APEC Smart City Industrial Technology Cooperation Forum
FINAL REPORT

Policy Partnership on Science, Technology and Innovation

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APEC Smart City Industrial Technology Cooperation Forum

Produced by
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Content

1. Basic data

1.1 Relevance

According to "The Honolulu Declaration - Toward a Seamless Regional Economy" in the 19th APEC Economic Leaders' meeting, APEC will take following steps to promote green growth goals.

- *"Promote energy efficiency by taking specific steps related to transport, buildings, power grids, jobs, knowledge sharing, and education in support of energy-smart low-carbon communities;*

- *Incorporate low-emissions development strategies into our economic growth plans and leverage APEC to push forward this agenda, including through the Low-Carbon Model Town and other projects;"*

The project "Building Smart Cites of APEC Economies" aims at building smart city which will promote energy efficiency by managing smart transport, smart buildings, smart power and many other smart aspects of the city, finally producing energy-smart low-carbon model cities/towns/communities. It will improve information service, enhance smart industries' standards and harmonization, and increase copyrighted products in APEC economies' smart industries and support information collection and analysis.

Based on the statistics, In APEC, from 1995 to 2005, the urban population grew from 965 millions to 1.75 billions, almost double size in ten years. The urbanization growth caused lots of challenges to the city management and huge energy wasting. For example, traffic jam in U.S. 2005 costs $78 billion and lost 4.2 billion hours, the problem requires a smarter traffic system. We also know, globally, almost one in three people lack access to electricity. In many cities, it is hard to provide stable energy; therefore, smart power and smart grid concepts are proposed. The same, from statistics we know that 2.8 billion people are facing water shortage problem current now. The trends will be 4 billions in 2030 and we will lose 3.6% annual economic growth, a smart water resource system is urgently required. Besides of above, we also need smart healthcare, smart government, smart building, smart communications… these entire city challenges need a smarter city management system, which we called building smart city.

To implement these aspects of smart city, we require lots of information technology innovations and industrializations, for example, to smart traffic, we need new technologies to monitor, analyze and optimize the traffic status. To smart water resource managements, the technologies related with sensor, information collection, information transfer network and information processing systems are necessary.

Also for other kinds of smart systems like smart healthcare, smart government… information technology is the technical foundation for building smart city.

Clearly, this project is a technology cooperation project between multiple APEC economies. It will improve cooperation in information technology and digital economy, which specifically and significantly contributes to promoting regional economic integration via free and open trade and investment.

1.2 Objectives

Since smart city is a hot research topic in many APEC economies, and increasing numbers of governments and enterprises joined in this technical area. For example, In U.S. 2009, the town Dubuque and IBM proposed a "Smart City" plan, almost the same time, Europe Union published "Energy Strategic Technology Plan" and many European cities proposed their own smart city plan. In Asia, Singapore introduced Intelligent Nation 2015 (iN2015), India has "Smart City Kochi" in 2007, Japan also has "Smart City Planning" from 2009 and China have many smart city plans like "Smart Shenzhen", "Smart Chongqing", etc. It is very good that many economies realized the city challenges and made lots of smart city planning. However, almost all the economies are developing their own technology standards alone, for example, we have no common definitions of "smart city" and no information technology-sharing platform among the economies.

Smart city is a long-time project and to be fully implemented, it will last until 2030 or 2050 or even later. But the objective of our project is to create a framework for cooperation between APEC economies' smart technology industry such as smart healthcare, smart traffic, smart government and smart grid amongst others. The framework will contain the technology standard working directions, technical communication guidelines, and related institutions or enterprises participation rules, etc.... It is very hard to build this standard or research concerns for everybody, but it is possible to start this kind of cooperation within related institutions and enterprises first and enlarge the scope to more and more organizations inside APEC economies that are interested in this project. After the activities are completed of this year, we plan to held more activities every year and continue to contribute smart city project.

It will ensure participants share the latest knowledge in the smart technology industry, improve the cooperation among developed economies and help the developing economies to increase their development speed.

Furthermore, this project will share experiences from research institutions and enterprises to enhance peoples' understanding of smart technologies and smart cities/towns/communities. It will setup a platform for communication amongst government, research institutions and industry. A MOU for the institutions and enterprise who want to join this project will be signed. Since many technical experts and participants have already met and communicated many times in the IEEE conferences during past ten years, after lots of discussions and communications, the basis for a MOU already exists there and the planned signing during the project's main activities is very possible. But after half year's preparation and 4 days' events, if the relevant research institutions and enterprises still can not reach the same concerns, we will keep working on it in future activities, but a declaration will be issued instead for this project.

1.3   Activity Locations

Changzhou, Jiangsu Province, China. For more information about Changzhou, can visit wiki webpage: http://en.wikipedia.org/wiki/Changzhou

1.4   Project Plan of Implementations

- 2012-01 – 2012-02: APEC Smart City Industrial Technology Cooperation Forum steering committee was setup. Contacted APEC PD in China and discussed the Concept Notes.
- 2012-03 – 2012-04: APEC Smart City Industrial Technology Cooperation Forum technical committee was setup. All experts, speakers and participants were contacted, and Concept Notes was submitted.
- 2012-05: BMC considered Concepts Notes and gave in-principle approval. Self-funding paid in project account. The contractors were appointed.
- 2012-06: BMC gave final approval. All experts, speakers and participants were notified and all individual detailed travel and activity plan started.
- 2012-07 – 2012-10: Preparation for main activities.
  1) Project website and external communication channel was setup.
  2) Multi-rounds meetings and discussions between APEC Secretariat and project organizer were held.
  3) The suggestions and comments from co-sponsor economies and other related parties were considered and discussed.
  4) The organizer sent out invitations to all member economies asking them to actively join and participate in the activities, some part of activities can be held or taken responsibility by co-sponsor economies.
  5) Monitoring report was submitted.
  6) MOU/Declaration guideline and framework was discussed within steering committee and technical committee, and the joined institutions and enterprises were informed 2 months before events.
- 2012-12-17 – 2012-12-20: Main activities like forum, conference, industrial cooperation, etc.….
- 2013-01 – 2013-02: Reimbursement, completion report, and future work.

1.5   Agenda of Key Dates Activities

APEC Smart City Industrial Technology Cooperation Forum

Theme：To-Build the Smart City

December 16th, 2012, Sunday	
Time	**Content**
15:00—18:00	Guest Registration
18:00—21:00	Welcome Banquet hosted by Changzhou Municipal People's Government （Distinguished Guests）

December 17th, 2012, Monday	
Time	**Content and Speakers**
08:30—09:00	Guest Registration
	Opening Ceremony
09:00—09:25	1. Yao Xiaodong, Mayor, Changzhou Municipal People's Government, China (5 minutes) 2. Liu Jun, Counselor, Department of International Cooperation, Ministry of Science and Technology, China (5 minutes) 3. Maxim A. Romanov, Representative of APEC PPSTI, Ministry of Economic Development, Russia (2012 APEC Hosting Economy, 5 minutes) 4. Official of Jiangsu Science and Technology Department, China (5 minutes) 5. Shi Guodong, Professor, Chair of Development Committee, Changzhou University, China (5 minutes)
09:25—09:30	The Unveiling Ceremony of the Changzhou Research Institute for Smart City
09:40—10:00	Photo Session and Tea Break
	Keynote Speech（1）
9:45—10:15	1. Vincenzo Piuri, IEEE Fellow, Professor,University of Milan (30 minutes)
	Industrial Forum : Industry Road for Building Smart City
10:10—11:45	1. Kou Weidong, Ph.D, Executive, Cloud, GAS, IBM Growth Market Unit, China (Moderator) 2. Zhang Xia, Ph.D, Senior Vice President, Chief Technology Officer and Chief Knowledge Officer, Neusoft Group, China 3. Zheng Yulin, Senior Vice President, UFIDA Software Co., Ltd., China 4. Wang Jianhu, Vice General Manager, Shanghai Baosight Software Co.,

