



**TURNING
THE PAGE
ON 2020**



Hello Canadian WISPs,

For 9 years CanWISP has represented the interests of Fixed Wireless ISPs to Canadian regulators and policy makers. Our message has been based on these basic facts:

- WISPs serve a crucial role in delivering broadband internet to Canadian homes and businesses and should not be ignored or excluded from the future of Canadian internet services.
- Access to interference-free spectrum is an enabler of higher speed internet services that our customers want and that the CRTC has targeted. Spectrum auctions make spectrum licensing inaccessible to most smaller ISPs (WISPs specifically) and put spectrum under the control of large players that have largely ignored rural Canada.

From that starting point our communication with ISED, the CRTC and other stakeholders focuses on:

- the desire of WISPs to serve clients where the carriers don't;
- the ability of WISPs to expand their networks quickly;
- the incredible burden of regulations on smaller service providers; and
- providing equal consideration in funding programs.

Over the past year we have participated in consultations on the 3600-3650MHz Band, the 3650-4200MHz Band and the 6GHz band. We have met with Minister Monsef, ISED and other officials. We believe our message is getting across, but the changes are never as fast as we would like.

This work benefits all WISPs members and non-members alike. ISED and the CRTC do pay attention to our membership numbers as they want to know how many WISPs are following our work. If you are not a member, please consider joining. If you are already a member, please renew in 2021.

If you have any questions about CanWISP or our work, don't hesitate to contact me.

Executive Director, CanWISP
jblack@canwisp.ca



Welcome to the 9th Annual CanWISP Conference. A lot has happened in our industry over the past year.

It was a few weeks more than a year ago when we were together for our last conference. A couple of weeks after the conference everything shut down. Although much of the world shut down, each of us WISPs started on what was probably our own 'Big Year'. We were asked to provide more service to our existing customers and more services to new customers. During the year, ISED also decided to begin taking away our access to spectrum that we use to deliver services to COVID-bound rural Canadians.

There is some hope. Vaccine's have been developed and are slowly making their way to Canadians. On the technical side, there may be additional spectrum coming in 6GHz, TVWS might actually move out of its non-commercial, development-only licensing stage and Point-To-Point licensing fees are coming down.

It has not been an easy year for our staff and families either. It's only through your dogged determination and leadership that you've brought your companies and staff through the year. Congrats.

Let's turn a page on 2020 and build a better 2021 together.

Now, please enjoy the show, thank the vendors and industry partners who support CanWISP and the conference.

Scott Holmes
President
CanWISP





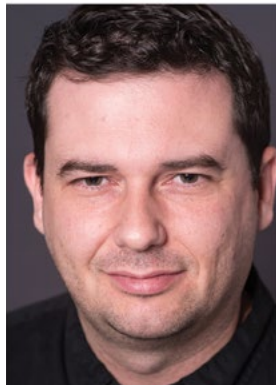
BOARD & EXECUTIVE DIRECTOR



Scott Holmes
PRESIDENT

Board Member since 2018

Scott is an entrepreneur who is the founder of Extreme Technology Corporation, a parent organization that has subsidiary companies in software and telecommunications. Scott is the CEO of Niagara Wireless Internet Company (NWIC Inc), a WISP in Niagara which has 27 fiber backhauled POPS to deliver high capacity connectivity to over 2,000 customers in the region. Scott's passion for telecommunications started at the age of 18 when he required higher capacity in rural Niagara to start his business. When Scott is not working he spends time with family and volunteers in his church and the community.



Dan Risebrough Barnes
CHAIRMAN

CanWISP Board member since 2014
Chair 2016-2018
Secretary 2015

Dan is the owner and CEO of Ruralwave. Since its launch in 2003 Ruralwave has grown to a medium sized fixed wireless provider in South Central Ontario. Centred in Kawartha Lakes, Ruralwave operations include wholly owned delivery of Fixed Wireless, LTE, Fibre to the Home, and Cable services to rural communities. Dan is a nation voice and advocate for fixed wireless broadband services and one of the founding members of Canwisp.



