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2016 WISPAPALOOZA

OCTOBER 11-13, 2016  
LAS VEGAS

# SHOW DAILY

## WISPAPALOOZA 2016 Showcases Expanded Focus, Deeper Insights

By Tara Seals

As the wireless ISP industry embarks on a new sea of opportunities in diverse areas like enterprise services, video and fiber—while deepening its commitment to traditional service areas—this year's show promises more opportunities for learning, conversations and insights than ever before.

According to Nathan Stooke, Co-chair of the WISPAPALOOZA Agenda Committee and CEO of Wisper ISP, the 2016 event offers an expanded focus that includes dedicated, topical education tracks for HR, marketing and more, an expanded Vendor Spotlight program and a record number of companies participating in the planning of the show.

"This year we had almost two dozen people dedicating time to plan the show—an even mix of vendors and operators," he explained. "This is the first year we've involved that many vendors, and they have an important perspective that comes from interacting with hundreds of WISPs and hearing their concerns and requirements."

Part of the fruit of those meetings is an expanded agenda that features grouped sessions that revolve around a given topic. The idea is to make it easier for WISPs to bring multiple representatives to the show from different aspects of the business.

"Typically if you look at a smaller WISP, they can't send a marketing and/or an HR person out for an entire week, so we've set it up so that different days feature different topics," said Stooke. "So for instance, all HR sessions are on Thursday, so they can limit their time out of the office and get the full benefit of the sessions. All of the marketing is on the first and second day, and Wednesday is the finance day with four sessions."

An overarching agenda theme is a focus on helping WISPs better run their business. "Accounting 101 for instance helps small business owners understand that how need to be tracking

things and how to do it properly," Stooke said. "We have our superb traditional regulatory and technical content as well, but we definitely want to make sure we're addressing the whole WISP?"

See WISPAPALOOZA 2016, page 6



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## Keynote Explores the Lessons of the 7 Summits and the 7 Seas

By Tara Seals

**M**artin Frey, chairman of ReadyNet and a Guinness world record holder for completing the seven summits (including Everest, Denali and more), and sailing the seven seas, has gained nationwide attention for his accomplishments in the adventure realm. “Is this the world’s most adventurous man?” asked CNN.

Frey will be the keynote speaker during lunch on Thursday, from 1:30-2:30. His talk will meld his experience climbing mountains and crossing oceans with his passion for the WISP industry to motivate and inspire attendees.

“I really want to capture these guys’ imagination and show them that they can take on and conquer big challenges,” Frey said. “They’re building businesses and facing daunting challenges like cellular carriers moving into their space—here, WISPs are the underdogs. They are facing the storms and riding out the challenges in order to climb their mountains—and this relates a lot to some of my adventures.”

In the mid-2000s, Frey stepped from the business limelight (though he still remains an active angel investor) to pursue his passions for

mountaineering and sailing with a singular goal of accomplishing something that had never been done before. It was his late climbing partner and friend, Steve Gasser, who first suggested he climb all Seven Summits – the highest peaks on each continent – while the two were climbing Denali. Frey was inspired to complete their mission after Steve’s untimely death a few months later. In December 2012, Frey summited his final peak – Mount Vinson in Antarctica.

With the Seven Summits completed, the ocean began calling. He and his wife Kym had wanted to find something they could do as a family with their severely disabled daughter Lily. The Freys purchased a sailing yacht, which they named AMARA, and set off together to sail halfway around the world.

Frey then completed his sailing circumnavigation in January 2015 and joined the EUROPA and Aventura III expeditions to cross the Southern and Arctic Oceans, respectively. To complete sailing all of the Seven Seas, Frey then participated in raced across the North Pacific as part of the Clipper Round the World Yacht Race.

“The challenges of sailing 6,000 miles across the north Pacific in 120MPH winds and 40-foot sea swells and getting bashed around is an endurance challenge and yet you ride it out,” he said. “WISPs building their businesses relates to this. Climbing Mount Everest is relevant too—you have to face the grind and keep going. It’s about taking risks and making decisions and problem-solving—all of the challenges that WISPs are taking on a daily basis.”

Frey said he will take the audience through some of his grandest adventures, including sailing around Madagascar in a storm, with lightning bolts striking all around him, and being on Everest when five people died. A woman died on one of the race boats on the Pacific as well.

“The big lesson is this: There will be storms but our attitude is more important than anything else when it comes to succeeding,” he said. “Take the lesson of Everest – I saw Marine tough guys crumble on the mountain because they weren’t ready mentally and didn’t have a process for renewing themselves on a daily basis. It’s a 51-day adventure to climb Everest, and it’s is a mental game as well as a physical game.” □

## Awards Keynote Showcases Exclusive WISP Industry Research

By Tara Seals

**B**rand-new for WISPAPALOOZA 2016, WISPA sponsored a quantified study on the nature of the WISP industry. The report is being announced at the show, with Jimmy Schaeffer, chairman and chief service officer of Carmel Group, making data available to members Tuesday evening during the Annual Awards Reception and Keynote (7:15 p.m. – 9:15 p.m.).

The report outlines, with hard data, why WISP businesses are successful, why people should invest in them, and why banks should offer credit and other resources to allow WISPA members to grow. Members can take this information to a bank or an investor as part of their business plan.

In a series of two-hour long surveys, the group asked respondents about the core elements of the WISP business—such as, what is the demand for broadband? What is a competitive provider? What spectrum bands are the most attractive? The responses were used to compile industry statistics on size, competition, which vendors/manufacturers are used and the regulatory

environment. The study also used 10 case studies (five from vendors and five from operators).

