

## MONDAY - MARCH 27

Mozart	Beethoven/Chopin	Julien/Gagnon/Walker	Delfosse
10:00 am - 6:30 pm Registration Open			
11:45 am - 12:00 pm <b>Welcome &amp; Introduction</b> Minister Gudie Hutchings			
12:00 pm - 12:45 pm <b>Can fixed wireless networks deliver a good Quality of Experience?</b> Gerrit Nagelhout, Preseem			
12:45 pm - 1:30 pm <b>Quick Fire Sessions</b> Sponsors and Exhibitors			
1:30 pm - 2:00 pm <b>The National Cyber Threat Assessment for 2023-2024</b> Kenny Jamer, Canadian Centre for Cyber Security			
2:00 pm - 2:15 pm <b>COFFEE BREAK</b>	2:00 pm - 3:00pm Experience with Gigabit		2:00 pm - 3:00 pm Vendor Showcase TP-LINK
2:15 pm - 3:00 pm <b>Planning your IPv6 Network</b> Jon Worley, ARIN			
3:00 pm - 3:30 pm <b>Vice-Chairperson Telecommunications</b> Adam Scott, CRTC			
3:30 pm - 6:30 pm EXPO HALL		3:30 pm - 4:00 pm 50/10 Wirelessly	
4:30 pm - 6:30 pm <b>Welcome Event</b> Sponsor: TDL Gentek			



### Adam Scott, Vice-Chairperson Telecommunications, CRTC

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 optimise 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.



### My Experience with Gigabit

New multipoint technology – short range, very high bandwidth is enabling operators to achieve gigabit speed to subscribers in unlicensed spectrum. Let's look at what 60 GHz spectrum can do for us!

### 50 / 10 Wirelessly

In our country, FWA is under pressure to perform. We need higher, more consistent data rates to create stable systems. Let's look at what it takes to determine if the wireless gear you have now, or maybe you're planning to upgrade in the future – has what it takes to create 50/10 or higher service rates to your subscribers.

### Dave Clelland, Systems Engineer, MBSI WAV



### Vendor Showcase TP-LINK

Introducing TP-Link Aginet, an agile and pragmatic solution for internet service providers. Cloud Managed Wi-Fi Solution. For ISPs dedicated to simplifying operation, reducing costs over the entire ISP service lifecycle, and providing comprehensive monitoring and remote troubleshooting for all your CPEs.

### Benjamin Liu, Director, B2B Sales and Product Management, TP-Link Canada Inc.

## SESSIONS



### Opening Comments: **Gudie Hutchings, MP, Minister of Rural Economic Development**

Gudie Hutchings is Canada's Minister of Rural Economic Development. She brings over 30 years of experience as a small business owner in the Atlantic Canadian tourism industry. Since 2015, she has been proudly serving her community as the Member of Parliament for the Long Range Mountains in Newfoundland and Labrador. As Minister of Rural Economic Development, she has been focused on implementing the \$2.75 billion Universal Broadband Fund, accelerating high-speed Internet access to all Canadians. As well, she is focused on improving rural housing supply, access to transit services, and workforce development in rural and remote communities.

Working across government, she has been a constant advocate for rural priorities, ensuring a rural lens is applied to all decision-making. Before she was appointed to Cabinet, she served as Parliamentary Secretary for Small Business and Tourism, as well as the Parliamentary Secretary to the Minister of Women and Gender Equality and Rural Economic Development, where she played a key role in the development of a national action plan to end gender-based violence and the Government's signature program to deliver universal connectivity.



### Can fixed wireless networks deliver a good Quality of Experience?

QoE is all about how the subscriber perceives your service. Poor QoE generally results in "slow internet" complaints. Dive deep into an insightful database of real world measurements that impact QoE.

#### **Gerrit Nagelhout, CEO, Aterlo Networks**

As CEO and co-founder of Aterlo Networks and Preseem, Gerrit's passion is helping ISPs understand and improve subscriber Quality of Experience (QoE) on their networks while uncovering new opportunities to help customers thrive and scale. Prior to co-founding Aterlo/Preseem, Gerrit spent 12+ years developing products and managing engineering teams for platforms used by some of the largest ISPs in the world. Now, however, he's dedicated to helping local and regional operators take on the big guys and solve network problems with products that people love. Gerrit has a degree in computer engineering from the University of Waterloo.