	Ltd., China 5. Yu Wei, Ph.D, Chief Technology Officer, DBJ Technologies (Zhuhai) Co., Ltd., China 6. Zhang Fan, Executive, Smart City Center, Inspur Group, China
11:45—13:15	Lunch
13:15—13:45	Keynote Speech（2）
	2. Wu Zhaohui, Professor, Executive Vice-President, Zhejiang University, China (30 minutes)
13:45—15:20	APEC Forum: Cooperation Road for Building Smart City
	1. Ma Jianhua, Professor, Hosei University, Japan (Moderator) 2. Nattapon Chayopitak, Ph.D, Thailand Science and Technology Research Institute, Thailand 3. Ching-Tarng Hsieh, Ph.D, Chiao Tung University, Chinese Taipei 4. Steshin Alexander Andreevich, Ph.D, Department of Information Technology, Russia 5. Li Qing, Professor, City University of Hong Kong, Hong Kong, China 6. T.S. Dillon, Professor, Peth University, Australia 7. Jin Qun, Professor, Waseda University, Japan
15:20—15:30	Tea Break
15:30—16:00	Keynote Speech（3）
	3.Xiong Zhang, Professor, Beihang University, China's 863 Plan Smart City Union Chief scientist (30 minutes)
16:00—17:30	Talent Forum: Talent Road for Building Smart City
	1. Chao Han-chieh, Professor, President, Ilan University, Chinese Taipei (Moderator) 2. Pu Yuzhong, Professor, President, Changzhou University, China 3. Zheng Ning, Professor, President, Hangzhou Dianzi University, China 4. Liu Zhen, Professor, Dean, Nagasaki Institute of Applied Science, China 5. Qu Yanzhen, Professor, Dean, Colorado Technical University, U.S.A 6.Xu Huihuang, Professor, Dean, Tamkang University, Chinese Taipei
17:30—17:40	Tea Break
17:40—18:00	Changzhou Declaration (To-Build Smart City)
18:00—18:05	Introduction to the Proposed Oversea Branch of Next Smart City Activity – Sydney, Australia
18:30—21:00	Dinner
December 18th, 2012, Tuesday	

Time	Content and Guest Speakers
08:30—09:00	Guest Registration
09:00—10:30	Keynote Speech（4）
	4. Carl K. Chang, IEEE Fellow, Ph.D, Iowa State University, U.S.A (30 minutes)
	5. Kou Weidong, Ph.D, Executive, Cloud, GAS, IBM Growth Market Unit, China
	6. Kanokvate Tungpimolrut, Ph.D, Thailand Science and Technology Research Institute, Thailand (30 minutes)
10:30—10:40	Tea Break
10:40—12:10	Science and Technology Forum: Science and Technology Road for Building Smart City
	1. Stephen S. Yau, IEEE Fellow, Arizona State University, U.S.A (Moderator)
	2. Ljiljana Trajkovic, IEEE Fellow, Simon Fraser University, Canada
	3. Mohammad Obaidat, IEEE Fellow, Monmouth University, U.S.A
	4. Chen Yen-Kuang, IEEE Fellow, Intel-NTU Connected Context Computing Center, Chinese Taipei
	5. Vincenzo Piuri, IEEE Fellow, Professor, University of Milan, Italy
12:10—13:30	Lunch
13:30—14:00	Keynote Speech（4）
	7. Zhong Ning, Professor, Maebashi Institute of Technology, Chairman of the International Web Intelligence Consortium (WIC) Institute, Japan (30 minutes)
14:00—15:30	Intelligentization Forum: Intelligent Road for Building Smart City
	1. Li Minglu, Professor, Dean, Shanghai Jiao Tong University, China (Moderator)
	2. Zhan Yongzhao, Professor, Dean, Jiangsu University, China
	3. Huang Tinglei, Professor, Dean, Guilin University Of Electronic Technology, China
	4. Hu Liang, Professor, Dean, Jilin University, China
	5. Liu Jian Xun, Professor, Dean, Hunan University of Science and Technology, China
	6. Zhao Haixing, Professor, Dean, Qinghai Normal University, China
	7. Gui Luoning, Ph.D, Senior Vice President, Shanghai Bell Alcatel-Lucent, China
15:30—17:00	Tour Activity

December 19th—20th, 2012, Wednesday - Thursday
IEEE International Conference

IEEE DASC/PICom/EmbeddedCom/ScalCom 2012 Program Overview

Time	Room 1	Room 2	Room 3	Room 4
Wednesday December 19, 2012				
08:00-16:00	Registration			
09:00-09.40	Opening Ceremony			
09:00-09:40	Keynote Speech I: Prof. Dakai Zhu, U.S.A (Chair: Prof. Yanzhen Qu, U.S.A)			
09:40-10:20	Keynote Speech II: Prof. Geyong Min, U.K. (Chair: Dr. Laurence T Yang, Canada)			
10:20-10.30	Coffee Break			
10:30-11:10	Keynote Speech III: Prof. Man Lin, Canada (Chair: Prof. Yang Xiang, Australia)			
11:10-11:50	Keynote Speech IV: Prof. Jinjun Chen, Australia (Chair: Dr. Feiyu Lin, Sweden)			
11:50-13:00	Lunch Time			
13:00-15:20	DASC-01	PICom-01	EmbeddedCom-01	ScalCom-01
15:20-15:30	Coffee Break			
15:30-18:00	DASC-02	PICom-02	EmbeddedCom-02	ScalCom-02

IEEE DASC/PICom/EmbeddedCom/ScalCom 2012 Program Overview

Time	Room 1	Room 2	Room 3	Room 4
Thursday December 20, 2012				
08:00-15:00	Registration			
09:00-10:20	DASC-03	PICom-03	EmbeddedCom-03	ScalCom-03
10:20-10.30	Coffee Break			
10:30-11.50	ScalCom-05	PICom-04	EmbeddedCom-04	ScalCom-04
11:50-13:00	Lunch Time			
13:00-15:20		PICom-05		ScalCom-05
15:20-15:30	Coffee Break			

1.6   Participant Economies

During forum, there are 12 member economies and 1 guest economy of APEC participate the activity.

The member economies and some of their experts/participants are:

- Australia:
  Tharam Dillon, Professor, Peth University
  Jinjun Chen, Associate Professor, University of Technology, Syndey
  Yang Xiang, Associate Professor, Deakin University
- Canada:
  Ljiljana Trajkovic, IEEE Fellow, Simon Fraser University
  Laurence Yang, Professor, St. Francis Xavier University
  Ferha Khendek, Associate Professor, Concordia University
- China:
  Liu Jun, Counselor, Ministry of Science and Technology
  Kou Weidong, Ph.D, Executive, Cloud, GAS, IBM Growth Market Unit
  Zhang Xia, Ph.D, Senior Vice President, Neusoft Group
  Wu Zhaohui, Professor, Executive Vice-President, Zhejiang University
- Hong Kong, China:
  Li Qing, Professor, City University of Hong Kong
- Japan:
  Ma Jianhua, Professor, Hosei University
  Jin Qun, Professor, Waseda University
- Korea:
  Dongmin Shin, Assistant Professor, Sejong University
  Hyokyung Bahn, Professor, Ewha Womens University
- Philippines:
  Glenn Vincent Lopez, Science Research Specialist, Advanced Science and Technology Institute, DOST
  Alexander Madrigal, Regional Director
- Russia:
  Maxim A. Romanov, Representative of APEC PPSTI, Ministry of Economic Development
  Steshin Alexander Andreevich, Ph.D, Department of Information Technology
- Singapore:
  Feng Lin, Associate Professor, Nayang Technological University
  Wei Ming Chiew, Ph.D, Nayang Technological University
- Chinese Taipei:
  Ching-Tarng Hsieh, Ph.D, Chiao Tung University
  Chao Han-chieh, Professor, President, Ilan University
  Chen Yen-Kuang, IEEE Fellow, Intel-NTU Connected Context Computing Center
- Thailand:

