism and Media Studies Centre of the University of Hong Kong to conduct a survey on the "e-life" of people in Hong Kong. The survey results will be announced in late January.

Don't miss the remaining exciting series which will be aired every Tuesday on TVB Jade at 7:00 p.m. The following is the schedule:

Date	Topic
16/01/2001	Security
23/01/2001	Future Office
30/01/2001	E-commerce
06/02/2001	Cyber Campus
13/02/2001	IT Application in Media Science
20/02/2001	Equal Opportunity
27/02/2001	Digital Divide - The Challenge Ahead

The return on Cable TV will begin on 7 March this year on News Channel 1. It will be broadcast every Wednesday at 8:30 pm and repeated on Thursday at 2:00 am and 12:00 noon. VCDs will also be made available once the broadcast of the whole series on TVB is completed.

To learn more about the documentary, please visit [www.itfiles.org](http://www.itfiles.org)

## 3rd IT Excellence Awards Presentation Ceremony



At the presentation ceremony of the 3rd IT Excellence Awards. (Front row starting from the right): Mr. Daniel Lai, President of HKCS; Mrs. Carrie Yau, Secretary for Information Technology and Broadcasting - HKSAR; Prof. Arthur Li, Chairman of the Panel of Judges; Mrs. Agnes Mak, Chairman of Organizing Committee. (Back row): Winners of the 3rd IT Excellence Awards.

The winners of the 3rd IT Excellence Awards were announced on 14 December 2000 at Hong Kong Convention and Exhibition Centre at a presentation ceremony officiated by Mrs Carrie Yau, Secretary for Information Technology and Broadcasting.

Mr. Daniel Lai, President of Hong Kong Computer Society, commended the winners for their achievements which so well illustrated Hong Kong's rapidly maturing IT culture.

This year's Awards were judged in two categories - Applications and Products. The Panel of Judges was chaired by Prof. Arthur Li, Vice-Chancellor of the Chinese University of Hong Kong. Among the key factors the judges were asked to consider were innovation and originality, functionality, cost performance, user and customer benefits, and project management. The judges have also focused on the societal impact, market performance and market potential of the entries.

In announcing the awards winners, Mrs Agnes Mak, Chairman of the Organising Committee, said that the 2000 edition of the IT Excellence Awards showed yet again that Hong Kong's IT knowledge base and its spirit of enterprise together have a formidable potential for shaping a better society and for showing the rest of the world what Hong Kong can achieve.

The Gold Award for Application went to Pacific Century CyberWorks for its Dynamic Work Force Management System which is a scalable e-service system supporting more than 2,000 users in the field. The judges commended PCCW for their skill in motivating their staff to adopt new practices.

The Gold Award for Product went to Qcode Information Technology Limited for its Q9 Character Input System, a multi-platform and multilingual input system which has very wide applications. The judges stated that "this innovative product has significant impact on the use of Chinese in today's information world."

The IT Excellence Awards Application Silver Award went to Hongkong International Terminals for its Productivity Plus Programme (3P). The programme smoothly integrates a range of disparate systems and technologies and has resulted in clear benefits to clients and suppliers as well as to transport operators.

The Survey and Mapping Office of Lands Department's Computerised Land Information System (CLIS) won the Application Bronze Award. The system was fully implemented in 1996 to provide a world class Geographic Information System that supports surveys, mapping and land information activities.

BigboXX.com website + my.sap.com ERP submitted by bigboXX Limited received a Certificate of Merit. Using 64-bit technology, and based on COM/DCOM open technology that runs on multiple platforms, the system delivers high performance and scalability plus the flexibility needed in a changing business landscape.

In the Product category, SmartCaller by InfoTalk SmartCaller Limited received the Silver Award. It is the world's first Chinese voice portal. Through any type of telephones, callers can enter immediately and easily into a direct and interactive voice dialogue with a voice portal.

Interactive MBA submitted by the Faculty of Business of City University of Hong Kong was awarded the Certificate of Merit in the Product Category. The "iMBA" is the first academic programme in Hong Kong (and one of the first in the world) to be delivered broadband via the Internet.

