PRIVACY SECURITY TRUST 2004

PROGRAM OF
SECOND ANNUAL CONFERENCE ON
PRIVACY, SECURITY AND TRUST

OCTOBER 13-15, 2004, WU CENTRE, UNIVERSITY OF NEW BRUNSWICK, FREDERICTON, NEW BRUNSWICK, CANADA

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National Research Council Canada

General Co-chair: Elliott Keizer, Research Services, University of New Brunswick, Fredericton, NB

General Co-chair: Greg Sprague, National Research Council Canada, Institute for Information Technology, Fredericton, NB

Program Chair: Stephen Marsh, National Research Council Canada, Institute for Information Technology, Fredericton, NB

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Wednesday October 13

Pre-Conference Workshop on Critical Infrastructure

TIME	EVENT	LOCATION
2:30 pm - 6:00 pm	This workshop is sponsored by Business New Brunswick in conjunction with UNB, NRC IIT e-Business, and the Government of New Brunswick - Department of Public Safety. **There is no additional charge to attend this pre-conference workshop.**	Wu Centre Chancellor's
2:30 pm - 2:45 pm	Welcoming Remarks **Greg Sprague, National Research Council of Canada, General Co-chair of PST'04**	Wu Centre Chancellor's
2:45 pm - 3:45 pm	***"Critical Infrastructure*** ***It is Critical!!!"*** **Dr. James Young, Commissioner of Emergency Management, Ontario, Canada** In April 2004, Dr. James Young was appointed Commissioner of Emergency Management, Province of Ontario. In that capacity, Dr. Young reports to the Minister of Community Safety and Correctional Services on all policy and program matters related to emergency management in the Ontario Government. Dr. Young is also responsible for Emergency Management Ontario, the Office of the Fire Marshal and the Centre of Forensic Sciences. Previous to this appointment, Dr. Young was Chief Coroner for the Province of Ontario for 14 years. During the SARS outbreaks in Ontario in the Spring of 2003, Dr. Young co-managed the provincial emergency and provided leadership in management control in addition to being one of the government's spokespersons in daily media briefings. In August 2003, a power black-out left over 50 million people in Ontario, New York state and much of the Eastern seaboard without power. Dr. Young was asked by the Government of Ontario to take a lead role in ensuring the coordination of the government's response to this crisis and in providing a leadership role when communicating with the public. Dr. Young has held prominent positions responding to numerous national and international disasters and emergency situations. In October 2002, Dr. Young went to Bali on behalf of the Canadian government in order to identify Canadians who died in terrorist bombings and to assist in the international forensic investigation. On April 20 2002, he arranged and oversaw the autopsies of four Canadian soldiers killed in Afghanistan under friendly fire by the United States. In September 2001, he was appointed Chief Medical, Emergency and Forensic Services Adviser for the Canadian Consulate General in New York. In this capacity, he was responsible for coordinating the efforts to identify Canadians thought to be missing and presumed dead as a result of the terrorist activities which occurred at the World Trade Center in New York City on September 11, 2001. Dr. Young was recently awarded the President's Award from the College of Physicians and Surgeons for his role in the SARS outbreak. He is also a member of the Canada-U.S. Power Blackout Task Force and an ex-officio member of the	Wu Centre Chancellor's

Walker Commission looking into the SARS situation.

Last summer's power outage affected fifty million people. Was this event a fluke or could it occur again? A Canada-US panel studied this issue and came up with a series of recommendations. The power outage is a good example of the pattern that is emerging of more frequent, bigger and more complex emergencies. These events, therefore, suggest that we must increase our critical infrastructure management programs substantially or face major disruptions in future.

