

The header features a dark blue background with a glowing green and blue grid pattern representing a globe. The WiMAX Forum logo, consisting of two overlapping circles, is positioned to the left of the text. The text "WiMAX FORUM" is in a large, white, sans-serif font, with "NEWSLETTER" in a slightly smaller font below it.

WiMAX FORUM[®] NEWSLETTER

APRIL 2015

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INTRODUCTION

Dear Respected Colleague,

The **WiMAX Forum leadership** continues to attend and participate at very important and well-received **events**.

At the end of last month, WiMAX Forum President **Declan Byrne** discussed WiMAX for Smart Grid, spectrum regulations and the need of licensed spectrum available to Smart Grids at the **UTC America Latina 2015** in Florianopolis, Brazil. The discussions with the regulator and interested parties have continued after the conclusion of the event. The WiMAX Forum, UTC America Latina, the regulator Anatel, Representatives of the Ministry of Communications, ANEEL, vendors and major utilities in Brazil have formed a working group to discuss the availability of a licensed spectrum designated to the Smart Grid in Brazil. The next meeting is scheduled to occur at the end of May 2015 at Anatel in Brasilia.

Also last month, a new white paper entitled, "*AeroMACS: A Common Platform for Air Traffic Management Applications*," was released. Published by **Senza Fili Consulting**, the research identifies the latest AeroMACS applications and benefits to key stakeholder groups. **If you are interested in reading the latest AeroMACS white paper**, please click **here**.

This month, at the Aviation Week – **MRO Americas 2015 Conference**, WiMAX Forum President Declan Byrne attended several lively and interesting discussions on the topic of Maintenance and Repair Operations (MRO). There was an overall shared view that enabling broadband technologies is a strategic imperative for many of the largest carriers, such as Southwest Airlines, whose leadership plans to "broadband-enable" their entire 737 operation. It was also discussed that AeroMACS will play a major role in the wireless planning for companies such as **United Airlines**, which are challenged by matching available spectrum with approved standardized technologies.

At the **ICNS Conference 2015** in Herndon Virginia, Declan Byrne discussed AeroMACS as the Next Generation Standard in Air Traffic Management (ATM) during his presentation. Prior to the event, the WiMAX Forum published a comprehensive AeroMACS white paper, entitled "**AeroMACS: Delivering Next Generation Communications to the Airport Surface**". This technical white paper on which a team of industry experts collaborated identifies the short- and long-term benefits to major stakeholders. More details about the new white paper are below in the Industry Spotlight section of this Newsletter.

At the end of April, WiMAX Forum Chairman **Dr. Mo Shakouri** presented at the **IoT Global Innovation Forum 2015** in Dallas, Texas on the "IoT Advances and Architectures: Driving Operational and Performance Gains" panel and discussed the WiMAX Operational Considerations to Leverage Performance.

Next month, the WiMAX Forum will continue to push forward hosting and participating in a number of industrial events with the expectation that these markets will continue to increase in value as WiMAX's market share further expands. Here is the summary of upcoming events that we are participating in the coming months:

- **UTC Telecom & Technology 2015** on May 5-8, 2015 in Atlanta, GA. WiMAX Forum President Declan Byrne will participate in a Workshop, entitled "Wireless Workshop: A Survey of Wireless

Technologies for Utility Communications." The session is scheduled to be held on Tuesday, May 5, 2015 from 9:15 a.m.- 12:15 p.m.

- **Internet of Things World 2015** on May 12-13, 2015 in San Francisco, California. WiMAX Forum Chairman Dr. Mo Shakouri will speak on the "Addressing the key challenges facing developments in Connected Transport Systems" panel during the "Integrated Transport Systems" Track.

Many of your organizations have been contacted by our membership and finance teams. As always, we stand ready to answer any questions that you have. Please don't hesitate to reach out to our Finance team lead, **Mr. Jack Daniels** or the membership team at Membership@wimaxforum.org if you have any questions or comments.

