

DAY
2

2016 WISPAPALOOZA

OCTOBER 11-13, 2016
LAS VEGAS

SHOW DAILY

State of WISPA: Making Big Strides, Eyeing the Future

By Tara Seals

Kicking off the first day of WISPAPALOOZA 2016, Alex Phillips, WISPA president, took to the stage to discuss the "State of WISPA."

This year's show has attracted 1,500+ attendees—a record—from 48 states and 26 different countries. And for the year, WISPA itself has 109 new members, 37 new vendors. This paves the road for further success and progress for the months ahead, Phillips noted.

Going forward, goals include growing membership and engagement, and strengthening the WISP industry presence in DC.

"When it comes to writing rules for the telecom industry, we're competing against larger organizations and industries with deep pockets and decades of experience in the corridors of power," Phillips said. "We are punching above our



Alex Phillips says WISPA's 'not gonna take it' when it comes to regulatory issues.

weight class and are making progress. 2016 was a year of success on the advocacy front."

The group is also making progress on Capitol Hill, he noted. WISPA is a strong backer of the Small Business Broadband Deployment Act, which is meant to ensure that small business providers of broadband Internet access service can devote resources to broadband deployment rather than compliance with cumbersome regulatory requirements. And, WISPA won a five-year exemption for small businesses from the Open Internet Order in a piece of legislation that passed the House and is moving through the Senate.

"Lawmakers reduced the exemption from five to three years in the Senate version—but our legislative team is devoted to brokering a compromise," Phillips said.

See STATE OF WISPA, page 6

micronet
COMMUNICATIONS, INC.

**Frequency Protection
&
Monitoring Service**

Protect Your Investment
Equipment Cost Tower Team Cost
Time Expense

Every Licensed Path All The Time
Monthly Archived Monitor Reporting

Complete License Management
Never Miss an FCC Deadline Again
Buildout Notification License Expiring
PCN Expiring

Included Free (\$240 Annual Value)

Call Today (972) 422-7200 ext 110

FREE TRIAL

SEE US AT
BOOTH #111



HaulPass V10g™

10 Gigabit Wireless Link

Blazing Speed in a Ruggedized, Compact Footprint



Introducing the HaulPass V10g, an advanced 10 Gbps V-Band millimeter wave radio link that delivers high-speed, low-latency, full-duplex wireless

data connectivity at distances up to 1.8 kilometers (over one mile). The HaulPass V10g provides broadband Ethernet connectivity via a fully integrated Ethernet switch, as well as 10 Gbps direct fiber-to-radio connectivity for maximum throughput and minimum latency.

The HaulPass V10g is housed in a small, ruggedized enclosure that's extremely easy to deploy. It utilizes the license-free V-Band spectrum to meet the ever-expanding needs of today's bandwidth-hungry networks.

Through the use of Adaptive Code Modulation and Baud (ACMB) technology, the V10g's code rate, modulation and baud are instantly set in real time, resulting in hitless adjustments to link conditions. This advanced technology maintains critical traffic transport even in the most adverse weather conditions.

With a disruptive price point and immediate ROI, our breakthrough V10g is what you'd expect from the innovation leader. Take advantage of our exclusive Wispapalooza offer on pre-orders for only \$7,995. Learn more at booth #111.

V10g Features at a Glance

- 2 x 1.25 Gbps Ethernet and 10 Gbps fiber wireless link
- V-Band license-free operation
- Up to 1.8 km point-to-point range
- Only 24.6 cm (9.7") diameter
- Low power requirements via PoE++ or 48 VDC
- Hitless adaptive coding, modulation and baud rate
- Intelligent AGC for maximum network throughput
- SNMP v 2.0 with private MIB and radio MIB

**Booth
615**

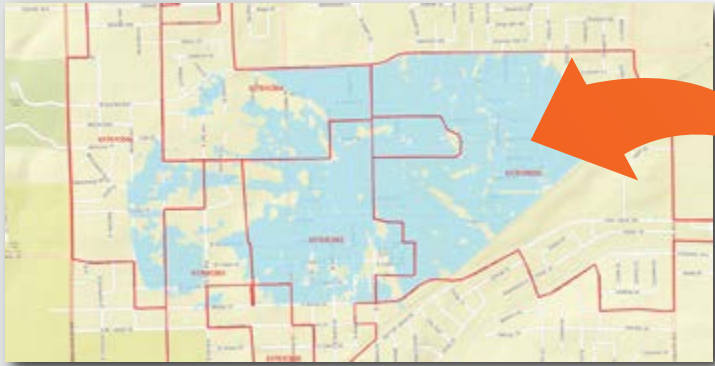


MarketBroadband.com

Take Control Of Your Market!

Stop at Booth 615 to get the
FREE Google Earth®
Instructions!

You'll Own The Neighborhood™ with Our Maps To Marketing Program



Lorex Sends Direct Mail ONLY to the Homes or Businesses Inside Your Target Area!

We target AT THE ADDRESS LEVEL—not by Carrier Route like the competition.

Even filter the data by Income, Home Value, Broadband Competition, Broadband Availability and MORE!

We overlay your service area map to remove areas that are not in your footprint.

1. Draw your **TARGET Market Area** on Google Earth®—It's **FREE!**



2. We overlay it with your **service area map (Fiber or Fixed Wireless)**



3. We remove the areas in your market area that are not in your signal footprint.



Fiber or Fixed Wireless—Market Only in Your Service Area!



Precisely Target Your Mail

AT THE ADDRESS LEVEL in your selected area and not by Carrier Route like the competition.

All Of The Tools For Multi-Touch Neighborhood Canvassing

We have everything you need:

- Direct Mail
- Yard Signs
- Door Hangers
- Referral Programs
- Flyers
- Cards
- ID Badges
- Shirts and Hats

Red - Fixed Wireless Market Area

Blue - Fiber Market Area

Actively Manage Yard Sign Placement



High Response Radius Mail Program Around New Activations

We mail to households around a new activation but only in your service area.

We Provide The Programs You Need To Grow Your Broadband Business

Call: 800-792-8812



MarketBroadband.com **LOREX**

Email: FixedWireless@MarketBroadband.com

Visit: MarketBroadband.com

WISPAPALOOZA Showcases Innovation in Exhibit Hall, Agenda

By Tara Seals

As WISPAPALOOZA Day 2 gets underway, carefully curated session tracks and a smart exhibit hall are ready to welcome attendees.

