The 7th AEARU Web Technology and Computer Science Workshop
National Tsing Hua University, Hsinchu, Taiwan
December 6-7, 2006

Conference Venue: 2nd General Building 7F, National Tsing Hua University, Hsinchu, Taiwan

Accommodations: Barkeley Business Hotel, Hsinchu (272 Kuang Fu Rd., Sec. 2, Hsinchu, Taiwan)

Participants and Paper Presentation:

Mining Geographic Correlations of Terms in Web Documents
Yin Yang, Alexander Markowetz (Hong Kong University of Science and Technology, Hong Kong)

Querying Data Streams with Keywords
Alexander Markowetz, Yin (David) Yang, Dimitris Papadias (Hong Kong University of Science and Technology, Hong Kong)

Discovering Query Translation from the Web for Cross-language Information Retrieval
Pu-Jen Cheng (National Taiwan University, Taiwan)

Using Large Scale Dictionary Coding to Improve Web Page Compression
Sun Wu, Ting-Chao Hsu, and Hsien-Tsung Chang (National Chung Cheng University, Taiwan)

Applying NLP Technology to Language Learning, Academic Writing, and Translation
Jason S. Chang (National Tsing Hua University, Taiwan)

Privacy Enhanced Attribute Exchange for Shibboleth/SAML based Authorization in Web Services
Yasuo Okabe (Kyoto University, Japan)

Extending Web Services for Multimedia Streaming
Gibson Lam and David Rossiter (Hong Kong University of Science and Technology, Hong Kong)

Speech and Audio Technologies for Internet-based Edutainment Applications
Jyh-Shing Roger Jang, Wen Tai Hsieh, Jiang-Chun Chen (National Tsing Hua University, Taiwan)

Comments from the organizers:
The 7th AEARU Workshop on Web Technology and Computer Science was held in National Tsing Hua University on December 6. It was held in conjunction with The Third Workshop on Grid Technologies and Applications (WoGTA '06), December 7-8, 2006, Chung Hua University, Hsinchu, Taiwan. The workshop was organized by the Computer and Communication Research Center and Department of Computer Science, National Tsing Hua University. The Call-for-Abstract and Workshop Schedule are attached in Appendix 1 and 2. In addition to the speakers, we have researchers from Japan. Hong Kong, and Taiwan to participate in the discussions. The delegates not

only presented excellent research results, but also exchanged different opinions and experience in education and research in Web Technology and Computer Sciences. The discussions were very active and inspiring. The delegates get to know each other very well at the end of the workshop. Overall, this is a very successful workshop.

Appendix 1. Call for Abstract

東亞研究型大學協會
東アジア研究型大学協会
동아시아연구중심대학협의회
The Association of East Asian Research Universities

Call for Abstracts

The 7th AEARU Web Technology and Computer Science Workshop
December 6, 2006, Tsing Hua University, Hsinchu, Taiwan, ROC

to be held in association with
The Third Workshop on Grid Technologies and Applications (WoGTA '06)
December 7-8, 2006, Chung Hua University, Hsinchu, Taiwan, ROC

The World Wide Web has fundamentally changed the way we do computation. Through the Web, people can search and gather information of various kinds, which facilitates computations such as machine translation, speech recognition, network security, bioinformatics, business decision, and content sharing. The Web also provides standard interfaces for linking various services and resources for service-oriented and grid computations. With new capabilities added everyday, we are at a turning point to witness how the Web revolutionizes the field of computer science and how computing shapes other disciplines.

The 7th AEARU Workshop on Web Technology and Computer Science provides a forum for researchers from the member universities of the Association of East Asian Research Universities (AEARU) to present their most recent research results on web technology and computer science. The objective is to identify potential research areas, exchange ideas on research and education, and discuss means for productive collaborations in the field of web technology and computer science. The workshop also welcomes researchers not belonging to the member universities to join and participate in the discussion.

The workshop will be held in National Tsing Hua University, Hsinchu, Taiwan, on December 6, 2006. It will be an associate event of the Third Workshop on Grid Technologies and Applications (WoGTA'06) to be held December 7 and 8, 2006, in Chung Hua University, which is also located in Hsinchu, Taiwan. WoGTA is an annual workshop focusing on grid related research and technologies. WoGTA'07 has invited the following three outstanding researchers to deliver keynote speeches:

- Prof. Viktor K. Prasanna, University of Southern California, Los Angeles, USA
- Prof. Satoshi Matsuoka, Tokyo Institute of Technology, Japan
- Prof. Jiannong Cao, Hong Kong Polytechnic University, Hong Kong

More details of the workshop can be found at: http://wogta06.csie.chu.edu.tw.

Participation

We invite research contributions in the broad area of Web technology and computer science. To participate, please follow the steps below.