“Competition is the No. 1 challenge,” said Schaeffer. “There’s intra-industry competition and also enormous external competition. But when that external competition invests in and does R&D in your core industry, that’s pretty encouraging. We found that cable and telco and fiber companies are all turning to wireless, including AT&T, Google and Comcast.”

Digging trenches for fiber and other ground-based wireline infrastructure is of course expensive, as is launching a fleet of satellites.

“But putting up a few towers and installing a few routers and consumer premise equipment packages is relatively inexpensive,” Schaeffer noted. “So as the tech improves so that more and more bits can be carried down that pipe wirelessly and it becomes more competitive with fiber, WISP technology will become an obvious answer.”

Concerns in the industry include a lack of support by government and the FCC, tech

concerns about how quickly operators can ramp up the throughput, and whether the cost of the equipment can be brought down even further.

WISPs also struggle with the size of the industry—compared to the other cable, telephone and fiber/satellite competitors. “Education is critical, for consumers, policy-makers and investors,” Schaeffer said.

As far as external drivers guiding WISP businesses, the growth in the business of technology overall—computers, hardware and software—is a core element at the heart of the WISP arena’s expansion. That in turn has been followed by an increase in broadband demand and traffic, especially coming from mobile and other devices. And, there’s been an increase in the demand for video.

“As video morphs into 4K and beyond, and we see more virtual reality and augmented reality, and super-fast two-way gaming, that video growth and the need for more bits going to grow more,” Schaeffer said.

See AWARDS KEYNOTE, page 6

## 1-VoIP Launches PBXRealtime for UniFi

1-VoIP (Booth 220) has launched a new version of its VoIP switch and phone system, PBXRealtime, with compatibility with Ubiquiti Networks' UniFi VoIP products.

For the past year, the PBXRealtime development team, with assistance from Ubiquiti developers, worked to incorporate support for UniFi VoIP with VoIP controller integration. The result is a stable solution that assists with configuring the UniFi VoIP phones to connect to PBXRealtime, and can pull the necessary information for the phone – such as MAC address and IP address – and log that information both in PBXRealtime and in the UniFi VoIP controller. The user can manage UVP phones within PBXRealtime while maintaining communication and integration with the VoIP controller.

PBXRealtime for Unifi also can run on a UniFi Cloud Key, a computer server about the size of a candy bar, with up to twenty concurrent calls. For users desiring to deploy UniFi VoIP phones with the UniFi VoIP controller, PBXRealtime for UniFi is a solution that combines both with the phone system.

### Adaptrum Unveils Planet Adaptrum, TVWS Radio

Adaptrum (Booth 203) has unveiled Planet Adaptrum and the ACRS2.0 High Performance (HP).

Planet Adaptrum is a cloud platform for managing Adaptrum devices and networks. Users can remotely discover, monitor and manage Adaptrum's devices from anywhere around the world. It features an intuitive, easy-to-use graphical user interface as a single pane of glass, advanced visualizations that include a zoomable map of device locations and status, as well as TV channel quality for both base and client units. And it has a TVWS database interface module to allow the units to interact with any authorized TVWS database to perform rules-compliant operations.

The ACRS2.0HP meanwhile is a TV white space (TVWS) radio that further increases coverage and capacity through higher-power transmission and channel expansion. Working with Microsoft and Mid-Atlantic Broadband, the ACRS2.0-HP is already being deployed to provide free Internet access to educational content for students in rural Virginia by extending broadband connectivity from schools to students' homes in the surrounding area.

It also can increase the free space range to 2.5 times that of the standard ACRS2.0 while still achieving the cleanest emissions, and achieve twice the capacity by occupying two adjacent channels. □

"We cannot wait to roll this new software out to the public," said 1-VoIP CEO Dennis Smith. "Our team has invested thousands of hours into developing what we think is the most revolutionary product in its product space. This would not have been possible without the support and feedback from Ubiquiti. They are a first-class company and have loads of people who really know what they're doing."

"PBXRealtime for UniFi solution provides our customers with access to reliable, high-quality voice services that are easy and affordable to integrate, with unparalleled customer service and support for advanced routing capabilities," added Brandon Gilles, UniFi lead at Ubiquiti. "The partnership between Ubiquiti and 1-VOIP is a win-win for businesses looking to leverage IP-based communications services." □



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**WISPAPALOOZA 2016, continued from page 1**

He added, "We have a jam-packed session agenda with so much information to learn and grow your business. Your brain should hurt by the time you're done with this."

Vendor Spotlights are a new addition to the mix for this year.

"We have added a dedicated sixth track for vendors to offer their roadmap, walk through products, offer demonstrations and so on," Stooke explained. "We have a number of major manufacturers that have information that they need to share, so we've given them that platform, in an integrated manner with the rest of the education."

Speed dating has returned to the agenda as well. Participants give their names, where they work and answer a question, like where they went to high school, what their last book was, or what the one thing they own is that they wish they didn't. After the ice is broken, an industry-specific discussion question is posted to facilitate idea sharing.

WISPAPALOOZA 2016 is the sixth iteration of the show, and it's well on its way to being another record-breaker, with plenty of new vendors and its best attendance to date.

