



**The 5th International Joint
Conference on Computer Science and
Software Engineering 2008**

May 7-9, 2008

Department of Computing

Faculty of Science

Silpakorn University, THAILAND

A 3D graphic consisting of several overlapping, semi-transparent rectangular blocks in shades of light blue and grey, arranged in a perspective view. The blocks are positioned at the bottom of the page, behind the text.

**Program
Schedules**

May 7th, 2008 – Special Sessions Day

Time		Special Session Programs
8:00	9:00	Registration at Pailin Room A (1st Floor)
9:00	10:00	Special Session I : Tutorial on Computational Algorithms for Bioinformatics for Beginners <i>Prof. Dr. Chidchanok Lursinsap, Advanced Virtual Intelligent Computing (AVIC) Center, Chulalongkorn University, Thailand</i>
10:00	11:00	Special Session II : Minimizing the Energy Consumption in Large Cluster Systems Using Resources Sufficiency Based Scheduling Algorithm <i>Assist Prof. Dr. Putchong Uthayopas, Kasetsart University, Thailand</i>
11:00	12:30	Special Session III : Seeking Certainty – Agile Development Methods in Software Projects <i>Roy Morien, Curtin University, Perth, Western Australia</i>
12:30	13:30	Lunch at Pailin Room B (1st Floor)
13:30	14:30	Special Session IV : Economy of Scale in Thailand Open Source <i>Dr. Virach Sornlertlamvanich and Sineenat Tienkouw, NECTEC, Thailand</i>
14:30	16:00	Special Session V : Institutional Repository for Preserving Scholarly Digital Assets <i>Jayan C Kurian, Nanyang Technological University, Singapore</i>
17:00	21:00	Shopping and Dinner at The Bridge Over the River Kwai (Relax on Your Own)

Special Sessions Day Abstract

Special Session I : May 7, 2008 (09.00 – 10.00)

Tutorial on Computational Algorithms for Bioinformatics for Beginners

Abstract

Some basic computational concepts used in Bioinformatics are introduced. This tutorial does not aim to explain all existing computational concepts and problems. Due to the limited number of pages, only those most studied problems and concepts are mentioned. The material in this paper is suitable for anyone who is interested in the computational concepts behind those currently existing bioinformatics programs. However, the readers should have some basic background in biology and mathematics.



Prof. Dr. Chidchanok Lursinsap

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Special Session II : May 7, 2008 (10.00 – 11.00)

Minimizing the Energy Consumption in Large Cluster Systems Using Resources Sufficiency Based Scheduling Algorithm

Abstract

In this paper, a new dynamic provisioning algorithm called Resources Sufficiency based Scheduling Algorithm is presented. This algorithm can be effectively used to save energy for large scale cluster. The approach is defining a guaranteed quality of service with users. Then, trying to minimize number of active machine by tracking the computing demand dynamically, then varying the available computing power close to the demand by controlling the state of machine from active, idle, power save.

From the experimental evaluation, it has been show that 9-14 percent of energy consumption can be reduced in 200 nodes cluster. In addition, even adding some guaranteed job (or SLA) into the system, some level of energy can still be save while maintaining the SLA and QOS with users.

Special Session III : May 7, 2008 (11.00 – 12.30)

Seeking Certainty – Agile Development Methods in Software Projects

About the presenter

Mr Roy Morien is an honorary Research Fellow of the DEBI Institute Curtin University of Technology, an independent consultant and researcher, and a sometime Visiting IS Specialist at Naresuan University in Phitsanulok, Thailand. He has an Institute Of Technology degree in corporate law and administration and a Bachelor Degree in Accounting, from the Western Australian Institute of Technology (now Curtin University of Technology), a PostGraduate Diploma in Information Systems, and a Master of Commerce(Information Systems) also from Curtin University of Technology. His industry experience dates from 1976, and his teaching and research interests since 1985 have been in software prototyping, Rapid Application Development Methods, and latterly Agile Development Methods. He has presented seminars at numerous universities in Thailand, on Agile Development Methods, and has published at international conferences in Australia and the USA on Agile Methods and Agile Project Management. Ro has also published a textbook on Programming and Software Engineering, and has journal papers published on Business Process Engineering, Database Pedagogy and IS Education.



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Special Session IV : May 7, 2008 (13.30 – 14.30)

Economy of Scale in Thailand Open Source

Abstract

Basic definition of open source software is a kind of software which is redistributable and its source code is free for everyone to run, to study, to improve, and to redistribute. Although the open source software has such a sense of freedom, open source software is able to be traded in markets. The economics of open source software is concerned. This paper makes a preliminary discussion of the economics of scale in Thailand open source software. We propose a concept and analyze the key factors which can explain the economics of scale in open source software in Thailand in the past few years

Special Session V : May 7, 2008 (14.30 – 16.00)

Institutional Repository for Preserving Scholarly Digital Assets

Abstract

Institutional repositories play a significant role in scholarly communication by means of long term preservation and dissemination in-addition to permanent storage facilities. The open and interoperable nature of institutional repositories has received widespread considerations from the stakeholders of academic and research institutions world-wide. In addition to digital content preservation and dissemination, an institutional repository reflects an organization's visibility and reputation. By carefully customizing repository functionality, an institutional repository can cater to a wide variety of information needs in an educational environment. The session will talk about institutional repositories and describe repository features associated with content acquisition and a framework for importing data, implemented at our repository. The rationale behind choosing DSpace for implementing our institutional repository, Digital Repository - Nanyang Technological University (DR-NTU) and the unique features we plan to implement to meet the needs of our users are also highlighted. It is expected that stakeholders of digital repositories will have a better view of institutional repositories and would consider the DSpace open source software tool for potential adoption at their affiliate institutions.