1. Please send an email to aearu@cs.nthu.edu.tw before **October 20, 2006**, to indicate your willingness to attend the workshop. This information is necessary for us to prepare needed traveling documents.
2. Please send the title and abstract (300- 500 words) of your contribution to aearu@cs.nthu.edu.tw before **November 15, 2006**. A collection of the abstracts will be distributed at the workshop.

Workshop Organizers
Honorary Chair: President Wen-Tsuen Chen
Workshop Chair: Prof. Chung-Ta King
Program Chair: Prof. Hwa-Chun Lin

Additional Information
Please see the workshop home page at http://www.ccrc.nthu.edu.tw/AEARU or send email to aearu@cs.nthu.edu.tw.

Appendix 2. Workshop Schedule
National Tsing Hua University, Hsinchu, Taiwan
The AEARU 7th Workshop on Web Technology and Computer Science
Agenda

Wednesday, December 6, 2006	
08:30-09:00	**Registration**
09:00-09:20	**Opening Ceremony** **Vice President -- Shih-Lin Chang**
09:20-10:40	**Session 1**
	Mining Geographic Correlations of Terms in Web Documents *Yin Yang and Alexander Markowetz* Hong Kong University of Science and Technology, Hong Kong *Torsten Suel /* Polytechnic University, USA
	Querying Data Streams with Keywords *Alexander Markowetz , Yin (David) Yang, and Dimitris Papadias* Hong Kong University of Science and Technology, Hong Kong
	Discovering Query Translation from the Web for Cross-language Information Retrieval *Pu-Jen Cheng /* National Taiwan University, Taiwan
10:40-11:00	**Coffee Break**
11:00-12:20	**Session 2**
	Using Large Scale Dictionary Coding to Improve Web Page Compression *Sun Wu, Ting-Chao Hsu, and Hsien-Tsung Chang* National Chung Cheng University, Taiwan
	Applying NLP Technology to Language Learning, Academic Writing, and Translation *Jason S. Chang /* National Tsing Hua University, Taiwan
12:20-14:20	**Luncheon**
14:20-15:40	**Session 3**
	Privacy Enhanced Attribute Exchange for Shibboleth/SAML based Authorization in Web Services *Yasuo Okabe /* Kyoto University, Japan
	Extending Web Services for Multimedia Streaming *Gibson Lam and David Rossiter* Hong Kong University of Science and Technology, Hong Kong
	Speech and Audio Technologies for Internet-based Edutainment Applications *Jyh-Shing Roger Jang, Wen Tai Hsieh, Jiang-Chun Chen* National Tsing Hua University, Taiwan
15:40-16:00	**Coffee Break**
16:00-17:20	**Session 4**
	Introduction to Taiwan UniGrid *Yeh-Ching Chung /* National Tsing Hua University, Taiwan
	Ubistreaming: Streaming Everywhere *Chung-Ta King /* National Tsing Hua University, Taiwan
18:30	**Farewell Dinner**

Agenda

Thursday, December 7, 2006	
8:30- 9:10	**Registration**
9:10-09:30	**Opening Ceremony**
09:30-10:30	**Keynote I** **Scientific Computing on Reconfigurable Systems** Dr. Viktor K. Prasanna Professor of Electrical Engineering Computer Engineering Division / Professor of Computer Science / University of Southern California, USA Session Chair: Chung-Ta King
10:30-11:00	**Coffee Break**
11:00-12:00	**Keynote II** **Towards Petascale Research Grids** Dr. Satoshi Matsuoka Professor of Dep. of Mathematical and Computing Sciences / Tokyo Inst. of Technology, Japan Session Chair: Whey-Fone Tsai
12:00-13:00	**Lunch**
13:00-14:20	**Session I - Grid Scheduling & Resource Management** **Session Chair: Sheng-De Wang** Job Scheduling and Resource Management for NDHUGrids *Ruay-Shiung Chang and Jih-Sheng Chang /* National Dong Hwa University Performance Evaluation of Adaptive Processor Allocation Policies for Moldable Parallel Batch Jobs *Kuo-Chan Huang /* Hsing Kuo College of Management Adaptive Loop Self-Scheduling on Heterogeneous Clusters *Dai-Zong Chen, Ko-Ta Chien and Yi-Min Wang /* Providence University Aggregative Resource Topology Generator on Internet-scale Computational Grids *Uei Ren Chen, Jyun Ming Chen, Chien Hsun Wang and Woei Lin /* National Chung Hsing University
14:20-14:40	**Break**
14:40-15:40	**Session II - Performance Evaluation on Grid** **Session Chair: Yeh-Ching Chung** Minimizing Migration on Grid Environments: an Experience on Sun Grid Engine *Yuan-Jin Wen and Sheng-De Wang /* National Taiwan University Benchmarking and Performance Analysis on a Blade Cluster *Chau-Yi Chou, Hsi-Ya Chang, Shuen-Tai Wang, Te-Min Chen and Chang-Hsing Wu /* National Center for High-performance Computing Performance Measurement of Parallel SPICE Circuit Simulator Program *Tien-Hsiung Weng, Ruey-Kuen Perng, Kuan-Ching Li, Chih-Yu Lin, Meng-Ju Hsieh /* Providence University
15:40-16:10	**Coffee Break**
16:10-17:30	**Session III - Grid Middleware & Information Services** **Session Chair: Hong-Chang Hsiao** Design and Implementation of Computational Bioinformatics Grid Services on GT4 Platform *Chao-Tung Yang, Tsu-Fan Han, Ya-Ling Chen, Heng-Chuan Kan /* Tunghai University The Design and Implementation of a Dynamic Resource Broker *Kun-Ming Yu, Li-An Yang, Zhi-Jie Luo, Jiayi Zhou /* Chung Hua University Efficient Computational Grid Middleware for Mobile Device *Yue-Shan Chang /* National Taipei University