"We've grown up as an industry, and businesses have gotten large enough now that they know they need someone dedicated to HR, or accounting," Stooke said. "That's been the most exciting part of growing the show. Six years ago when we started it was almost purely technical and regulatory-focused. Now we have record attendance and people are bringing multiple people and we have full marketing tracks. People are running complex businesses and they need that level of insight and education." □



## NetSapiens Celebrates 10 Years of SNAPsolution UC

**N**etSapiens Inc. (Booth 504) is celebrating the tenth anniversary of its SNAPsolution platform. SNAPsolution, originally launched in October 2006, was designed to be a core application platform that was future proof, innovation friendly and focused on bringing sustainable value to service providers and their end users.

"When we set sail 10 years ago, our goal was to take the platform to market to shake the status quo," said Anand Buch, CEO and co-founder of NetSapiens. "We wanted to change the way that telephony vendors were dictating the best practices of how to build next generation VoIP networks. We designed SNAPsolution to give service providers the ability to make their own choices, create better services for their end users, and be able to compete with the largest carriers on the market." Anand continued, "The fact that many (if not all) of our initial deployments from 2006 are still in service and growing today suggests that we are on the right track."

This mission of providing the tools that service providers need to grow and compete in the marketplace has stayed with NetSapiens over the past decade to guide the product into what it has become today. Since its release, SNAPsolution has seen significant advancements in its suite of user portals, customizable user scopes, call center applications and new UC features that businesses are increasingly demanding from their ITSPs.

In many ways, the progress that has been made in SNAPsolution is a reflection of the company as a whole with NetSapiens seeing substantial growth in nearly every aspect of the business. SNAPsolution has become the core platform for more than 100 service providers around the globe. And, the company has increased staff across multiple disciplines throughout the company, opened a new headquarters in La Jolla, Calif. and launched a satellite office in Canada.

NetSapiens has also broadened its reach by developing many relationships with third-party partners and creating interoperability opportunities between products.

"The past 10 years of SNAPsolution success is a testament to the every NetSapiens team member that had a hand in making it happen and also to the strong community of NetSapiens service providers who continue to help push us forward into the next decade of growth," Buch said. □

**AWARDS KEYNOTE, continued from page 4**

Traditionally WISPs have served areas where there is limited rural broadband access and little competition. Now, they are seeing growth beyond the rural residential core, and are expanding into businesses, the government sector and institutions, Schaeffer said.

Also, he pointed to the growth in the number and sophistication of mobile devices.

"Cellular mobile is combining with fixed wireless," he said. "Devices work inside the house on Wi-Fi and then switch to mobile on the go. We'll start to see more opportunity from that."

Overall, the study found there to be plenty of growth and daylight for WISPs.

"The future looks positive for this industry," Schaeffer said. "There is present and future consumer demand for their services, software and hardware, and the economics are attractive because of the nature of fixed wireless physical routers." □

# Agenda at-a-Glance

## TUESDAY, OCTOBER 11

8 a.m. – 9:30 a.m.  
**Breakfast / Opening Remarks / Sponsor Intros**  
9:30 a.m. – 9:45 a.m.  
**Intermission**  
9:45 a.m. – 11:30 a.m.  
**Speed Dating**

11:30 a.m. – 11:45 a.m.  
**Intermission**  
11:45 a.m. – 12:30 p.m.  
**State of WISPA**  
12:30 p.m. – 3 p.m.  
**Exhibit Hall Opening / Lunch**

3 p.m. – 4 p.m.  
**Sessions**  
4 p.m. – 4:15 p.m.  
**Intermission**  
4:15 p.m. – 5:15 p.m.  
**Sessions**

5:15 p.m. – 6:45 p.m.  
**Exhibit Hall**  
7:15 p.m. – 9:15 p.m.  
**Annual Awards Reception and Keynote: Jimmy Schaeffler, The Carmel Group**

## 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**



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# Rural Broadband Healthcare Gap Widens

By Tara Seals

It's no secret that broadband penetration in rural areas lags behind that of more populated areas, as a study from Journal of Rural Health points out. And, that gap is widening.

Between 2010 and 2014, healthcare facilities in metro areas saw their rates of "very fast" connections grow significantly, from 14 percent to 55 percent, while facilities in non-metro areas saw a much smaller increase (from 5 percent to 12 percent). Similarly, the percentage of metro facilities with "very slow" connections decreased from 33 percent to 11 percent, but non-metro connections of this type had a much slower decline (from 38 percent to 28 percent).

According to the FCC, almost half (46 percent) of the U.S. land mass is made up of farmland—but these areas are woefully underserved by broadband. Agriculture makes up 5 percent of the 2.2 million farms in America, employing 21 million Americans, which is 15 percent of the total workforce and six times what the auto industry employs.

But, rural America is losing population thanks to a lack of technology, which is translating into economic declines. According to the 2010 U.S.

Census, about 20 percent of Americans lived in rural communities. Just five years later, it's less than 15 percent.

That means that businesses will abandon plans to open new plants or offices because of a lack of workers, which in turn reduces the tax base, which in turn reduces the ability to pay for new technologies. Those are the very technologies that allow innovation in, healthcare, education and distance-learning, telemedicine and more.

The Journal of Rural Health study goes on to show that the connected healthcare gap is primarily driven by non-hospital facilities, like private practices, health departments, pharmacies, clinics. The rate of growth for hospital connections between 2010 and 2014 is actually quite similar between metro and non-metro areas.

The FCC has recommended that primary care practices have speeds of at least 4Mbps and that small primary care practices, nursing homes and rural health clinics have speeds of at least 10Mbps in order to keep up with life-saving healthcare innovations.

It's also worth noting that the faster the broadband, the better the economic outcomes: A

study from the FTTH Council last year found that communities with widely-available gigabit access have per capita GDP that is 1.1 percent higher than communities with little to no availability of gigabit services.

