MAY 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, the WiMAX Forum published a comprehensive AeroMACS white paper entitled, *"AeroMACS: Delivering Next Generation Communications to the Airport Surface"* at the **ICNS Conference 2015** in Herndon, Virginia. This technical white paper, on which a team of industry experts collaborated, identifies the short- and long-term benefits to major stakeholders. **If you are interested in reading the latest AeroMACS white paper**, please click *here*.

This month, at **UTC Telecom 2015** in Atlanta Georgia, the WiMAX Forum President **Declan Byrne** participated in a Workshop entitled, "Wireless Workshop: A Survey of Wireless Technologies for Utility Communications". During the UTC Telecom, Declan presented to the USTDA and Brazilian Delegation about spectrum availability and the advantages of licensed spectrum.

At **Internet of Things World 2015**, WiMAX Forum Chairman **Dr. Mo Shakouri** presented the key challenges facing developments in Connected Transport Systems during the "Integrated Transport Systems" Track.

At the end of May, Declan Byrne participated in a meeting at the Brazilian regulator Anatel, along with UTC America Latina, Representatives of the Ministry of Communications, ANEEL, vendors and major Brazilian utilities, to discuss the availability of a licensed spectrum designated to the Smart Grid in Brazil. Periodic meetings occur with the Working Group, which is expected to have another meeting in the next few months.

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 hosting and participating in the coming months:

• **CommunicAsia2015** on June 2-5, 2015 in Singapore. WiMAX Forum Chairman Dr. Mo Shakouri will 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).

• **87th Annual AAAE Conference** on June 7-10, 2015 in Philadelphia, Pennsylvania. WiMAX Forum President Declan Byrne will discuss AeroMACS on the "High-Tech and High Performance: Best Practices In Ramp and Apron Operations" panel on Monday, June 8 at 3:30pm.

• **Systems Architecture and Interfaces (SAI) Subcommittee** meeting being held on June 16-18, 2015 at the Lufthansa Airport Conference Center - Frankfurt Airport Center in Frankfurt, Germany. WiMAX Forum President Declan Byrne will present AeroMACS during the meeting.

• WiMAX Forum COO **Richard Hawkins** will attend the **International Civil Aviation Organization (ICAO)** Working Groups S meeting being held on June 22-23, 2015 at the ICAO Headquarters in Montreal, Canada. AeroMACS and other Aeronautical Communications issues will be discussed at the meeting.

• **Wireless China Summit 2015** meeting being held on September 16-17, 2015 at the Crowne Plaza Beijing Sun Palace in Beijing, China. Explore how AeroMACS is able to shape the future of airport operations. The WiMAX Forum will lead panels, presentations and discussions during the AeroMACS Track on September 16, 2015 from 1:45pm to 6:00pm.

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** to be announced as of yet. 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 all a wonderful remainder of May, and a prosperous June.

Best Regards,

WiMAX Forum

EVENTS

In May, 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:

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**.

Every year, AAAE's annual conference is the place to be for invaluable networking with more than 2,000 of our business partners and colleagues who represent more than 250 airports across the country. The conference's educational sessions feature interactive discussions led by subject matter experts on critical topics affecting our industry today, including security, financial planning, technology and customer service.

AAAE's premier gathering also hosts one of the largest exhibit halls filled with aviation products and services for event attendees to see, test, and feel, giving them ample time to discover the most current offerings and to see what's new and different to help your airport business. The conference will take place on **June 7-10 at the Pennsylvania Convention Center in Philadelphia, Pennsylvania.**

The WiMAX Forum will be at the Annual AAAE Conference!

Come see Declan Byrne, WiMAX Forum President, speak about AeroMACS on the "High-Tech and High Performance: Best Practices In Ramp and Apron Operations" panel on Monday, June 8 at 3:30pm.

For more information and event registration, please visit **87th Annual AAAE Conference**.

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 is proud to be a sponsoring organization. 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**.

The upcoming Wireless China Industry Summit will take place on **September 16-17, 2015 at the Crowne Plaza Beijing Sun Palace in Beijing, P.R.C.** This educational program provides insights about a broad range of critical issues and exciting new developments. At the Wireless China Industry Summit, you and your organization will have a firsthand opportunity to learn more about the latest wireless technologies and their applications in high growth market segments.