### The National Cyber Threat Assessment for 2023-2024

The Canadian Centre for Cyber Security (the Cyber Centre) is part of the Communications Security Establishment (CSE). It is the single unified source of expert advice, guidance, services and support on cyber security for Canadians. The partnership branch of the CCCS will present the National Cyber Threat Assessment for 2023-2024 with Key Judgements for the telecommunications sector.

#### **Kenny Jamer, Telecommunication Sector, Canadian Centre for Cyber Security**

Kenny is a Security Architect with the Partnerships Directorate of the Canadian Centre for Cyber Security. He has worked with the CCCS/CSE since 1999 helping to secure Canadian networks by developing standards, systems testing, incident handling, and helping Critical Infrastructure partners mitigate risks in their networks. Away from work Kenny spends as much time in the Great Outdoors as possible.



### Planning your IPv6 Network

Did you know that IPv6 can help your WISP grow? IPv6 provides a significantly larger pool of addresses compared to IPv4. This can help WISPs support the growing number of connected devices and ensure long-term growth. Obtaining IPv6 addresses from ARIN (American Registry for Internet Numbers) is a straightforward process and provides provider-independence and sufficient resources to run your WISP business. Attendees will learn the basics of IPv6, the appropriate IPv6 block size to request, and options for supporting IPv4 in their network.

#### **Jon Worley, Senior Technology Architect, ARIN**

Jon Worley has been an integral member of the ARIN team since 2004, currently serving as the Senior Technology Architect. He possesses extensive knowledge and expertise in all aspects of ARIN policies and procedures, specifically concerning the requesting, managing, and transferring of IP addresses and AS numbers, and technical services such as ARIN's RESTful API. Jon has shared his expertise on these subjects, as well as IPv4 depletion and IPv6 adoption, as a speaker at numerous ARIN events.



# AGENDA

## TUESDAY - MARCH 28

Mozart		Beethoven/Chopin	Julien/Gagnon/Walker	Delfosse
8:00 am - 9:00 am	Breakfast			
9:00 am - 10:00 am	<b>Wisper ISP The WISP Business</b> Nathan Stooke, Founder and CEO			
10:00 am - 10:45 am	<b>Geographic Information System (GIS) Wireless Experiences</b> Jeff Buell, CIRA	10:45 am - 5:00 pm Expo Hall Coffee Break 		
11:15 am - 12:15 pm	Vendor Showcase - MBSI WAV			
12:15 pm - 1:00 pm	LUNCH BREAK			
1:15 pm - 2:00 pm	<b>The Accessible Canada Act, and other legal issues affecting WISP's</b> C. Cliff, C. Copeland, TacitLaw	2:15 pm Coffee Break 	1:15 pm - 2:15 pm Vendor Showcase CALIX	1:15 pm - 2:15 pm Raising Capital
			2:30 pm - 3:30 pm Vendor Showcase ATMAIL	2:30 pm - 3:30 pm Vendor Showcase TARANA
			3:30 pm - 5:00 pm CEO ROUNDTABLE	
5:00 pm - 7:00 pm	GALA RECEPTION (Le Baccara) MBSI WAV			



### MBSI WAV Vendor Showcase

MBSI WAV is evolving with our customers – network operators, integrators, Managed Service Providers, and corporate network managers from pure broadband wireless offering to hybrid fiber / wireless networks. Let's us talk about this evolution and see what MBSI WAV can do for you!

**Dave Clelland, Systems Engineer, MBSI WAV**



### The Accessible Canada Act, and other legal issues affecting WISPs

Participants will learn about the Accessible Canada Act ("ACA"), which came into force in 2019 and applies to federally regulated entities. The goal of the legislation is to create a barrier-free Canada by 2040. We will give a high-level overview of WISPs' obligations under the ACA and other accessibility laws and the approaching deadlines for creating and publishing accessibility plans; setting up feedback processes; and developing progress reports. We will also provide a brief update on employment law issues affecting WISPs.

**Catherine Cliff, Lawyer, Tacit Law**

### CEO ROUNDTABLE

If you are an OWNER, CEO or GENERAL MANAGER you'll want to be here. It's a closed session for you to talk about whatever you want to talk about.



## SESSIONS



### The WISP Business

There's a reason it's called a Business. Nathan has grown his business from Day 1. He's learned that the WISP business is not just about bits, bytes, throughput, ping time, SN Ratios and jitter. Hey, if it was easy - Everyone would be doing it.