"I'm very proud of the exhibit hall," said Trina Coffey, director of operations at WISPA and co-chair of the Agenda Committee for the show. "The traditional configuration of straight, up-and-down rows means that people are weaving back and forth all day, and it's not conducive to mingling. We have an angled exhibit hall that's much more open. And there's a reason for that: Lunches are in the exhibit hall, and there are tables where people can sit and talk. This gives them a chance to socialize in a more casual atmosphere. It's not all about being sold to or trying to buy—the hall is designed for building relationships and networking too."

The agenda meanwhile is packed full of information across multiple discipline areas, geared to address everything that a WISP could need in order to effectively run and grow its business.

"We have a volunteer committee that includes operators and vendors alike, and they help us gear our educational tracks towards all facets of

the business," Coffey said. "There are tracks for the technical side, plenty of regulatory material to keep abreast of what they can and cannot do when running their business, as well as marketing, HR and finance."

The agenda also has designated segments for beginners, and more advanced sessions for industry veterans.

"We don't want the new WISP to come in and feel intimidated or like the speaker is talking above them, so we've earmarked some sessions for those just starting out," Coffey said. "Conversely, the guys that have been at it for 20 years have opportunities to go more in depth on the topics."

The Vendor Spotlight track has expanded the content focus as well.

"Our vendors are traditionally told that when they sit on a panel they're not allowed to pitch themselves," Coffey noted. "But this track gives them an hour to do with as they please, integrated into the agenda."

Coffey also noted that WISPAPALOOZA offers a great opportunity for members and attendees to learn more about the staff and to get more involved in WISPA as an organization.

"I encourage everyone to stop and say hello to the staff," she said. "I could not do what I do without the support from my staff and the board. Our new salesperson is here, Gary Helmers, who is new to the association since July. Also, most members have spoken to Arielle Coffey on the phone—they can see her here at registration, along with David Zybert, our marketing guru."

Attendees can learn more about the WISPA staff at <http://www.wispa.org/About-Us/WISPA-Staff>.

"I'd also like to encourage members to get more involved in whatever area they feel passionate about," Coffey added. "All of the committees are volunteer-based, so if members find something they care about, they can simply contact the committee chair and get involved in the association."

Committee chair contact information can be found at <http://www.wispa.org/About-Us/Committees>. □



Trina Coffey
Director of Operations,
WISPA

Don't miss the WISP PAC Fall Fundraiser!

By Tara Seals

WISP PAC, the political action committee formed to support WISPs and the fixed wireless industry, invites you to attend its fall fundraiser at WISPAPALOOZA. Join Vegas showgirls, good food and an open bar to show your support for our industry and to learn more about the PAC's activities.

WISP PAC is a non-partisan group created to support candidates that stand up for the industry in D.C.

In 2016, it has become increasingly more effective and robust of an organization. For instance, the group weighed in on Connect America

parameters, which at the outset excluded unlicensed spectrum strategies and relegated WISPs to the sidelines when it comes to applying for funds to build out broadband to the underserved. The scheme was tilted towards funding FTTH, regardless of whether that plan would be cost-effective for tax payers. The FCC went on to amend its stance, adopting WISPA's proposal, so that fixed wireless players now have access to \$200 million in federal subsidies over the next 10 years.

WISP PAC's goal is to level the playing field, and enable small business owners and entrepreneurs compete with cable and telcos. Funding can

See **DON'T MISS**, page 6

Wispmon Offers CPNI Compliance

Wispmon Software (Booth 507) has become the first WISP-centric billing/management/OSS software to allow providers to seamlessly comply with CPNI requirements as required by law for telecommunications carriers.

The FCC has made it clear that VoIP providers must meet requirements that include annual filings as described in Enforcement Advisory No. 2015-02. While

there is some debate about whether or not WISPs that provide data-only service fall into this category, Wispmon now makes it easy to comply by limiting viewable proprietary information only after security checks have been passed.

WISP customers can manage and update their security information through a new customer portal, which also ensures that the customer's information is secure.

Since 2007, Wispmon has become the first to fully integrate billing, monitoring, mapping and sales qualification through LOS profiling, trouble ticketing and work orders into a single platform. Last year with the release of version 4.0, Wispmon became the first fully responsive interface incorporating full inventory and IP management, all working on any device with a Web browser and an Internet connection. □

Vubiq Announces HaulPass V10g

Vubiq Networks Inc. (Booth 111) has announced the HaulPass V10g, an advanced 10Gbps V-Band millimeter wave radio link that delivers high-speed, low-latency, full-duplex wireless data connectivity at distances up to 1.8 kilometers (over one mile).

The HaulPass V10g provides broadband Ethernet connectivity via a fully integrated Ethernet switch, as well as 1 Gbps direct fiber-to-radio connectivity for maximum throughput and minimum latency.



"Our HaulPass V10g radio is housed in a small, ruggedized enclosure that's extremely easy and cost-effective to deploy," said Vubiq CEO John Dilworth. "It utilizes the license-free V-Band spectrum to meet the ever-expanding needs of today's bandwidth-hungry networks."

Weighing only 6.6 pounds and designed for extreme weather operation, the HaulPass V10g features a ruggedized outdoor enclosure with a compact diameter of only 24.6 centimeters. The advanced ACMB technology maintains critical traffic transport even in the most adverse weather conditions.

The flexible HaulPass V10g radio can be powered via Power over Ethernet (PoE++) or by using the unit's separate auxiliary 48V input, drawing less than 35 watts.


Mike Pettus, founder and CTO of Vubiq Networks, added "Thanks to our patented

Modular Integrated Waveguide technology, we have been able to leapfrog the competition for ultra-high-speed wireless broadband applications."

The HaulPass V10g utilizes the 60 GHz V-Band radio frequency that is globally allocated as unlicensed spectrum.

"This freedom provides the ability to deploy

our HaulPass V10g wireless radios as needed in enterprise, campus, ISP, private and carrier networks," continued Pettus. "V-Band provides many inherent benefits, including interference immunity, deployment flexibility and easy network reconfiguration."


The HaulPass V10g will be available for delivery in Q4 of this year. 

Morningstar Demonstrates Solutions for Off-Grid Solar Systems

Morningstar Corp. (Booth 227) is providing live demonstrations of its new Ethernet MeterBus Converter (EMC-1), which enables IP-based network and internet connectivity for various Morningstar solar charge controllers and inverters that can be used in off-grid wireless internet applications.

Those solutions are: TriStar MPPT; TriStar PWM; ProStar MPPT; SunSaver Duo; SunSaver MPPT and SureSine Inverter.



The Ethernet MeterBus Converter offers remote configuration and adjustments to solar system settings; reliable operation in arctic cold and hot desert climates; IP based MODBUS connectivity; displays of system status and log data to Morningstar's Live View Web page; and a cloud-hosted data service that is scheduled to launch in late 2016. 