Kanokvate Tungpimolrut, Ph.D, Thailand Science and Technology Research Institute

Nattapon Chayopitak, Ph.D, Thailand Science and Technology Research Institute

- U.S.A:

Stephen S. Yau, IEEE Fellow, Arizona State University

Mohammad Obaidat, IEEE Fellow, Monmouth University

Carl K. Chang, IEEE Fellow, Ph.D, Iowa State University

The guest economy and some of the participants are:

- Macau, China:

Chi-Man Pun, Professor, University of Macau

Some experts/speakers photo together:

1.7   Some Expert Details

Kou Weidong (China)

Executive, Cloud, GAS, IBM Growth Market Unit
E-mail: kouwd@cn.ibm.com

Prof. Weidong Kou is Associate Director of the E-Business Technology Institute and Adjunct Professor of the Department of Computer Science and Information Systems at the University of Hong Kong. Prof. Kou also serves as Adjunct Professor at the University of Maryland in US. In addition, he is Guest Professor of Zhejiang University, Sun Yat Sen University, South East University and Beijing University of Posts and Telecommunications, and Adjunct Professor of Shanghai Jiao Tong University, South China University of Technology, and Lan Zhou University in China. Prof. Kou is a member of the Advisory Committee of Computer Science and Electrical Engineering at the University of Maryland, Co-Chair of the Technical Advisory Board of the e-Generation Technology Center at Shanghai Jiao Tong University, Deputy Director of the Academic Committee of the National Key Laboratory of the Ministry of Education of China for Computer Networking and Information Security at Xidian University, and Technology Advisor to IBM Great China Group's University Relationship Program.

Prof. Kou has taught courses at various universities, including the University of Maryland, Rutgers University, University of Waterloo in Canada, University of Linkoping in Sweden, and University of Hong Kong. He has been invited to give lectures in many universities around the globe, for example, University of California, Dalhousie University, University of Toronto, McGill University, Simon Fraser University, York University, and University of Wollongong.

Prof. Kou has over 12 years of industrial experience in North America. He was Principal Investigator at IBM Center of Advanced Studies in Toronto, Architect of a major IBM B2B e-commerce project for a national government at the IBM Industrial Solution Development Center in Canada, Chairman of the Imaging Committee at the AT&T Imaging System Division, and Senior Software Engineer at Siemens. He was the Industrial Co-leader of the major project of Canadian Institute of Telecommunications Research, and a member of American national standard committees: ANSI X9B9 (Financial Image Interchange) and ANSI X3L3 (JPEG and MPEG). Prof. Kou is the Founding Chair of International Symposium on Electronic

Commerce (ISEC). He has served as a Guest Editor for special issues on e-commerce for International Journal on Digital Libraries. Prof. Kou has authored/edited 5 books in the areas of e-commerce, security, and multimedia technologies, including the book entitled "Networking Security and Standards" published by Kluwer in 1997. He has also published over 50 papers on journals and conferences. He has also authored 9 US and Canadian issued and pending patents.

Since joining the University of Hong Kong in August 2000, Prof. Kou has been leading the e-commerce and wireless security research and development efforts. Notably, Prof. Kou and his team have been awarded the Innovation and Technology Fund (ITF). The ITF exercises, being highly competitive and placing great emphasis on local relevance, select only projects with great potential for Hong Kong, China. Out of a total of 19 proposals submitted in January 2001 by all sectors in Hong Kong, China, only three projects were awarded, and two of these came from the teams led by Prof. Kou. The total funding for the two winning projects was over $17 million Hong Kong dollars for the period of two years.

Prof. Kou has received various invention achievement and technical excellence awards from IBM, AT&T and Siemens. He is a Senior Member of IEEE.

Wu Zhaohui (China)

Professor Zhaohui Wu was born on December 18, 1966, in Wenzhou, China. He received the Ph.D. degree from Zhejiang University in 1993. From 1991 to 1993, he was with the German Research Center for Artificial Intelligence (DFKI) as a joint Ph.D. student. He was a visiting professor of the University of Arizona. He is an executive vice-president of Zhejiang University and the Director of the Institute of Computer System and Architecture. He is deputy head of the Expert Group of Modern Service Industry Project, a member of the IT Expert Committee for the National 863 program, a senior member of the IEEE, a standing council member of China Computer Federation. His research interests include intelligent system, semantic grid, and ubiquitous embedded systems. Prof. Wu has authored 4 books and more than 100 refereed papers. He is on the editorial boards of several journals, and has served as PC member for various international conferences.

Han-Chieh Chao (Chinese Taipei)

Email:hcchao@gmail.com

Han-Chieh Chao is a joint appointed Full Professor of the Department of Electronic Engineering and Institute of Computer Science & Information Engineering where also serves as the president of National Ilan University, I-Lan, Chinese Taipei. He has been appointed as the Director of the Computer Center for Ministry of Education starting from September 2008 to July 2010. His research interests include High Speed Networks, Wireless Networks, IPv6 based Networks, Digital Creative Arts and Digital Divide. He received his MS and Ph.D. degrees in Electrical Engineering from Purdue University in 1989 and 1993 respectively. He has authored or co-authored 4 books and has published about 280 refereed professional research papers. He has completed 100 MSEE thesis students and 3 PhD students. Dr. Chao has received many research awards, including Purdue University SRC awards, and NSC research awards (National Science Council of Chinese Taipei). He also received many funded research grants from NSC, Ministry of Education (MOE), RDEC, Industrial Technology of Research Institute, Institute of Information Industry and FarEasTone Telecommunications Lab. Dr. Chao has been invited frequently to give talks at national and international conferences and research organizations. Dr. Chao is the Editor-in-Chief for IET Communications, Journal of Internet Technology, International Journal of Internet Protocol Technology and International Journal of Ad Hoc and Ubiquitous Computing. Dr. Chao has served as the guest editors for Mobile Networking and Applications (ACM MONET), IEEE JSAC, IEEE Communications Magazine, Computer Communications, IEE Proceedings Communications, the Computer Journal, Telecommunication Systems, Wireless Personal Communications, and Wireless Communications & Mobile Computing. Dr. Chao is an IEEE senior member and a Fellow of IET (IEE). He is a Chartered Fellow of British Computer Society.

Ching-Tarng Hsieh (Chinese Taipei)

Email: chsieh@itri.org.tw

Dr. Ching-Tarng Hsieh has more than 20 years' experience in information and communications technologies including WiMAX, WLAN, 5ESS, 4ESS, IS-95, cdma_2000, and UMTS systems. He has worked in systems engineering, architecture, software development, and project management with extensive experience in switching system and protocol software development.