Look out for more information on **WiMAX Advanced**, **WiGRID**, **AeroMACS**, as well as other **upcoming events** as of yet to be announced. If you have any questions regarding any of this or our organization's activities, please reach out to us. We look forward to hearing from you, and to continuing to work with you throughout the year.

We at the WiMAX Forum wish you a great rest of the month and we hope to see many of you soon!

Best Regards,

WiMAX Forum

EVENTS

In April, the WiMAX Forum continues to stay busy planning and attending events. We will continue in our efforts to bring you quality events directly hosted by the WiMAX Forum, we will also have a presence and participate at key industry events. The WiMAX Forum team looks forward to seeing you at of these events.

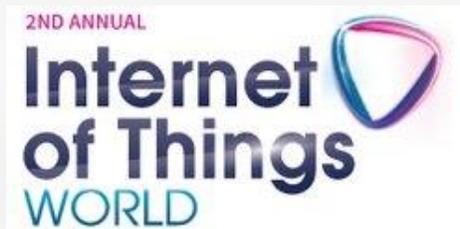
The following is the summary of the upcoming events:



East AfricaCom represents the most advanced region of the continent for mobile and digital communications, mobile money and ICT development. From and established 12 years supporting the market the East AfricaCom event will showcase the innovators and business leaders that are creating the next phase of the digital ecosystem. It will take place on **May 6-7, 2015 in Kenya at the Safari Park Hotel.**

Regulators, operators, ISPs and digital leaders will gather seamlessly to discuss the connectivity challenges across the region. Mobile money as the great differentiator to East African markets takes a dedicated stream this year, showcasing innovation in mobile financial services and the new strategies for corporations taking up MVNO licenses.

The WiMAX Forum is proud to be a supporting organization! For more information and event registration, please visit [East AfricaCom 2015](#).



Informa's **Internet of Things World 2015** is the world's largest independent IoT event with over 4,000 attendees, 250+ industry thought leaders and 150+ exhibitors. With a focus on monetizing the IoT revolution through bringing together ecosystem wide attendees, stakeholders and investors, Internet of Things World is a unique opportunity to promote your IoT message right in the heartland of IoT development. It will take place on **May 12-13, 2015 in San Francisco, CA USA at the Moscone Center**.

The WiMAX Forum will be at Internet of Things World 2015!

Come see **Dr. Mo Shakouri**, WiMAX Forum Chairman, speak on the "Addressing the key challenges facing developments in Connected Transport Systems" panel during the "Integrated Transport Systems" Track at a TBD time on May 12, 2015. Check back soon for more details.

For more information and event registration, please visit [IoT World 2015](#).



Rising size of mobile workforce, increasingly complex demands by users, coupled with the proliferation of connected devices have made this industry more dynamic than ever. It has also blurred the line between work and personal time as seen in the rise of mobility driven innovations such as smart living solutions, wearable technologies, and many others.

At CommunicAsia2015, the latest innovative technologies from Big Data, Business Analytics, Cloud technologies, IoT, to Zigbee will be unveiled, that will change the way we live and work. It will take

place on **June 2-5, 2015 at Marina Bay Sands, Singapore.**

The WiMAX Forum will be at CommunicAsia2015!

Come see **Dr. Mo Shakouri**, WiMAX Forum Chairman, speak on the "Developments in WiMAX: Where is WiMAX Now Being Deployed and What are its Future Prospects?" on June 4 at 2:40pm, which is Day 3 - Maximizing your Revenue via DSL, Fiber, and Wireless.

For more information and event registration, please visit [CommunicAsia2015](#).



These are historic times for our industry. Service providers in North America today are investing in upgrading their networks at levels not seen since the turn of the century. Back in 2000, the telecom industry had to wrestle with one revolutionary new technology: optical networking. Today, more than a dozen technologies are poised to revolutionize the world. The **Big Telecom Event** will take place on **June 9-10, 2015 at McCormick Place, Chicago, IL, USA.**

The WiMAX Forum is proud to be a sponsoring organization. For more information and event registration, please visit [Big Telecom Event](#).