The IT Excellence Awards is a professional initiative of the Hong Kong Computer Society and were devised in order to promote a greater use of IT, to help strengthen an IT usage culture in Hong Kong's business and daily life, and to encourage local software development.

The Awards are funded by the Innovation and Technology Fund. It is supported by the Information Technology and Broadcasting Bureau and the Innovation and Technology Commission of the Government of the Hong Kong SAR. They are organised in close partnership with the Hong Kong Industrial Technology Centre Corporation, the Hong Kong Information Technology Federation, the Hong Kong Productivity Council, the Hong Kong Trade Development Council, Information and Technology Services Department and Office of the Privacy Commissioner for Personal Data. The Honorary Auditor is PricewaterhouseCoopers.

## Hong Kong Team represented by Chinese University came third in the SERACC 2000 micro-mouse competition

The four-student Chinese University team (Gerry Lo Wing Hang, Ben Chan Chi Bun, John Lau Chi Fai and Jack Cheng Chee Kit) set off for Manila on the 26th November 2000 for the annual SERACC micro-mouse competition. This is the second year, the Hong Kong Computer Society had entered a micro mouse team to compete in the SERACC micro-mouse competition. We were put up in Tesda, a technology training camp for local girls, by the Philippines host. It was a hard act to follow the local custom to get up at 5:30 the next day (27th



Hong Kong Team represented by Chinese University won the 3rd prize in the SEARCC 2000 Micro-mouse Competition..

November). This was necessary because the pace in the Philippines was slower and it took time to assemble a very large party.

We arrived at the Philippines Polytechnic University for the practice session at around 8:30. We quickly settled in, laid out our gears and started tuning our mouse for the maze. Not before long, we faced several problems. The first was whether our mouse could handle the slippery surface of the maze effectively. The slippery surface would make the turns less precise and the mouse would crash easily. The second was the lighting problem because reflection would confuse the sensors. This would effectively blind our mouse and the consequence was not difficult to imagine. The third problem was the level of competitions. This was our second attempt at this competition. We had learned from the previous team that it wasn't easy to make the micro-mouse to navigate the unknown maze on unknown surface, find the centre, go back to the starting point and then dash to the centre in the shortest time. Many teams including our previous team couldn't even finish the course.

Our team worked furiously through out while I scouted the competitors' camps. The host team, Philippines, looked very relax and seemed to be hiding some secret weapons. The reigning champignons, Singapore, looked very relax too while another hot favourite, Thailand, worked as hard as our team. We had two micro mice, called CU Probe 1 and CU Probe 2. They were named Probes because we were venturing into unknown. Our team A (Probe 1) looked confidence and tried all sorts of tricks. But our team B (Probe 2) seemed to have a hardware problem. The mouse's sensors were not responding and kept crashing. We had already changed the banks of sensors twice and still could not fix the faults. Time was getting late and we had to packed, although reluctantly, and returned to the hostel.

We settled into our room right after dinner and continued to prepare for the big day tomorrow. We ripped up the mattress and turned a bed into a maze. Team A had now developed a few tricks of C-turns, U-turns and double Z-turns. We wetted the wheels to mark the turning paths. Data was collected and parameters were adjusted after some furious number crunching. The team B was still battling with the hardware problem. As time was running out, I ordered a swap of the

main computer with the spare mouse. Ah, I have forgotten to tell you that we had carried three mice for the competition just in case of trouble. However, the built of the spare mouse was different and therefore it could not run using the software for the Probe 1 & 2. It was used as spare parts only. After some fiddling, our Probe 2 seemed to have recovered and started doing the tricks we programmed. Although it was now 2 O'clock in the morning, the team was full of confidence and we were now discussing how we should win the competition tomorrow. Our priority was to record a complete run, while the ranking was secondary. Our plan was simple; we should use a very conservative program with no tricks for Probe 2 to record a good run. The Probe 1's tactic would be based on the results of the Probe 2. If Probe 2 could score a good run, Probe 1 should go all the way out to attack using all the tricks developed. If Probe 2 failed, our level of risks depends on the scores of the other teams.