The study examined 55 communities in nine states, finding a positive impact on economic activity in the 14 communities where gigabit services are widely available. That plays out in multiple ways, including through the direct effect of infrastructure investment and increased expenditures, as well as shifts in economic activity (e.g. job creation and occupational changes) and productivity gains.

"Gigabit communities are empowered communities," said FTTH Council president Heather Gold.

The study shows that gigabit translates to a per capita GDP approximately 1.1 percent higher than the similar communities with little to no availability of gigabit services. In dollar terms, this suggests that the 14 gigabit broadband communities studied enjoyed approximately \$1.4 billion in additional GDP when gigabit broadband became widely available. □



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## Multilink Takes Wraps Off FTTH Solutions

Multilink Solutions (Booths 100 and 906) has launched FTTH networking solutions suitable for triple-play service, video surveillance networks, enterprise networks and the Internet of Things applications.

The REVO 818 OLT and REVO GPON SFP ONT are compatible with Mikrotik Router/Switches with SFP ports. In this architecture, a Mikrotik Router/Switch can function as an ONU. The solution can be deployed to develop FTTH solution wherever Mikrotik Router/Switch is used.

"It is a tough task to re-establish a cable or broadband Internet service architecture with FTTH architecture," the company noted. "It is a high-cost solution...the FTTH OLT and ONU devices are expensive, and it becomes more expensive when we have to replace the traditional broadband network architecture with these devices for larger number of customers. We worked for developing a cost-efficient solution for this problem. Instead of replacing the whole network architecture, we would like to introduce devices that are compatible for existing architecture."

REVO 818G is rack-mountable, and contains eight PON ports, eight GE uplink ports and eight GE uplink electric ports. It has a maximum optical coupling ratio of 1:128, up to 1024 GPON ONTs. the downlink bandwidth is 2.5Gbps, while uplink bandwidth is 1.25Gbps.

The REVO SFP meanwhile is a new terminal mode for GPON, for carrier-grade FTTH network applications. It can plug into an L2 Ethernet Switch SFP slot to function as an ONT or MDU. REVO SFP supports standard OMCI, can provide up to 1.25Gbps uplink and a 2.5Gbps downlink high-speed transfer rate.

Multilink is offering a startup kit for FTTH connectivity exclusively for WISPAPALOOZA attendees at Booth 100. It contains a REVO eight-port OLT; one SFP B+ class; a 1:32 Splitter; ONT sample equipment; EMS management packets; and eight hours of support for design, configuration and operation. □

## employer essentials Offers Free HR, Payroll and Business Assessments at Booth

employer essentials (Booth 104) will be conducting free private consultation sessions during WISPAPALOOZA.

employer essentials is a human resources and payroll company that specializes in providing customized solutions for the WISP industry—whether the company has one employee or 200+. An assessment could cover a range of things depending on a company's needs, including: HR risk assessment; other HR issues; a Growth Curve Assessment to assess a company's stage of growth and identify specific business challenges; or a discussion of a company's overall strategic plan.

employer essentials is offering consultations at its booth on Tuesday between 12:30 p.m. – 6:15 p.m.; Wednesday between 11 a.m. and 7:15 p.m.; and Thursday between 11 a.m. and 1:30 p.m. □

## WISPAPALOOZA Promo: Free Signal TV Offers Discounted OTA TV Test Package

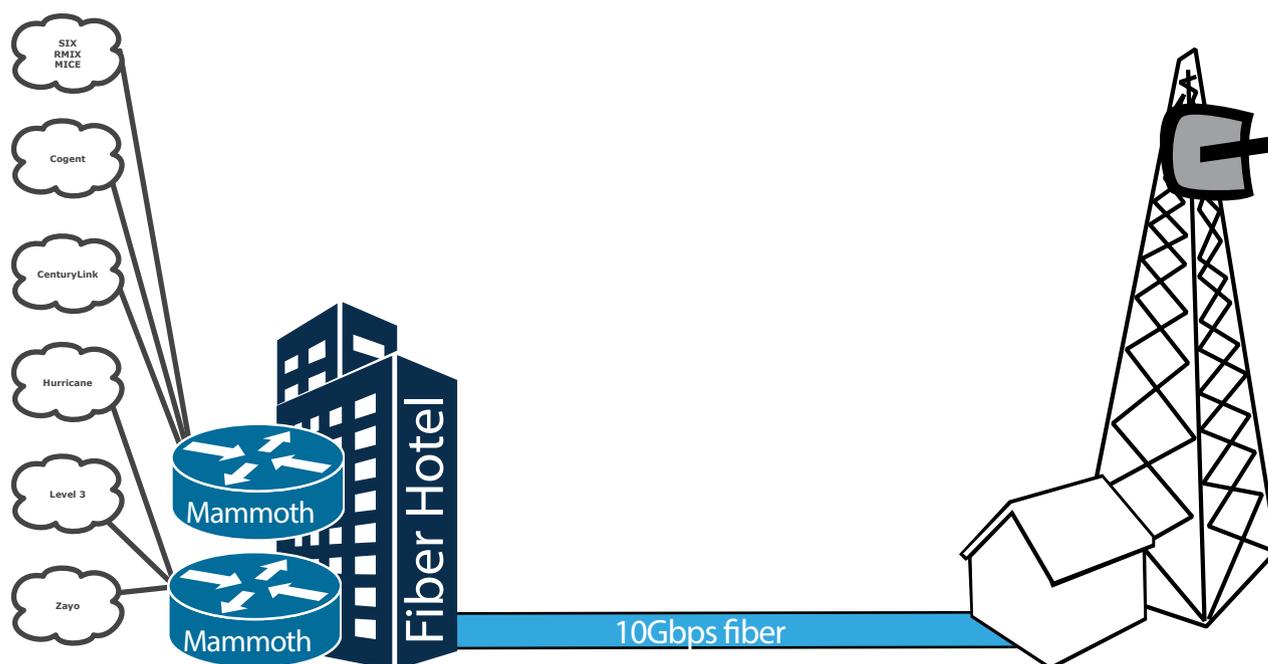
Free Signal TV (Booth 500) is offering a special WISP OTA TV introductory package exclusively for attendees of WISPAPALOOZA.

