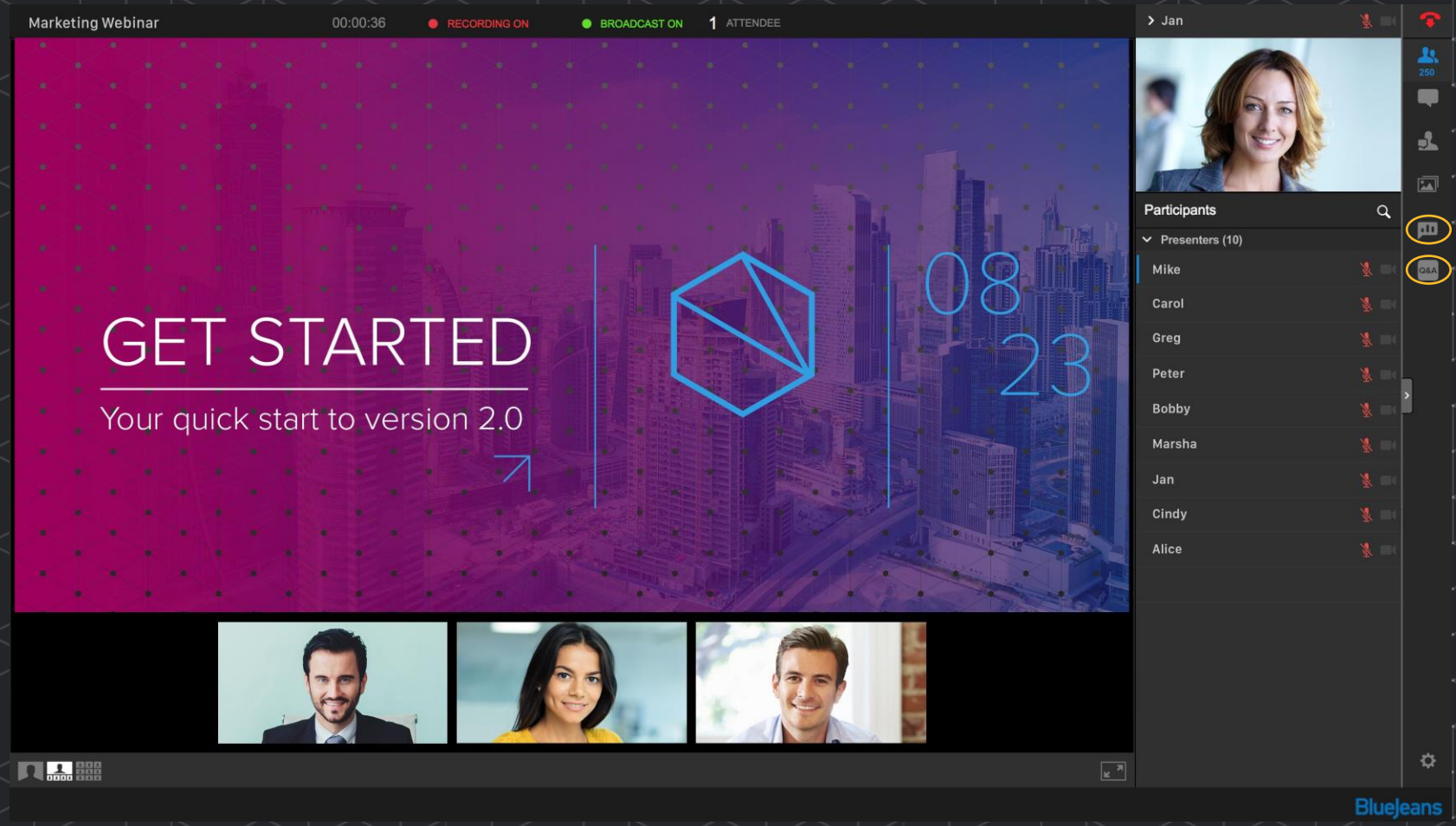
IoT WebTalk

The Power of Partnership: CLEAR SKIES AHEAD FOR MOBILE-ENABLED AVIATION

Wednesday, 24 March 2021 | 08:00 PDT | 11:00 EDT | 15:00 GMT

Polls & QA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Participants
Presenters (10)
Mike
Carol
Greg
Peter
Bobby
Marsha
Jan
Cindy
Alice
Polls
Questions & Answers
BlueJeans

Agenda

15:00	Introduction	Barbara Pareglio, **GSMA** Pawel Trominski, **GUTMA** Christopher T. Kucera, **OneSky**
15:10	How to develop enablers for aviation in 3GPP standards?	Stefano Faccin, **Qualcomm**
15:15	How cellular can enable BVLOS operations?	Gerry Libunao, **Verizon**
15:20	What data can MNOs offer for BVLOS flights?	Thomas Neubauer, **TEOCO**
15:25	How to integrate cellular enabled UAS into aviation?	Boris Resnick, **GLONASS Union**
15:30	Panel and Q&A, moderated by Barbara Pareglio, GSMA	All speakers and ACJA Board Members