Carrier Wi-Fi World brings together the public Wi-Fi ecosystem to share trial and deployment experiences, to help define and refine carrier grade Wi-Fi network strategies. With an emphasis on real-life case studies from network operators, end user verticals (cities, venues, transport, enterprise etc.), vendors and analysts, the show provides an ideal platform to get a holistic view of the carrier grade Wi-Fi requirements, explore revenue generating strategies, forge strategic partnerships and a fantastic opportunity to showcase the latest solutions available to accelerate deployments. It will take place on **June 9-11, 2015 at ExCel Exhibition Center in London.**

The WiMAX Forum will be at Carrier Wi-Fi World 2015! Also, the WiMAX Forum is proud to be a sponsoring organization. Come see WiMAX Forum Chairman Dr. Mo Shakouri speak on the Association

Panel on Wednesday, June 10 at 9:10am.

For more information and event registration, please visit [Carrier Wi-Fi World 2015](#).



Serving the industry for over 26 years, the Exhibitions India Group which has played an integral role in the changing landscape of the Information and Communication environment in South Asia, has now joined hands with AfriEXPOS, Africa's premier expo organizer to bring its expertise through **Convergence Africa World**, which **will take place on 17-19 June 2015 in Oshwal Centre (Parklands) Nairobi, Kenya**.

The expo will showcase innovation and merger of technologies over any screen – be it a computer / laptop, telephone, or TV screen. Focused business matching will provide the perfect opportunity to network with industry bellwethers and establish new relationships.

For more information and event registration, please visit [Convergence Africa World 2015](#).

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 (*Free*)
- Diamond Sponsorship (*WiMAX Forum Members Only*)
- Platinum Sponsorship
- Gold Sponsorship
- Silver Sponsorship
- Exhibitor (*Upon Availability - WiMAX Forum Members Only*)

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 2015. 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

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. [WiMAX Forum Membership](#) provides a wide range of benefits and services that allows WiMAX Service providers to grow their networks and the vendor community to sell more equipment and services.

The WiMAX Forum would like to extend a special welcome to the new members from 2014-2015:

- [Alpha Tel S.A.](#)
- [Civil Aviation Safety Authority of Australia](#)
- [DFS Deutsche Flugsicherung GmbH](#)
- [Ecil Energia](#)
- [Embry Riddle Aeronautical University](#)
- [Exelis](#)
- [Great River Energy](#)
- [Green Packet Berhad](#)
- [Hawaiian Electric](#)
- [Iberdrola USA](#)
- [Intellicom LLC](#)
- [Kyocera Communication Systems Co.](#)
- [Magnaquest Technologies Ltd](#)
- [Metropolitan Washington Airport Authority](#)
- [MITRE Corporation](#)
- [Seowon Intech](#)

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!

If you have questions regarding the WiMAX Forum Membership, please send a message to Membership@wimaxforum.org.

INDUSTRY SPOTLIGHT

AeroMACS: Delivering Next Generation Communications to the Airport Surface

Doug Gray & Dr. Nima PourNejatian

It has been widely recognized that airport communications systems are greatly outdated. Major airports throughout the world lack the communications capacity to meet today's airport traffic demands and certainly will not be sufficient to address the requirements for improved weather information, better aircraft and ground-handling equipment traffic management, and the growing need for communications leading to improved safety and airport and aircraft security. Recently, wireless broadband capabilities have been considered to guarantee future safety and regularity of flight services at airports worldwide.

This paper provides further details on how AeroMACS can meet the short- and long-term demands for improved airport surface communications and what it would take to facilitate a typical AeroMACS deployment in airports.

If you are interested in reading the entire publication, please click [here](#).