Those that purchase two Marathon Whole-House HDTV Antennas will receive an AirView Digital DVR for free, with free shipping. That means that customers receive a value of \$385 for only \$298.

The company also has a Vendor Spotlight Presentation on Wednesday at the show, at 4:15 p.m. (see *AGENDA, page 7*). □

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# AmCom Rolls Out Minutes and SMS Services

AmCom Solutions (Booth 206) has announced a major service expansion that includes both wholesale and retail origination, termination, toll-free, SMS minutes and SIP trunks.

AmCom customers will have the ability to buy their own services through a simple, intuitive, dedicated portal. This allows them to

save time and resources to scale their services on-demand.

The company said that the SMS minutes offering is gaining in popularity. For example, hospitals, doctors and dental offices can send appointment confirmations via SMS to a patient's mobile phone; or, retail businesses can advertise

an SMS number for customers to receive special offers and coupons via SMS text messages.

"We're excited to offer new and existing customers the ability to buy and manage their own minutes and SIP services," said Scott Fairbairn, president of AmCom. "This latest service offering complements our core business as a voice and data solutions provider for the major carriers in the United States." □

## PBX Realtime

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## Baltic Networks Announces General Availability of RouterMAXX Vengeance

**B**altic Networks (Booth 316) has debuted the Maxxwave RouterMaxx Vengeance enterprise routing system.

This virtualized network appliance was designed from the ground up to work in today's high-capacity data network infrastructure systems. It's based on a new 4GHz quad-core Intel Skylake processor and 16GB of DDR4 RAM.



Features include eight built-in Gigabit copper ports, hot-swappable dual AC power supplies and an expansion slot that allows for additional fiber/copper connections (including 10 Gig fiber). Running VMware ESXi, users can add additional network applications on top of the platform, including multiple instances of RouterOS to provide flexibility when it comes to BGP and failover applications. Ideal for WISPs and fiber service providers, the Vengeance is priced just under \$2,000. □

## MarketBroadband.com Bows Geo-Targeting Tool Based on Service Footprint

**M**arketBroadband.com (Booth 615) has announced a strategic marketing tool that allows ISPs to target potential customers at the address level, within their service area.

The Maps-to-Marketing tool allows the marketing staff to use non-technical mapping tools to target their marketing without the involvement of the engineering staff. This approach eliminates wasted marketing dollars spent on households and businesses that are not serviceable by the ISP. It also allows ISPs with a mixed product offering (like fiber and wireless) to target offers based on the technology that best services that home or business.



ISPs deploy their service where they can get the best return on investment. While this makes sense from a practical standpoint, it makes targeting their marketing more difficult, since most advertising vehicles use standard geographical boundaries like zip codes or postal carrier routes for distribution. Most of the time, these boundaries do not match up with a given ISP's service area, creating a problem for the marketing staff.

Marketers can use free mapping tools like Google Earth to draw polygons representing the areas that the ISP wants to target; MarketBroadband.com then uses GIS mapping tools to overlay the network deployment maps from the ISP's engineering department to "clip out" the areas where the two maps overlap.

MarketBroadband.com then develops a highly targeted footprint, and then executes the marketing based on that strategy.

"ISPs deploying mixed technology is more and more common," said Ken Janc, president of Lorex, the company behind MarketBroadband.com. "With this new approach, the engineers can provide deployment maps of both a fiber and a wireless network, which will typically overlap. They only need to do this once. Then, marketing can draw polygons of target markets. We identify the fiber and wireless regions within the target markets and work with the ISP to execute the marketing that best fits each target area."

MarketBroadband.com has been using deployment maps from ISP engineering departments to facilitate more targeted marketing for several years. □

## Runcom Launches Affordable TVWS CPE – Certified by the FCC

**R**uncom Communications (Booth 802) has announced new NLOS TV white space (TVWS) solutions for enhanced connectivity, available now for commercial applications.

The TVWS CPE was recently FCC certified.

The new CPE will enable WISPs and vertical operators to reach all previously unreachable subscribers and potential users located

