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INTRODUCTION

Dear Respected Colleagues,

As 2019 winds down, we want to take a moment to express our sincere gratitude for your unflagging support and enthusiasm. Your insights, wisdom and unceasing collaboration allowed us to produce important work to advance the Aeronautical Mobile Airport Communication System (AeroMACS), WiGRID, and the WiMAX technology. We have much going on, which we feel is directly relevant and value-added to our Members and industry. Thanks to the generosity, commitment, contributions, collaboration and participation of our Board of Directors, Member Companies and Working Group Representatives, we have been able to continue the expansion of our services, achieving significant milestones together through collaboration and growing the market for WiMAX technology.

Throughout the year, the WiMAX Forum has participated in several industry events, meetings, and technical activities to widely advocated the capabilities of AeroMACS, WiGRID, and other industry applications based on the WiMAX Standard. We have seen important progress on our initiatives.

AeroMACS has gained momentum this year and achieved significant milestones with the collaboration of key players in the aviation industry. AeroMACS has been demonstrating immense potential and benefits to a variety of audiences that include aircraft maintenance, airlines, airport, ATC/ATM, government representatives, and more. The industry has demonstrated support to AeroMACS as the standard selected to support the safety and regularity of flights.

The Project Authorization Request (PAR) for revision of the IEEE 802.16t has been approved by the IEEE 802 Executive Committee and the first face to face meeting will take place at the IEEE 802 Wireless Interim session in Irvine, CA on January 2020. It is important to get broad participation in the standard work, if you are interested in participating in the standard revision, please email info@WiMAXForum.org, and we will provide you with more details.

As this coming year promises further momentum, we will continue to push forward hosting and participating in a number of industrial events to bring the highest value to the WiMAX community as the market share expands. Our focus has been to share key lessons, concrete knowledge, and work together for the benefit of the industry. Through our events, speaking opportunities, and webinars, we are reaching out to diverse audiences in the WiMAX community in ways that will best serve all stakeholders. Here is the summary of an upcoming event that we are participating during the coming months:

• On March 11, 2020 at 2:00PM local time, the WiMAX Forum will host AeroMACS 2020 – Madrid, a session with AeroMACS presentations at the World ATM Congress - Aireon Spotlight Stage - Feria de Madrid Convention Centre (IFEMA). The presentations will focus on supporting the global Aviation Community in managing profitable development and growth of AeroMACS networks.

• On March 10-12, 2020 at the World ATM Congress Conference & Exhibition, the WiMAX Forum will exhibit AeroMACS at Booth 117 in the IFEMA Exhibition Hall. If you would pre-scheduled a meeting time with us, please email info@WiMAXForum.org and we will be glad to schedule a time to speak with you.
Please note registration is required in order to attend the World ATM Congress and the AeroMACS 2020 - Madrid. For registration, please click the following link: 

The WiMAX Forum will keep busy preparing for exciting meetings and events to raise awareness about the benefits of the WiMAX technology. We will continue attending, and participating at key industry events to bring the highest value to the WiMAX community as the market share expands. Please stay tuned for the upcoming event and for more information, please visit: WiMAX Forum Events.

We have been in touch with our members about our 2020 renewal cycle. As always, we stand ready to answer any questions that you may have. For more information regarding your membership status, please email Membership@WiMAXForum.org, and we will respond as quickly as possible.

Please reach out to us if you have any questions or comments. We wish you a healthy and happy holiday season and we look forward to speaking with you soon in 2020!

Best Regards,
WiMAX Forum

INDUSTRY SPOTLIGHT

The WiMAX Forum maintains a bustling schedule of public appearances, white paper publications, webinars, and press releases on behalf of our industry. Below you can find the most relevant activities and latest communications.

• **Waypoints: Tomorrow’s Technologies Today’s Air Traffic Demands**

Implementing wireless technologies for air traffic infrastructure. Features: Delivering airport operational excellence Data Comm saves FAA and passengers millions in delays. Air traffic resiliency must be measurable Enabling safety through resilient technologies. Implementing wireless technologies for air traffic infrastructure L3Harris deploys AeroMACS at airports across the United States. Technology advancements at the speed of safety Excerpts from the white paper published in the ATCA Journal of Air Traffic Control.

To view the publication, please click [here](#).