### Nathan Stooke, Founder and CEO, Wisper Internet

In the last 19 years, Nathan Stooke went from programming PCs to building Wisper into a successful multi-million dollar Internet service provider. With headquarters in Mascoutah, IL, Wisper now services Illinois, Kansas, Missouri, Indiana, Arkansas, and Oklahoma. In 2018, the FCC announced that Wisper ISP won \$220.3 million of federal funding in the FCC' rural broadband auction, the Connect America Fund Phase II. This money will be distributed to Wisper over a period of ten years. Wisper was one of 103 providers to win financial support from across the country.

As CEO of Wisper, Nathan has provided high-speed Internet service to tens of thousands of happy customers; many in rural, underserved areas where previous service providers had been spotty or nonexistent.



### Geographic Information System (GIS) in your Business

Customers are out there anxious for better internet service. ISPs would be willing to expand infrastructure, but they need to have confidence in a return on their investments. Data, particularly spatial data, can play a big role in matching customer demand to service expansion opportunities. Jeff will highlight some of the various data sources, data types and software you need to assist wireless ISPS, particularly in rural areas.

### Jeff Buell, IPT Program Manager, CIRA

Jeff is the Internet Performance Test (IPT) Program Manager. The IPT is the most advanced internet quality test in Canada that provides public access to the performance results. Jeff is an advocate for how IPT data, maps and reports can help stakeholders identify areas with limited access, improve funding decisions, evaluate the success of funded projects and do so at a high degree of geographic granularity.



### Vendor Showcase: TARANA

#### How Tarana ngFWA is Closing the Digital Divide and Delivering Reliable Broadband Service Worldwide

Tarana's ngFWA (next-generation fixed wireless access) broadband platform, Gigabit 1 (G1), is taking the world by storm. No longer just a concept, more than 200 ISPs in 19 countries are actively deploying ngFWA to connect their customers. Join our vendor showcase session to learn about the benefits these operators are realizing with G1, and to take a deep dive into the technology required to provide reliable broadband service in challenging locations.

### Vardin Amiri, Sales Engineering, TARANA

Vardin Amiri is a highly seasoned technical sales engineer with more than 23 years of experience in the Wireless industry. He has worked for manufacturers of Point-to-Point, Point-to-MultiPoint wireless solution built on proprietary and standard based technologies, such as LTE and 802.11xx chipsets.

### Raising Capital

#### Come and hear from some ISPs that have been successful in raising capital

Capital comes in many shapes and sizes, from formal and informal sources. Debt and Equity are the primary categories, but there is also seed capital, venture capital and private equity. We'll provide an overview of the process and the ISPs will share their experiences.

#### Moderator: Jonathan Black

Panelists: Nathan Stooke, Wisper Internet

Birket Foster, Storm Internet

Hank Wall, Valley Internet



## WEDNESDAY - MARCH 29

### Mozart

8:00 am - 9:15 am **Breakfast** 

9:15 am - 10:00 am **The Road to 2030 Opportunities and Obligations**  
Brenda Bouchette, Tacit Law

10:30 am - 11:30 am **3800 MHz Spectrum Auction Overview and Demonstration**  
Matthew Kellison Chad Paquette, ISED

11:45 am - 12:30 pm **Lunch Break** 

12:30 pm - 1:30 pm **CRTC Under New Management: What does it mean for Rural ISPs**  
Peter Menzies,  
Monica Song  
Rachael Thomas, MP

1:30 pm - 2:00 pm **State of the Industry**  
Jonathan Black, CanWISP  
Our annual survey of rural ISPs reveals a lot about how much we do for Rural Canadians.

2:00 pm - 2:45 pm **Independent ISP Update**  
Jay Thomson, CCSA  
Geoff White, CNOC  
Jonathan Holmes, ITPA  
Bob Allen, BCBA  
Jonathan Black, CanWISP

2:45 pm - 3:00 pm **Closing Comments**  
Andre Cleroux, Jonathan Black

### Beethoven/Chopin

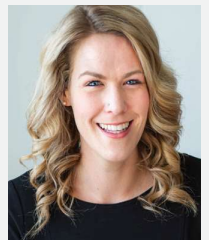
9:00 am - 12:30 pm  
Expo Hall

10:00 am - 10:30 pm  
**COFFEE BREAK**



### Julien/Gagnon/Walker

8:30am - 9:15 am  
**AGM Meeting**



### Independent ISP Associations' Annual Update

There are several associations of independent ISPs. They each have distinctive interests but share some common ideals and goals. What challenges do other independent ISPs face?