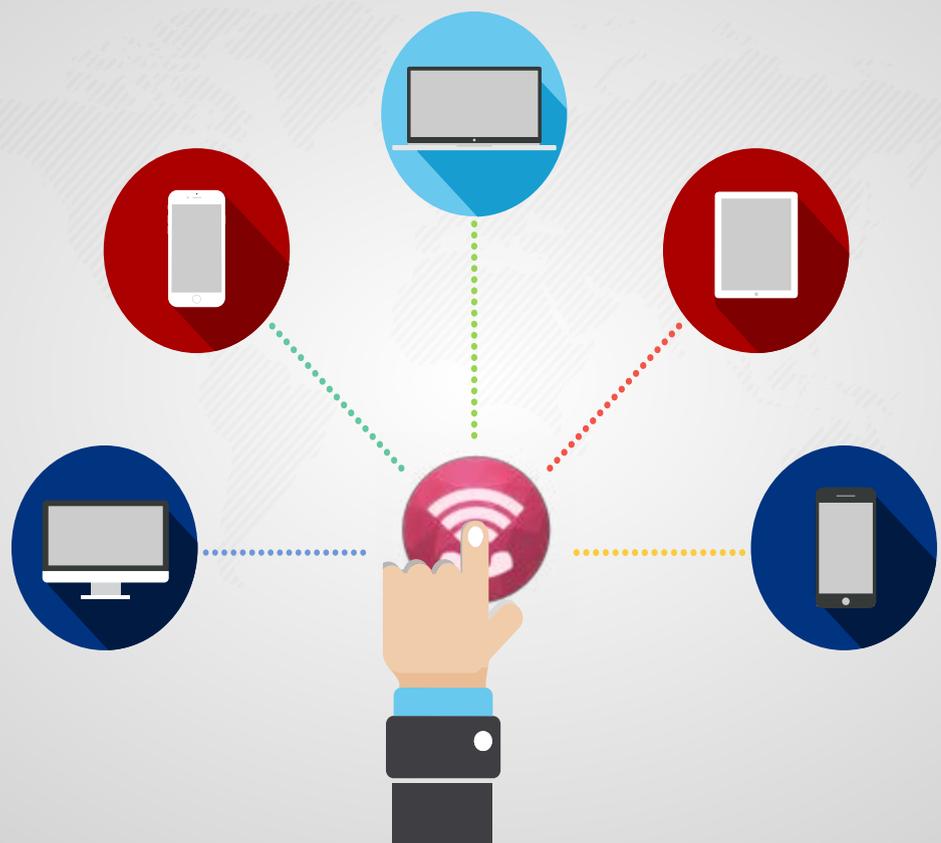
beyond the network existing coverage.

The new outdoor CPE includes two TX/RX ports for enhanced coverage, power over Ethernet (PoE) for ease of installation and other fresh features.

"However, the best news is that the CPEs are available now at amazingly affordable price," said Israel Koffman, CEO of Runcom Communications. □

## SNAPmobile Web

A Unified User Experience Anywhere on Any Device!



### LIVE Demonstrations at Booth #504

SNAPmobile Web is a browser-based softphone built directly into the NetSapiens portal interface. It brings the features and functionality that are currently offered on SNAPmobile iOS and Android to the desktop, creating a unified user experience across all devices. This webphone is designed using WebRTC so your end-users never have to download a softclient plugin again!

**NETSAPIENS**

[www.netsapiens.com](http://www.netsapiens.com)

## Friendly Showcases IoT, Smart Home Management

**F**riendly Technologies (Booth 910), the largest provider of management software for wireless broadband and LTE providers, is showcasing Internet of Things (IoT) and smart-home management solutions that help generate new revenue streams.

**TR-069 Device Management:** These device management solutions streamline the entire wireless broadband service life cycle (deployment, monitoring and support), enabling operators to increase customer satisfaction while reducing operational costs. The idea is to simplify the deployment, management and monitoring of data, VoIP and IPTV services, providing QoE insights of the wireless network performance.

**IoT Management Platform:** Friendly's IoT solution is a unified device management

platform for any vertical, including smart city, energy, utilities, manufacturing, agriculture, retail, fleet management, asset tracking, healthcare, security and others. The solution can be offered via Friendly's IoT Cloud (SaaS) or installed at customer's premises.

**Smart Home Management Platform:** This is a full solution for management and monitoring of millions of households. It enables service providers to introduce their own smart-home service to subscribers, offering various smart home service packages. It's available for installation at service provider's premises or as a cloud solution. Friendly also can provide smart hubs and sensors from leading manufacturers, or integrate the solution with devices of the service provider's choice. □

## BridgeWave Debuts Lightweight 80GHz System

**B**ridgeWave Communications (Booth 213) has unveiled the BridgeWave Flex4G-LITE (FL4G-LITE), an ultra-low cost E-band (70/80GHz) millimeter wave system delivering up to 3Gbps full-duplex data throughput per radio.

FL4G-LITE, the first in a series of new millimeter wave radio systems, offers up to 3Gbps full duplex throughput, greater range, smaller size, lower power consumption and reduced installation costs. It enables aggregation, backhaul and connectivity for networks supporting business and residential broadband, HD video surveillance, and mobile and Wi-Fi backhaul.

The offering supports carrier networking features including CPRI protocol, and is aimed at carriers and ISPs seeking to quickly scale deployments and increase subscriber revenue.

It has a lightweight, compact form factor, with a single optical interface carrying 2.5Gbps of capacity. This greatly simplifies deployment and minimizes installation and connectivity costs which are typically incurred with legacy systems that require multiple fiber runs.

BridgeWave offers a wide range of antenna options for the FL4G-LITE, including a 90cm antenna to maximize range, and an integrated antenna (for ETSI markets) to further simplify installation. FL4G-LITE is the first 80GHz radio with the option of a higher gain 3-foot antenna, enabling operators to reach distances far beyond those of conventional E-band systems.