	Analysis of multimedia communication on On-demand Hybrid Multipath Routing protocol *Chuan-Ching Sue and Chi-Yu Hsu /* National Cheng Kung University
18:00-20:00	**Conference Dinner**

	Friday, December 8, 2006
9:20-10:20	**Keynote III** **Integrating P2P Technologies into the Grid Environment**
	Dr. Jiannong Cao Professor of Department of Computing Hong Kong Polytechnic University Session Chair: Chien-Min Wang
10:20-10:50	**Coffee Break**
10:50-12:10	**Session IV –P2P Technologies & Applications** **Session Chair: Pang-Feng Liu**
	CFR: A Peer-to-Peer Collaborative File Repository System *Meng-Ru Lin, Yeh-Ching Chung and Ssu-Hsuan Lu* Tsing Hua University
	A Tree-Shaped Control Plane to Enable Constant Degree and Diameter P2P Networks *Hung-Chang Hsiao, Chih-Peng He and Yung-Chih Lin* National Cheng-Kung University
	Server Placement in the Presence of Competition *Yi-Min Chung, Pangfeng Liu and Jan-Jan Wu* National Taiwan University and Academia Sinica
	An Efficient Grid Middleware within Multicasting and Peer-to-Peer Network Environment with Its Application to Flood Monitoring Systems *Jyh-Horng Wu, Fang-Pang Lin, Te-Lin Chung, Jo-Yu Chang, Shyi-Ching Lin, Mulder-Yu, Jiun-Gu Ding, Cherng-Yeu Shen, Ren-Jieh Shih and Whey-Fone Tsai* National Center for High-Performance Computing
12:10-13:20	**Lunch**
13:20-15:00	**Session V – Grid Applications & Sensor / Ad Hoc Network** **Session Chair: His-Ya Chang**
	Design and Implementation of a Monitoring and Information Services Using Ganglia and NWS for Grid Resource Broker *Chao-Tung Yang, Sung-Yi Chen, Tsui-Ting Chen, Ying-Chieh Yeh and Cheng-Yuan Chen* Tunghai University
	ASPOG: An Efficient Simulated Production System on Grid Environments *Chin-Feng Lin and Tzuo-Jr Lu* Chang Jung Christian University
	Authentication Application Based on Grid Environment *Huey-Ming Lee, Tsang-Yean Lee and Homer Wu* Chinese Culture University
	Prevention Techniques for Flooding Attacks in Ad Hoc Networks *Bo-Cang Peng and Chiu-Kuo Liang* Chung Hua University
	A Fault-Tolerant Event Boundary Detection Algorithm in Sensor Networks *Ci-Rong Li and Chiu-Kuo Liang* Chung Hua University
15:00-15:30	**Coffee Break**
15:30-17:10	**Session VI – Data Grid** **Session Chair: Chin-Feng Lin**
	A High-Performance Virtual Storage System for Taiwan UniGrid *Chien-Min Wang, Hsi-Min Chen, Chun-Chen Hsu and Jan-Jan Wu* Academia Sinica
	Replica Location Service in Data Grid *Ming-Jeng Yang*

	Takming College
	Redundant Parallel File Transfer with Anticipative Adjustment Mechanism in Data Grids *Chao-Tung Yang and Yao-Chun Chi* Tunghai University
	Dynamic File Maintenance and Consistency Mechanism in Data Grids *Chao-Tung Yang, Chun-Pin Fu, Wen-Chi Tsai and Chien-Jung Huang* Tunghai University
	Performance Evaluation of Distributed SRB Server *Chin-Chen Chu and Ching-Hsien Hsu* National Center For High-Performance Computing and Chung Hua University