The WiMAX Forum will host - AeroMACS Track - at the Wireless China Industry Summit!

Next generation wireless communications is paving the way for airport and aircraft operations to become more efficient, safe and profitable. The second AeroMACS Seminar at Wireless China Summit focuses on a new wave of solutions, services and avionics that offers connectivity for applications at the airport surface. Explore how AeroMACS is able to shape the future of airport operations. The WiMAX Forum will lead panels, presentations and discussions during the **AeroMACS Track on September 16, 2015 from 1:45pm to 6:00pm**.

Increase your presence at the Wireless China Summit and the AeroMACS Track with a sponsorship! This high-profile event offers sponsors a speaking opportunity, exhibition space, and excellent visibility before, during, and after the event. For more information about the sponsorship that best suit your needs, please contact Alessandra Rocha at **Alessandra.Rocha@WiMAXForum.org**.

Sponsored by:

Supported by:
Office of Radio Regulatory Committee, Civil Aviation Administration of China (CAAC)

Approved and Endorsed by:
Radio Regulatory Bureau, Ministry of Industry & Information Technology (MIIT)

For more information and event registration, please visit **AeroMACS Track at Wireless China Summit 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**
- **Intellecom 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

• Opening Up of 3.65 GHz Band Webinar
Challenges and Demands of New Guidelines

A new global trend for the 3.65 GHz band is emerging due to the recent U.S. Federal Communications Commission's Report and Order opening up 150 MHz for shared access in the 3550-3700 MHz band to wireless broadband service providers, industrial users, and other federal/non-federal users. This is a significant operational change for the 3.65 GHz wireless broadband community, critical infrastructure players, and specifically global WiMAX deployments, which demand solid guidelines, policies, and industry support to have adequate protection.

On April 21, 2015, the U.S. Federal Communications Commission ("FCC") released a Report and Order ("Report and Order") creating a new Citizens Broadband Radio Service ("CBRS") that will permit commercial use of 150 MHz of spectrum in the 3550-3700 MHz band ("3.5 GHz Band"). It contains the band 3650-3700 MHz which includes the 3.65 GHz Wireless Broadband Service ("WBS").

The Report and Order adopts rules for making the band available in phases for wireless broadband and other innovative uses through a three-tiered sharing framework enabled by a Spectrum Access System ("SAS") that will establish frequency and power usage restrictions to protect incumbent users from interference.

The **WiMAX Forum Smart Energy Working Group (SEWG)** has been closely monitoring this activity and is working closely with ecosystem players to develop such guidelines so 3.65 GHz users can continue to leverage this band. SEWG's daily interactions with the FCC, WinnForum, and other rule makers have perfectly positioned SEWG at the heart of the 3.65 GHz band policy-making debate and Spectrum Access System (SAS) development.

The WiMAX Forum will host a **free live webinar on Wednesday, June 3 at 10-11AM PDT**, which is open to all companies seeking more details and wanting to influence the outcome. **For additional information and registration**, please click **here**.

• AeroMACS on the Horizon to Modernize Surface, Communications Operations
By Juliet Van Wagenen, Editor, Aviation Today

When it comes to improving operations through connectivity, Surface Wide Information Management (SWIM) is making a big splash, but in enabling SWIM and a whole host of other NextGen applications to the fullest extent, the little-talked-about Aeronautical Mobile Airport Communications System (AeroMACS) could be the next big thing. AeroMACS is a new broadband data link that has the ability to

support the ever-expanding range of Air Traffic Management (ATM) communications technologies emerging under the modernization initiatives of NextGen and Single European Sky. The system aims to bring wireless, broadband connectivity to airports for surface operations and can conceivably be brought onto aircraft to interact with avionics systems.

AeroMACS aims to improve surface communications and operation efficiency through a broadband connection. **To read the entire article**, please click **here**.

• AeroMACS: A new paradigm for communications
By Tim Guest, Journalist, Land Mobile

Early adoption of the AeroMACS platform is occurring in developed countries and at larger airports, and that its main strength is its ability to support many applications concurrently, in a scalable and cost-effective way. It will play a crucial role in maintaining security and safety standards as air traffic congestion grows. AeroMACS can be used worldwide to ensure interoperability and efficiently support the communication needs at airports for all aviation stakeholders: airlines, airport authorities as well as Air Navigation Service Providers (ANSPs).