Time	Session	Location
3:45 pm - 4:00 pm	Refreshments	Wu Centre Lobby
4:00 pm - 4:30 pm	***"Introduction to Critical Infrastructure Protection in Canada "* Janet Bax, Director General Programs, PSEPC / Emergency Management and National Security**	Wu Centre Chancellor's
4:30 pm - 5:15 pm	***"Critical Infrastructure, Public Security and the Role of Provinces "*Andrew Easton, Director, Security and Emergencies Directorate, NB Department of Public Safety** Andrew Easton is the Director of the Security and Emergencies Directorate for the New Brunswick Department of Public Safety. In this role since fall 2001, he is responsible for leading work related to the provincial Security Program, the development of the provincial Critical Infrastructure Program, and the development of the provincial Chemical, Biological, Radiological Nuclear and Explosives Program. In addition, he is responsible for support of security and criminal intelligence policy analysis and development. Andrew is the primary link between the Province and the federal agencies responsible for national security. He works regularly with elements of the RCMP, Canadian Security Intelligence Service (CSIS), Public Safety and Emergency Preparedness Canada (PSEPC) National Security Program, various elements of Department of National Defense, Transport Canada and Natural Resources Canada.	Wu Centre Chancellor's
5:15 pm - 6:00 pm	***"Critical Infrastructure Research Opportunities"* Steve Marsh, Research Lead Privacy, Security & Trust, NRC IIT - e-Business** Steve Marsh is a Research Officer at in the National Research Council's Institute for Information Technology (NRC-IIT), and is based in Moncton and Fredericton, New Brunswick. He is the Research Lead for IIT's Privacy, Security and Trust initiative. His PhD, finished in 1994, introduced the world's first computationally tractable formalisation of the phenomenon of trust, and applied it to Multi Agent Systems. His research interests include trust (in general, and also in specific areas such as trustable and trusting agents and computers), HCI, socially adept technologies, artificial life, Multi Agent Systems, social computers, complex adaptive systems, critical infrastructure interdependencies, advanced collaborative environments, and enabling technologies to support ordinary people trying to work and play together to accomplish extraordinary things. Dr. Marsh will discuss research issues, funding opportunities, policy issues and long term strategies for research into the protection, survivability, and management of CIs. He will also address the topic of CI interdependencies and involve the audience in a discussion of potential research opportunities and	Wu Centre Chancellor's

collaborations.

6:00pm - 9:00 pm   Registration Desk Open   NRC

6:00pm - 9:00 pm   Opening Reception   NRC

Thursday October 14

TIME	EVENT	LOCATION
8:00 am - 5:00 pm	Registration Desk Open	Wu Centre Lobby
8:00 am - 8:45 am	Breakfast	Wu Centre Lobby
8:45 am - 9:00 am	Welcoming Remarks	Wu Centre, auditorium
9:00 am - 10:00 am	Opening Keynote ***"Who you gonna call? How trust decisions are made in a networked world." Pamela Briggs (Sponsored by ACOA)*** (Professor Pamela Briggs currently holds a Chair in Applied Cognitive Psychology and the positon of Acting Dean in the School of Psychology and Sport Sciences at the University of Northumbria, Newcastle upon Tyne, U.K. She is also Director of the PACT Lab - a new research laboratory for the investigation of Psychological Aspects of Communication Technologies. Pam has worked as a consultant for multinational organizations and her most recent work on on trust and privacy issues in computer-mediated communication is funded by the Economic and Social Research Council's E-Society initiative. Her ambition is to master the use of her mobile phone.)	Wu Centre, auditorium
10:00 am -10:30 am	Nutrition Break	Wu Centre Lobby
10:30 am -12:00 pm	**Session 1:Commerce and Society** • *Future Trends in Mobile Commerce: Service Offerings, Technological Advances and Security Challenges.* **Ali Grami and Bernadette Schell** • *Building Online Trust through Socially Rich Web Interfaces.* **Milena Head and Khalid Hassan** • *Familiarity and Trust: Measuring Familiarity with a Web Site.* **Jie Zhang and Ali Ghorbani** • *Design and Prototype of a Coercion-Resistant, Verifiable Electronic Voting System* **Anna Shubina and Sean Smith** • *Practical Remote Electronic Elections for the UK* **Tim Storer and Ishbel Duncan**	Wu Centre, auditorium
12:00 pm -1:30 pm	Thursday Luncheon Keynote : ***"Child Pornography Investigations - Meeting New Challenges"* Detective Sergeant Paul Gillespie, Toronto Police, a 25-year veteran of the Toronto force**	Wu Centre Chancellor's

Microsoft and the Toronto police, where Gillespie is in charge of the child exploitation section, are now developing software that will make it easier for police to investigate the dissemination of child pornography on the Internet .

| 1:30 pm - 3:00 pm | **Session 2: Privacy and Identity** | Wu Centre, auditorium |

- *Combating Spam with TEA*
  Jean-Marc Seigneur, Nathan Dimmock, Ciarán Bryce, Christian Damsgaard Jensen

- *Supporting Privacy in E-Learning with Semantic Streams*
  Lori Kettel, Christopher Brooks, Jim Greer

