New Frontiers for Broadband and Resilience in Telecommunications
SATELLITES AND BEYOND
October 16, 2024

Wednesday, October 16, 2024
12 – 6 p.m.
Donald K. Johnson Centre, First Canadian Place / Exchange Tower
130 King Street, Toronto, Ontario

Host
Ivey Business School, Western University, Ontario

Organizer
Erik Bohlin, Ivey Chair in Telecommunication Economics, Regulation and Policy – with support from Lawrence National Centre for Policy and Management, Ivey Business School

Moderator
Romel Mostafa, Director, Lawrence National Centre for Policy and Management, Ivey Business School

Schedule

Time	Location
12:00 – 1:00 p.m.	**Welcome Buffet Lunch**
1:00 – 1:10 p.m.	**Welcome and Introduction** Erik Bohlin, Professor, Ivey Business School and Romel Mostafa, Director, Lawrence National Centre for Policy and Management, Ivey Business School
1:10 – 1:30 p.m.	**Opening Keynote: Satellites Contributing to Canadian Broadband Policy and Resilience** Andre Arbour, Director General, Innovation, Science and Economic Development Canada (ISED)
1:30 – 1:50 p.m.	**Recent Initiatives by FCC on Satellite Access** Martin Doczkat, Office of Engineering and Technology, Federal Communications Commission, USA
1:50 – 2:10 p.m.	**Satellites and Digital Divide in New Zealand** Bronwyn Howell, Professor, Victoria Business School, New Zealand
2:10 – 2:30 p.m.	**An Open Access Model for Inter Satellite Wholesale Communication** Peter Cramton, Emeritus Professor, University of Maryland, USA and International Research Fellow, Planck Institute, Germany
2:30 – 3:00 p.m.	**Coffee Break**
3:00 – 3:15 p.m.	**Impact of LEO in Remote Indigenous Communities: Canada's Northwest Territories** Rob McMahon, Professor, University of Alberta (virtual presentation)

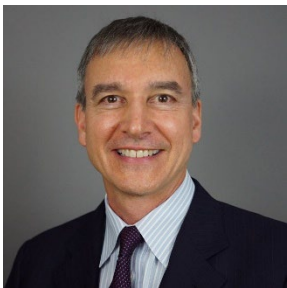|	
3:15 – 4:15 p.m.	**Panel Discussion** Moderated by Romel Mostafa, Director, Lawrence National Centre for Policy and Management, Ivey Business School Michèle Beck, Senior Vice President, Telesat Imran Khan, Chief Financial Officer, Northwestel Phil Moore, Vice President, Corporate Real Estate and Emergency Response, Telus Sohayla Praysner, Independent Advisor
4:15 – 4:30 p.m.	**Dangers of Regulatory Vacuums in Space** Rob Frieden, Emeritus Professor of Telecommunications Law, Penn State University (virtual presentation)
4:30 – 4:45 p.m.	**What are Some Takeaways for Canada?** Georg Serentschy, Managing Partner, Serentschy Advisory Services, Austria
4:45 – 5:00 p.m.	**What are Some Takeaways for Canada?** Adam Scott, Vice Chair, Canadian Radio-Television and Telecommunications Commission (CRTC)
5:00 – 6:00 p.m.	**Networking Reception with Cocktails and Hors d'oeuvres**

Speakers

Andre Arbour is the Director General of Telecommunications and Internet Policy at Innovation, Science and Economic Development Canada. He is responsible for leading policy development on various telecommunications matters including Internet and mobile wireless competition, rural and remote access, international Internet governance and in relation to the Telecommunications Act. Prior to his current role he occupied a series positions working in telecommunications and public policy. Past initiatives including leading development of Canada's first national Connectivity Strategy, leading policy for $4 billion in connectivity program funding, and policy development on various issues related to net neutrality and consumer protection.

Michèle Beck is Telesat's Senior Vice President, Canadian Sales responsible for both Enterprise, Government and Broadcast sales in Canada. Ms. Beck joined Telesat in 1987 where she began her career in engineering, developing new products in digital video compression, HDTV and direct-to-home satellite services. She was then hired by the Canadian Cable Telecommunications Association serving as their Vice President Technology. In 2006, Ms. Beck returned to Telesat as Director, Engineering responsible for all satellite service offerings including R&D, enterprise, broadband and broadcast. She soon was appointed Director, North American Enterprise and Government Sales where she built an impressive record enabling Telesat customers to achieve operational efficiencies and meet other business goals by applying her expertise in technical, commercial and regulatory matters. Promoted to her current position in 2013, Ms. Beck holds a BA Sc., Electrical Engineering from the University of Ottawa.