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The GSMA in numbers

1987
The GSMA was founded

12
offices worldwide

93m
lives impacted through Mobile for Development

2016
we're the first sector to commit to the UN Sustainable Development Goals

GSMA Membership:

750+
mobile operators

400
companies in the broader ecosystem

Nearly **200,000**
attendees worldwide come to our MWC and Mobile 360 Series events

Connecting **23,000**
industry experts through InfoCentre2

10.1bn+
cellular connections worldwide (including IoT)

5.2bn+
unique mobile subscribers

$600bn
annual 5G contribution to global economy in 10 years

75%
of the global fixed broadband market is represented by GSMA members

Over **600**
meetings in the past year amongst the GSMA Working Groups

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About GUTMA

Global UTM Association

- **MISSION**: To support and accelerate the transparent implementation of globally interoperable UTM.
- **UTM PURPOSE**: To foster the safe, secure, efficient and affordable integration of drones into national airspace systems.
- **GUTMA MEMBERS**: In over 30 countries across 6 continents, our diverse membership represents the entire UTM ecosystem.

GOALS:

Empower a harmonized global digital UTM ecosystem

Enable more UTM flights than ATM

Trusted source for UTM knowledge

Aerial Connectivity Joint Activity (ACJA)

www.gsma.com/aviation/

Global UTM Association

www.gutma.org/acja/

Arieal Connectivity Joint Activity

Connecting Cellular and Aviation

Innovation

Safe, harmonised technology and regulatory environment for BVLOS connected drone operations

New business opportunities

Manufacturers

Regulators (EASA, FAA)

Standards (RTCA, EUROCAE)

Aviation ecosystem

Traffic Management (USS, ANSP)

UAV operators

WT 1 WT 2 WT 3 WT 4

ACJA

Regulators (OFCOM, FCC)

Modules

Standards (3GPP, ITU)

Mobile Network ecosystem

Mobile Network Operators (Connectivity)

Powered by requirements from BVLOS drone end-users/applications and UTM ecosystem

GSMA Arieal Connectivity Joint Activity Connecting Cellular and Aviation

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ACJA Work Task 1

Cellular Standard Coordination

WT 1 Lead
Stefano Faccin
Qualcomm

Purpose

C2 connectivity, Broadcast & Networked Remote ID, Detect and Avoid, Interface between the USS and MNOs (service exposure and interfaces), Use of cellular for UAS communications

Integrate cellular standards with aviation regulations and standards

Achievements

White paper capturing requirements for integration of aviation services and cellular MNOs to support BVLOS

Future plans

Further enablers for BVLOS support via cellular MNOs (C2 and Remote ID)

Cellular enablers for Detect and Avoid

Use of cellular PC5 for UAV2UAV and UAV2 ”anything” connectivity

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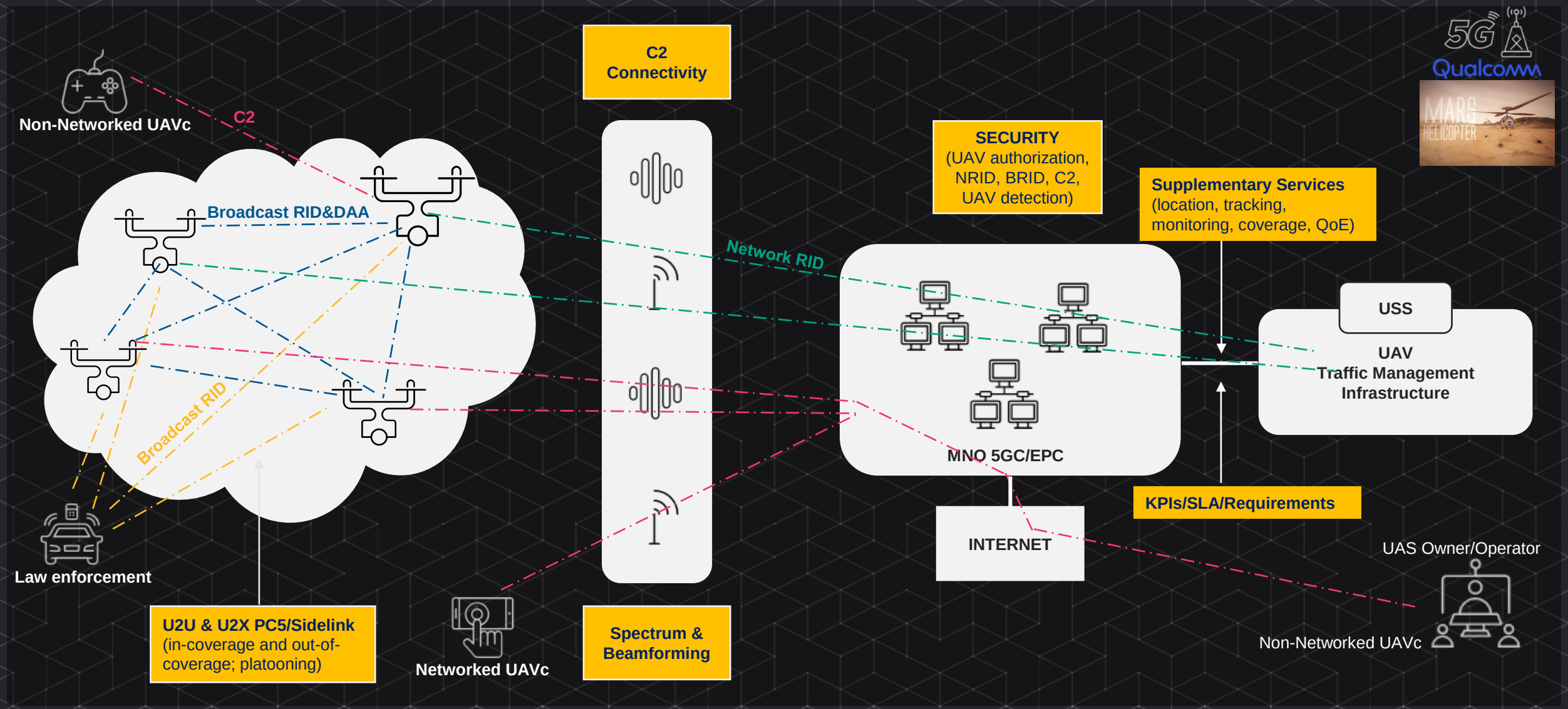
UAV Connectivity Framework and the 3GPP Ecosystem