"Public and private network operators are under continuous pressure to increase backhaul performance and grow subscriber revenue, and BridgeWave is responding to these demands with the new low-cost Flex4G-LITE," said Sanjay Nagpal, REMEC/BridgeWave senior vice president of global sales and marketing. "This new product not only delivers on capacity and performance, but is easy to integrate and deploy, dramatically lowering installation costs and time-to-revenue. In the near term, BridgeWave will be launching a series of new 80GHz products that will bring wireless performance on par with fiber at far less cost, and with breakthrough features that have yet to be seen in any wireless radio system." □



Wireless Internet Service Providers Association

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# SAF Unveils Next-Gen Microwave Radio System

**S**AF Tehnika (Booth 713) has launched the second generation of its best-selling microwave radio system, the Integra.

The SAF Integra-series next-generation microwave radio platform combines the radio, modem interfaces and mounting brackets into a single unit, making it cost-efficient and easy-to-install.

The radio can be purchased in three different versions:

- As a single radio unit that is compatible with any manufacturer's antenna systems;
- Radio + integrated antenna that is made from innovative, corrosion-resistant materials;
- And as a dedicated solution for wideband applications.

Integra-series radios have a capacity of up to 1Gbps throughput with header compression in 1+0 configuration. The latest modem technology also enables the covering of longer distances due to better system gain at 256QAM, and hitless ACM switching up to 2048QAM. The bandwidth range goes from 3.5MHz up to 112MHz, making the product fit for a variety of applications – from last-mile to backbone connectivity.

With optional ETSI Class 4 antennas, Integra can effectively be deployed in a dense microwave environment. And, direct radio and antenna integration (Integra-G) saves the time usually spent on radio-to-antenna assembly and sealing.

All Integra products are made from an innovative EMC-compliant composite material, ensuring complete corrosion resistance

## Micronet Updates E-Band Registration Options

**M**icronet Communications (Booth 204) has upgraded its E-Band registration system.

The 70/80 GHz E-Band is a high-frequency, very high-capacity (up to 10Gbps) band used for short- to medium-range fixed wireless backhaul. The FCC uses a lightly licensed approach for this service, where the license holder obtains a nationwide license and then registers individual links with third-party database managers. Micronet is one of the original managers.

The upgrade now gives users a range of new functions, including: Advanced frequency selection; Google Earth site verification of coordinates, elevation, antenna height and building blockage of interference paths; and line of site (LoS) verification.

To register or apply for a nationwide license, users can go to: [www.micronetcommunications.com/LinkRegistration](http://www.micronetcommunications.com/LinkRegistration). □

surpassing that of the classic microwave antennas. The mounting bracket is optimized for wind-load reduction too, which keeps the radio link up even in rugged weather. And, a significant addition is the software-controlled LED, which indicates whether the radio has been synchronized with the remote end and is operating properly.

Meanwhile, a built-in multi-core network

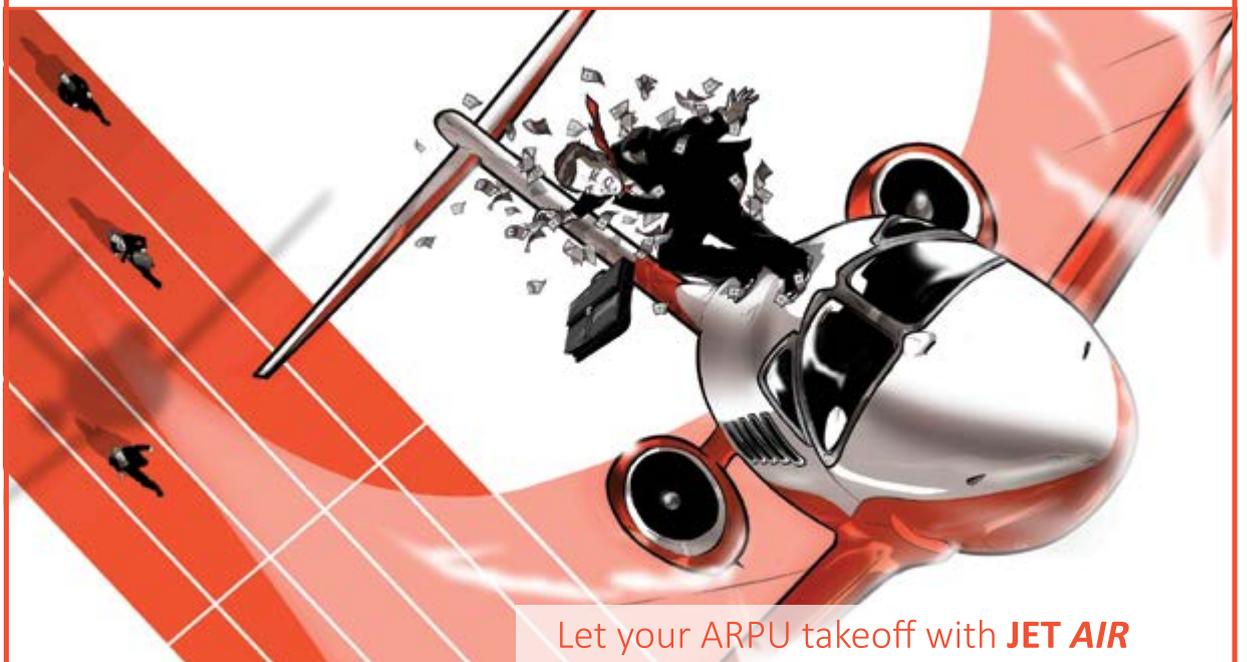
packet processor enables Carrier Ethernet performance with features like synchronous Ethernet, header compression and RADIUS authentication. Three Gigabit Ethernet ports per radio also allow the use of the built-in high performance Gigabit switch in all-outdoor environment, eliminating additional cost from expensive rack-mount switches and facilitating shelter-free installations. □