Your Telecom Go-To Partner

NEW SERVICES AND SERVICE UPGRADES

- Internet/DIA/Data Transport
- Voice/Internet Bundles
- Disaster Recovery/Redundancy
- DDoS/Firewall
- and more!

PROJECT MANAGEMENT

Coordinate the installation of products and services, from contract generation to turn-up and first bill review

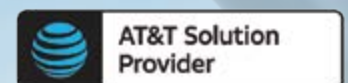
BILLING DISPUTES

We will work with AT&T to clear up any billing disputes on your current services.

**We are not a reseller so there's
NO COST from AmCom
for the above services.**

**Contact us for a quote today!
(512) 342-2226 x104 or
email sales@amcomsolutions.com**

www.amcomsolutions.com



STATE OF WISPA, continued from page 1

Phillips noted that WISPA is dedicating efforts to educate lawmakers on issues ranging from the importance of ensuring access to unlicensed spectrum to the regulatory burdens that the USDA Rural Utility Services imposes.

He added that despite the good news, plenty of challenges naturally remain ahead.

"It's been a good year, but it's not yet time to break out the bubbly," he said. "We are still fighting a constant battle to educate our lawmakers about our role, the state of competition against Comcast and Verizon and the other big companies, and on an array of trends that is quite hard to fathom. The main thing is to explain that if the goal is to increase access to high-quality, affordable broadband, more people would be better served if the system wasn't dominated by big money and bureaucrats."

FCC policies, he said, are designed to protect incumbents from dangers that aren't really there—while those same incumbents are taking advantage of subsidies. Meanwhile, regulatory uncertainties are hampering the development of innovative technology for the sector.

"Cable and telco companies spent \$10 million last year to fund candidates at the federal level, and \$42 million on lobbying efforts," he said.

"I suspect it's hard to ignore all that money. Dwight Eisenhower said, we must guard against the acquisition of unwarranted influence in the councils of government. But in many states the phone companies have systematically created and changed the regulatory framework. They have the protection of being the incumbent and having access to rights of way, but are excluded from regulation that would spur competition."

Lobbying efforts will be critical going forward, Phillips added, which is where WISP PAC comes in. The non-partisan fundraising group contributes to candidates that are pro-WISP and supports efforts to raise the profile of the industry.

"The WISP industry is pro-competition, pro-consumer, pro-taxpayer, pro-small business and pro-rural development," Phillips said. "Let's use this week to become more effective advocates for our industry—and this has to be a long-term effort for all of us. Contribute to WISP PAC and get involved." □

DON'T MISS, continued from page 4

go a long way: WISP PAC noted that in a payroll deduction program, if five employees at each WISP contributed \$2 a week, WISP PAC would be one of the largest PACs in D.C., bringing in \$250,000 per year to use in lobbying efforts.

Those interested in setting up a payroll deduction can get forms from any of the WISP PAC board members at the show; and, after the event, forms and donations can be sent directly to chairman Elizabeth Bowles, at ebowles13@icloud.com. □

Important information: Federal law mandates that WISP PAC only accept individual (i.e. personal) contributions, and individuals may give a maximum of \$5,000 per calendar year to WISP PAC. Contributions may be made via check or credit card. Contributions under \$100 may be given in cash.

When: Wednesday, October 12
Where: Tango Room
Time: 7:15 p.m. - 9:15 p.m.

Contribution Levels:

Supporter: \$50
Friend: \$100
Patron: \$250
Bronze Patron: \$500
Silver Patron: \$1,000
Gold Patron: \$2,500

Huawei Partners with Country Wireless on Fixed Wireless

Huawei and Country Wireless are building a carrier-class fixed wireless network in central Wisconsin.

Country Wireless plans to cover an estimated 5,000 homes with TDD LTE fixed wireless technology. Huawei's 4T4R TDD LTE RAN solution allows Country Wireless to offer maximum speed of up to 100Mbps per user with current 2Rx CPE. The maximum speed could be double by using Huawei 4T4R CPE which becomes available in Q4 2016.

In addition, the solution allows growth without replacing the existing infrastructure or changing spectrum bands.

"Rural carriers look to us to help develop robust broadband networks in a scalable and cost-efficient way," says Bill Gerski, vice president of sales for Huawei. "Huawei understands the unique needs of the Tier 3 market, which is frequently overlooked. We are dedicated to providing the infrastructure to help Country Wireless achieve its goal of providing LTE network access to rural residents."

Country Wireless is expanding its solution and will have a complete fixed wireless LTE-Advanced network for its subscribers in the upcoming months. □



SAF North America

MICROWAVE SOLUTIONS FROM BACKBONE TO LAST MILE

- Industry leading technology and best performance
- Reliable, carrier-grade equipment with an unbelievable 5 year warranty
- Exceptional technical support and customer service

Visit us during the WISPAPALOOZA at **booth No.713**

www.saftehnika.com | info@saftehnika.com

Agenda at-a-Glance

WEDNESDAY, OCTOBER 12

8:30 a.m. – 9:30 a.m.
Sessions and Vendor Spotlight

9:30 a.m. – 10 a.m.
Intermission

10 a.m. – 11 a.m.
Sessions and Vendor Spotlight

11 a.m. – 12:00 p.m.
Keynote: Milo Medin, Google Inc.

12:00 p.m. – 2:30 p.m.
Exhibit Hall/Lunch

2:30 p.m. – 2:45 p.m.
Intermission

2:45 p.m. – 3:45 p.m.
Sessions and Vendor Spotlight

3:45 p.m. – 4:15 p.m.
Intermission

4:15 p.m. – 5:15 p.m.
Sessions and Vendor Spotlight

5:15 p.m. – 7:15 p.m.
Exhibit Hall Reception

8:30 p.m. – Midnight
CEO / Technical Roundtables

THURSDAY, OCTOBER 13

8:30 a.m. – 9:30 a.m.
Sessions and Vendor Spotlight

9:30 a.m. – 10 a.m.
Intermission

10 a.m. – 11 a.m.
Sessions and Vendor Spotlight

11:00 a.m. – 1:30 p.m.
Exhibit Hall / Lunch

1:30 p.m. – 2:30 p.m.
Keynote: Martin Frey, ReadyNet

2:30 p.m. – 2:45 p.m.
Intermission

2:45 p.m. – 3:45 p.m.
Sessions

3:45 p.m. – 4:15 p.m.
Intermission

4:15 p.m. – 5:15 p.m.
Sessions

5:15 p.m. – 5:30 p.m.
Intermission

5:30 p.m. – 6:15 p.m.
Closing Remarks / Snack

**Don't forget to wear
pink on October 13th at
WISPAPALOOZA!**

WISPA is recognizing October as Breast Cancer Awareness Month, declaring Thursday as Pink Day, in conjunction with fundraising partner METAvivor. Donations can be made at www.metavivor.org.