- *Secure Public Instant Messaging: A Survey*
  Mohammad Mannan and Paul van Oorschot

- *Determining Internet Users' Values for Private Information*
  Scott Buffett, Nathan Scott, Bruce Spencer, Michael Richter and Michael Fleming

- *Zero-knowledge Device Authentication: Privacy & Security Enhanced RFID preserving Business Value and Consumer Convenience*
  Stephan J. Engberg, Morten B. Harning, Christian Damsgaard Jensen

| 3:00 pm - 3:30 pm | Nutrition Break | Wu Centre Lobby |

| 3:30 pm - 5:00 pm | **Session 3: Short Papers** | Wu Centre, auditorium |

- *An Architecture for Identity Management (August 2004)*
  Brian R. Richardson and Jim Greer

- *A Diagrammatical Framework for Information Systems Attacks*
  Terry Roebuck

- *Structural Concepts for Trust, Contract and Security Management for a Virtual Chemical Engineering Organisation*
  Panayiotis Periorellis, Christopher J. W. Townson and Philip English

- *Online Gaming Crime and Security Issue - Cases and Countermeasures from Taiwan*
  Ying-Chieh Chen, Patrick S. Chen, Ronggong Song, Larry Korba

- *The Sensitivities of User Profile Information in Music Recommender Systems*
  Evelien Perik, Boris de Ruyter , Panos Markopoulos, Berry Eggen

- *Towards secure interaction in agent societies*
  Tony Roy Savarimuthu,Martin Purvis,Marcos De Oliveira and Maryam Purvis

- *infoDNA (Version 2) Agent Enhanced Trustworthy Distributed Information*
  Stephen Marsh

- *Syntax-based Vulnerability Testing of Frame-based Network Protocols*
  Oded Tal , Scott Knight, Tom Dean

5:00 pm - 6:00 pm	***PST*Net - Next Steps.* David Townsend, UNB, Faculty of Law and Scientific Director, PST*Net, Anatol Kark, Group Leader, Software Engineering, NRC IIT Ottawa**	Wu Centre Chancellor's

PST*Net was established in 2003 to create and cultivate a network of researchers, innovators, and cyber- security professionals from industry, academia and government to examine and address Internet privacy, security and trust issues so that Canada's social and economic welfare is protected and Canadian economic growth is sustained.

By networking the PST researchers from coast to coast in Canada, PST*Net's goals include facilitating collaboration and knowledge-sharing; capitalizing on existing research strengths and partnerships; forging new relationships which enhance opportunities for growth in cyber-security in Canada, and promoting the training of highly qualified researchers and practitioners in the field.

This session will examine models for the future of PST*Net. By attending this session you can help shape the future of this important initiative.

06:45 pm	Thursday Reception
Guides will lead the way to
Fredericton's finest restaurants	Meet in the James Joyce Pub, Beaverbrook Hotel

Friday October 15

TIME	EVENT	LOCATION
8:00 am - 3:00 pm	Registration Desk Open	Wu Centre Lobby
7:45 am - 9:00 am	Breakfast	Wu Centre Lobby
8:00 am - 9:00 am	Friday Breakfast Keynote: **"The Evolution Mandate: Convergence of Systems, Storage, Operations and Security Management" Diana Kelley, an Executive Security Advisor for CA's e Trust security management solutions business unit.** (Diana Kelley is responsible for advising customers on strategic security solutions and helps guide CA's security business. Diana has extensive experience creating secure network architectures and business solutions for large corporations and delivering strategic, competitive knowledge to security software vendors. Prior to CA, Diana founded Security Curve, an independent provider of strategy, consulting, and education to the security industry. She also held senior positions with Symantec Corp., Baroudi Bloor, The Hurwitz Group, KPMG and other leading firms and consultancies.) IT Management is a little like Mark Twain's commentary on the weather, everyone's *talking* about it, but is anyone doing anything to change it? Like the weather, management of network, data, system, and security information can mean the difference between a sunny business day and a stormy one. As systems and networks increase in complexity and enterprises embrace the emerging on-demand model, one point is clear: *intelligent* management of disparate systems and applications is essential for 'clear skies' In this talk we take a look at where the industry is currently: overloaded and understaffed, review the reasons why "defense in depth" and information silos will not be sufficient to drive and manage business in the future. The talk explores why working smarter not harder is the only solution and sets forth a mandate for both vendors and end-users by explaining the drivers towards a convergence (reconsolidation) of all areas of information management (systems, storage, security, network) that will enable companies to turn the voluminous amounts of data and alerts into knowledge and action.	Wu Centre Chancellor's
9:00 am - 10:00 am	Friday Morning Keynote: **Network Identity, Case Study, Current R&D efforts at Sun around identity and industry challenges. Ken.McPherson, Director of Identity Management Solutions for Sun Canada. (Sponsored by Sun Microsystems)**	Wu Centre, auditorium
10:00 am - 10:30 am	Nutrition Break	Wu Centre Lobby
10:30 am - 12:00 pm	**Session 4: Security Methods** • *Formal Implementation of Network Security Policies*	Wu Centre, auditorium