New

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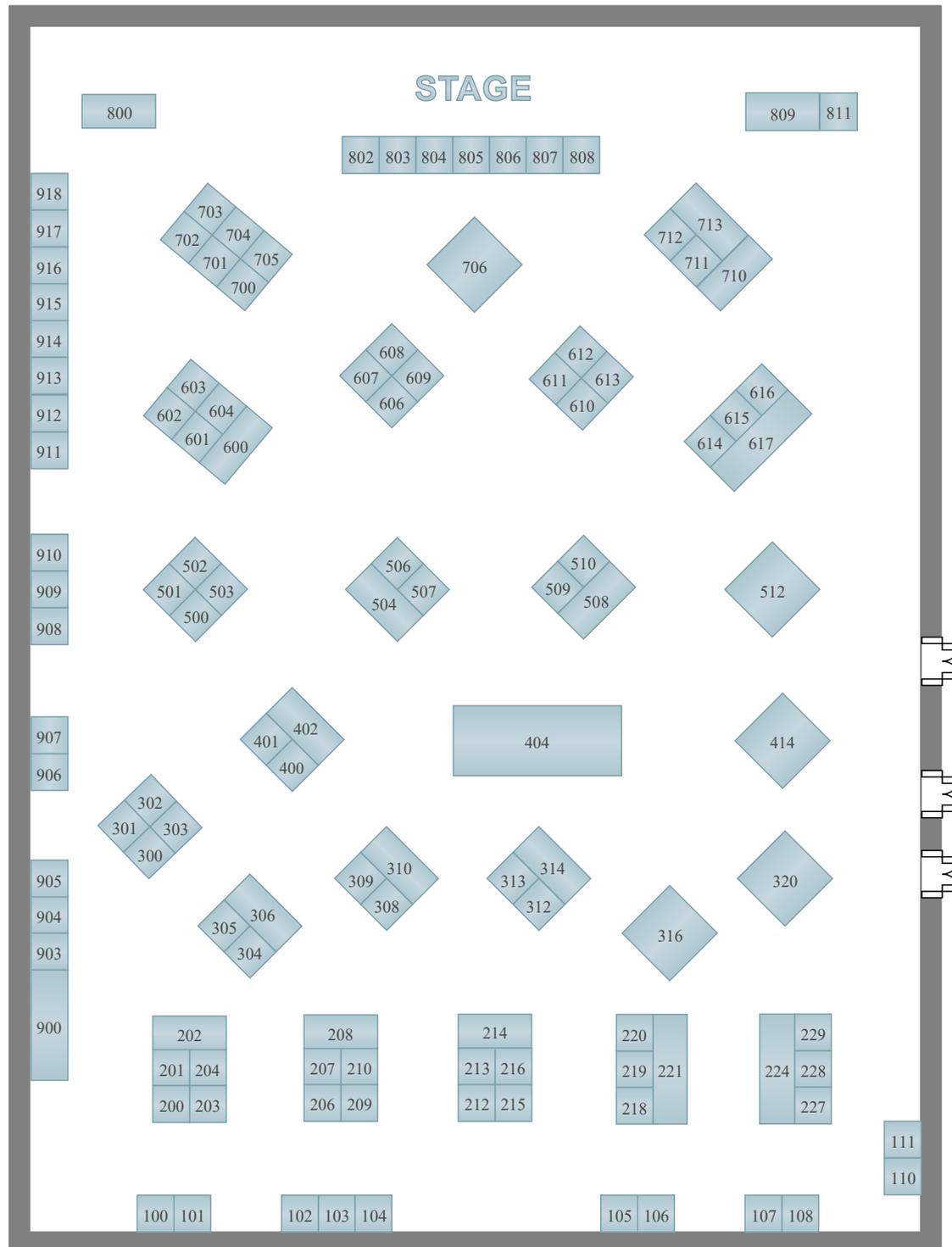
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# EXHIBITORS AT-A-GLANCE

Booth #	Company
100	Multilink solutions Inc.
101	PerfectVision Mfg. Inc.
102	ReadyNet Solutions
103	Solidphone
104	Employer Essentials
105	Mission Critical Energy Inc.
106	Wade Antenna Inc.
107	Wireless Connections LLC
108	Interstate Powercare
110	The Fibersmith Company
111	Vubiq Networks Inc.
200	Ooma Inc.
201	LEAF Commercial Capital
202	Sonar Software Inc.
203	Adaptrum
204	Micronet Communications Inc.
206	AmCom Solutions Inc.
207	Bright WiFi
208	Mimosa
209	Zyxel Communications
210	Platypus
212	Brink Networks
213	BridgeWave Communications
214	KP Performance Antennas
215	Kiesling Associates LLP
216	Vitality
218	Winncom Technologies
219	Alliance Corporation
220	1-VoIP Enhanced Services
221	Winncom Technologies
224	Winncom Technologies
227	Morningstar Corp.
228	WISPA Wireless Internet Service Providers Association
229	DoubleRadius Inc.
300	ARIN
301	Communications Data Group
302	Pace International
303	Flytec Computers
304	COS Systems
305	IPiFony Systems Inc.
306	Huawei Technologies USA Inc.
308	WAV Wireless Outfitters
309	MBSI WAV
310	ViaSat
312	Compliance Solutions
313	American Tower
314	RADWIN Inc.
316	Baltic Networks
320	Ubiquiti Networks
400	Trango Systems
401	Clearfield Inc.
402	Baicells
404	Powercode
414	Cambium Networks Inc.
500	Free Signal TV

# Exhibit Hall Booth Map





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