Get next level ISP billing with our revolutionary BSS/OSS solutions

MBS CUSTOMER CARE AND INVOICING

MBS, is a revolutionary modular consumer billing and account management system for dynamic telecommunication environments. MBS integrated modules include: Customer Care, Mediation, Customer Invoicing, Trouble Reporting, Task Management, E-Care, Cash Drawer, and Service Activation Manager, as well as 3rd-party financial, mapping and facilities management products. Take advantage of our smart approach to customer management and take control of your revenue stream with our highly efficient, integrated billing tools.

FEATURES

- Online and licensed web-based solutions
- Consumer billing for wireline, Internet, cable, wireless, VOIP, IPTV and other services
- Control charges and billings for any situation
- Limitless account and service compositions
- Multi-cycle/multi-month billing
- Multiple taxing zones
- Online portal for bill and account maintenance
- Service provisioning
- Recurring and usage based billing
- Comprehensive reporting and analytical tools

LOOK TO CDG FOR
SUPERIOR SERVICE, INNOVATIVE SOLUTIONS,
AND EXCEPTIONAL BILLING CAPABILITIES

cdg.ws | 888.234.4443

BOOTH 301

2016 WISPAPALOOZA Awards Sparkle

WISPAPALOOZA held its annual Awards ceremony yesterday evening, revealing accolades for companies and individuals nominated and voted on by the principle members of WISPA.

The following categories are peer- and customer-nominated and voted upon:

- **Manufacturer of the Year - Ubiquiti Networks**

- **Operator of the Year - Amarillo Wireless**
- **Product of the Year - Mimosa B11**
- **Distributor of the Year - Baltic Networks**
- **Service of the Year - Tower Coverage**

Three additional awards are nominated by the membership and chosen by the WISPA Board:

The Triumph Award is awarded to those that have overcome adversity; previous winners have faced natural disasters, regulatory issues and

more. The 2016 winner is **Clay Stewart**, COO of AcelaNet/SCS Broadband.

The **2016 Volunteer of the Year** is **Richard Bernhardt**, Owner & CEO, Bernhardt Communications Co.

And, **the Visionary Award** is awarded to an individual whose vision for the fixed wireless industry and/or WISPA has had a significant impact. This year's winner is **Nathan Stooke**,

See AWARDS, page 10

Tycon Shows Off Solar Controller

Tycon Systems Inc. (Booth 600) is exhibiting the TPDIN-SC48-20 at WISPAPALOOZA, a Web-manageable MPPT solar controller with a built-in seven-port gigabit passive power over Ethernet (PoE) switch.

The Web interface has full capabilities to measure and log battery voltage, battery current, input current, load current and battery temperature. Ports can be controlled by a settable ping watchdog to power-cycle the port if communications to the unit are interrupted.


An auxiliary port can be controlled by voltage, temperature or time, so it can be programmed to control lights, pumps, generators, heaters, fans, etc. The unit supports automated email alerts if user-programmed limits are exceeded, so that the user can be alerted in case of developing problems at the site.

The controller also can be powered through an external AC-to-DC power supply in order to charge the batteries from an AC source, like grid power or a generator. The solar input of the

controller always takes priority, so if the sun is shining the external DC input isn't used.

All inputs and outputs are surge- and overload-protected. Connectors and battery fuse are removable for easy maintenance.


The controller can be mounted using the integral DIN rail mount bracket or using two mounting tabs. It uses temperature-compensated smart battery charging to properly charge GEL or AGM batteries and extend their life. It also has a balance charge mode for periodic battery-bank maintenance. □




visp.net
BILLING and AUTOMATION

Booth Number **510**

Streamline Take Control And Grow



AUTOMATE



www.visp.net

Micronet Takes Wraps Off WISProtect

Micronet Communications Inc. (Booth 204) has launched WISProtect, a specialized frequency management service for WISPs. WISProtect offers frequency management and license protection for a clear path to growth.

The extent to which fixed wireless has evolved with affordable, massive MIMO and spectrum re-use has taken everyone by surprise. Even Google Fiber is going wireless, and WISPs have already connected thousands of homes in parts of California, Arizona, Midwest and more across the U.S.

"The opportunity is vast, but so too will be the added burden on the RF ecosystem. Therefore, success for WISPs will be largely dependent on effective frequency management and migration to licensed backhaul," the company said.



WISProtect

Powered by Micronet Communications

"Micronet is an industry leader with over thirty years of unparalleled experience. We understand that this is a time of historic opportunity for WISPs and so we created WISProtect."

Micronet has a unique pedigree dating back 30 years to when we helped MCI build out the first nationwide competitive carrier network.

Since then, it has helped hundreds of WISPs migrate to licensed backhaul and protect their frequencies with round-the-clock monitoring of all neighboring license applications.

"There's never been a better time for WISPs," Micronet said. "Fixed wireless price/performance hit the sweet-spot this year, and the industry is suddenly poised to bridge the digital divide for millions of Americans." □

BEC Technologies Debuts LTE Outdoor Router with .11AC Wi-Fi Hotspot

BEC Technologies Inc. (Booth 806) has announced support of LTE Advanced across its LTE product portfolio, along with an outdoor 4G/LTE Wi-Fi Hotspot.

LTE Advanced technologies like carrier aggregation, Cat 6 UE support and higher-order MIMO continue the evolution of LTE towards higher peak data rates, lower latency and more capacity.