Neil Smellie
TREASURER

Board Member since 2017
Treasurer 2017-2018

Neil Smellie began in the ISP industry in 1995 and is currently President of Core Broadband.



Christopher Pape
VICE CHAIRMAN

Board Member since 2014
Vice Chair since 2015
Secretary 2014

20 years in the wireless industry including Ericsson telecommunications, Rogers wireless, Virgin mobile and Clearnet (now Telus). At Canwisp, Christopher represents Routcom Inc. - a WISP operating north of the GTA.



Jonathan Black
EXECUTIVE DIRECTOR

Jonathan was one of the founding members of CanWISP in 2018 during his time at Storm Internet. He has served the organization in various roles: Board Member, Treasurer, Chair, Conference Organizer and most recently as Executive Director. When he is not working on CanWISP he provides consulting services to WISP's and any other group trying to bring internet to underserved Canadians.



Jennifer French
EXECUTIVE ASSISTANT

Board Member since 2019

Jennifer was been in the WISP industry for 5 years and is currently a Customer Service Representative at Lakeland Networks who generously donate her time to the CanWISP cause. Thank you Lakeland Networks.



Steven Cole
SECRETARY

Secretary 2016-2018
Board Member since 2015

Steve is the President of Kingston Online Services which he founded 26 years ago.



Jeff Pastuck
BOARD MEMBER

Board Member since 2015

Jeff Pastuck is the Wireless Network Manager of Seaside Wireless Communications located in Sydney, Nova Scotia. Seaside Wireless Communications was formed in 2008 and offers wireless broadband and has a sister company Seaside Communications that has been in business for 40 years offering TV, VoIP and Cable Internet. After gaining experience at an enterprise level working at a local university, Jeff moved on to join Seaside's wireless division not long after its founding.



Andre Cleroux
BOARD MEMBER

Board Member since 2020

Andre is the Vice President of Customer Relations & Wireless Networks of TekSavvy Solutions Inc. With 14 years in the telecom industry, he has been instrumental in several initiatives from the development of fibre and wireless networks to overall customer service operations within the contact centre.