Dr. Ching-Tarng Hsieh received his Ph.D. in Computer Sciences from The University of Texas at Austin. He worked at Bell Laboratories/Lucent Technologies for 15 years before joining the Industrial Technology Research Institute. He is a Technical Director at Industrial Technology Research Institute responsible for technology development and promotion of wireless industry. Dr. Hsieh is also an adjunct professor at National Chiao Tung University and chair of International Collaboration Group of the Networked Communications Program Office in Chinese Taipei responsible for promoting international collaboration and 4G standards/applications.
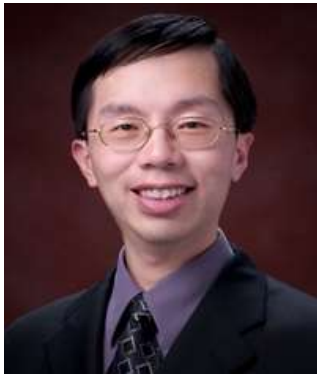
Yen-Kuang Chen (Chinese Taipei)

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Associate Director, Intel-NTU Connected Context Computing Center,
Principal Research Scientist, Intel Corporation
Fellow, IEEE

Research Interests
Developing innovative technologies to address core challenges in connected context computing, including sensing, communication, context analysis, and smart services.

Education
Ph.D. degree from Princeton University

Records and Recognitions
30+ granted patents, 20+ pending patent applications, and 85+ publications
Editorial board member of 5 journals and transactions, lead guest editor of 6 special issues, program committee member of 40+ international conferences, and member of 4 IEEE technical committees, on multimedia, video compression/communication, image/signal processing, VLSI circuits and systems, parallel processing, and software optimization.

Teaching
Introduction to Machine-to-Machine, Fall 2012
Introduction to Machine-to-Machine, Fall 2011

Special issue
IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS), Special Issue on: *Low-Power, Reliable, and Secure Solutions for Realization of Internet of Things*, August 1, 2012

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Biodata: Nattapon Chayopitak received the B.S. degree from Columbia University, New York,in 2001, and the M.S. and Ph.D. degrees from the Georgia Institute of Technology, Atlanta, in 2003 and 2007, respectively, all in Electrical Engineering. Since 2007, he has been a research with the National Electronics and Computer Technology Center (NECTEC), under the Advanced Automation and Electronics Research Unit. His research areas include the automation systems and design optimization of electrical machines.

Kanokvate Tungpimolrut (Thailand)

[Research Unit Director]
[National Electronics and Computer Technology Center]
Tel: [662-564-6900 ext 2410]
E-mail: [kanokvate.tungpimolrut@nectec.or.th]

Biodata: Mr. Kanokvate Tungpimolrut received the M. Eng. as well as D. Eng. degree in electrical and electronics engineering from Tokyo Institute of Technology, in 1992and 1995, respectively. He was a researcher with Fuji Elctric Co., Ltd. Since 1996, he has been a researcher with NECTEC, Thailand. He is now a director of Advanced Automation and Electronics Research Unit in NECTEC. His research interests are applying automation and power electronics to various applications including smart systems.

Ljiljana Trajkovic (Canada)

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ACADEMIC BACKGROUND

Ph.D in Electrical Engineering, 1986. University of California, School of Engineering and
Applied Science, Los Angeles, California, GPA (4.0/4.0):
Ph.D. dissertation entitled \Negative Di_erential Resistance in Transistor Circuits."
Advisor: Professor Alan N. Willson, Jr.
M.Sc. in Computer Engineering, 1981. Syracuse University, Electrical and Computer Engineering Department, Syracuse, New York, GPA (4.0/4.0)
M.Sc. in Electrical Engineering, 1979. Syracuse University, Electrical and Computer Engineering Department, Syracuse, New York, GPA (3.9/4.0)
Dipl. Electr. Ing., 1974. University of Pristina, Electrical Engineering Department, Pristina,Yugoslavia, GPA (9.97/10.0)

RESEARCH INTERESTS

Communication networks: trac collection, characterization, and modeling in high-performance networks; simulation and performance evaluation of packet networks; intelligent control of packet networks; hardware design of packet switching systems.
Nonlinear circuits and systems: software tools for circuit simulation; homotopy methods fornding dc, steady state, and transient solutions of transistor circuits; theory of nonlinear circuits and systems.

HONORS AND AWARDS

- 2012 IEEE Circuits and Systems Society Meritorious Service Award, May 22, 2012
- Centennial Volunteer Award, IEEE Vancouver Section, March 25, 2012

- Outstanding Service Award, IEEE Vancouver Section, June 21, 2010
- Nominee, YWCA Vancouver Women of Distinction Award, 2008
- EIC Canadian Paci Railway Medal, 2007
- IEEE Fellow, 2005 - present
- Research Fellow of the BC Advanced Systems Institute, 1999 - 2002

Lj. Trajkovi_c, Curriculum Vitae, November 1, 2012

- Fellowship of the Japan Society for the Promotion of Science, 1998
- NSF Visiting Professorship for Women Grant, University of California, Berkeley 1995 - 1997
- Zonta International Amelia Earhart Fellowship 1984 and 1985
- UCLA Hortense Fishbaugh Memorial Scholarship 1983
- UCLA School of Engineering Fellowship 1981 and 1982
- IIE Fulbright Fellow 1978 - 1979
- City of Pristina Public Award for Contribution to Arts and Sciences, 1974
- Mathematics competition: Elektrijada 1973 (3rd place); SUSEJ 1974 (2 - 3rd place)
- Vuk Karadzic Diploma, High-school Ivo Lola Ribar, Pristina, Yugoslavia, 1969.

Stephen S. Yau (U.S.A.)

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Stephen S. Yau is the United States Arizona State University (Arizona State University) Department of computer science and Engineering Professor, information security research center (Information Assurance Center) IEEE Trans. on Services Computing director, editorial board.He served in the United States : Northwestern University, University of Florida, Arizona State University, and the Arizona State University Department of computer science and Engineering (1994-2001), former director of the International Institute of electrical and Electronics Engineers Computer Society (IEEE) (Computer Society) chairman, Council member (IEEE member, Board of Directors), Computing Research Association (Computing Research Association) members of the Council (member, Board of Directors), IEEE COMPUTER Journal of Computer Communications journal, advisory board member, IEEE Trans. on Software Engineering, Journal of Information Sciences and Journal of Systems and Software Journal editorial. He served as president of the general assembly of more than 10 meetings or joint chairman, including IEEE World Congress on Services in 2012 (including CLOUD 2012, Web Services 2012, Services Computing 2012, Mobile Services 2012 and Services Economics 2012, the Conference Series), world computer University (IFIP World Computer Congress IEEE Annual International Computer) and the Software and Applications Conference (COMPSAC) of the president of the general assembly or joint chairman. His research interests include: System Based on services, trusted computing, cloud computing, software engineering, mobile ad hoc network and pervasive computing, won the IEEE Tsutomu Kanai Award Richard Computer Association, E. Merwin Award, IEEE Centennial Award, Third Millennium Medal, China Computer Society Award for outstanding contribution. He is a lifetime fellow (IEEE Life Fellow) and American Association for the Advancement of Science and (Fellow).
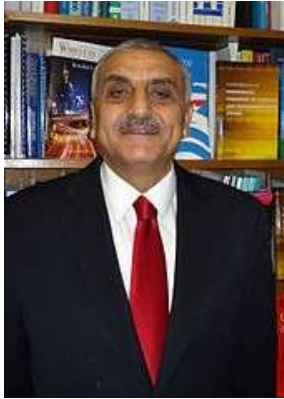
Mohammad Obaidt (U.S.A.)

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Obaidat has held various positions in the past,including Advisor to Adnan Badran, the President of Jordan's Philadelphia University, who served in 2005 as the Prime Minister of Jordan. Obaidat is the cousin of the former Prime Minister of Jordan, Ahmed Obaidat (also written as Ahmad Obeidat), who served as the Prime Minister of Jordan in 1984.