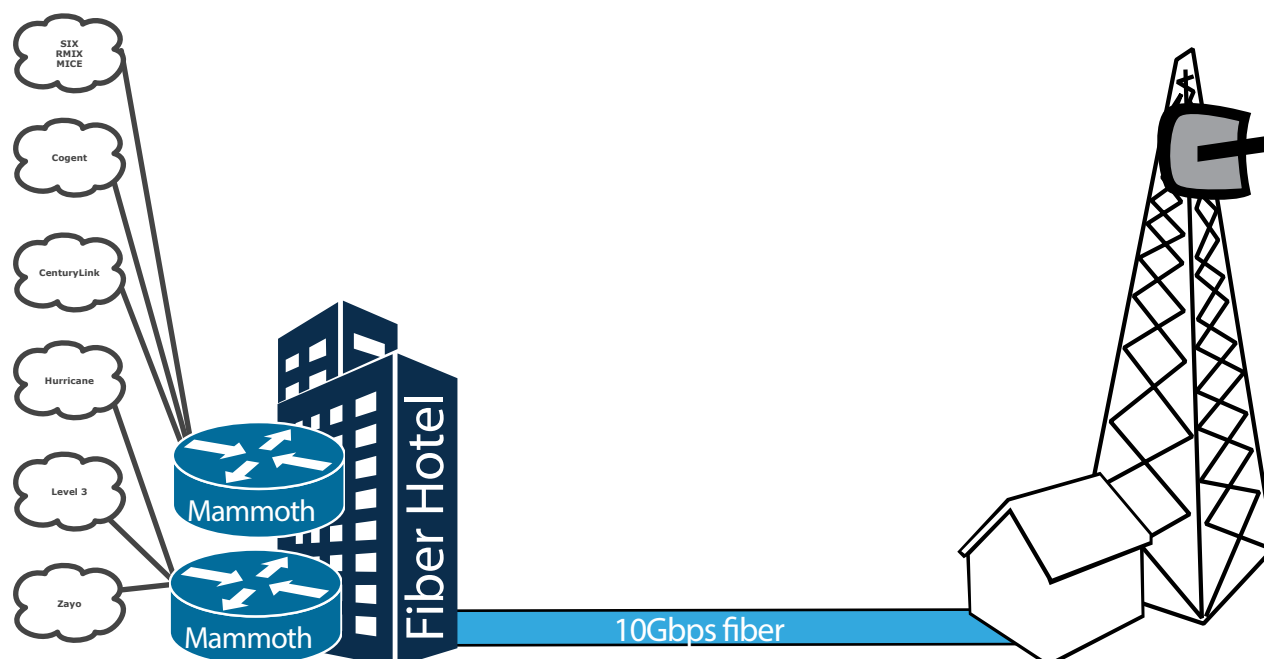
BEC Technologies will exhibit various platforms supporting this latest evolution of LTE at its booth, along with the BEC 6950—the 4G/LTE Outdoor Router. On display are:



- The MX-Connect Series of LTE M2M/IoT Device Platforms, supporting a wide range of applications and vertical market segments;
- Multi-Carrier Concurrent Connectivity and True-Seamless Failover—unique BEC features that enable high-availability for mission critical applications;
- 4G LTE Broadband & Service Delivery Solutions, platforms for fixed, VoIP/VoLTE, outdoor and industrial applications;
- Intelligent In-Vehicle Technologies, including automotive telematics and fleet management system;
- and BEC LTE Central Management Systems: Cloud-based device management application to extend visibility, monitor and control devices remotely from a single console. □

10Gbps to Multiple Upstreams

Mammoth has the best transport, the best blend of transit



Mammoth Networks

Contact us at 307.685.5557 or visit www.mammothnetworks.com

What Happens Where the Fiber Ends?

By Atul Bhatnagar, President and CEO, Cambium Networks

In the world of broadband, there is little doubt that the advent of fiber will bring faster, more reliable connections than the traditional copper infrastructure ever could. What we sometimes forget, however, is that even fiber has its limits.

For a fiber cable to work, you can do one of two things: hang it from a pole, or trench it in

the ground. Inherently, this limits the ultimate reach that fiber will have. We won't be able to set up poles in many parts of the world, and the same goes for digging trenches. Can you imagine trenching fiber through the Himalayas?

At some point the fiber has to end. Rugged and remote landscapes simply won't support it. But

that doesn't mean we can't provide consistent, high throughput connectivity to these places and the people who live there. Where the fiber ends – that's where a strong wireless link begins.

I'll give you two examples. In rural North Dakota, farmers and small businesses rely on Red River Communications for Internet access. Red River was already delivering high speed, low latency connectivity to various communities through fiber. Even so, demand for throughput was exceeding network capacity. To expand its reach to more customers in far-flung parts of the state – regions it traditionally couldn't reach with fiber – the company used our PTP and PMP wireless backhaul links and brought the same high-quality connectivity to those who otherwise would have never had access.



The second example is near and dear to me. Let alone fiber, nearly everything comes to an end in the rugged mountains of Nepal. Yet, there are many villages and communities in this region who just as well need reliable Internet for health care and education opportunities. I am proud to say our PMP solutions provide high-quality wireless connections to 150 of the world's most remote villages in Nepal.

The lesson I'd like to impart here is that everyone, everywhere should have access to the same standard of quality that fiber can provide. And with wireless backhaul, this is all possible. ▣

AWARDS, continued from page 8

co-chair of the WISPAPALOOZA Agenda Committee and CEO of Wisper ISP.

And finally, **the President's Awards of Excellence** are awards of merit given to up to 10 people per year, for doing more instead of less, and putting in the extra time and commitment to make a positive effect on the industry. As the name suggests, the winners for this award are selected by WISPA president Alex Phillips. The 2016 winners are: Elizabeth Bowles, Jimmy Carr, Arielle Coffey, Fred Goldstein, Brian Gray, Aaron Larson, Forbes Mercy, Layne Sisk, Ari Starch and Nathan Stooke. ▣

PBX Realtime

Reliable
Scalable
Multi-tenant
Fault tolerant

Carrier VoIP Switch
Saves your time
Works for you

Come see us
Booth 220

pbxrealtime.com
(888) 369-8647

Ubiquiti Sets Up Long-Haul Italian Link with 300+Mbps

The International Centre for Theoretical Physics (ICTP),

Amateur radio operators from CISAR (which operates CisarNet, a nationwide amateur radio communications system which serves as part of Italy's emergency communications infrastructure), and a team of Italian researchers from ICTP established the radio link in the 5 GHz frequency band using Ubiquiti Networks' airFiber AF-5X radios.

"What makes this accomplishment significant is the extremely high data rate and spectral efficiency," said ICTP spokesperson Ermanno Pietrosemoli. "This link attains broadband data rates of over 350Mbps, while using only 50 MHz of spectrum."

Pietrosemoli also noted that while this is not a Frequency Division Duplex (FDD) system, the link has latencies of less than 3.5 milliseconds, an important measure of networking performance. The link's high speed and low-latency are ascribed to the Ubiquiti gear's proprietary Hybrid Division Duplexing technology.

Despite the long distances involved, the link was relatively simple to set up: "Once the antennas were mounted on the towers, the radios were aligned in a matter of minutes using the airFiber radio's built-in aiming tool," said Giuseppe Misuri, president of CISAR. "With Ubiquiti's airFiber equipment, we will be able

to increase our network capacity considerably without requiring a major capital investment. This upgrade will provide an excellent tool for our ongoing studies of broadband propagation."