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May 8th, 2008 – Conference Day I

Time		Conference Programs
8:00	9:00	Registration at Pailin Room A (1 st Floor)
9:00	9:45	Opening Ceremony at Pailin Room A (1 st Floor)
9:45	10:15	Keynote Speakers I : Software Process Improvement in Thailand <i>Prof. Dr. Kanchit Malaiwongs, Fellow, Royal Institute of Thailand</i>
10:15	10:45	Keynote Speakers II : 3D Body Scanning: Clothing and Healthcare Applications <i>Prof. Philip Treleavan, University College London, UK</i>
10:45	11:00	Coffee Break
11:00	11:30	Keynote Speakers III : Fault Tolerant and Fault Recovery Techniques in Supervised and Unsupervised Neural Networks <i>Prof. Dr. Chidchanok Lursinsap, Advanced Virtual Intelligent Computing (AVIC) Center, Chulalongkorn University, Thailand</i>
11:30	12:00	Keynote Speakers IV : Modeling Component-Based Software Systems <i>Prof. Dr. Walter Dosch, University of Lübeck, Germany</i>
12:00	13:00	Lunch at Pailin Room B (1 st Floor)

Keynote Speakers

Keynote Speakers I : May 8, 2008 (09.45 – 10.15)

Software Process Improvement in Thailand

Abstract

Thailand has realized the need to create software industry since the first computer was brought in the country. In 1986, NECTEC was founded to act as a funding agency for university research in electronic and computer technology. Later, NECTEC was assigned responsibilities to promote the use of ICT in the public sector, establishing the Software Park Thailand, drafting ICT laws for the Cabinet, as well as collaborating with the Thailand Institute for Industry Standards in developing several ICT standards. Software Park Thailand became a transition partner of the Software Engineering Institute and promoted the use of SW CMM and CMMI in Thai software companies. In 2002, the Cabinet approved the establishment of Software Industry Promotion Agency (SIPA) as a public organization within the Ministry of Information Technology and Communication. SIPA funded a group of software experts to create a new standard – Thai Quality Software (TQS) for use in very small software enterprises. TQS is now further modified to align with the new ISO 29110 standard.

Keynote Speakers II : May 8, 2008 (10.15 – 10.45)

3D Body Scanning: Clothing and Healthcare Applications

Abstract

Measurement of the human body is fundamental to many areas especially clothing and medicine. Now 3D body surface scanners – developed largely for clothing applications – are transforming our ability to accurately measure and visualize people's body size and shape. 3D whole body scanners capture in 1-10 seconds highly accurate 3D body maps, allowing a computer to automatically extract hundreds of measurements from a scan, as well as valuable 3D shape information.

3D surface scanners have revolutionized anthropometrics surveys, such as SizeTHAILAND, and are finding increasing use in clothing applications (e.g. size recommendation, made-to-measure and virtual try-on) and medicine (e.g. monitoring obesity and plastic surgery).

Professor Treleaven is a pioneer of 3D body scanning. This talk presents the science of 3D body scanning, and described new applications in clothing and healthcare.

Keynote Speakers III : May 8, 2008 (11.00 – 11.30)

Fault Tolerant and Fault Recovery Techniques in Supervised and Unsupervised Neural Networks

Abstract

Neural networks become an important and unavoidable computational tools for solving classification and functional approximation problems. The classification problem is the root of several problems in artificial intelligence, pattern recognition, data mining, machine learning, forecasting. The functional approximation is the extension of classification problem. With this important role in science and engineering research, the VLSI implementation of a neural network is a must. In this talk, the mathematical concept of how to enhance the fault tolerant capability and how to recover the faulty situation for both supervised and unsupervised neural networks will be briefly discussed.



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Prof. Dr. Chidchanok Lursinsap,

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Keynote Speakers IV : May 8, 2008 (11.30 – 12.00)

Modeling Component-Based Software Systems

Abstract

The field of software engineering originally concentrated on “programming in the small” putting the main emphasis on implementation techniques. Over the last decades, software and systems engineering expanded to a comprehensive engineering discipline for integrated software and hardware systems.

Nowadays software engineering comprises requirements engineering, modeling and design, implementation and testing, deployment and maintainance, evolvment and management. Software engineering proves to be a key technology; its mastery determines the functioning of modern infrastructures, consumer products and ubiquitous services.

Software development has matured from heuristic practice to an engineering discipline. Nowadays software engineers benefit from a solid stock of basic research addressing modelling and design techniques for sequential, concurrent, distributed, and timed systems. Software quality and reliability, security and safety, the management of change, diversification and reuse form new challenges to software engineering practice.

The talk contributes to the emerging profession of software engineering as “a systematic disciplined quantifiable approach to the development, operation, and maintainance of software ...” (IEEE Std 610.12).



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