• **SESAR JU Members Showcases Maturity of Datalink Communication Solutions**

On 23 October, SESAR JU member and partners held an open day in Brussels bringing together a wide audience of stakeholders to present the progress in datalink communications achieved during the first phase of SESAR 2020 research and innovation. The open day presented the work coming out of the SESAR 2020 project PJ.14 EECNS on the future technologies emerging in the domain communications, navigation and surveillance domains to manage future operational services, such
as 4D trajectory management.

To review the details and presentations, please click here

EVENTS

In the coming months, the WiMAX Forum will host, participate, attend, and support events globally. We continue our efforts to bring you quality conferences hosted by the WiMAX Forum, and we will present and participate at key industry events. The WiMAX Forum team looks forward to seeing you at these events.

Featured Events:

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
<th>Location</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>AeroMACS 2020 - Madrid</td>
<td>March 11 at 14:00 to 16:00</td>
<td>Madrid, Spain</td>
<td>For more information visit: <a href="#">AeroMACS at World ATM Congress</a></td>
</tr>
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</table>

Upcoming Events:

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
<th>Location</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th Smart Cities International Symposium</td>
<td>January 21-23, 2020</td>
<td>Chicago, IL</td>
<td>For more information visit: <a href="#">Smart Cities International Symposium</a></td>
</tr>
<tr>
<td>Convergence India 2020</td>
<td>February 19-21, 2020</td>
<td>New Delhi, India</td>
<td>For more information visit: <a href="#">Convergence India</a></td>
</tr>
<tr>
<td>Internet of Things India expo</td>
<td>February 19-21, 2020</td>
<td>New Delhi, India</td>
<td>For more information visit: <a href="#">Internet of Things India expo</a></td>
</tr>
<tr>
<td>World ATM Congress 2020</td>
<td>March 10-12, 2020</td>
<td>Madrid, Spain</td>
<td>For more information visit: <a href="#">World ATM Congress</a></td>
</tr>
</tbody>
</table>
The WiMAX Forum plans to host and participate in other events over the course of the year. 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 Membership provides a wide range of benefits and services that promote growth and innovation of AeroMACS, WiGRID, and WiMAX technology. Only WiMAX Forum Members can certify products to guarantee interoperability and standard compliance for AeroMACS, WiGRID, and WiMAX; secure networks using Public Key Infrastructure (PKI) certificates; develop technical specifications; influence favorable regulatory environments; and contribute to the growth of the industry through standards development that satisfy the market needs, among other advantages.

The WiMAX Forum would like to extend a special welcome to the new members for 2019:

- **German Aerospace Center (DLR)**
- **Ondas Networks**

The WiMAX Forum is committed to delivering the value necessary for our members to get the most from their membership, and we are always engaging with individual members to discuss how we can better serve them. If you are interested in speaking with our leadership team on our specific
initiatives or have any questions, please send a message to Membership@wimaxforum.org.

**The WiMAX Forum is the best place to access, leverage, and influence the growth and development of the AeroMACS, WiGRID, and WiMAX Technology. So be a leader and step up to get involved today!**

**WORKING GROUPS**

The **WiMAX Forum Working Groups** are key to the development of WiMAX technology. The Working Groups are chartered by the WiMAX Forum to bring together content experts from member companies to collaborate and contribute to specification development, harmonize documents, and perform other tasks that the WiMAX Forum has determined to be necessary or useful.

The WiMAX Forum organizes its technical activities through a number of Working Groups that produce technical requirements, develop technical specifications, and advise the forum. The Working Groups are the currently focused on **AeroMACS, Smart Energy**, product certification and various spectrum access solutions.

Several activities are being scheduled and we have a lot to get done in the new year. We need the help of your technical experts in these groups. If you are interested in participating in our **Working Groups**, please contact us at info@WiMAXForum.org and we will be glad to speak with you about this opportunity. It is a crucial time for your organization to influence and leverage the Working Groups activities and contribute to the development of the market.

The Aviation Working Group (AWG) and the AWG Certification Task Group (CTG) have had a great year making significant progress on several technical projects to support AeroMACS as the standard selected to improve the safety and regularity of flights and have been achieving important milestones. The AWG and CTG members are collaborating on the development of AeroMACS Product Conformance Certification, AeroMACS Public Key Infrastructure (PKI), FCC AeroMACS Petition for Rulemaking, and other initiatives.

The AWG CTG has completed and approved the IOT procedures to support the testing and certification of products in support of an overall WiMAX Forum certification compliance for AeroMACS based on international approved standards. This recent approval represents the completion of the full set of testing procedures for AeroMACS Certification that include the previously published WiMAX Forum® AeroMACS Test Suite Structure and Test Purposes (TSS&TP) for PCT and RCT Specifications.