The International Centre for Theoretical Physics is a research institute for physical and mathematical sciences that operates under

a tripartite agreement between the Italian government, UNESCO and the International Atomic Energy Agency. Founded in 1964 by the late Nobel Laureate Abdus Salam, ICTP has been a driving force behind global efforts to advance scientific expertise in the developing world for over 50 years. □

2Ascent Launches Turnkey Wholesale Partner Program

2Ascent Data Centers (Booth 611), powered by Sitco Companies, has announced its Turnkey Wholesale Partner plan, centered on its cloud-based VoIP platform.

"We've done the work of building and testing our platform to provide reliable, feature-rich and privately branded business phone service and the most basic of residential telephone service that are easily deployed and installed," the company said. "You control how to deliver, install and support the services to your customers, we are here to provide support and training along the way."

The program includes a partner portal, which makes ordering services for your customers automated and easy to manage.

"We can help your business become more profitable by offering VoIP services to your existing client base with little to no upfront expenditure," the company said.

2Ascent is giving away an Apple Watch at its booth at WISPA PALOOZA. □



NETSAPIENS®

Celebrating 10 Years of the SNAPsolution!

NetSapiens' core product, the SNAPsolution, is turning 10! Join the NetSapiens team at **Booth#504** to celebrate a decade of empowering service providers like you with high quality VoIP software.

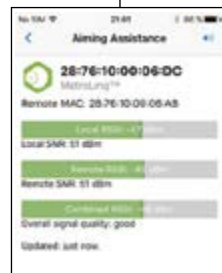


www.netsapiens.com

IgniteNet Announces New, Effortless Aiming App

IgniteNet (Booth 705) has launched a one-of-a-kind aiming application, featuring ultra-easy PTP connections for the company's MetroLinq 60Ghz products.

Alignment is vital to acquire a successful link, and any misalignment may cause serious performance issues or even loss of connectivity. WISPs can quickly, simply and accurately align all point-to-point connections with IgniteNet's aiming app.



The app also means that it is no longer necessary to log in to both ends of the MetroLinq radios, with laptops connected to each. IgniteNet's aiming app requires a single USB dongle connected to an available port on just one radio on a single side of the connection.

It is also no longer necessary to have a "man on the ground" relaying the alignment data or cumbersome equipment on both ends of the

wireless connection. The app is designed to stream alignment data to a phone or tablet in real-time, saving time and labor/installation costs.

"Never before has alignment been this fast, easy and informative," the company said. "And with IgniteNet's newly enhanced Web UI, aiming is now more simple, accurate and responsive than ever before. Both the aiming app and enriched Web UI are a true win-win for service providers and installers alike." □

Novi Security Conducts Live Demo at WISPAPALOOZA

Home and business security technology provider Novi Security will demo its four-in-one device at WISPAPALOOZA, in the Winncom Solutions Center (Booths 221 and 224).

"We are excited to be educating WISPAPALOOZA attendees on how we have simplified security," said Tyler Crawford, CEO of Novi Security. "We have done an extensive amount of research, surveying hundreds of consumers, and have created a security system that people actually want and can more easily afford."

Conference attendees, including retailers, channel partners and distributors, will experience the ease of installation of the battery-powered wireless sensor and the user-friendly capabilities of its

integrated mobile app. At one-fifth the price of traditional security, the unobtrusive ceiling-mounted sensor includes a camera, smoke detector, motion detector and siren. When the sensor detects motion or smoke, it automatically sends three high-definition images to the user's smartphone via the Novi app.

"Unlike other security systems, Novi empowers the user with complete control of the response," Crawford continued. "You choose to call the police, sound the siren, request additional images or disarm the system. The app gives you complete functionality wherever you are."

Novi Security sales and marketing director Jeff Keller will conduct the live demo for interested parties. □

RADWIN Bows Carrier-Grade PtMP JET AIR Beamforming

RADWIN (Booth 314) has unveiled the JET AIR PtMP beamforming solution.

RADWIN's field-proven offering is designed to meet the ever-growing capacity requirements of residential subscribers at a very affordable price.

RADWIN's JET AIR assures revenue growth for residential service providers by delivering service resiliency. RADWIN's new offering also includes subscriber units, designed for simple installation and operation.

Jet AIR will be available for shipment on December 6.

RADWIN provides point-to-multipoint and point-to-point sub-6 GHz broadband wireless solutions, specifically geared for non-line-of-sight (NLOS) small cell backhaul. Incorporating the most advanced technologies such as a beam-forming antenna and an innovative air interface, RADWIN's systems deliver optimal performance in the toughest conditions, including high interference and obstructed line-of-sight. The solutions power applications including backhaul, broadband access, private



network connectivity, video surveillance transmission as well as delivering broadband for trains and metros. □

NetSapiens Unveils Browser-Integrated Softphone

NetSapiens Inc. (Booth 504) has officially unveiled SNAPmobile Web, a browser-based softphone.

SNAPmobile Web brings the features and functionality that are offered on SNAPmobile iOS and Android to a pop-out Web phone, creating a unified user experience across all devices. NetSapiens is giving a first look at this new feature of the SNAPsolution platform during live demonstrations at WISPAPALOOZA.

SNAPmobile began as a way to give users access to features of the NetSapiens portal interface within a convenient smartphone app. The addition of SNAPmobile Web will bring the project full circle by extending the SNAPmobile experience that users already have on their mobile phones directly to their browsers. Users can access the SNAPmobile interface to make calls, edit answering rules, manage voicemails and more, from anywhere and on any device. This is especially beneficial for call center agents, remote workers and office workers looking for a convenient replacement for their traditional desk phone.

Select Spectrum Plans Fall 2.5GHz Spectrum Lease Auction

Based on the success of its previous auctions, Select Spectrum (Booth 907) has planned another 2.5GHz Spectrum Lease Auction for this fall. Parties interested in participating in the Auction must submit a signed agreement by October 20, and first bids will be due on October 27.

The fall auction will feature more than 400 Educational Broadband Service "EBS" and Broadband Radio Service "BRS" licenses, covering the homes of more than 140 million people.

The auction brings together educational institutions that do not have the infrastructure or budget to build broadband systems with wireless operators. The latter may wish to expand their coverage, or to provide customers with higher data speeds by leasing excess capacity on the educators' channels.

Previous auctions have resulted in 83 completed 2.5GHz spectrum transactions, with additional deals working their way through the negotiation process. After the fall auction Select Spectrum expect the total number of completed deals to climb to more than 100.

Select Spectrum was founded in 2010 to help spectrum rights holders and commercial wireless operators efficiently complete spectrum leases and sales at fair prices..

SNAPmobile Web is also a direct replacement for the third-party soft clients that service providers deploy to their end users. The amount of time that service providers spend helping their end users download, configure and support soft clients is an unnecessary drain on resources and the bottom line. SNAPmobile Web was designed to eliminate these time-consuming activities.

