WiMAX FORUM® NEWSLETTER

IN THIS ISSUE

- **Introduction**

- **Events**

- **Membership Services**

- **Industry Spotlight**

- **Working Groups**

- **WiMAX Forum News**

INTRODUCTION

Dear WiMAX Community,

This November, the **WiMAX Forum** recently held three significant and successful events.

In late October, the WiMAX Forum held its first **WiGRID PlugFest & Certification Event** at the **Electric Power Research Institute (EPRI)** in Knoxville, Tennessee. The event brought together a mix of global utility equipment vendors—**Cisco**, **GE**, and **Siemens**—working together to enhance their interoperability and test and certify equipment on multiple frequency bands across a number of different applications.

On November 6th, the WiMAX Forum hosted its second annual **WiMAX Oil & Gas 2013**, a pre-conference session at **OilComm Conference & Expo**, held in Houston, Texas. The event, which drew more than 100 attendees from over 35 companies, outlined how **WiMAX technology** addresses connectivity needs of the energy industry. Discussions were held on a wide range of topics, including planning, designing and deploying Smart Energy networks as well as best practices for operational efficiencies. The event was very well-received, and reactions and feedback were extremely positive.

The WiMAX Forum would like to thank speakers from the following companies:

Accenture	**LocaLoop Inc.**
CelPlan Technologies	**Powertech Labs**
EP Energy	**Redline Communications**
GE	**Siemens**
Johnston Technical Services	

On November 11th, the WiMAX Forum held its third annual **WiMAX Africa Operator Summit** in conjunction with AfricaCom. Over 150 telecom operators, equipment manufacturers, government organizations, solution providers and media representatives attended the event. The program highlighted opportunities, challenges, and strategies involved in operating a profitable WiMAX network in Africa. The event was sponsored by MagnaQuest, and the reception was sponsored by Samsung.

The WiMAX Forum introduced **WiMAX Advanced**, the Forum's evolution to the

WiMAX standard, enabling WiMAX operators to access a broader ecosystem of devices and radio access technologies to more easily operate within a multi radio access network environment. The presentations were well-received, and the African operator community gained concrete knowledge to managing profitable growth of WiMAX and multi-platform network infrastructure. The WiMAX Forum would like to thank the following companies for providing speakers:

Airspan	**MicroTeck Enterprises**
CelPlan Technologies	**MobinNet Telecom Co.**
ConvergEX Technologies	**PT Internux (Indonesia)**
Citi Stride Limited	**Purewave Networks**
Digisoft	**Samsung**
Fairwaves LLC	**Siemens**
GE	**Softbank Mobile (Japan)**
Green Packet	**Telrad**
Hitachi	**uMAX**
MagnaQuest	**World Bank**

The WiMAX Forum would like to take this opportunity to thank the many speakers, Working Group participants, and attendees that traveled to these events and made them such a success. Each event solidified the position and value of WiMAX technology for operator and industrial markets.

We would also like to remind you that the WiMAX Forum will soon begin its **renewal season**. Many of our members are renewing their annual memberships, and our membership and finance teams have been working together to make certain that this process goes smoothly for everyone.

Many of your companies should be hearing shortly from our membership team, and they will be happy to answer any questions that you have. If you have questions regarding your membership status, please send a message to **membership@wimaxforum.org**, and we will respond as quickly as possible.

If you have questions regarding any of this or our organization's activities, please reach out to us. Have a great rest of the month.

Best Regards,

The WiMAX Forum

EVENTS

In November, the WiMAX Forum continues to stay busy planning and attending events. The WiMAX Forum team looks forward to seeing you at our events. The following is the summary of the upcoming events:

The **Smart Grid Latin American Forum** will be on **November 26-28, 2013 at the Frei Caneca Convention Center in Sao Paulo, Brazil**. The Smart Grid Latin American Forum was organized in 2008 and has been leading discussions, dissemination, and feasibility of Smart Grids in **Latin America**. The Smart Grid Latin American Forum counts with a massive adhesion of energy professionals in the region and aims to align public and private agents around a shared vision.

The WiMAX Forum members will receive a special discount of **20%** on the registration. Please email **Alessandra.Rocha@WiMAXForum.org** for the discount code.

For more information and registration, please visit: **Smart Grid Latin American Forum**.