Erik Bohlin is Professor and Chair in Telecommunication Economics, Policy and Regulation at the Ivey Business School. He is an expert in telecommunications policy, an inter-disciplinary topic concerned with the impact of digitalization in the economy and society. He is Editor-in-Chief of *Telecommunications Policy*, a premier journal in the field. He is on leave as Professor at Chalmers University of Technology, Sweden. His graduate degree is in Business Administration and Economics at the Stockholm School of Economics (1987) and his Ph.D. is from Chalmers University of Technology (1995). He is a Member of the Swedish Royal Academy of Engineering, and Past Chair of the International Telecommunications Society, an inter-disciplinary professional society convening conferences on the evolving digital society and policy needs.

Peter Cramton is an Emeritus Professor of Economics at the University of Maryland and an International Research Fellow at the Max Planck Institute for Research on Collective Goods. Since 1983, he has researched auctions and market design, designing complex markets to achieve goals. Applications include electricity, financial, and communications markets. He has introduced innovative market designs in many industries. He has advised many governments on market design and dozens of bidders in major auctions. Cramton is a co-inventor of spectrum auction designs used in North America, Europe, and Asia-Pacific. He is an advisor and chief economist to companies implementing markets. From 2015-2021, Cramton was an independent director of the Electric Reliability Council of Texas (ERCOT) board. He received his BS in Engineering from Cornell University and his PhD in Business from Stanford University.

Martin Doczkat is the Chief of the Electromagnetic Compatibility (EMC) Division in the Office of Engineering and Technology (OET), having served in various roles and capacities at the Federal Communications Commission (FCC) over the past fourteen years. The EMC Division is responsible for providing technical expertise on measurement and data collection related to broadband performance as part of the FCC's Broadband Data Collection (BDC) and Measuring Broadband America (MBA) programs, performing technical analyses including radiowave propagation and network performance studies to inform FCC policy decisions, and administering the FCC's Experimental Licensing and radiofrequency exposure compliance programs and the Technological Advisory Council (TAC). Prior to joining the FCC, Martin provided consulting engineering services to various FCC licensees. He is a member of the Institute of Electrical and Electronics Engineers (IEEE), International Electrotechnical Commission (IEC) Technical Committee (TC) 106, Association of Federal Communications Consulting Engineers (AFCCE), Federal Communications Bar Association (FCBA), and a licensed professional engineer (PE) in the District of Columbia. He holds a Bachelor of Science (BS) degree in Electrical Engineering from The Pennsylvania State University (PSU), and Master of Science (MS) degrees, in both Systems Engineering and Electrical Engineering, from The George Washington University (GWU).

Robert Frieden holds the Pioneers Chair in Telecommunications and Law at Penn State University. He is a leading analyst in the field of telecommunications and Internet infrastructure and has authored many comprehensive works on international telecommunications, Internet law and policy, cable television, and communications law. Professor Frieden has published over 100 journal articles and four books on various telecommunications topics. Prior to joining Penn State, Professor Frieden served as Deputy Director, International Relations, Motorola Satellite Communications, Inc., where he managed the regulatory and international liaison efforts for Motorola's IRIDIUM low earth orbiting satellite project. He has held senior level policy making positions in government and worked in the private sector as an attorney. Professor Frieden received a B.A. in Telecommunications from the University of Pennsylvania and a J.D. from the University of Virginia.

Bronwyn Howell is the undergraduate programme director for the BCom Management major, and teach decision-making and operations management in the School of Management, Victoria University of Wellington. Bronwyn has a multidisciplinary academic background in Operations Research, Economics, Management and Public Policy, and practitioner experience in the information technology and health sectors. Her current research focuses on the governance, policy and management of new technology projects, particularly mobile telecommunications and

distributed ledger (blockchain) applications. This draws on her work in decision-making under uncertainty, risk and risk management and the intersection with government funding, policy decisions and regulatory interventions. The latter includes her work on public-private partnerships in both the telecommunications and health sectors. Bronwyn has a particular interest in comparing the effects of new technology projects in small, remote and developing countries, with to those in large, centralised economies, focusing on the effects of scale and distance on outcomes. Her research is multidisciplinary, and predicated upon a systems view of interactions within projects, firms, industries and economies.

Imran Khan is Chief Financial Officer and VP of Corporate Services at Northwestel. In this role, Imran oversees Northwestel's Finance and Accounting, Capital Program, Carrier services, Legal services, Facilities and fleet Management, Procurement and Supply Chain functions, and Corporate security. Over the past 18 years, Imran has held several leadership roles, encompassing operations, finance, engineering, and, most recently, the MacValley Fibre Link Project. He has varied experience in financial management, business leadership, and corporate strategy. Based in Yellowknife, Imran is also a dedicated community member. His active involvement in the Stanton Territorial Hospital Foundation and the Yellowknife Chamber of Commerce Board of Directors showcases his commitment to Yellowknife.