**Jay Thomson**, CEO, Canadian Communications Systems Alliance (CCSA),



**Geoff White**, Executive Director, Canadian Network Operators Consortium (CNOC),



**Bob Allen**, Executive Director, British Columbia Broadband Association (BCBA),



**Jonathan Holmes**, Executive Director, Independent Telecommunications Providers Association (ITPA)



**Jonathan Black**, Executive Director, Canadian Association of Wireless ISPs (CanWISP)



## SESSIONS

### **The Road to 2030 – Opportunities and Obligations**

Canada's goal is to connect 100% of Canadians by 2030. What will this look like for rural operators? With the clawback of 3.65 GHz spectrum, what spectrum can operators use to build rural networks? And what new requirements will ISPs have to meet? Brenda will discuss the opportunities and obligations that are on the horizon for rural ISPs.

#### **Brenda Bouchette, Technical and Economics Advisor, Tacit Law**

Brenda is a professional engineer with 26 years' experience in the telecommunications industry. Brenda has designed fixed and mobile networks across Canada and internationally, for large carriers and small operators. She has extensive knowledge of telecommunications network design and the business challenges facing network operators. She is also well-versed in economics and its application to the telecommunications industry.

### **3800 MHz Spectrum Auction – Overview and Demonstration**

ISED will walk us through what happens in a spectrum auction. From preparation to participation. A demonstration of the auction process through several rounds of bidding will also be presented.

#### **Matthew Kellison- Acting Director General, Spectrum Policy Branch,**

Innovation, Science and Economic Development

Matthew Kellison is the Acting Director General for ISED's Spectrum Policy Branch, and was previously Senior Director of Auction Operations. He has previously worked for the Patented Medicine Prices Review Board as the Director of Regulatory Affairs, and spent ten years at the Competition Bureau leading a variety of enforcement and policy files, particularly in the telecom sector. Matt has a Master's in economics from Queen's University.

#### **Chad Paquette – Manager, Auction Informatics, Spectrum Policy Branch, Innovation, Science and Economic Development.**

Chad has been involved in ISED's spectrum auction program for over 20 years. During that time, he's held several key roles. In the beginning, he developed the auction results mobile browsing interface for the PCS auction held in 2001. In his current role as Manager of Auction Informatics, he's responsible for ISED's auction rooms which includes IT equipment, network infrastructure as well as overall auction security. He also manages the bidding software during the conduct of ISED's spectrum auctions.

### **CRTC: Under New Management. What does this mean for rural ISPs?.**

A panel of regulatory, legislative and telecommunications experts will provide their commentary on the current form of the CRTC.

#### **Monica Song, Partner, Dentons**

Based in Ottawa, Monica Song is the national co-leader of Dentons Canada's Regulatory group. Monica is a senior administrative and public policy lawyer with a deep understanding of the Canadian legislative and public policy landscape who specializes in advising clients spearheading growth and innovation in the digital economy.

#### **Peter Menzies, Senior Fellow, Macdonald-Laurier Institute**

Peter Menzies spent almost 10 years as a CRTC Commissioner following three decades as a working journalist and newspaper executive, most notably with the Calgary Herald where he served as its editorial page editor, editor in chief and, finally, publisher. He worked briefly in the Parliamentary Press Gallery and Alberta Legislature Press Gallery, and won National Newspaper and Association of Opinion Page Editors awards for the objective of his work. At the CRTC he served initially in a part-time capacity followed by four years as regional commissioner for Alberta and the Northwest Territories and then four more as Vice Chair of Telecommunications. He was involved in major decisions involving service to northern and other remote communities, the establishment of the national emergency alerting system and the setting of the criteria establishing the Basic Service Objectives for telecommunications in Canada.

#### **Rachael Thomas, MP, Lethbridge**

As a dedicated listener and tireless advocate, Rachael has served as a powerful voice for the Lethbridge riding since she was first elected as the Member of Parliament in 2015. Grounded in the belief that every Canadian deserves to be treated with dignity, equality, and respect, Rachael is committed to putting people first. Empowered by the stories people share with her, Rachael puts a human face to government policies when she speaks in the House of Commons.

Rachael currently serves as the Shadow Minister for Canadian Heritage, where she passionately defends Canadians' rights and freedoms and seeks to empower Canadians to use their gifts, talents, and abilities to further themselves and build a Canada we can all be proud of. She believes the Canadian people—not government—are the problem solvers, solution makers, and wealth generators that will get our country back on track.