WiGRID 2014 DistribuTECH will be a pre-conference session at **DistribuTECH** on Monday, January 27, 2014 at the Henry B. Gonzalez Convention Center, San Antonio, Texas. The event will focus specifically on supporting the Smart Grid community in deploying effective and affordable WiMAX networks to support their communication initiatives.

All operators and vendors are invited to this event to meet, network, and discuss ideas with the goal of fostering a prosperous environment and future for the WiMAX Smart Grid ecosystem. The event will highlight the opportunities, challenges, and strategies involved in operating a profitable WiMAX network.

WiGRID 2014 will be an interactive working event. Participation in this event is free to attendees of the DistribuTECH. WiGRID 2014 is open to all participants of the WiMAX ecosystem, and membership in the WiMAX Forum is not a requirement to attend.

For additional information and registration, please visit: **WiGRID 2014 DistribuTECH**.

Sponsorship Opportunities:

Increase your presence at the WiMAX Forum events through a sponsorship! Our high-profile events offer sponsors excellent visibility before, during and after the event.

Sponsorship opportunities include:

- Media Sponsorship   - Diamond Sponsorship *(WiMAX Forum Members Only)*   - Platinum Sponsorship *(WiMAX Forum Members Only)*   - Gold Sponsorship *(WiMAX Forum Membership **NOT** Required)*

For more information about which event sponsorship may best suit your needs, please contact Alessandra Rocha at **Alessandra.Rocha@WiMAXForum.org**.

The WiMAX Forum plans to host and participate in other events over the course of 2013. In 2014 we will continue in our efforts to bring you quality events directly hosted by the WiMAX Forum, and will also have a presence at key industry events. As details concerning these events are finalized, we will be certain to keep you informed.

For more information about our events, please visit: **WiMAX Forum Events**

MEMBERSHIP SERVICES

There are currently 102 members of the WiMAX Forum in good standing. The WiMAX Forum would like to extend a special welcome to the newest members in 2013:

- **Burco Electronic Systems**
- **BusyInternet**
- **ConvergEX**
- **Honeywell**
- **MitraStar Technology Corporation**
- **Siemens**
- **Synkro Southwest, LLC (Local Loop)**
- **uMAX (Dandemutande Investments (Pvt) Ltd)**
- **Xcel Energy**

The WiMAX Forum is committed to delivering the value necessary for our members to get the most of their association with the WiMAX Forum, and we are always happy to engage with individual members to discuss how the WiMAX Forum can better serve its membership.

If you have questions regarding your membership, please contact Raul Rigo at **Raul.Rigo@WiMAXForum.org**; +1-305-582-7590.

The WiMAX Forum is the best place for our members to access, leverage and influence the growth and development of the WiMAX industry. So be a leader in WiMAX and step up to get involved today!

INDUSTRY SPOTLIGHT

WiMAX Forum® Industry Update Announcement:

A Plan for WiMAX Advanced Alignment with IEEE 802.16™ Standard

A little over a year ago the WiMAX Forum® launched the WiMAX 2.1 initiative with the goal of adopting a clear evolutionary technical roadmap for the WiMAX technology's convergence with TDD LTE. Over the past year, the WiMAX Forum has been working with leading operators and ecosystem vendors to develop the business case and technology roadmap for WiMAX 2.1 or "WiMAX Advanced™", based on IEEE Standard 802.16™.

Similarly, the XGP Forum was founded with the goal of defining a global specification to be adopted by 3GPP to make it possible for "PHS and AXGP" operators to share the ecosystem with TDD LTE[1]. The GTI (Global TDD-LTE Initiative) is now collaborating closely with the XGP Forum and the WiMAX Forum. This effort has resulted in significant progress with both WiMAX and PHS operators, equipment providers, and service providers, coming to an understanding that these technologies should be harmonized for the future 4G TDD architecture.

The ITU approved both LTE Advanced and WiMAX Advanced as IMT-Advanced technologies, and the WiMAX 2.1 initiative leverages the unique advantages of TDD spectrum along with other key attributes, such as Carrier Aggregation, 256QAM, and 8x8 MIMO, with a goal to reach a mobile downlink speed of 1 Gbps by 2017. WiMAX Advanced runs parallel to LTE Advanced, but is also a path to convergence with TDD LTE to enable operators to benefit from the economies of scale associated with a larger ecosystem of cost-effective TDD LTE devices. With the support of more than 140 members, the WiMAX Forum officially approved WiMAX Advanced as an extension of its technical network evolution roadmap during its most recent Board meeting in Washington, DC. The WiMAX Forum now has a plan in place for a smooth and cost-effective, backwards compatible transition to WiMAX Advanced for both network and subscriber equipment.