Obaidat was a Distinguished Fulbright Scholar to Jordan during the academic year 2004/2005. He served as Chair of the Department of Computer Science and the Graduate Studies Committee at Monmouth University. He has been invited to give keynote speeches and invited talks at international conferences, universities, and organizations all over the world.

Dr. Obaidat is the author or co-author of numerous books and refereed scholarly journal and conference papers. His books have been translated to several languages.[1]

He held visiting professorships at various universities, including Aberdeen University, UK, INSA-Rouen, France, Philadelphia University, Jordan, University of Seville, Spain, University of Oviedo, Spain, National Ilan University, Chinese Taipei, Tamkang University, Chinese Taipei, Korea Advanced Institute of Science and Technology (KAIST), South Korea, University of Girona, Spain, Genoa University, Italy, KFUPM, Saudi Arabia, Carthage University, Tunisia, EMI, Morocco, Torino Polytechnic, Italy, Bogazci University, Turkey, and International Islamic University Malaysia.

He served as IEEE Computer Society Distinguished lecturer/visitor (1994–1997) and now is a distinguished lecturer for the Association for Computing Machinery (ACM)[2] and SCS.[3] His research interests encompass wireless systems, computer communication networking, cyber security, Learning Automata, Neural Networks, Parallel and Distributed Systems, Modeling and Simulation, Performance Evaluation of Computer and Telecommunication Systems, Telecommunications, among others.[1]

Carl K. Chang (U.S.A.)

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Carl K. Chang is Professor and Chair of the Department of Computer Science at Iowa State University. He received his PhD in computer science from Northwestern University in 1982, and worked for GTE Automatic Electric and Bell Laboratories before joining the University of Illinois at Chicago in 1984. He joined Iowa State University in 2002 as the Department Chair of Computer Science. His research interests include requirements engineering, software architecture, net-centric computing, services computing and software evolution. Chang was President of the IEEE Computer Society in 2004. He has also served as Editor-in-Chief for IEEE Software (1991-94), a flagship publication for the global software industry, and Editor-in-Chief for IEEE Computer (2007-2010), the flagship publication of the IEEE Computer Society. He has been the recipient of a number of major IEEE awards, including the IEEE Computer Society's Meritorious Service Award, Outstanding Contribution Award, the Golden Core recognition, and the IEEE Third Millennium Medal. In 2006 he received the prestigious Marin Drinov Medal from the Bulgarian Academy of Sciences. Most recently, in early 2012, he received the Richard E. Merwin Medal from the IEEE Computer Society in recognition of his extraordinary leadership. His research work has been recognized by IBM with the IBM Faculty Award in 2006, 2007 and 2009. Chang is and IEEE Fellow, AAAS Fellow, and a member of the European Academy of Sciences.

Yanzhen Qu (U.S.A.)

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Dr. Yanzhen Qu currently is the dean and a professor in Computer Science and Information Technology at Colorado Technical University – Southern Colorado, USA. Dr. Qu holds a B.Eng. in Electronic Engineering, a M. Eng. in Electrical Engineering, and a Ph.D. in Computer Science. Over his industrial career characterized by many "the world first innovations", he has served at various senior or executive level Product R&D and IT management positions at several multinational corporations. He was also the chief system architect and the development director of several world first very large real-time commercial software systems.

At Colorado Technical University, Dr. Qu is the dissertation supervisor of over ten computer science doctoral students, and his recent research interests include cloud computing security and architecture, cyber security risk detection and mitigation, data engineering, software engineering process and methods, soft computing, data mining over non-structured data, human-oriented computer interface, scalable enterprise information management system, as well as embedded and mobile computing. He has been served as general/program/session chair or keynote speaker in several professional conferences or workshops. He has published many research papers in the peer reviewed conferences and professional journals, and is currently serving as a member of editorial board of several professional journals.

Geyong Min (U. K.)

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Geyong Min is currently a senior lecturer in the Department of Computing at the University of Bradford. He was awarded the PhD degree in Computing Science from the University of Glasgow in the United Kingdom. He conducts research in the general areas of Design and Performance Analysis of Computer Networks and Communication Systems including Internet, Wireless Networks and Mobile Systems, and Interconnection Networks for Parallel and Grid Computing Systems. His current research focuses on the following topics:

1. Design and Analysis of the Next Generation Internet: Towards the Convergence of Multi-Service Heterogeneous Networks (Supported by the Sixth European Framework Programme (FP6))
2. Analysis and Optimisation of Network Resource Allocations and Quality of Service (QoS) for Heterogeneous Internet Traffic (Supported by EPSRC)
3. Performance Modelling, Analysis and Optimisation of Interconnection Networks for Large-Scale Parallel Multimedia Servers (Supported by Nuffield Foundation)
4. Performance Evaluation and Enhancement of Wireless Communication Networks for Multimedia Applications (Supported by University's Research Investment Fund)
5. Design and Evaluation of QoS-Based Scheduling Strategies for Grid Computing Systems (Supported by EPSRC and InforSense Ltd.)
6. Traffic Modelling, Prediction, and Analysis for Network Security.

His research results have been accepted for publication in the well-established journals including IEEE Transactions on Computers, IEEE Transactions on Multimedia, IEE Proceedings-Computers and Digital Techniques, Performance Evaluation, Journal of Computer Networks, Journal of Mobile Networking and Applications, Journal of Supercomputing, Journal of Computers & Electrical Engineering, and in the reputable conferences such as IEEE/ACM Int. Parallel & Distributed Processing Symposium (IPDPS), IEEE/ACM Int. Symposium on Modeling, Analysis and Simulation of

Computer and Telecommunication Systems (MASCOTS), and IEEE Symposium on Computers and Communications (ISCC), etc.

Dr. Min is the Founding Co-Chair of the International Workshop on Performance Modelling, Evaluation, and Optimisation of Parallel and Distributed Systems (PMEO-PDS) held in conjunction with IEEE/ACM-IPDPS, and the International Workshop on Performance Analysis and Enhancement of Wireless Networks (PAEMN) held in conjunction with IEEE AINA conference. He serves as an Editorial Board member of the Journal of Wireless and Mobile Computing and the Guest Editor for the journals of Computation and Concurrency: Practice and Experience, Future Generation Computer Systems, Supercomputing, and Cluster Computing. He is the Program Vice-Chair of International Conference on High Performance Computing and Communications (HPCC'2005) and International Conference on Wireless Networks (ICWN'2005). He served on program committees of 30 professional conferences/workshops including GLOBECOM and ICCCN. He is a member of the IEEE Computer Society. He is the Co-Editor a new book (Performance Evaluation of Parallel, Distributed and Emergent Systems, Nova Science Publishers, 2005).

Vincenzo Piuri (Italy)

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- In 2012 he has been appointed as Member of the Scientific Committee of the European Center for Soft Computing, Mieres, Spain.

- In 2012 he has been selected as IEEE Ambassador.

- Special Issue on Biometrics in the IEEE Transactions on Systems, Man, and Cybernetics - Part C
He has been appointed Guest Co-Editor of the Special Issue on Biometrics, to be published in late 2013 in the IEEE Transactions on Systems, Man and Cybernetics: Part C - Applications and Review.

- In 2011 he has been nominated Distinguished Lecturer of the IEEE Systems Council for biometric technology and applications.

- He has been honored with the admission to the IEEE-HKN, the honor association of the IEEE, for excellence in research, education, and service to the community in the field of information and communication technology, and the related disciplines (2011).

- He will serve as Director in the IEEE Board of Directors (2010-2012).