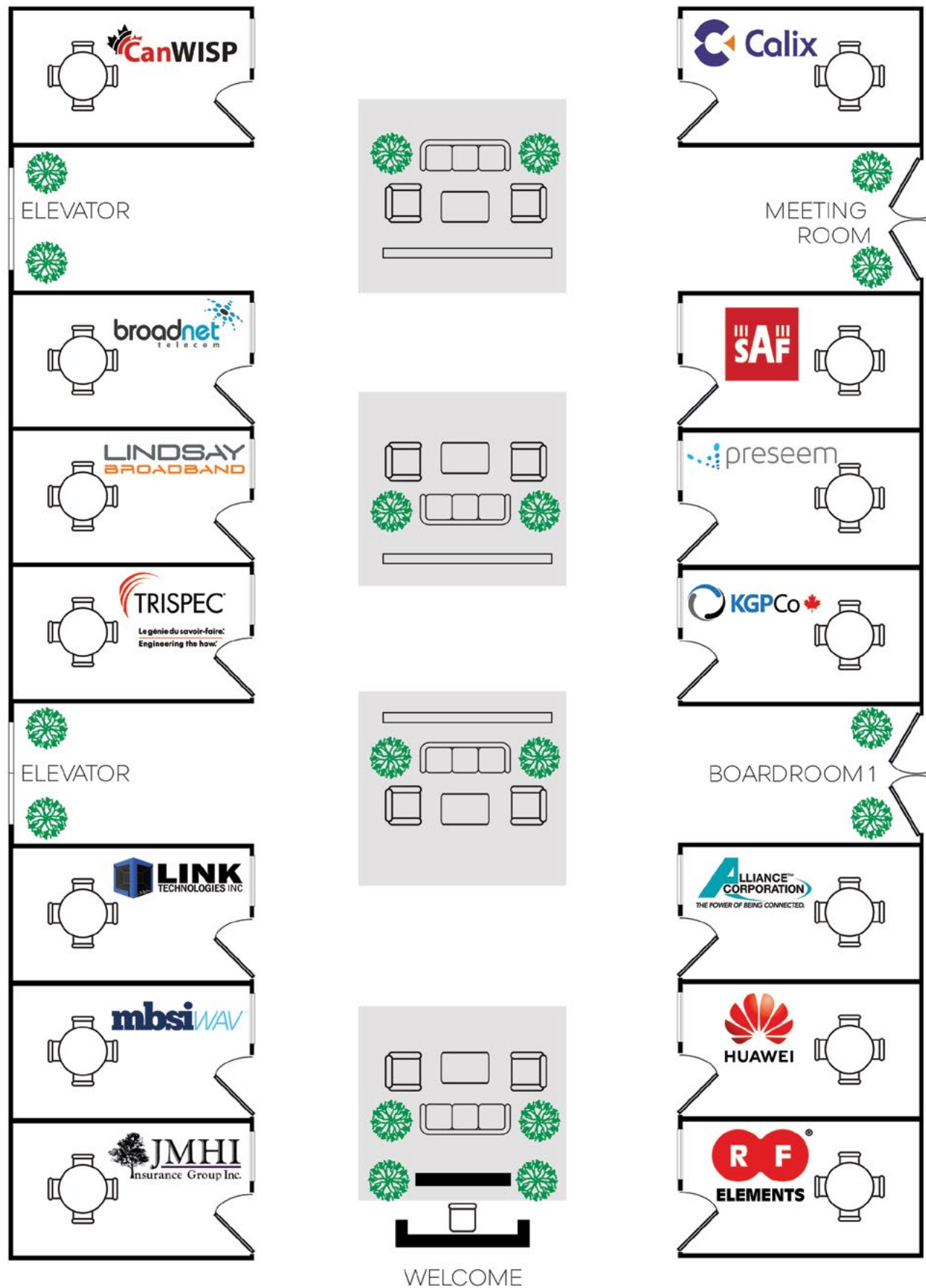


Brenda Bouchette
BOARD MEMBER

Board Member since 2020

Brenda has worked in the telecommunications industry for 25 years, and in the WISP industry for 15 years, as a project engineer, wireless network designer, and regulatory policy analyst. Today, Brenda works with Tacit Law. Brenda lives in BC and does her best to take advantage of it.

TEAM SUITES



AGENDA

TUESDAY - MARCH 30

10:00 am - AUDITORIUM

10:00 am - 10:15 am Welcome & Introduction - Scott Holmes, Jonathan Black

10:15 am - 10:45 am Peter Nowak | TekSavvy

10:45 am - EXPO HALL / TEAM SUITES

11:15 am - 12:00 pm Brad Stimpson | Redline TV White Spaces (TWWS) and the changing Canadian spectrum landscape

12:00 pm | LUNCH -

12:00 pm - RF Elements | BREAKOUT

12:45 - AUDITORIUM

12:45 pm - 1:30 pm Ronil Prasad | Aviat Multichannel, mmWave and Multiband Technologies

1:30 pm - 2:15 pm Claire Carver-Dias | clearday | Thriving in challenging times: How to lead your team through crisis

2:15 pm - 2:45 pm Quick Fire

2:45 - EXPO HALL / TEAM SUITES

2:45 pm - Huawei | BREAKOUT

3:30 pm - Owners GM's Only

WEDNESDAY - MARCH 31

9:15 - EXPO HALL / TEAM SUITES

9:15 am - MBSI WAV | BREAKOUT

10:00 am - 10:45 am David Willis | CRC / ISED | Update from ISED

10:45 am - 11:30 am Matt Mangriotis | Cambium New Opportunities for Fixed Wireless, Spectrum Sharing and Utilizing 5G

11:30 am - 12:15 pm Mark Kelley | (Mesh, mmWave) Business Case supporting mmWave Technology

12:15 pm | LUNCH

12:15 pm - LinkTechs | BREAKOUT

1:00 pm - EXPO HALL / TEAM SUITES

1:30 pm - 2:00 pm Mark Evans | Marketing Spark Stand out using Brand Storytelling

2:00 pm - 2:45 pm Brenda Bouchette | TacitLaw If you're not doing these things you're probably not compliant

2:45 pm - 3:30 pm Panel: How to manage when you're understaffed

3:30 pm - 4:00 pm Greg Owens | Calix | WiFi 6, are you ready?