The Basics of WiMAX

Declan Byrne, President of the WiMAX Forum, discusses the essentials of WiMAX at Microwaves & RF

WiMAX is still being used by hundreds of operators around the world to provide high speed Internet to end-users. However, much of WiMAX's new growth in the U.S. and worldwide is happening within industrial markets such as Aviation, Utilities/Smart Grid, Oil & Gas and Transportation. WiMAX Forum has been working diligently with these markets to define certain technical profiles that address the very specific requirements of these markets. In addition, the communication of these markets tends to be "upload-centric" (as opposed to the consumer and mobile markets that are "download-centric.") As a technology, WiMAX is flexible enough to be customized for the upload needs of these vertical markets, whereas LTE cannot and WiFi has security and other concerns associated with any unlicensed radio technology.

The WiMAX industry continues to evolve to meet the world's wireless broadband needs, which have changed greatly over the past few years. In spite of the surge in LTE globally, it will take several years for it to be fully adopted, especially in geographies like Africa and India or in rural areas (even in the United States) where Internet infrastructures are still in their development stages. WiMAX is an affordable, high throughput platform that brings a stable, tested system to these markets. We have developed a WiMAX Advanced technical profile which enables ISPs to deploy WiMAX today, to address their fixed wireless access needs, but offers a scalable, low-cost migration path to LTE.

If you are interested in reading the full article at Microwaves & RF, please click [here](#).

WORKING GROUPS

The **WiMAX Forum Working Groups** focus on three key initiatives: **AeroMACS**, **Smart Energy** and **WiMAX Advanced**.

The Aviation Working Group (AWG) continues to ramp up four key projects: AeroMACS Certification, AeroMACS PKI, Network Reference Model and FCC Service Policy Petition. The AWG has formed task groups to focus on these initiatives. The Certification Task Group is finalizing IOT Use Case Scenarios and beginning to develop tests for our first AeroMACS Certifications Testing Event in Fall 2015. The PKI task group is gathering input to develop a draft Certificate Profile and Policy document that can serve as a guideline to the groups in the industry that are developing related requirements. After initial testing of X.509 certificate applications based on the Current WiMAX PKI Program, Symantec will be offering a Proof Of Concept for our members deploying AeroMACS Trial Networks.

In collaboration with the Network Reference Model Task Group members, the WiMAX Forum published a high-level, technical white paper entitled, "AeroMACS: Delivering Next Generation Communications to the Airport Surface." This white paper discusses the short- and long-term benefits of AeroMACS for key stakeholders and outlines a typical AeroMACS deployment. The WiMAX Forum plans to publish additional white papers in the future based on the work on the Network Reference Model and a comprehensive AeroMACS proof-of-concept deployment plan for Dallas Fort Worth International Airport. As the work to develop an AeroMACS Network Reference Model continues, the results can be used as the basis to begin FCC Petition development in 2015.

After receiving the FCC's adoption of its Report and Order for its initial **FCC FNPRM** regarding the 3.5 GHz band, the Smart Energy Working Group (SEWG) members will begin their response to the second FNPRM as soon as it is released, and members continue to participate in the Wireless Innovation Forum (WInnForum) Spectrum Access System (SAS) to influence the rules that regulate the 3.5 GHz band. Collaborating with API, Ameren, CenterPoint Energy Houston Electric, Exelon, and UTC, the WiMAX Forum continues to investigate other smart grid spectrum alternatives such as the 700MHz band with 1MHz channels and pursue the interests of the Smart Grid industry. For other Smart Energy initiatives, SEWG presented at OilComm and has plans to present WiMAX for Rail at an AAR Wireless Communications Committee meeting based on use cases and applications defined by the rail industry.

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. 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 & WiMAX Advanced Initiative*
- **SEWG** - Smart Energy Working Group - *Requirements & WiGRID Initiative*
- **AWG** - Aviation Working Group - *Procedures, Profiles & AeroMACS Initiative*
- **TWG** - Technical Working Group - *Technical*
 - **CTG** - Certification Task Group - *Technical*
 - **NTG** - Network Task Group - *Technical*
- GRWG** - Global Roaming Working Group - *Advisory*
- 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**. 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.