Steshin Alexander Andreevich (Russia)

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Ministry of information technologies, communications and mass media of the Nizhny Novgorod region
(http://mininform-nnov.ru) — Information technology/system integration

Head of IT department
Organizes and coordinates the work on the preparation, implementation and control of implementation of actions on creation of the information society and e-government development in the Nizhny Novgorod region.

Organizes the work of the coordination Council for Informatization of the Nizhniy Novgorod region at the Governor of the Nizhny Novgorod region - the Chairman of the Government, of the expert Council on Informatization of the Nizhny Novgorod region.

Organizes the work on transition to the provision of the electronic form of the state and municipal services provided by Executive authorities of the Nizhny Novgorod region, authorities local self-government, as well as services rendered by state and municipal institutions of Nizhny Novgorod region; organizes the work on ensuring the access of citizens and organizations to information on state (municipal) services to available information resources of bodies of Executive power and local self-government of the Nizhniy Novgorod region; to inform the public about the procedure for granting state and municipal services in the Nizhny Novgorod region with the use of the Internet; manages a single Internet portal of public and municipal services (functions) of the Nizhniy Novgorod region ("Single window"). (www.gu.nnov.ru)

Organizes the work on creation of a network of multi-purpose centres of the Nizhny Novgorod region;

Develops and introduces the architecture of e-government in the Nizhniy Novgorod region

Organizes the work on increase of computer literacy of the population of the Nizhniy Novgorod region, employees of bodies of Executive power and local self-government

of the Nizhniy Novgorod region, including organizes the training of the inhabitants of the Nizhniy Novgorod region skills of using computer technologies, conducts testing to determine the level of knowledge on the use of information technologies

Coordinates the process of the protection of the public the information processed in the information systems of bodies of the Executive authorities of the Nizhny Novgorod region, from unauthorized access, destruction, modification, blocking, as well as other unlawful actions in respect of the protected information.

Coordinates the development of corporate information-telecommunication network of the bodies of Executive authorities of the Nizhny Novgorod region, formation and support of information resources of bodies of the Executive authorities of the Nizhny Novgorod region and bodies of local self-government in the Intranet. Provides access to resources of a network Intranet, employees of bodies of Executive power and local self-government of the Nizhniy Novgorod region. Coordinates the establishment of the joint (corporate) Intranet web-site of the Executive authorities of the Nizhny Novgorod region and bodies of local self-government, providing technical support to the Intranet web site.

Coordinates the work on creation and use of information resources of bodies of the Executive authorities of the Nizhny Novgorod region, including those involved in the development of the bodies of Executive authorities of the Nizhny Novgorod region projects and programs in the sphere of information technologies, implementing projects in the sphere of information technologies on the directions of the activity of the Ministry.

Carries out evaluation of the effectiveness of projects in the sphere of information technologies of the Executive authorities of the Nizhny Novgorod region.

Coordinates the work on the participation of Executive authorities of the Nizhny Novgorod region in the projects of Informatization, implemented by the Federal bodies of Executive power.

Carries out the work on monitoring and comprehensive analysis of the situation in the industry of information technologies of the Nizhny Novgorod region.

Education

2002   Nizhny Novgorod Technical University
        Faculty of information systems and technologie

Additional education

2009   The program of training of management personnel for organizations
        Of national economy of the Specialty Is 'Management'

Skills

    Organize the work, connected with:implementation and support of information systems, the development of it-infrastructure, organization of events (itforum2020.ru), etc.

1.8   Summery of Management Arrangements

1.8.1   Project Overseer and Assistants:

- Project Overseer: Mr. Tianchu Yang

  Mr. Tianchu Yang studied as a MA and Ph.D student at Linkoping University, Sweden. He is currently the General Manager of Changzhou Ubitech Co. Ltd. He has more than 15 years of experience in the information technology industry, including both academic and industrial areas. He currently leads a smart factory project that is a sub-project of smart city.
  Tel: +86 – 180 – 15277096
  E-mail: tianchu.yang@gmail.com

- Project Overseer is assisted by Mrs. Feiyu Lin

  Mrs. Feiyu Lin is a researcher at Changzhou University, who has been working in smart solutions for many years. Her research mainly focuses on semantic web, ontology and context awareness.
  Tel: +86 – 180 – 68588788
  E-mail: feiyu.lin@gmail.com

- Project Overseer is assisted by Mrs. Yunqian Yin

  Mrs. Yuanqian Yin is the director of Changzhou Foreign Science and Technology Exchange Center. She is also an official at Changzhou Science and Technology Bureau, who has been working on science and technology exchange for many years.
  Tel: +86 – 519 – 88123707
  E-mail: service@czkjjl.com

- Project Overseer is assisted by Miss Christine Tian Wang

  Miss Tian Wang is a Canadian currently working as a foreign language teacher at Changzhou University. She is a history graduate from Queen's University, Canada, and lends her expertise in project communication.
  Tel: +86 – 137 – 75016677
  E-mail: tian.christine.wang@gmail.com

1.8.2   Gender:

Following steps have been taken:
- Both men and women organizers have been included in the planning and

management of the project from the very beginning. For example, two female officials and a female researcher are directly assisting the Project Overseer.

- The steering committee consists of more than 30% female.
- Encouraged both male and female attendees to participate actively in the all project activities, especially females in the information technology area, which is an area traditionally filled mostly by males.
- Researchers, speakers and participants are invited irrespective of their gender.
- Both genders will get benefits from the projects.

1.8.3   Cost Efficiency:

- Make an efficient travel plan as early as possible so as to reduce the travel expenses, which constitutes a large percentage of total expenses.
- Check more travel agencies' webpages and compare their flight tickets to get cheaper prices.
- Try to use free local locations. For example, Changzhou University's halls and auditoriums to minimize hosting fee.
- Try to attract as many volunteers as possible to reduce the labour costs, for example, university students.
- Try to use electronic form for office use, instead of hard copy.
- Use media meeting and teleconferences instead of physical meeting for internal discussion.

1.8.4   Risk Management

Risks	Actions
• Hard to establish contacts for most of the economies	Try to contact as many economies to be co-sponsor as possible. Even if co-sponsorship could not be reached, but communication is still important and asking for suggestions and help from all economies increase cooperation between APEC economies
• Duplication of project work	Although Smart City is a hot topic in APEC, and many projects have the same goal as our project, which is to promote energy efficiency. However, our project is focused on information technology innovations and industrialization, which can avoid the duplication work from EWG
• Visa Delays	Many economies need visa to enter China; we

	plan the project as early as possible and try to give adequate time for visa application. And also contact Chinese embassy/Office to increase the visa speed if possible.
• Since the participants number is expected more than 200, and many activities are held at the same time, management is a challenge to the organizer	1) The organizer already builds steering committee, and communicate officials as early as possible to get management support. 2) Local universities students with good English speaking are asked to be volunteers or short-term clerks, which help the human resource shortage. 3) More hotels are arranged based on the number of participants, like a large number of 200. 4) More conference rooms and cooperation locations are prepared for larger scale visitors.

2. Key outputs

2.1   Changzhou Declaration

APEC Smart City Industrial Technology Cooperation Forum

Changzhou Declaration – "To-build Smart City Together"

APEC Smart City Industrial Technology Cooperation Forum was held on Dec. 17 – 20, 2012 in Changzhou, China. Around 400 representatives from multiple APEC economies and experts from the smart industry participated in the Forum.   With the theme of "To-build Smart City Together", this was a high level conversation focused on a globally concerned topic: smart city building.