4:00 pm Closing Remarks



EXPO HALL ENTRANCE



PLATINUM SPONSOR

GOLD SPONSOR

SILVER SPONSOR

THANK YOU

THANK YOU TO OUR SWAG BOX SPONSOR





azotel
.....outside

ENABLING BROADBAND ANYWHERE



*French Canadian
and English Customer
Documents and
End User Portals
Provided*

Azotel is more than a billing and operational support system. It's a powerful, flexible ISP automation tool that provides unparalleled efficiency and customer satisfaction.

Developed by a WISP operator in 2002, Azotel has grown into a feature-rich, time-tested system in use by WISPs & Fiber Broadband Operators around the world. Whether you have 100 or 100,000 subscribers, Azotel can save you money and bring ease to your operations.

- Mobile-friendly interface for installers
- Electronic signature capture
- End User Portal provides 24/7 customer access and service updates
- Automated billing with customizable billing plans
- Single CRM screen for all customer data and interactions (with integrated help/ticket system)
- Auto-disconnect for non-payment and auto-reconnect when payment received via End User Portal
- Financial Dashboard and reporting on key performance indicators on one screen
- Integrated with fiber management tools: Vetro and Render
- Integrated with fiber vendors: Calix, Zhone and more coming
- Works with LTE and Fiber as well as all traditional Fixed Wireless Vendors (Cam, Ubnt, Telrad, Baicells, etc...)
- Integrated with Bandwidth and Control tools: (Bequant, Preseem, Saisei)
- Integrated Google Calendar scheduling internal and external installers
- Map and coverage checking available and integration with TowerCoverage.com

Michael Sheward / CTO, Solutions4ebiz / Azotel N America Distributor
SCHEDULE A DEMO / sales@azotel.com or call +1 877 666 3249
azotel.solutions4ebiz.com



EXPLORE OUR GAME-CHANGING PRODUCTS



**Join us at our breakout session
TUESDAY MARCH 30th @ 12:00 PM**

Our Distributors:



More Info:

YOUTUBE CHANNEL
www.youtube.com/rfelements

CORPORATE WEBSITE
www.rfelements.com

ABOUT OUR TECHNOLOGY
www.rfelements.com/technology

Siklu

STARTING AT 5,300 CAN\$*

Go Faster, Go Further with

Siklu's Canada Special on 10Gpbs E-Band mmWave Links

Following recent ISED updates on licensing in the E-Band frequencies with annual fees dropping as much as a whopping **98%** for 10Gbps urban deployments, Siklu is pleased to share an exclusive Canada only PROMO on our industry leading 70/80Ghz EtherHaul-8010 series of radios. Don't compromise on quality - cash in on an unmatched price point today **starting at CAN \$5,350** for a 10Gbps full-duplex mmWave link!

Similar to our V-Band products, the E-Band EH-8010 radio supports wide frequency agility and extremely narrow beams resulting in almost unlimited spectrum for dense deployments. Our robust radios are unmatched in performance and reliability, delivering multi Gbps connections over miles and miles for years and years.

The products being offered in this industry leading promo can support 10Gbps full-duplex capacity with extended range as far as 10KM - accelerating Gigabit broadband deployment in urban, suburban and rural areas. These carrier grade radios deliver fiber performance, reliability and throughput wirelessly, now with an even lower CAPEX.