The team woke up at 6:00 in the morning (28 November, 2000) and was beaming with confidence when we left for the competition venue in the Westin Philippines Plaza Hotel. We were very disappointed to find out the maze wasn't ready and could not have the last trials. Eventually the maze had arrived and all the teams wasted no time to have the final trial runs. Suddenly, we discovered our Probe 2 had developed the same hardware problem again. Our team was sweating and wonder why Probe 2 could not travel.

The competition was opened officially with all the fanfares. SEARCC (South Eastern Asian Region Computer Confederation) had held this competition for ten years. The chairman explained what the micro mouse competition was about. It was a game to compete on hardware and software designs. The micro mouse was a mini robot which must be clever enough to negotiate an unknown maze to seek out the centre without external assistance. It would then return to the starting point to make a quick run to the centre. To score good marks, a mouse must be clever, reliable and have good engineering design to navigate the tricky turns. The final score was based on the target seek time and the actual run time.

The race maze has now completed. We felt we would have a good chance because there were fewer z-turns which would favour the smaller nippy mice. Ours were the sort of big tanks with sheer power. The host team, Philippines A, started first and failed to make a safe trip to the centre after locating the centre. Then Singapore A made a good run to the centre and had also made a fast run back. Then, it was our Probe 2's turn. Probe 2 had to retire because of the persisting hardware problem and kept crashing. Thailand wasn't doing any better either and had to retire early too.

We were now pondering what should our tactic be. We have a good chance finishing within the top three if we tried. But if we were too greedy, we might even fail to score any points. In the end, we took the middle of the road option. We would enter the mouse with fast straight-line dash without clever C-turn manoeuvres. Our hearts nearly felt out when Probe 1 left the starting point. Our team had developed a very good algorithm and it did not take the mouse long to find the centre and found an even better path on its way back to the starting point. Our mouse made a very fast run to the centre following the best path and completed an even faster second run. We then had to settle back and had a few nail biting moments.



The Singapore B team, the reigning champion, was a Porsche and was too fast for anybody. Then came the final team, the unknown host team B. It looked nippy and could also do a few tricks. Minutes felt like hours as the Philippines B surveying the maze. Our heartbeats accelerate every time it passed through the opening to the shortest path. For some unknown reasons, it did not venture into the fast path and was happy attacking from the outer path. When the fast run started, we realised its path wasn't good enough. No matter how fast it ran, it was not going to beat us. We would be the second runner up and could even get a higher ranking if we can beat the Singapore A. In the end, we were beaten into the third place by 0.12 second.

Singapore B had retained its title with an unbeatable score of 12.88s. The runner up was Singapore A with a score of 17.01s and we had recorded a time of 17.13s. Of course, we were delighted at getting a prize at the second attempt. We came from no way and had beaten the old hands like Thailand and the Philippines. We vowed to come back when the local TV station interviewed us. We had already started working on the better mouse design even before we packed. On the whole, we have learned our hardware was inadequate and our software had saved the day. With better hardware and better sensors, we should aim for better rankings. Our team consists of year 1 students and should be able to help us to pass on their experience.

*By Prof. K.H. Lee*

## HKCS Information Security Special Interest Group (IS-SIG)

HKCS IS-SIG organized a half-day personal security seminar on 9 December 2000. It was supported by Hong Kong Productivity Council and Office of the Privacy Commissioner of for Personal Data, HKSAR (PCO) and sponsored by RSA Security, Computer Associates, F-Secure and Symantec. The seminar was a huge success and over 400 attendees were recorded.

Hon. Sin Chung Kai, the Legislative Council member representing the IT sector, gave the first opening speech. He briefed the audience of the progress in amending the Computer Crime Ordinance. The amendments will clarify the definitions of computer and impose a more severe punishment on offenders. The second opening speech by Mr. Tony Lam, Deputy Commissioner, PCO was about the personal privacy problems and the importance in ensuring its confidentiality.

Ms. Sanny Kau of RSA Security Corporate then presented a topic on Web browser and Cafe Internet security. She described that the security issues in Internet and their countermeasures. These include a good PKI product that can authenticate email messages and their senders. Mr. Vincent Tam of Computer Associates talked about virus prevention measures. He pointed out that virus scanner must be frequently updated and critical data backup.

Mr. Chester Soong, the Chairman of ISP Association gave an interesting talk about email security. He explained various vulnerabilities in emailing in Internet. These include the possibilities in receiving virus codes and Trojan programs attached to email. He advised the audience of not downloading software from unknown web sites.