The WiMAX Forum, **ICAO**, other regulatory members and key industry stakeholders have formed the AeroMACS Advisory Council (AAC). The AAC is a collaborative body that will promote effective public-private dialogue and will consistent with the AeroMACS Certificate Policy and ICAO policies, provide strategic guidance and oversight for AeroMACS PKI, thereby helping promote optimum interoperability and trust among participants.

The WiMAX Forum has partnered with **Eonti** to manage and implement **AeroMACS PKI** as the Management Authority (MA). The MA has brought on the first Certificate Authority (CA) to make
AeroMACS PKI commercially available to make AeroMACS operational networks secure. An overview of the AeroMACS PKI process is available here: [AeroMACS PKI Users Overview](#).

The Smart Energy Working Group (SEWG) members are working with IEEE to bring to market devices for narrowband applications and other sub 1GHz spectrum. If you are interested in participating in this activity, please contact us at [info@WiMAXForum.org](mailto:info@WiMAXForum.org) and we will be glad to speak with you about this opportunity.

You can learn more about the Working Group activities by visiting the member’s workspace area to view the outcomes of recent Working Group sessions or join groups to receive emails related to that group's activities. To find more information on our Working Groups, please visit: [www.wimaxforum.org/Page/About/Working-Groups](http://www.wimaxforum.org/Page/About/Working-Groups).

**Working Group activity is integral to the success of the Forum, and your participation is important to the WiMAX community!**

**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 December:

- **The Standards Cheat Sheet: What You Need to Know About the IEEE Standards Process**
- **AeroMACS 2020 - Madrid**
- **Waypoints: Tomorrow's Technologies Today's Air Traffic Demands**
- **ICAO Manual on the Aeronautical Mobile Airport Communication System (AeroMACS)**
- **The Standardized Solution for the Airport Surface Communications Worldwide**
- **Application and Development of New Technologies of ATM in China**
- **WiMAX Forum: Mo Shakouri Outlines Benefits of WiGRID, AeroMACS Technologies for Private Networks**
- **BDS/AeroMACS Integrated Positioning Algorithm for Airport Surface Surveillance**
- **AeroMACS: The System That Facilitates Operations at Galeao Airport**
- **Airlines Electronic Engineering Committee Approves Changes to Ease L-Band Satcom, IP Communications**
- **Application of New Wireless Communication Technology AeroMACS at Domestic and Foreign Airports**
- **Showcasing Progress of Future Datalink Solutions**
- **Failure to secure IoT networks has far-reaching consequences, and transportation is a bullseye target**
- **EUROCAE Technical Work Programme**
- **IATA: Global airline industry expected to improve in 2020**
- **6 IoT Security Predictions for 2020**
• EUROCONTROL contributes to ICAO's global approach to cybersecurity
• FCC moves on shared access to mid-band spectrum
• 4th Annual Smart Cities International Symposium & Exhibition
• DigiCert and Ubisecure partner for next-generation Legal Entity Identifier organization identity solutions
• Progress towards liberalized and harmonized regulatory frameworks key to unlocking full benefits of air connectivity
• Waypoints: Tomorrow’s Technologies Today’s Air Traffic Demands
• Air traffic management market is predicted to surpass USD 10 billion by 2025
• Predictions About IoT and Digital Transformation in 2020
• FCC Seeks Comment on Rules for UAS Operations
• October’s moderate passenger growth a “positive” for the industry
• Leonardo presents a road map for the Company’s innovation and research through the launch of Leonardo Labs with the aim to strengthen technological development and competitiveness
• Blockchain and Data Science
• Cyber Strategies For the Aviation Aftermarket
• Tiscali broadly welcomes ruling on 3.5 GHz licence renewal
• China’s First Beidou and AeroMACS Airport Scene Operation Pilots Have Achieved Initial Results
• Showcasing Progress of Future Datalink Solutions
• The 2nd International Symposium on Air Traffic Management for Civil Aviation (ATM 2020)
• Utilization of AeroMACS Infrastructure for Airports and Airlines
• ICAO Council Elects New President
• China and Europe to Enhance Aviation Cooperation
• Australia Releases Draft IoT Cybersecurity Code of Practice
• Siemens Could Buy Iberdrola Siemens Gamesa Stake: Report
• November 2019 WiMAX Forum Monthly Newsletter