EH-8010 BUNDLE	LIST PRICE (FOB USA)	END USER PRICE (FOB Canada)
EH8010FX-Kit-1	US\$10,910	CAN\$5,350*
EH8010FX-Kit-2	US\$11,870	CAN\$5,695
EH8010FX-Kit-2DL5	US\$12,438	CAN\$5,883

CLAIM YOUR PROMO AT HELLO@SIKLU.COM

* The above End User Prices are SP or SI price per Link * Link includes two of each: ODU, Antenna, Bracket, PoE (see table above)

* 10Gb/s Capacity and ExtendMM 8010 license upgrades are included for 8010 bundles * Promo expires June 30th 2021

BROADBAND Solutions

LICENSED MICROWAVE 6-80 GHz 10 Mbps to > 4 Gb 1-25 miles +

Cambium Networks
Ceragon
DragonWave
Siklu

LICENSED EXEMPT P-P & PMP, Mesh & WiFi 900 MHz, 2.4, 4.9 & 5GHz

Cambium Freewave
Rajant Racom
RAD/ RADWIN BlinQ
Redline Siklu
Baicells

NETWORKING Switches, Routers, Modems, IP Cameras

Dasan Zhone
Cambium Networks
Uniview
RAD
Wild Networks

CABLING Coax, Copper, Fiber

RFS CommScope
Corning R&M
Prysmian Draka
Times

ANTENNAS

Radiowaves Til-Tek
CommScope RF Engineering
L-COM
RFS

POWER AC/DC, UPS, RENEWABLE

Alpha Technologies
Microsemi
EATON
ICT
Solis Energy

ENCLOSURES, RACKS & CABINETS

L-COM
DDB

PROTECTION & GROUNDING

Polyphaser Microsemi
Times Harger
AC-Line Citel

TOWERS, MOUNTS & STEEL PRODUCTS

ROHN
Sabre Industries
Trylon
Baird Mounting Systems



You deserve better. Just because.

Not to brag, but we're kind of a big deal. Because billing is kind of a big deal. Improve your billing; improve your business. And the way to improve your billing software is to choose a provider who is flexible, responsive, and there for you all the way.

Better billing.
Better business.
Because BillMax.
Learn what better means at BillMax.com.

billmax
Internet Billing and Customer Management



stocked in Canada exclusively at: **mbsiWAV**

**IOIO
BOX**
www.ioiobox.co

A PURPOSE BUILT WEATHER PROOF COST-EFFECTIVE NETWORK GEAR ENCLOSURE



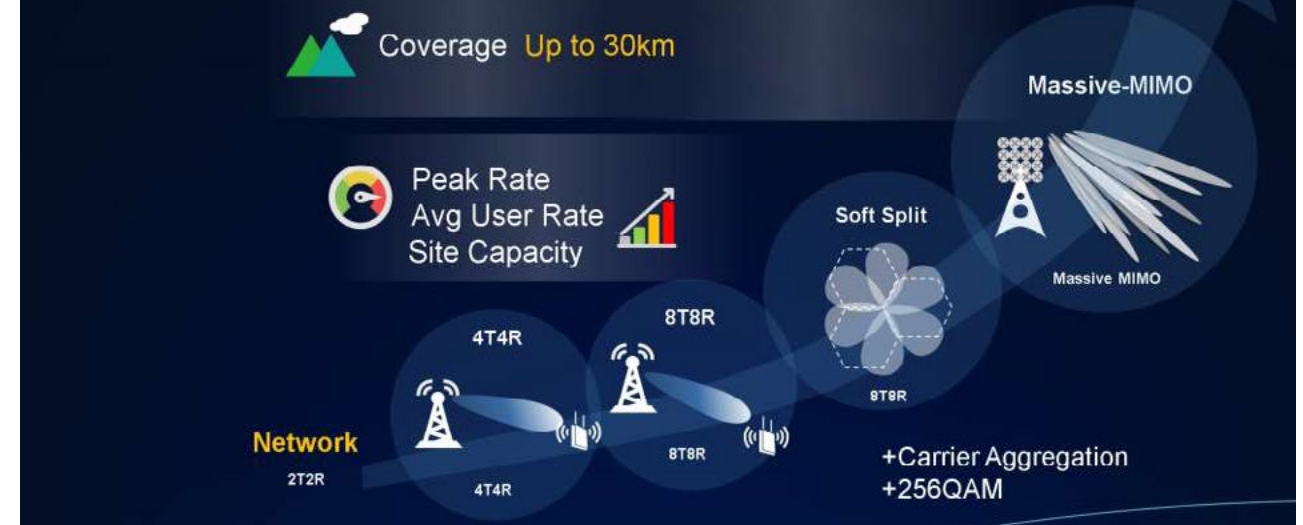
KGPCo Canada provides end-to-end supply chain solutions



Our booth will feature the latest products and network innovations from:



Huawei WTTx Solution for Rural FWA



Huawei Technologies Co., Ltd

End-to-End Solutions



RF



Optical



Powering



**Business
Connectivity**



Lindsay Broadband's end-to-end solutions have been keeping customers connected for 65+ years. A few CanWISP highlights are below.