Mr. Roger Chung from Symantec Hong Kong presented a firewall product that can ensure network security and virus protection. He gave the address of a web site which Internet users could visit and run security checks on their connected computers. At the end, Ms Syson Wong of F-Secure introduced a well-known virus scanner and explained some of its advanced virus detection and cleaning features.

At the end of the seminar, six software packages from Symantec and F-Secure were lucky drawn. Attendees were also given free PC-Weekly Magazines, Jockey Club mouse pads, PCO security pamphlets and many informative materials. Excellent feedback on the presented topics and HKCS working team was received.

## Welcome Party & Christmas Party 2000

To extend a warm welcome to our new members and celebrate this special holiday season with our members, a party was hosted by HKCS at The Empire Hotel Hong Kong on 20 December 2000. Over seventy members and guests attended the party and every attendee brought a Christmas gift to have a gift exchange. The highlight of the party was the introduction of new members by Dr. Louis Ma, HKCS Vice President (Membership). The party has given the new, old and Council Members as well as guests an opportunity to meet and network with each other under a relaxed atmosphere.



HKCS Welcome Party & Christmas Party on 20 December 2000.



HKCS new and Council members at the Welcome Party & Christmas Party 2000



**In this issue:**

**Editor: James Wilson**

NOTES ON HKSPIN JANUARY SPEAKER'S MEETING Page 5

SOFTWARE TESTING IN THE INTERNET AGE: PART 2 Page 5-7

EVENTS CALENDAR Page 8

### Notes on HKSPIN January Speaker's Meeting

On January 11, 2000, Dr. John Horch, a well-known speaker and lecturer on the topic of Software Quality Assurance, delivered a speech in the HKSPIN Speaker's meeting titled 'The Value of Personal Certification'

Dr. John Horch started the speech by providing a background of the CQA (Certified Quality Analyst), an individual certification programme organized by the Quality Assurance Institute (QAI) of USA. He then continued to talk about other certifications available, including CSTE (Certified Software Test Engineer), CQE (Certified Quality Engineer), and CISA (Certified Information System Auditor). Dr. Horch then discussed various certification programme available for organizations, including ISO 9001 and SEI/CMM. All these certifications indicate that the individual or organization has achieved a certain level of professionalism. However, Dr. Horch questioned whether it is worthwhile to obtain all these certifications since organization there is nothing changed after the certification. The certification may not bring new business, cannot guarantee a promotion, and those certified need to get a re-certification or certification maintenance on the certificate every year.

Dr. Horch explained that getting a certification is only the beginning of the journey to quality improvement, demonstrating that the individual or organization has reached a certain level of capability. The more important thing for certification is to demonstrate the capability to improve continuously, beyond the level required achieving certification. The certification provides the initiative and the basis for further advancement, and hopefully, the improvement this time will provide benefits for the organization or help the continual growth of the individual.

### Software Testing in the Internet Age: part 2

*Len Di Magglo*

(article continued from the October 2000 HKSPIN newsletter)

#### **The Response**

How do you deal with this type of brave new world if it's your responsibility to assure the quality of the software? You must do the following:

#### **Remember that Plan is Also a Verb**

You'll never have all the time or resources you'll want to perform testing. You will always have to maximize the effectiveness and the efficiency of your testing. You have to understand the technology and the product, develop an organized approach, learn from mistakes (your own and others') and be able to quickly adjust when designs must change or when things go wrong. Not "if", but "when" they go wrong. Don't worry, some things WILL go wrong. How do you do this? You perform some basic algebra. You quantify tasks, goals, and results to reduce the number of variables in the equation. The key is to make things quantifiable so that they can be measured. You don't have time to deal with vague or subjective project requirements. You have to define what you want the product to do and work toward those requirements. You don't have time for someone to go off on a tangent. You need to quantify tests, and their expected and actual results in a test plan and test report and get the information to the project team. You won't be able to perform a thorough test by poking at the product "here and there." The model that software development organizations will follow in the future will demand flexible designs and an evolutionary development cycle. Testing must adjust as the product evolves.