Operators in mature markets with access to additional spectrum have already begun deploying TDD LTE networks in parallel with their existing WiMAX networks. Now that its acquisition by SoftBank has been concluded, Sprint is accelerating the deployment of a new TDD LTE network while maintaining the existing Clearwire Mobile WiMAX

network which serves millions of subscribers in the United States. With an average of 100 MHz of 2.5 GHz TDD spectrum nationwide and access to new capital from SoftBank, Sprint and Clearwire can devote 20 MHz of spectrum to manage the transition to support WiMAX and TDD LTE co-existence over a period of two years or more. In Japan, UQ Communications has also implemented plans to leverage newly awarded 2.5 GHz spectrum to upgrade its existing network from WiMAX to WiMAX 2+, to leverage WiMAX Advanced in support of TDD LTE devices. UQ launched WiMAX 2+ service on Oct 31, 2013[2].

On October 4, 2013, the Korean MSIP (Ministry of Science, ICT and Future Planning) outlined a policy for WiBro (WiMAX) operators to upgrade to TDD LTE[3]. In addition to the technical merits, the policy is based on the premise that the existing 1 million plus WiBro subscribers transition to WiMAX 2+ in the future. The ministry is providing support to enable WiBro services, which are serving special purposes in such fields as national defense, to co-exist in a niche market, while expanding to overseas markets by means of network establishment and technological development.

The WiMAX evolution to WiMAX 2+ in Korea, is expected to have a significant economic benefit over the next several years. Jung In-Joon, professor in the Department of Business Administration at Daegu University, published his report in June on the current status of TDD LTE and frequency management directions in the journal of the Korea Association for Telecommunications Policies. In the report, he claimed that the service sales that could be anticipated in 2019 would reach US$16.995 billion when harmonization is achieved. "If the 57 MHz frequency band that is allocated for mobile is used for TDD LTE, the service sales are expected to be increased by at least 400% and up to 2,000% during the same period," he suggested[4].

The Korean government also has its sights set on the potential global demand for TDD LTE. The WiMAX transition will drive local firms to boost their competitiveness in the 4G market. In this context, it benefits a national plan for the development of the TDD LTE segment within this year, which will cover the R&D of key TDD LTE technologies, research on next-generation equipment, such as 5G, and terminals, and the development of application service models.

As of Q1 2013, almost every one of the 477 WiMAX operators worldwide has embraced the WiMAX 2.1 initiative based on IEEE 802.16TM. With the success of WiMAX 2+ for UQ in Japan, the global TDD LTE transition presents a substantial business opportunity for equipment and system providers. The TDD LTE device

market is growing at a rapid pace. According to industry analysts, China Mobile alone will procure more than 50 million TDD LTE terminals in 2014, including approximately 40 million smartphones and 10 million data cards.

In recognition of the significant economic benefits of having a common ecosystem, the WiMAX Forum is proactively collaborating with operators, equipment vendors, and regulatory agencies worldwide to facilitate the implementation of a WiMAX Advanced harmonization plan.

1. **http://www.xgpforum.com/new_XGP/en/001/xgp.html**
2. **http://www.uqwimax.jp/english/news_release/201310301.html**
3. **http://www.msip.go.kr/www/brd/m_211/view.do?seq=793**
4. **http://www.businesskorea.co.kr/article/1260/lte-tdd-expected-present-huge-business-opportunities**

WORKING GROUPS

The WiMAX Forum **Working Groups** are the key to the development of WiMAX technology. Working Groups are chartered by the WiMAX Forum to bring together content experts from member companies to contribute to and harmonize documents and specifications and perform other tasks that the WiMAX Forum has determined to be necessary or useful. Principal members of the forum have the opportunity to participate as officers of working groups when there are vacancies and to vote on working group output.