We realize that intelligentization is the next technological revolution after industrialization, electrification and informatization. Using intelligence technology, to build smart city is the major trend and character of today's city development. Smart city is the outcome of the new round of information technology reform and knowledge economy development. It is a comprehensive integration of industrialization, urbanization and informatization, and is an illustration of transition towards a higher stage. The essentiality of smart city building as well as its significances toward the economy and society has been generally recognized by delegates, experts and scholars at the Forum.

We notice that many APEC economies have already started building smart city and are actively developing their own smart industry. These beneficial efforts provide new ideas and ways for global economic structural reforms and methodological innovations.

In order to further promote cooperation among APEC member economies in building smart city and smart industry development, after full deliberation and wide discussion and consultation, we publish this, Changzhou Declaration, which will give a forward-looking and strategic direction for building smart city, industrial innovation and technological cooperation.

1. Using this Forum as a foundational platform, we will join together global universities, research institutions, enterprises and relevant organizations to make contributions to smart city's common definition, construction and realization. We will seek, develop, integrate and deploy different resources to achieve the integration between informatization and intelligentization, which correspond with the development goals of modern city in the current economies and society. Through building the smart city, it will enhance new development of information technology such as Internet of Things, Cloud Computing and Big Data, which would accelerate the pace towards intelligentization.

2. Basing on the intelligentization of information technology, we will use data representation to measure cities' intelligence level. Thus, we can setup a scientific measurement standard on the policy management level. At the same time, implement interoperable technical standard for all related information industries.

3. Pushing forward the establishment process of smart city's evaluation standard, pilot cities inside APEC economies will be identified, for example, Changzhou, P. R. China. The pilot city will support policy innovation, academic research and industrial applications in smart technology. It will also provide practical experimentation for smart city evaluation standard.

4. Using this Forum as a starting point, we will continue to enhance cooperational exchange, building "APEC Smart City Research Institute" together. Forming a long-term and more efficient mechanism to promote communication and discussion within the smart industry.

Changzhou, P. R. China
2012/12/17

2.2   Contractor Summary Report

Project Name: APEC Smart City Industrial Technology Cooperation Forum
Project Number: IST 02/2012A

Summary Report

Author: Dr. Changqing Luo

Introduction and Background

Based on the statistics, In APEC, from 1995 to 2005, the urban population grew from 965 millions to 1.75 billions, almost double size in ten years. The urbanization growth caused lots of challenges to the city management and huge energy wasting. For example, traffic jam in U.S. 2005 costs $78 billion and lost 4.2 billion hours, the problem requires a smarter traffic system. We also know, globally, almost one in three people lack access to electricity. In many cities, it is hard to provide stable energy; therefore, smart power and smart grid concepts are proposed. The same, from statistics we know that 2.8 billion people are facing water shortage problem current now. The trends will be 4 billions in 2030 and we will lose 3.6% annual economic growth, a smart water resource system is urgently required. Besides of above, we also need smart healthcare, smart government, smart building, smart communications... these entire city challenges need a smarter city management system, which we called building smart city.

To implement these aspects of smart city, we require lots of information technology innovations and industrializations, for example, to smart traffic, we need new technologies to monitor, analyze and optimize the traffic status. To smart water resource managements, the technologies related with sensor, information collection, information transfer network and information processing systems are necessary. Also for other kinds of smart systems like smart healthcare, smart government... information technology is the technical foundation for building smart city.

This project is a technology cooperation research project between multiple APEC economies. It will improve cooperation in information technology and digital economy, which specifically and significantly contributes to promoting regional economic integration via free and open trade and investment.

To ensure the quality the project and setup a long-term mechanism to keep the effects after workshop, a research institute for smart city is proposed, for example, Changzhou Research Institute for Smart City.

Research Work

To finish the task successfully, I did following work:

- Read 62 technical papers or surveys from IEEE, ACM, Springer, in building smart city area. Most papers give ideas how to build smart city or part of smart city, for example, smart grid, smart healthcare, smart home, smart factories, … All of smart products will consist of a smart community/city.
- Talk with 23 technical experts which are mainly come from APEC economies, for example, Stephan Yau, Professor from Arizona State University, U.S.A.; Laurence T. Yang, Professor from St. Francis Xavier University, Canada; Kou Weidong, Executive, Cloud, GAS, IBM Growth Market Unit, China, … All of them give very good ideas for building Research Institute of Smart City, both from academic and industrial views.
- Investigate 21 companies that are mainly come from APEC economies, for example, NARI, Nanjing, China, a leading smart grid product company; IBM, world-leading smart products provides; Neusoft Group, a leading software company…
- Discuss with officials from multiple APEC economies, for example, Ministry of Science and Education in China; NSTDA, Thailand; Changzhou Local government; …
- Talk with around 60 participants from APEC economies, which include almost all speakers in the workshop and many industrial participants.

Conclusion

Based on the work mentioned in section 2, the research questions can give following answers:

- Whether the market needs this kind of research institute?
  Yes, research institute for smart city is an urgent work for the market. We need an intermediate institution to connect university research and industrial products.

- What is the objective of research institute?
  The research institute will work on applied technology; it will apply the research contributions from universities to companies.

- How to build this research institute?
  The research institute will be build based on the cooperation among government, industry and institutions. The main body will locate in companies, but the management level will be government official, who will

coordinate the connections.

The research institute will setup by two branches, one branch includes several research departments, mainly get the research ideas from universities and connect the ideas with industrial products. Another branch includes different companies; it will mainly search the research products to check if companies can use them.

- Do we need build Changzhou Research Institute for Smart City first?

  Yes, Changzhou Research Institute for Smart City will be a useful pilot site for whole APEC cooperation, at the same time; Changzhou local government and local companies show great interests to build this research institute.

3. Key outcomes

3.1   Participant Statistics

- Number of total participants: around 400 participants in total.
- Number of participating economies inside APEC: 12 member economies and 1 guest economy.
- Number of speakers: more than 40 speakers from 11 different member economies, and more than 50% from developing economies.
- Number of participating enterprises: more than 60 enterprises from 7 different economies, and at least 80% from developing economies.
- Number of participating technical experts: more than 100 technical experts to join the activities and 13 economies' representatives.

3.2   Website and hitting

Official Website of the forum: http://www.czubitech.com/apec2012

From following statistics of website hitting, only in Dec 2012, the total hits is 58497, much more than expected value: 5000.
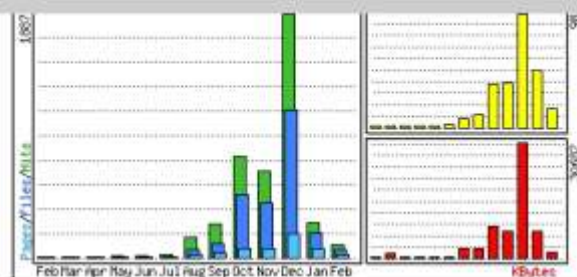
Month	Average/day					Totals				
	Hits	Files	Pages	Visits	KBytes	Hits	Files	Pages	Visits	KBytes
Feb 2013	95	65	23	16	1488	285	196	70	48	4465
Jan 2013	269	191	68	49	6979	8339	5949	2115	1523	216358
2013	253	180	64	46	6495	8624	6145	2185	1571	220824
Dec 2012	1887	1142	188	97	30682	58497	35425	5856	3035	951132
Nov 2012	670	419	73	38	7257	20104	12579	2197	1149	217716
Oct 2012	786	489	73	37	8316	24391	15183	2270	1153	257781
Sep 2012	257	107	31	10	2422	7724	3237	955	325	72673
Aug 2012	161	60	24	7	2356	4997	1863	756	247	73022
Jul 2012	27	9	5	2	248	843	280	177	77	7688
Jun 2012	12	2	1	1	36	380	73	48	45	1073
May 2012	9	1	3	1	38	299	46	97	45	1191
Apr 2012	7	1	1	1	41	220	57	52	44	1237
Mar 2012	5	2	2	1	1154	160	74	77	57	35789
Feb 2012	2	0	1	1	2	74	19	38	34	69
Jan 2012	2	1	1	1	1983	91	38	34	31	61465

And check every month and even every day statistics, more than 50% of them come from developing economies.