Rob McMahon is an Associate Professor in the Media & Technology Studies Unit and the Department of Political Science at the University of Alberta. Prior to joining the University of Alberta in 2015, he worked as a postdoctoral researcher with the First Nations Innovation Project at the University of New Brunswick and co-founded the First Mile Connectivity Consortium, a national nonprofit association of Indigenous technology organizations. In 2020, Dr. McMahon received the Killam Accelerator research award from the University of Alberta. From 2018-2022 he was the co-director of the DigitalNWT project, which employs a co-creational approach to strengthen the foundation of community-based digital literacy in the Northwest Territories (NWT). Today he is part of a multi-year project investigating the impacts of LEO satellite access in rural/remote communities in the NWT.

Phil Moore is Vice President, Corporate Real Estate and Emergency Response at TELUS. He has been with TELUS for over 25 years and has held a variety of senior positions. Since 2018 he has been the Chair of TELUS Emergency Management Operating Committee. He has led the organization through preparation and response for impacts from floods, wildfires, atmospheric rivers, Derechos and the COVID-19 pandemic. His

team takes each response as an opportunity to learn and direct further investment into climate risk mitigation and response. TELUS response goes beyond infrastructure protection, service continuity and safety and has evolved into a more impactful humanitarian response both domestically and internationally. Phil has a Master of Business Administration from the University of Calgary, a post-diploma from the British Columbia Institute of Technology and a Bachelor of Arts from the University of Western Ontario.

Romel Mostafa is an Assistant Professor of Business, Economics and Public Policy at the Ivey Business School. Romel's areas of research and expertise include strategy & capability development in new firms, innovation & competitive dynamics, industrial evolution & policy, as well as behavioural decision-making. He has published in a number of leading academic journals, including Academy of Management Journal, Journal of Behavioral Decision Making, Journal of Risk & Uncertainty, Organization Science and Management Science. His research and commentaries have been featured in global media outlets such as CNN, NPR and the New York Times. Romel has taught both at graduate and undergraduate levels, and received several teaching awards. He obtained his PhD and MSc from Carnegie Mellon University, and BA from Lawrence University. As the Director of Ivey's Lawrence National Centre for Policy and Management, Romel spearheads the Centre's research, outreach and teaching initiatives. The Centre advocates for sound policy and corporate action towards unlocking national competitive advantage, by focusing on critical challenges and opportunities around digital, trade and social infrastructural pillars.

Sohayla Praysner is a customer-focused industry leader who has built partnerships with Canadian Service Providers throughout her career. Most recently, Sohayla was Country Manager, Canada at Intelsat, who operates the world's largest integrated satellite-terrestrial network. Prior to that, Sohayla held several leadership roles at Cisco Canada, Alcatel-Lucent and Nortel Networks. Her telecom career began at Bell Canada as a Network Engineer, and she has since led significant initiatives enabling large scale deployments of transformational technologies across Canada. Sohayla is a Professional Engineer and a graduate of the University of Toronto's Electrical Engineering program. She enjoys being involved with leading edge communication technologies that allow people to live, work and interact seamlessly across multiple, integrated terrestrial and non-terrestrial networks. Sohayla remains engaged with Engineering and Business programs and students at Canadian universities, as a coach and mentor to the next generation of professionals who will shape the future of the country.

Adam Scott is currently the Vice-Chair of Telecommunications at the Canadian Radio-television and Telecommunications Commission. With over 20 years of telecommunications policy and regulatory experience, Adam has managed complex files with technological, economic, social and legal dimensions, including Canada's 5G spectrum auctions. He has 12 years of experience at the executive level and brings a wealth of legislative, policy, regulatory, and program expertise to the telecommunications space. During his time at Innovation, Science and Economic Development Canada, he was responsible for developing strategies on how to optimize social and economic benefits of wireless spectrum in Canada. For many years, he developed government programs to improve broadband access in rural and remote parts of Canada, and developed a vision and strategy for improving Canada's communications infrastructure, addressing rural gaps, affordability issues, competition, innovation and investment. Adam brings significant experience to the table in consulting and cooperating with industry, civil society, other levels of government, departments and agencies.

Georg Serentschy advises C-level and top experts in the digital sector (platforms, telecommunications, media, and technology) on strategy, regulation & competition, spectrum policies, cybersecurity policies and innovation. A prime focus of his advisory work is the strategic positioning of companies in a specific regulatory environment. Experience shows that regulation is the most critical lever for driving commercial performance, investment and innovation in the digital sector. Georg's professional career spans more than 40 years. It began in nuclear physics, after which he turned to industrial research and development in various high-tech industrial areas such as software development, solar energy, aerospace, and telecommunications. After his career in industry, he joined Arthur D. Little, a strategy consulting firm. Then, for over a decade, he headed up the Regulatory Authority for Telecommunications in Austria (RTR-GmbH). The highlight of Georg's regulatory career was chairing and vice-chairing BEREC (Body of European Regulators for Electronic Communications). In 2014, he founded his consulting boutique, focused on advising C-suite and top digital sector experts on strategy, artificial intelligence, regulation & competition, spectrum policy, cybersecurity policy and innovation. In parallel, he continues to work with leading consultancies on a project basis.