A. Lacasse, M. Mejri and B. Ktari

- *A novel visualization technique for network anomaly detection*
  Iosef-Viorel Onut, Bin Zhu and Ali Ghorbani

- *A Declarative Approach to Stateful Intrusion Detection and Network Monitoring*
  M. Couture, B. Ktari, M. Mejri and F. Massicotte

- *Application of Belief-Desire-Intention Agents in Intrusion Detection & Response*
  Mehdi Shajari and Ali Ghorbani

- *Detection of New Malicious Code Using N-grams Signatures*
  Tony Abou-Assaleh, Nick Cercone, Vlado Keˇselj, and Ray Sweidan

12:00 pm - 1:30 pm	Friday Luncheon Keynote : *"Evolving to a World of IP"* **Brian O'Shaughnessy, Vice President - Video Networks Technology Development , Bell University Labs** **(Sponsored by Bell University Labs and Aliant)**	Wu Centre Chancellor's

Mr. O'Shaughnessy is responsible for corporate technology planning and development, research and development, Bell University Lab management, and compliance to regulatory standards. A recognized industry expert in the wireless communications field, Mr. O'Shaughnessy is the past president of the CDMA Development Group (CDG) having completed 4 years as president in 2003. The CDG is an organization responsible for the promotion, advancement, deployment and future developments of CDMA wireless systems and technology.
Prior to this appointment, Mr. O'Shaughnessy held several senior management positions within Bell Mobility and Bell Canada, including director of network engineering and director of technology planning.
Mr. O'Shaughnessy is passionate about nurturing future generations of engineers and entrepreneurs in Canada. He is Chairman of the Board of Directors of Shad International, a not-for-profit organization that runs a program to help top senior high school students from around the world to expand their scientific and technical knowledge and to develop their entrepreneurial skills.
Mr. O'Shaughnessy holds an electrical engineering degree from Queen's University and has been a licensed professional engineer (PEO) since 1985.

The whole telecom industry is changing faster than anyone could have imagined just a couple of years ago. The catalyst? The universality of IP based networks supporting traditional applications in new ways: data, voice, wireless, TV and more. This talk will explore the bounds of this new World of IP and explain how Bell and Aliant are working with partners across a variety of industries as well as academia to define this new World

1:30 pm - 2:30 pm	**Session 5: Information Access and Assurance**	Wu Centre, auditorium

- *Current Trends and Advances in Information Assurance Metrics*
  Nabil Seddigh, Peter Pieda, Ashraf Matrawy, Biswakit Nandy,

John Lambadris and Adam Hatfield

- *xTrust: A Scalable Trust Management Infrastructure*
  Marc Branchaud and Scott Flinn

- *Efficient Revocation of Dynamic Security Privileges in Hierarchically Structured Communities*
  Deholo Nali, Ali Miri, and Carlisle Adams

2:40 pm - 3:40 pm	Friday afternoon closing panel: **"The Internet as a Dark Cloud" Diana Kelley, Computer Associates, Canada, Sandy Bird, Q1 Labs, Canada, Fred Carter, Office of the Privacy Commissioner, Canada, Pamela Briggs, University of Northumbria, UK** The Internet, which once held so much promise as a pillar of the 21 st century economy, has been taken over by the dark side. Cyberspace is now teeming with hackers, spammers, terrorists, pornographers, scam artists and assorted other criminal types. The dream of an e-Society powered by e-Commerce, e-Learning, e-Government and e-Health is fading as the average citizen's trust in technology begins to erode. Can the dream be salvaged or is it already too late? Join six prominent privacy, security and trust panelists as they present their provocative and controversial views on the future of information and communications technology.	Wu Centre, auditorium
3:40 pm - 4:00 pm	PST2004 Closing	Wu Centre, auditorium

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