• GPON / XGS-PON OLTs & ONTs

- Lowest total cost of ownership, with best price for performance - no recurring licenses or additional software required

• FREE GPON Trial - Network in a Box



• Small Cells

- Standalone small cell radios as well as one-box small cell solutions

• Line-Powered Backhaul Demarcation Devices

- PoE++ devices supporting small cells, wireless access points, IP cameras, PoS devices, IoT devices, information kiosks, etc.

• Residential UPS Systems

- Powerful, compact UPS solutions with 8-hour or 24-hour backup power

Keeping You Connected.
Tough Tech. Proven Performance.

www2.lindsaybb.com/CanWISP | info@lindsaybb.com | +1.705.742.1350

RF, Optical, Powering & Business Connectivity Solutions

mbsiWAV[®]

We are proud to represent the very best in wireless broadband, LTE, Wi-Fi equipment & accessories. With strategically located warehouses in Canada, product is ready to ship when you need it.



CALL

866-597-6274

CLICK

mbsiwav.com

FOLLOW





QoE MONITORING & OPTIMIZATION FOR WISPs

- ✓ INCREASE REVENUE
- ✓ REDUCE SUPPORT COSTS
- ✓ EXPAND NETWORK SAVINGS



MEASURE, ANALYZE, AND OPTIMIZE YOUR NETWORK

SIMPLE SETUP. USE YOUR OWN HARDWARE OR ONE OF OUR AFFORDABLE APPLIANCES.
PER-SUBSCRIBER MONTHLY PLANS STARTING AT \$100. NO CONTRACT.

START YOUR FREE 30-DAY TRIAL TODAY!
1-833-773-7336 | PRESEEM.COM



ACCURATE RF PROPAGATION MAPS
WORLDWIDE WITH SIMPLE WEBSITE
INTEGRATION FOR CUSTOMER SIGN UP
& PRE-QUALIFICATION

TOWER COVERAGE.COM

LINK
TECHNOLOGIES INC
EXPERIENCED NETWORK ENGINEERS FOR DESIGN,
SUPPORT & HARDWARE SALES
LINKTECHS.NET 314.735.0270

ARE YOU TRYING TO DELIVER BROADBAND SPEEDS TO YOUR CUSTOMERS?

TRISPEC is your ONE STOP SHOP for Canada's WISP's



Visit our booth and let us help you engineer your network

Trispec has a wide range of Fibre to the Node (FTTn) options:

- GPON solutions from Technity and Nokia
- Outside Plant (OSP) components, OSP Fibre Splice Closures
- Fibre optics cable from Clear Wave Photonics

Wireless P-P backhaul

- Featuring new solutions for Gigabit links from Nokia, SIAE & Siklu

Wireless P-MP access

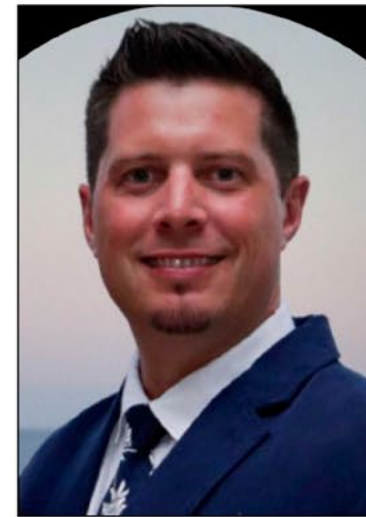
- Featuring new levels of broadband performance from Siklu Terragraph & Telrad

CPE

- Cable modems, IPTV Set top boxes, Gateways, Wi-Fi routers and more



Photo provided by:



CANWISP INSURANCE

JMHI continues to work with CANWISP to provide a tailored insurance offering as a value-added service to its membership.