My test department keeps all test plans, test logs, bug reports, and test tools on the internal Web server. Test plans are written using the following format:			
1.1 Category: System Build			
Test #	Heading:	Description	Notes
1.1.1	Objective:	Verify that the supplied sources correspond to the release note.	
	Test Steps:	Compute signature of supplied source files, compare with file of expected signatures.	
	Script:	Test001	
	Expected Results:	Signatures should match as documented in spec. AAAA.	
	Actual Results:	FAIL	
	Run by whom/when:	jsmith, 01/01/97	
	Bugs:	12345	
1.1.2	Objective:	Verify that the software correctly builds	
	Test Steps:	Execute the supplied build script, compare file signatures	
	Script:	Test001	
	Expected Results:	Signatures should match as documented in spec. AAAA.	
	Actual Results:	PASS	
	Run by whom/when:	jsmith, 01/01/97	
	Bugs:		

Figure 1 - Test Plan Fragment

### Maintain a Collaborative Relationship with Development

In the past, the conventional wisdom has generally called for the test group to be completely separated from its development counterpart. What's the rationale for this strict separation of the development and test groups? The classical answer is that (1) the skill sets are so different that the same engineers cannot perform both development and test tasks and (2) it's very difficult for people to be critical of and objective about their own work. Unfortunately, this separation can often lead to developers delivering buggy and incomplete code for testing ("throwing it over the wall"). Some developers may unconsciously not check their own work and simply rely on the test group to ensure the quality of the software. This is a fallacy. It's possible to locate and remove bugs by testing. It's not possible to "test in" quality or an effective design. A far worse problem is that the developers may lose their sense of ownership of and responsibility for the quality of the product.

The best results are achieved when distinct development and test groups exist, but are coupled together throughout the entire life of a project. The two teams should share information and tools during the entire project. Some time ago, I saw the benefits of sharing tools when our test group was able to complete a tool that verified contents of binary data files used to store customer billing information. We

used these tools in our testing, but also gave copies of the tools to the development team to assist them in debugging their work. When should the test department become involved in the project? From the very beginning. Bug detection is performed after the code is written. By this time, resolving the bug can be expensive as code must be changed, rebuilt, and retested. Bug prevention, however, is much cheaper and is performed as soon as the design is started.

### Be Your Own Ongoing Beta Test

One of the best things you can do to improve the effectiveness of your testing is to use your own products. In my test department, we do this for several products. For example, our internal Web servers make use of our Web-hosting products and our desktop systems all access the Internet through our firewall product. By using our own products everyday, we get a better appreciation for the customer's point of view, find bugs that might be missed in a structured test and only appear after prolonged (and random) use. In addition, using our own products enables us to debug our internal product support infrastructure.

### Always Test for Security

Be afraid. Be very afraid. There are bad people roaming the Internet. Security must be built into your products, and the platforms on which they run. The most important aspect in testing the security of an Internet product or service, however, is not the mechanics of testing for security holes,