The WiMAX Forum organizes its technical activities through a number of Working Groups that produce technical requirements, develop technical specifications, or advise the forum. These groups are coordinated by the Technical Steering Committee. The WiMAX Forum Working Groups include:

- **SPWG** - Service Provider Working Group - *Requirements*
- **SEWG** - Smart Energy Working Group - *Requirements & WiGRID Initiative*
- **AWG** - Aviation Working Group - *Procedures & Aviation Initiative*
- **NWG** - Network Working Group - *Technical*
- **TWG** - Technical Working Group - *Technical*
- **CWG** - Certification Working Group - *Technical*
- **GRWG** - Global Roaming Working Group - *Technical*
- **RWG** - Regulatory Working Group - *Advisory*

If you are not a member of a Working Group yet, you can request to join on the group's **Home Page**. Or if you want to take an active role in one or more of the Working Groups, you can use the group chair link on that same page to contact the Chairman of the group and to see how you can help.

Your participation is important to the WiMAX community!

Members of the AWG and CWG are collaborating to develop the Project Execution Plan to outline the tasks, resources, and timeline to implement AeroMACS Certification in 2014.

After a successful session at OilComm in Houston this month, the Smart Energy Working Group is seeking participation from the Oil & Gas community to begin the development of a set of requirements for WiMAX Networks to serve that industry.

WiMAX Advanced Release 2.2 Specifications are in the final steps of approval and prepublication and are on schedule to be published by the end of 2013.

You can learn more about the Working Group activities by visiting the member's area in Kavi and viewing the outcome of recent Working Group sessions or joining groups to receive emails related to that group's activities. Working Group activity is integral to the success of the Forum.

If you or your company is interested in nominating someone for a working group leadership role, please contact the TSC Chair Rich Hawkins at **Rich.Hawkins@WiMAXForum.org**

WiMAX FORUM NEWS

The WiMAX Forum, in partnership with Multiview, has launched its weekly WiMAX Newsbrief. This weekly summary of news from around the WiMAX ecosystem is intended as a benefit to our members. If you do not yet receive the Newsbrief and wish to do so, please sign up here: **WiMAX Newsbrief**.

Below is a summary for the month of November:

○ **bnetTV speaks with Declan Byrne of the Wimax Forum at the 2013 WiFi**

World Summit held in London and gives us an overview of the Forum

- MobinNet extends WiMAX network to Gorgan, Sari and Bojnurd
- uMAX promotes Zimbabwean young designers & fashion bloggers at Fashion Weekend Zimbabwe
- Nominations Open for Aegis Graham Bell Awards 2014
- WiMAX Market Expected to Reach $33.65 Billion by 2016
- LTE-TDD Expected to Present Huge Business Opportunities
- Thank You for Making OilComm 2013 a Success!
- Abracon Releases the AMCA Series of High Performance, Multilayer Chip Antennas in Six Different Sizes in Low Profile Packaging
- uMAX Commemorates World Rhino Day 2013
- Quickline Saves Lincolnshire Wireless ISP Linpop from Going Bust
- TCI to hold VoIP tender; investment in telecoms infrastructure forthcoming
- WiMAX Forum concludes successful Africa Operator Summit event
- Exelon: From 'Intelligent Grid' to 'Smart Grid'
- Accenture: Smart grid benefits set to exceed industry forecasts
- 4G360 new job board
- Elbit to present a wide array of next generation solutions at I/ITSEC
- Enforta wins new corporate subscribers
- Nepal's telco to expand public Wi-Fi services
- Rostelecom provides pre-WiMAX for cluster in Tver
- InfiNet Wireless and MaxNET partner to provide Khartoum with reliable Internet
- Smart Grid Latin America Forum 2013
- WiGRID 2014 DistribuTECH
- CommunicAsia2014 Summit
- Attend Next Gen Packet Transport Networks on Nov. 12-14 and win exciting prizes
- Montenegro ends September with 89,428 broadband connections
- GlobalTT.com at Africa.com — readies for new everything
- Pakistan to capitalize on IT sector: Ahsan Iqbal

- **Viti extends WiMAX coverage to Tarava and Paparo**
- **Laos to ask for ICT support**
- **Global cellular M2M market: 37 percent CAGR between 2012-2016**
- **TTK announces WiMAX network tender in 19 cities**
- **Best innovations in TIME recognized in 4th Aegis Graham Bell Awards 2013**
- **Exabytes eCommerce Conference 2013 to outline Malaysia's Internet retail market**
- **Little Valley, Olean could see new broadband by next summer**
- **Sequans' WiMAX technology powers new Huawei Wi-Fi router**
- **Fixed wireless products a solution to Swaziland's economic growth**
- **October 2013 WiMAX Forum Monthly Newsletter**