In partnership with Travelers of Canada JMHI has produced a unique insurance offering just for CANWISP members. It offers multiple levels of coverage based on your size and operation plus member only discounts!

Licensed in Ontario, Alberta, Saskatchewan, JMHI also has a strategic alliance to service Quebec (Je suis francophone) and is currently working on B.C. We are happy to work with other Brokerages to ensure you get the CANWISP coverage and rates if we're not in your Province/Territory.

JMHI is run by Eric Gaudrault who is the Owner, President and Principal Broker. He services some of Canada's largest ISPs/WISPs and having worked in the Telecom Industry for several years, Eric has a Niche skillset to effectively address CANWISP member insurance needs.

To gain access to the program or if you have any questions, please contact Eric directly at:

Eric Gaudrault, CAIB, CSIP, RIB
Lieutenant (N) (Retired)
Email: eric@jmhigroup.ca
Tel: 226-312-2020
Toll Free: 1-855-236-5644





Official Product Line Card

A leading provider of 5G enabling technologies:



Complementary technologies supported:



Value-added software:



Addressable Markets:



Sales Contracts

Andy Richardson
arichardson@broadnet-telecom.ca
Cell 514.451.8869

Richard Bourret
rbourret@broadnet-telecom.ca
Cell 514.909.3428

Stephane Beausejour
sbeausejour@broadnet-telecom.ca
Cell 514.880.0095

INFORMED CONSULTING SOLUTIONS

Let us help you expand and realize your company's potential | info@kuropartners.com



Financial Management & Strategy | Business Operations | Interim and Turnaround Management | Strategic Planning
Exploring Strategic Alternatives | Due Diligence Execution (Buy-side and Sell-side) | RFP Response Development

Experienced, Knowledgeable, Marketing
& Branding Professionals Capitalizing on what
makes you "YOU".



705-357-2499 | victorydesigncompany@gmail.com

Giving All Canadians Access to Our Interconnected World

At CanWISP, we strongly believe that all Canadians deserve outstanding access to our technological infrastructure. To accomplish this, we take part in regulatory discussions with the Canadian Government to promote and share best practices within both government and industry. CanWISP members ensure that rural and exurban communities across Canada have the access and reliable connectivity they need to high-quality voice, video and data services. We work and live in all of the communities we serve, which gives us a greater understanding of our customers' needs and a much more personal aspect to our service. Our goal: to continue working with stakeholders to ensure that spectrum, a public resource, is used in an efficient and beneficial matter for all Canadians, no matter where in the country they live.

Permettre à tous les Canadiens d'avoir accès à notre monde interconnecté

Chez CanWISP, nous croyons fortement que tous les Canadiens méritent d'avoir un accès à l'infrastructure technologique. Pour réaliser ceci, nous participons à des conférences sur la réglementation avec le gouvernement du Canada afin de promouvoir et partager les meilleures façons de faire entre le gouvernement et l'industrie.

Les membres CanWISP s'assurent que les communautés rurales et exurbaines du Canada aient accès à un service haute vitesse fiable de grande qualité autant au niveau de la voix, des vidéos et des données. Nous travaillons et habitons dans les communautés desservies. Ceci nous permet de bien comprendre ce dont les clients ont besoin et nous permet d'offrir un service beaucoup plus personnalisé.

Notre objectif : travailler avec plusieurs intervenants afin de s'assurer que le spectre, qui est une ressource publique, soit utilisé le plus efficacement possible afin que tous les Canadiens puissent en bénéficier, peu importe où ils sont situés.



Canadian Association of Wireless Internet Service Providers Association des fournisseurs de service internet sans fil (CanWISP)

P.O. Box 24210 RPO Hazeldon
Kanata, Ontario K2M 2C3 Canada
Toll Free: 1.844.370.0404
eMail: info@canwisp.ca