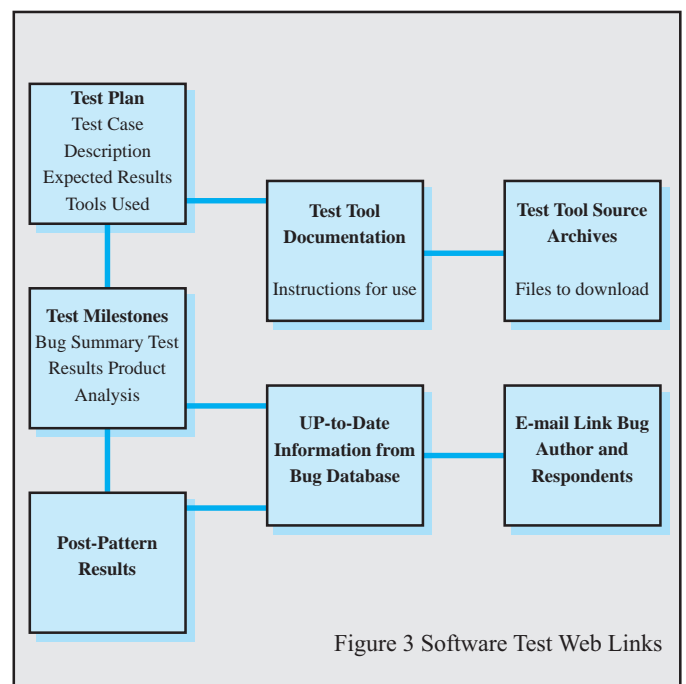


Figure 3 Software Test Web Links

it is in the development of an attitude about security. Some people are squeamish about Internet security. They react to news stories about Internet break-ins by becoming paralyzed with fear and by wishing that their problems would just go away. They won't. As the use of the Internet increases, especially the use of the Internet for electronic commerce, the number of pirates on the Internet will also increase. Just like the net, security problems are here to stay. You will have to deal with them.

How do you do this? You cannot safeguard your products on a one-shot basis. It's an ongoing effort. You make security a daily part of your development and test environment. The security you build into your products must evolve in reaction to new threats, just as they must evolve in response to new technological advances. Where do you find out about Internet and Web related security alerts? Right on the Internet and Web. In addition to there being bad people on the net, there are some good people out there too. In 1988, a computer virus named "worm" caused major Internet network outages. In response to this incident, an emergency response team was formed by the Defense Advanced Research Projects Agency (DARPA). Out of this team, the Computer Emergency Response Team (CERTSM), now called the CERT Coordination Center [3] grew. The CERT Coordination Center issues advisories on potential Internet security threats. For example, if a security hole is found in a specific program (such as the Unix sendmail program), they will investigate, document the risks, and make recommendations as to how the risks can be avoided. You can even subscribe to advisory e-mail lists so that you'll automatically be kept informed as new holes are found and filled. You must also incorporate the latest security tools into your testing. You should always test your systems for potential security "holes" by using security scanner programs such as SATAN or the Internet Security Scanner™ (ISS) and by staying up to date with the latest security information.

### **Control the Test Environment**

You need to quantify the test environment to make sure you are running meaningful tests. Inter-product compatibility is extremely important and, as each company continues to produce new versions of their products at a faster rate, increasingly difficult to verify. What version of HTML are you depending on in your application? Can the newest version of Netscape Navigator™ and Microsoft Explorer™ deal with your screens? Are you using SSL? Which version? Are you using the Java™ AWT (Abstract Windowing Tool-Kit)? Do the screens look the same on a MAC or PC? They might not![4] These are all questions you have to ask yourself.

Included in the test environment are the people performing the testing. It's often the case that management will attempt to solve a problem by "throwing bodies" at it. Tasks that can be broken down into pieces and performed by people with no communication between them can be done quicker by adding staff. Testing software, especially complex software, however not only requires extensive communication between people (the more people, the more coordination is needed), it also requires people to be trained before they can make any contribution to the test effort[5].

And, don't forget to control management's efforts to get personally involved! Frequently when a last minute bug (or bugs) is delaying a project, higher and higher levels of management start noticing the project and start trying to help. All too often, this involvement results in test engineers being compelled to write status reports and attend frequent (even daily) status meetings. Maintaining a test log on a Web server (see "Document or Die" below) is a good way to keep everyone informed as to test progress, without having to spend all your time in meetings. I recently had to deal with the "case of the helpful development manager." We were nearing the end of a project, time was very short, but we had a large number of tests that had never been run. Enter the helpful development manager. He appeared at my office door and announced, "I found someone to help you out. Me!" His heart was in the right place, but the amount of time I had to spend training, directing, and correcting his work ended up looking like a test case for proving Brooks' law that "Adding manpower to a late software project makes it later." [6].

### **Document or Die, On the Web(?)**

To most engineers (development and test engineers), writing code is a joy. To them, however, writing documentation is a form of penance to be avoided at all costs. What makes this penance even more grueling is that, in order for the documents to be made complete and correct, they must be reviewed. The review process brings with it the necessity of going into the copying and distribution business. You don't have the time for this. Unfortunately, without a plan to quantify the tests, and test results and bug reports to quantify the outcome of the tests, you'll never know what you've done, or what you've yet to accomplish. This is especially troublesome with the short development/test schedules that exist today. Fortunately, a little technology can go a long way toward making this part of your life easier. It can also save you time. A Web server of your very own gets you out of the distribution business by providing a centralized (and platform independent) document archive. Someone asks "Can you make me a copy of that?" Answer them with "Help yourself. Here's the URL."