To launch SNAPmobile Web, a user can click a single button in the portal interface or navigate to the SNAPmobile URL in their browser and login. There are no plugins to download and no manual configurations to navigate.

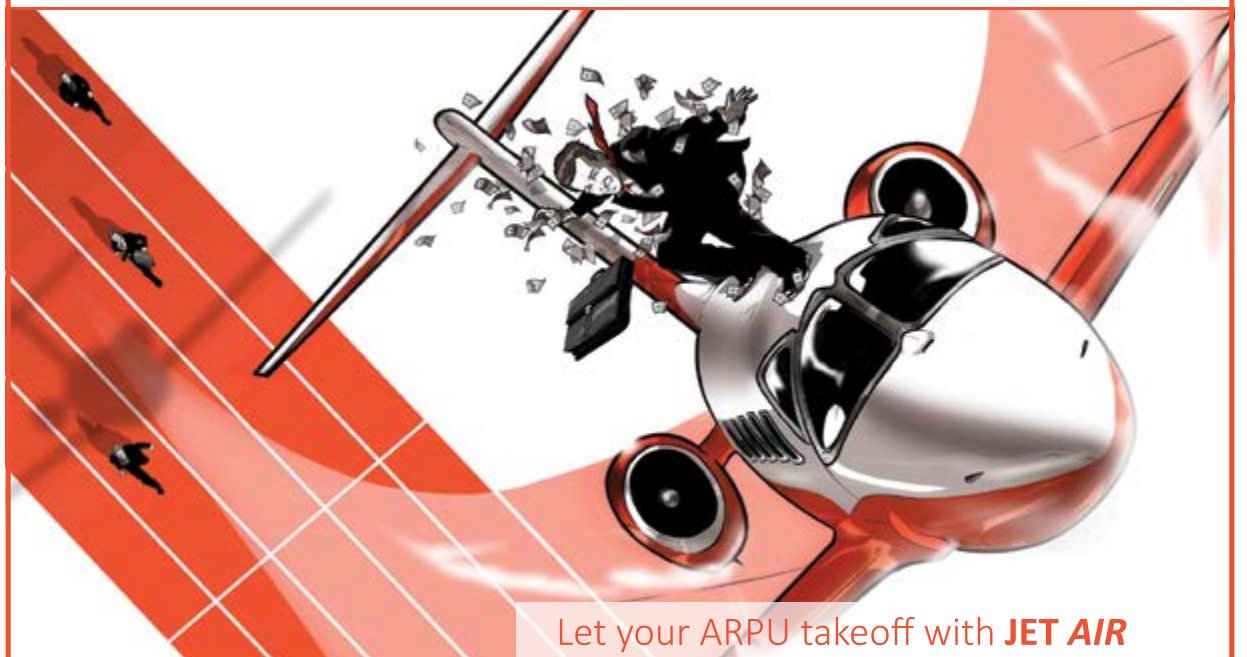
SNAPmobile Web is expected to become available to NetSapiens clients later this year.