3.3   Media News

Almost most of portal news websites reported the forum news, for example:

The website of Ministry of Science and Technology of People's Republic of China
http://www.most.gov.cn/kjbgz/201212/t20121227_98756.htm

People's Daily Website:
http://scitech.people.com.cn/n/2012/1228/c1057-20041373.html

"APEC智慧城市与产业科技合作论坛"于2012年12月17至18日在常州市科教城成功召开，此次论坛由科技部国际合作司，江苏省科技厅和常州市人民政府联合主办。刘俊参赞代表科技部国际合作司出席论坛开幕式并致辞。俄罗斯经济发展部马克西姆·罗门诺夫先生（Maxim A. Romanov）、中国科学技术交流中心王艳副主任、江苏省科技

Changzhou Daily news:

APEC智慧城市与产业科技合作论坛在常举办

共建智慧城市《常州宣言》发表

本报讯 17日,APEC智慧城市与产业科技合作论坛在常州科教城隆重开幕,为我市扩大在智慧城市、智能产业领域全方位的国际合作搭建平台。来自……………成员经济体代表、知名科学家、著名大学与研发机构专家以及跨国公司、创新型企业专家等约400人参加。市委常委徐光辉出席论坛并致辞。

本次论坛活动是在APEC基金支持下,由国家科技部国际合作司、省科技厅和市政府联合主办的高端峰会。在为期4天的论坛上,与会者将围绕共建智慧城市主题,一起展望城市愿景,研讨发展策略,共商合作大计。

当天,设在常州科教城的常州智慧城市研究院揭牌成立。研究院将集成智慧城市的技术研发、成果转化、企业孵化和产业投资等多种功能,

3.4   Changzhou Research Institute for Smart City

Based on the Changzhou Declaration *"Using this Forum as a starting point, we will continue to enhance cooperational exchange, building "APEC Smart City Research Institute" together. Forming a long-term and more efficient mechanism to promote communication and discussion within the smart industry."*

After hard work for investigations, discussions and decisions, Changzhou Research Institute for Smart City is build during forum:

4. Overall Impact and Lessons Learned

4.1   Beneficiaries

The beneficiaries are most of the APEC economies. They come to China and join the forums, conferences and activities. They present their ideas, research achievements, and products to other institutions, organizations and enterprises. After the activities, they share the experience of the activities. Cooperation in information technology and digital economy among APEC economies are also present on both the research and product level, and may extend even to government strategy making.

There are 4 keynote sessions and 5 sub forums:
- Keynote speakers from industry and research institutions gave fresh ideas to all beneficiaries that can engage on research and products, and government strategies.
- Industrial Forum: Industry Road for Building Smart City
  The CEOs from famous world-leading companies give their thoughts from industry.
- APEC Forum: Cooperation Road for Building Smart City
  The experts from different APEC economies share their cooperation experiences and talk their strategies to improve the cooperation inside APEC.
- Talent Forum: Talent Road for Building Smart City
  The presidents and deans from universities of APEC economies expressed their views how to educate the talents for building smart city.
- Science and Technology Forum: Science and Technology Road for Building Smart City
  The Fellows of IEEE show their recent research achievements and point out directions for the future science and technology in building smart city.
- Intelligentization Forum: Intelligent Road for Building Smart City
  The deans of schools of computer science and engineering talked how to implement intelligentizations for smart city.

Other parts of Project:
- APEC sessions in IEEE International Conferences on Pervasive Intelligence and Computing (PiCom2012), Embedded Computing (EmbeddedCom2012), Dependable, Autonomic and Secure Computing (DASC2012), Scalable Computing and Communications (ScalCom2012): the APEC sessions will give APEC scientists and engineers the chance to discuss those development questions related to cooperation in information technology and services.
- APEC Smart Cities Industry and Technology cooperation activities: The activities will improve the information technology and digital economy

investment, services and promotion and development of SMEs and entrepreneurship. The beneficiaries will be researchers and enterpriser.

- APEC IT research and enterprise cooperation activities: These activities will encourage increase cooperation between companies and institutions in the IT technology industry. The purpose is to improve investment, service, innovation and promotion and development of SMEs and entrepreneurship, which is a key priority of APEC. The beneficiaries will be researchers and enterpriser.

4.2   Disseminations

The disseminate results and/or outputs of projects are following:
- Cooperation between research and industry is realized and commercial negotiations are held between research institutions and enterprises.
- Industrial Cooperation can be initiated and commercial negotiations are held among enterprises.
- Citizens will get input from smart city ideas through media such as websites, TV reference, newspapers etc.…
- APEC session papers in four IEEE conferences will be published, and the papers are SCI indexed, the target audiences are researchers in smart industry or engineers in information technology industry. Four SCI indexed special issues around 60 SCI indexed papers will be published.
- The project report will be sent out to all member economies after activities.
- The participants will spread the knowledge sharing after the activities to all APEC economies or non-APEC economies that joined in the activities.
- Changzhou Declaration point out the direction of building smart city and developing smart industries.
- Changzhou Research Institute for Smart City is setup and this long-term and more efficient mechanism will promote communication and discussion within the smart industry.

4.3   Lessons Learned

1. Although lots of preparation works have been planned, but the management for the 400 persons' activity is very difficult, we need to invest the resources the earlier the better.
2. The famous experts/speakers are always very busy, we changed almost 20% speakers and experts from the plan, seems the situation can not be avoid, but the backup plan is very important for the cases.
3. Don't familiar with the APEC reimbursement rules, delay many APEC funding speakers and participants' travel, we need read more APEC guidelines and discuss with APEC secretariat as early as possible.

5.Conclusions and Future Work

5.1   Conclusions

This forum is a very successful event, which has around 400 participants from world-leading enterprises, famous research institutions and government.

The forum gives different views from keynote speech sessions and sub forums. The speakers and participants discussed the direction of building smart city and developing smart industries. Under current world information technology trends, it is a very good chance for entrepreneur, professors, specialists, presidents, deans and citizens to communicate and exchange minds. It will improve the cooperation in science and technology innovations within APEC framework; enhance the discussion among different parties for building smart city.

This forum is an important science and technology activity in APEC PPSTI (ISTWG). It has practical significance in building smart city together for APEC economies, Cooperation in developing smart industries, form a long term and more efficient mechanism, improve the merge of industrialization, urbanization and informatization.

Clearly, this project is a technology cooperation project between multiple APEC economies. It will improve cooperation in information technology and digital economy, which specifically and significantly contributes to promoting regional economic integration via free and open trade and investment.

5.2   Future Work

- Based on the achievements of this forum, continue more activities in building smart city within APEC framework, for example, new project in PPSTI will be applied with following creative:
  1. Connect modern service industry with building smart city
  2. Spread the activities in more APEC economies, specially developing economies, like Thailand, Russia, Philippines or Australia…
  3. Exhibitions of industries products and improve the cooperation via free and open trade and investment

- Build APEC Research Institute for Smart City. Since Changzhou Research Institute for Smart City is a practical way to form a long-term efficient mechanism in building smart city and developing smart industries, it is better to build APEC Research Institute to improve the cooperation with APEC framework. A self-funded project will be applied in PPSTI.

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APEC Smart City Industrial Technology Cooperation Forum

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