### Conclusion

When you work in cement, steel, silicon, or other physical media, your actions are limited by the characteristics of the media. In contrast, software is a logical, rather than physical, medium. In software, the primary limits are your own skills and imagination.

The Internet and World Wide Web have opened a staggering number of previously unimaginable opportunities for new product development while at the same time have started to eliminate physical restrictions on product distribution.

These factors, coupled with increasingly intense competition, will require a change to the existing static model of product development and result in more frequent product releases. In order to deal with this new product development model, software test organizations must adapt to meet the model. The rapid changes in software development and test practices required by the Internet and World Wide Web will present difficulties, but will also provide development and test engineers with one of the true joys of working at the forward edge of human imagination and invention, that of discovery.

### Events Calendar

Date	Name of Event	Location	Contact
February 12-16, 2001	Software Management 2001 Conference and Applications of Software Measurement 2001 Conference	San Diego, California	<a href="http://www.sqe.com/sm">http://www.sqe.com/sm</a>
February 19-21 2001	14th Conference on Software Engineering Education & Training	Charlotte, NC, USA	<a href="http://www.lrgl.uqam.ca/cseet2001">http://www.lrgl.uqam.ca/cseet2001</a>
February 19-23, 2001	The SEPG Conference in India 2001	New Delhi, India	<a href="http://www.qaiindia.com/">http://www.qaiindia.com/</a>
February 19-23, 2001	The International Software Test Professionals Week	The Hyatt Hotel River Walk, San Antonio, Texas	<a href="http://www.testinginstitute.com">http://www.testinginstitute.com</a>
February 22-25, 2001	Hong Kong Information Infrastructure Expo & Conference	Hong Kong Convention and Exhibition Centre	<a href="http://hkiexpo.tdc.org.hk/">http://hkiexpo.tdc.org.hk/</a>
March 12-15, 2001	13th Software Engineering Process Group Conference (SEPG 2001)	New Orleans Marriott New Orleans, Louisiana	<a href="http://www.sei.cmu.edu/products/events/sep/">http://www.sei.cmu.edu/products/events/sep/</a>
March 22-28 2001	CeBIT 2001 - World Business Fair for Office Automation, Information Technology and Telecommunications	Hannover, Germany	<a href="http://www.cebit.de/">http://www.cebit.de/</a>
April 2-6, 2001	International Conference on Practical Software Quality Techniques and International Conference on Practical Software Testing Techniques	Orlando, FL	<a href="http://www.psqtconference.com">http://www.psqtconference.com</a>
April 17-19 2001	Sixth International Conference on ISO 9000 & TQM	Ayr, Scotland	<a href="http://www.hkbu.edu.hk/~samho/icit.htm">http://www.hkbu.edu.hk/~samho/icit.htm</a>
April 23-27 2001	QAI's International IT Quality Conference	Orlando, Florida	<a href="http://www.qaiusa.com/">http://www.qaiusa.com/</a>
May 29 - June 1, 2001	International Internet & Software Quality Week 2001	San Francisco, California USA	<a href="http://www.soft.com/QualWeek/QW2001/">http://www.soft.com/QualWeek/QW2001/</a>
June 11-14 2001	European SEPG Conference 2001	Amsterdam	<a href="http://www.espi.org">http://www.espi.org</a>
October 15-19, 2001	21st Annual International Software Testing Conference	Orlando, Florida	<a href="http://www.qaiusa.com/">http://www.qaiusa.com/</a>



Hong Kong Software Process Improvement Network  
A special interest group of HKCS

This newsletter is published by the Publications Committee of the Hong Kong Computer Society (Editor: Paul Kwan)

**Hong Kong Computer Society**

Room 1915, China Merchants Tower, Shun Tak Centre, 168 Connaught Road Central, Hong Kong  
Tel: (852) 2834 2228 • Fax: (852) 2834 3003 • Email: [hkcs@hkcs.org.hk](mailto:hkcs@hkcs.org.hk) • URL: <http://www.hkcs.org.hk/>

© Hong Kong Computer Society, 2001