New

RADWIN JET AIR

for the Residential Market

Based on market-proven beamforming for WISPs



Let your ARPU takeoff with **JET AIR**

DON'T MISS! Product Unveiling by **CEO Sharon Sher**

RADWIN Residential Deployment Case Study - Guest Speaker Presentation

Oct 12th, at 2:45pm in room Brasilia 4

JOIN US AND WIN



Fitbit Fitness Watch



GoPro



iPad Air 2

Visit **RADWIN booth # 314** for a live product demo & raffle tickets

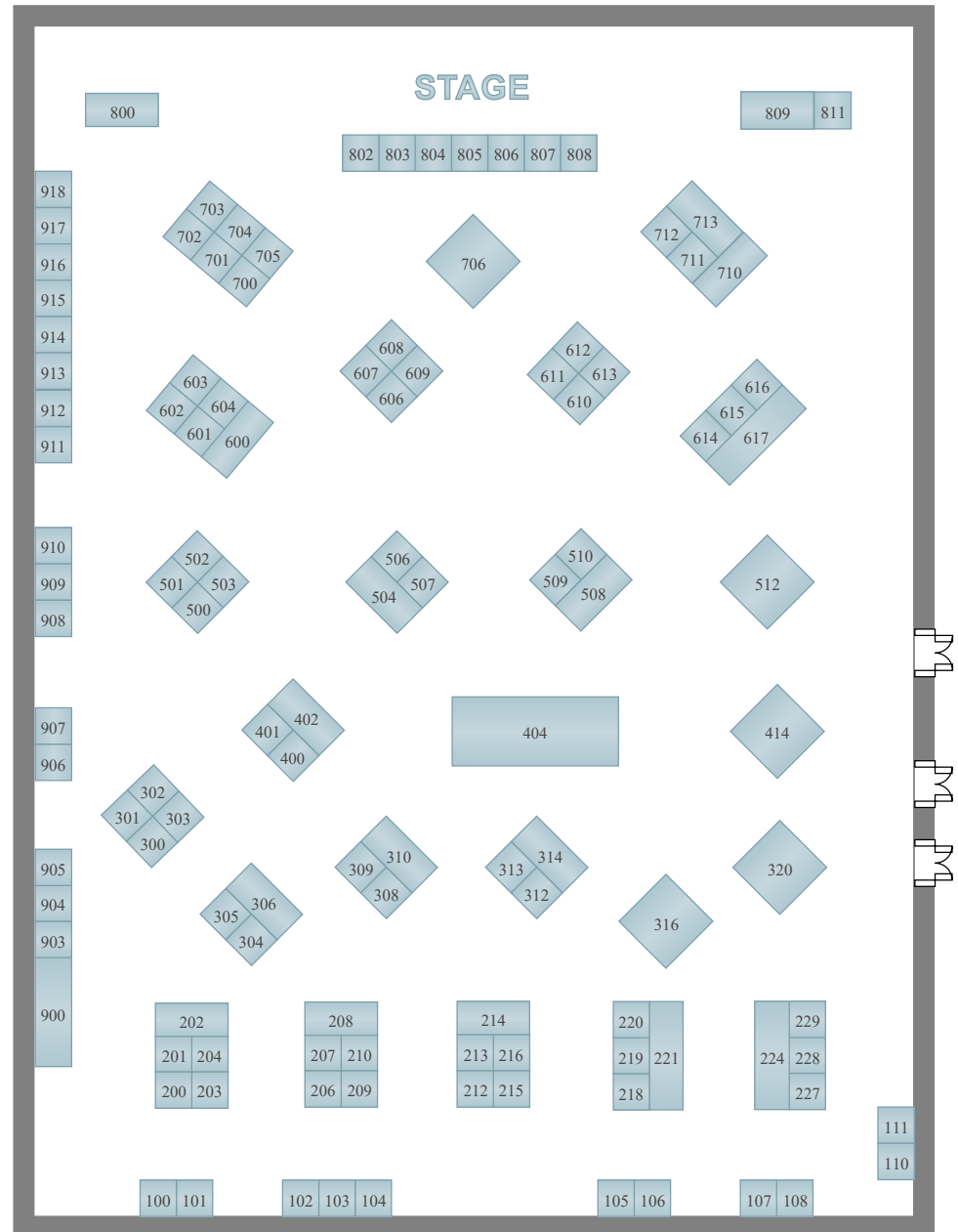
www.radwin.com | sales@radwin.com

RADWIN

EXHIBITORS AT-A-GLANCE

100.....Multilink solutions Inc.	507.....Wispmom
101.....PerfectVision Mfg. Inc.	508.....Streakwave Wireless Inc.
102.....ReadyNet Solutions	509.....Ritalia Funding
103.....Solidphone	510.....Visp.net
104.....Employer Essentials	512.....ConVergence Technologies Inc.
105.....Mission Critical Energy Inc.	600.....Tycon Systems, Inc.
106.....Wade Antenna Inc.	601.....Itelite Antennas Inc.
107.....Wireless Connections LLC	602.....ZTE (USA) Inc.
108.....Interstate Powercare	603.....3-GIS LLC
110.....The Fibersmith Company	604.....Cayman Wireless, Inc.
111.....Vubiq Networks Inc.	606.....Technologies Management Inc.
200.....Ooma Inc.	607.....BillMax Billing Solutions
201.....LEAF Commercial Capital	608.....PacketFlux Technologies Inc.
202.....Sonar Software Inc.	609.....ServerPlus LLC
203.....Adaptrum	610.....Safety One Training International Inc.
204.....Micronet Communications Inc.	611.....SITCO LLC
206.....AmCom Solutions Inc.	612.....LigoWave
207.....Bright WiFi	613.....Tarana Wireless Inc.
208.....Mimosa	614.....LinuxMagic Inc.
209.....Zyxel Communications	615.....MarketBroadBand.com/Lorex Inc.
210.....Platypus	616.....Graybar
212.....Brink Networks	617.....Telrad Networks Ltd.
213.....BridgeWave Communications	700.....VJTT Networks Ltd.
214.....KP Performance Antennas	701.....Beka Publishing
215.....Kiesling Associates LLP	702.....Telecom Surplus Resources Inc.
216.....Vitelity	703.....Gigaband LLC
218.....Winncom Technologies	704.....Microcom Technologies
219.....Alliance Corporation	705.....IgniteNet
220.....1-VoIP Enhanced Services	706.....RF Elements North America
221.....Winncom Technologies	710.....Link Technologies Inc.
224.....Winncom Technologies	711.....DirectlinkAdmin - Video Direct
227.....Morningstar Corp.	712.....EPCOM
228.....WISPA Wireless Internet Service Providers Association	713.....SAF Tehnika
229.....DoubleRadius Inc.	800.....Millennium
300.....ARIN	802.....Runcom Technologies Ltd.
301.....Communications Data Group	803.....StreamVision LLC
302.....Pace International	804.....Massive Networks
303.....Flytec Computers	805.....GoDBiNet
304.....COS Systems	806.....BEC Technologies Inc.
305.....IPiFony Systems Inc.	807.....Last Mile Gear
306.....Huawei Technologies USA Inc.	808.....Eupen Cable USA
308.....WAV Wireless Outfitters	809.....Tower One Inc.
309.....MBSI WAV	811.....Mammoth Networks
310.....ViaSat	900.....ISP Supplies
312.....Compliance Solutions	903.....Streakwave Wireless Inc.
313.....American Tower	904.....Star Solutions International Inc.
314.....RADWIN Inc.	905.....Siklu
316.....Baltic Networks	906.....Multilink Inc.
320.....Ubiquiti Networks	907.....Select Spectrum LLC
400.....Trango Systems	908.....American Tower Company Inc.
401.....Clearfield Inc.	909.....The Fusion Network LLC.
402.....Baicells	910.....Friendly Technologies
404.....Powercode	911.....Product Source International Datacomm/Zhone Technologies
414.....Cambium Networks Inc.	912.....Procera Networks
500.....Free Signal TV	913.....Giglinx Global
501.....RACOM s.r.o.	914.....Saisei Networks Pte Ltd
502.....SWG Inc.	915.....Rodeo Internet/Rodeo Networks LLC
503.....Azotel Solutions4ebiz	916.....Carlson Wireless Technologies Inc.
504.....NetSapiens Inc.	917.....Extreme Technology Corp.
506.....Freeside Internet Services	918.....ROHN Products LLC

Exhibit Hall Booth Map





Memphis, TN March 14-16, 2017

2017 WISPAmerica

Feel the beat.

Stomp your feet.

Get the rhythm

and the pulse . . .

Of WISPAmerica 2017!

Save the Dates: March 14-16, 2017

YOUR EASY BUTTON

for Wholesale
Telecommunication Services



GIGLINX

WHOLESALE BANDWIDTH | CDN & COLOCATION

- ⊗ Wholesale Bandwidth - (Over 200 Carriers Globally, Fiber, Coax, EoC, Wireless)
- ⊗ Transport - (NNI, Long Haul, Metro, Dark Fiber, Wireless)
- ⊗ MPLS - (Global Connectivity, Monitoring, Reporting)
- ⊗ Wholesale Colo - (Local, National, International)
- ⊗ Cloud - (IaaS, DRaaS, BaaS, VDI)
- ⊗ IPv4 Allocations - (Rent or Purchase, ARIN, RIPE, etc.)
- ⊗ CDN | Streaming and Storage
- ⊗ VOIP



Our Infrastructure Partners

INTERNAP

NTT Communications

PCCW

integra
TELECOM

zayo
GROUP

at&t

Deutsche
Telekom

BT

XO
COMMUNICATIONS

SingTel

TATA

Sprint

Level 3

TeliaSonera
International Edition

Comcast

中国移动
China Mobile

gtt
GLOBAL TELECOM + TECHNOLOGY

verizon

tw telecom

CenturyLink

cogent
COMMUNICATIONS
Optical Internet

TIME WARNER CABLE
Business Class

EarthLink
CARRIER

中国电信
CHINA TELECOM

Telstra

Charter
Business

WWW.GIGLINX.COM

sales@giglinx.com

1.800.856.5960