AeroMACS represents safety, efficiency and increased capacity when it comes to airport communications. **To read the entire article**, 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) and its task groups continue to make great progress on four key projects: AeroMACS Certification, AeroMACS PKI, Network Reference Model and FCC Service Policy Petition. The Certification Task Group is finalizing IOT Use Case Scenarios for a Multivendor Interoperability Demonstration Event (MIDE) to be held on September 7-11 at **Powertech Labs** and beginning to develop tests for AeroMACS Certification Wave 1 to be available in late Fall 2015 at Powertech Labs, our accredited AeroMACS Designated Certification Lab (ADCL). AeroMACS Certification Wave 2 will be available in 2016. The PKI task group has gathered 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. Additionally, the PKI Task Group is submitting PKI Certificate Policy Considerations in a working paper to **ICAO** Working Group S.

Network Reference Model Task Group members are addressing questions raised at the ICNS conference in response to a recently published technical white paper entitled, "AeroMACS: Delivering Next Generation Communications to the Airport Surface," which you can read **here**. 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. AWG members are responding to the FCC NPRM for WRC-12 Resolutions and defending the spectrum at future ITU meetings, including WRC-15 and WRC-16.

After receiving the FCC's adoption of its Report and Order for its initial **FCC FNPRM** regarding the 3.5 GHz band, the WiMAX Forum is hosting a webinar on this on June 3 at 10:00-11:00AM PDT to provide more details. Please register for the webinar **here**. The Smart Energy Working Group (SEWG) members are planning their response to the second FNPRM, and members continue to participate in the Wireless Innovation Forum (WInnForum) Spectrum Access System (SAS) committee 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 narrowband applications, the WiMAX Forum will survey utilities to further analyze the addressable market for this and other sub 1GHz spectrum.

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 May:

- **AeroMACS A new paradigm for communications**
- **SESAR and Challenges to the Air Traffic Management Industry**
- **Exelon-Pepco merger one step closer to reality**
- **Montenegro records 97,885 broadband connections in Feb**
- **CommunicAsia2015 Features WiMAX Forum Participation**
- **Smarter WANs Equal Fewer Emergencies**
- **Enforta launches Managed Hot-Spot at Blagoveshchensk hotel**
- **Running mobile networks in real time**
- **TTK connects Sovkombank branch**
- **TNM takes Smart e-WIMAX golf to Zomba**
- **AeroMACS on the Horizon to Modernize Surface, Communications Operations**
- **Opening Up of 3.65 GHz Band Webinar**
- **NextGen Implementation Plan 2015**
- **Big Telecom Event 2015 in Chicago, IL on June 9-10**
- **Telecentras revenues up 3% in 2014**
- **Liquid Telecom buys out Zambia WiMAX player**
- **IoT Security 2015 in Boston, MA on September 22-23**
- **Senate bill would allow utilities to sidestep PURPA**
- **Laptop fair begins today**
- **BUET hosts Career Development Workshop**
- **FCC raises the curtain on the Citizens Broadband Radio Service**
- **A Smart Twist to the Power Grid**
- **Internet of Things World on May 12-13, 2015 in San Francisco**
- **Enforta expands services for Russian Metal**
- **Commercial Avionics Systems Market Growth Driven by NextGen, Orders**
- **87th Annual AAAE Conference Featuring AeroMACS Presentations**
- **What does the energy future look like?**
- **The FCC Issues Order Implementing WRC-07 & 12 and Enabling AeroMACS**
- **Best Paper Competition Winners Announced for ICNS 2015**
- **15 ARINC Standards You Should Know for AEEC 2015**

- **Iran shows progress in 2014 with fibre network deployment**
- **Carrier Wi-Fi World in London, June 2015**
- **ERAM Rollout Marks Next Milestone in FAA's NextGen Initiative**
- **Pakistan mobile broadband user base flat in March**
- **Rostelecom board approves FreshTel takeover**
- **Final keynote line-up is revealed for Internet of Things World 2015**
- **Anacom launches 3.4GHz-3.8GHz consultation**
- **April 2015 WiMAX Forum Monthly Newsletter**

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