ACJA Work Task 3

Standard Aerial Service Profile

WT 3 Lead
Gerry Libunao
Verizon

Purpose

Define cellular network connectivity profiles for aerial services

Achievements

Industry whitepaper on LTE aerial user-to- network (UNI) base profile

DOWNLOAD

Future plans

WT dormant pending completion of standards for:
- 5G NR support of UAVs in 3GPP
- LTE MOPS in RTCA and EUROCAE

LTE aerial work transferred to GSMA – guidelines for LTE UNI profile, roaming and network Interconnection support of aerial services

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ACJA Work Task 2

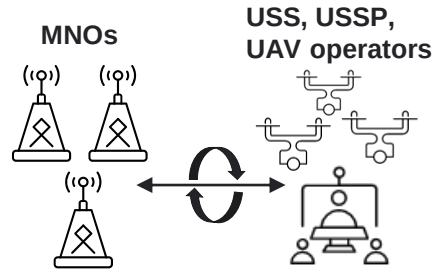
Data exchange between MNOs and UTM

WT 2 Lead
Thomas Neubauer
TEOCO

Purpose

Global data exchange btw MNOs & drone eco-system

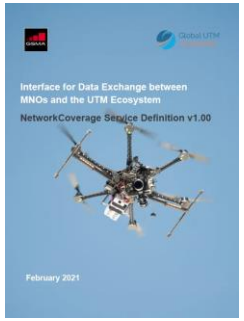
Needed for pre-flight, in-flight and post flight data exchange



Achievements

Delivered a globally harmonized Network Coverage Service Definition for connectivity data & ground risk data

DOWNLOAD



Future plans

- Deploy Network Coverage Service
- Measure thresholds & requirements
- Monitoring & logging formats & needs

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ACJA Work Task 4

Development of MOPS & MASPS

WT 4 Lead
Boris Resnick
GLONASS Union

LinkedIn

Purpose

Interface between ACJA & wider telecom community & aviation SDOs (e.g. RTCA, EUROCAE) for enabling UAS communication adoption and ensuring safe deployments based on performance-based requirements

Achievements

Draft minimum operation performance paper for UAS communications by 4G/LTE mobile network as an input towards EUROCAE WG-105 and RTCA SC-228 standards

Future plans

2021: Architecture & use cases for 4G LTE UTM connectivity white paper
2022: MOPS definition & use cases for 4G/LTE C2 connectivity
Beyond 2022: MOPS for 5G connectivity

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Panel Discussion

Peter Musgrove

Lead Member of Technical Staff

AT&T

Boris Resnick

Deputy Technical Director

GLONASS Union

Barbara Pareglio

Senior Director, IoT Technology

GSMA

Pawel Trominski

Project Manager

GUTMA

Thomas Eder

Senior Engineering Manager

Nokia Digital Automation

Christopher T. Kucera

Co-Founder and Head of Strategic Partnerships

OneSky

Stefano Faccin

Director of Technical Standards

Qualcomm

Eric T. Ringer

Co-founder and Chief of Staff

Skyward, a Verizon company

Thomas Neubauer

VP, Business Development

TEOCO

Gerry Libunao

Distinguished member of the Technical Staff

Verizon

Thank You!

on-demand video recording

www.gsma.com/drones

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