Your participation is important to the WiMAX community!

Now is the time to get involved. With activities gaining serious momentum, it is a crucial time and a great opportunity to influence and leverage these activities. If you or your company is interested in participation in our **Working Groups** or a leadership role, please contact the TSC Chair Rich Hawkins at Rich.Hawkins@WiMAXForum.org. To find more information on our Working Groups, please visit: www.wimaxforum.org/about/working-groups.

WiMAX FORUM NEWS

The WiMAX Forum weekly Newsbrief contains the summary of news from around the WiMAX ecosystem and is intended as a benefit to our community. 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 April:

- **FCC Releases Rules for Innovative Spectrum Sharing in 3.5 GHz Band**
- **Algeria Telecom expands WiMAX in 3 locations**
- **Broadband Group Promotes NextGen Ground-to-ground Network**
- **NetJets Donates \$1 Million to OSU for NextGen Research**
- **Enforta starts services for Surgutneftegazbank**
- **CommunicAsia2015 Envisioning the Future Through Innovative Technologies**
- **California pilots community of net-zero smart homes**
- **Exelis Launches Airspace Surveillance Tool For UAS Operations**
- **Airport Capacity Estimate Changes as Battle Over PFC Rages**
- **Enforta starts services for construction company**
- **Ukrainian Telecoms Forum in Kyiv, May 2015**

- **AeroMACS Takes Flight Globally: Delivering Next Generation Communications to the Airport Surface**
- **FCC Makes 150 Megahertz of Contiguous Spectrum Available for Mobile Broadband and Other Uses Through Innovative Sharing Policies**
- **WiMAX Forum President Declan Byrne Speaking at UTC Telecom & Technology 2015**
- **London businesses turn to WiMAX after Holborn fire**
- **AT installs three WiMAX sites in Ain Temouchent**
- **Internet of Things World 2015 - Receive a 15% Discount on Registration through the WiMAX Forum**
- **Linking the last five**
- **Nokia and Alcatel-Lucent agree €15.6bn all-stock merger**
- **Read the Highlights Edition of World ATM Now for an Overview of the Event**
- **FCC to hold an Open Meeting Regarding the CBRS Band 3550-3700 MHz for wireless broadband**
- **CenterPoint Energy reports results of \$200 million DOE smart grid grant**
- **NextGen Progress: More Than You'd Think**
- **ICNS Newsletter - Plenary Program Day 2**
- **NCC to hold telecom hearing on Monday**
- **Jordan reaches 75% internet penetration in 2014**
- **Call for Presentations Antenna Systems 2015**
- **NextGen GA Fund Expands Avionics Funding Available To GA Operators**
- **Duke Energy invests in renewable energy research**
- **Q&A: Declan Byrne Discusses the Basics of WiMAX**
- **Trends + Technologies Of The Asian Broadband Industry Featured @ CommunicAsia2015**
- **26.1 million internet users in Kenya**
- **Carrier Wi-Fi Asia 2015**
- **Enforta starts services for Sberbank in Belgorod**
- **An Open Wi-Fi Signal Coming Near You Soon!**
- **Kiribati telco sold to Fiji's ATH for USD5.72m**
- **ICNS Newsletter – Plenary Program Day 3**
- **edotco inks agreement with Qubee on network sharing**
- **Fixed telephone lines now at over 381,000**
- **SMC set to launch mobile broadband business in 2016**
- **TTK launches WiMAX in Kopeysk (Chelyabinsk region)**
- **FCC April 19th Agenda Announced, CBRS is a Featured Agenda Item**

- **IoT Global Innovation Forum**
- **Peering can help bridge digital divide**
- **Internet infrastructure spurs broadband demand**
- **Internet of Things World**
- **FTC opens office to secure the Internet of Things**
- **Akamai: Global average Internet speed grew 20% year over year to 4.5 Mbps, mobile traffic jumped by 54%**
- **March 2015 WiMAX Forum Monthly Newsletter**



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