



Unmanned Aerial Vehicle Vertical Applications' Trials Leveraging Advanced 5G Facilities

ISSUE HIGHLIGHTS

The 11th issue of the 5G!Drones newsletter presents the project activities during the period December 2021 - February 2022. This issue focuses on the latest 5G!Drones dissemination and communication activities, the trials performed, the 5G-PPP transition to 6G-IA SNS, the upcoming deliverables, as well as the latest GA meeting.

5G!Drones activities in numbers:

- 4 Journal-Conference Papers
- 1 Presentation - Panel Discussion
- 1 Trial Video
- 1 3-days Trials in EURECOM
- 6G-IA SNS presentation
- 2 Submitted Deliverables
- 3 Upcoming Deliverables
- 9th 5G!Drones General Assembly



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OULUN YLIOPISTO

THALES



INVOLI

Hepta



NOKIA



AIRBUS

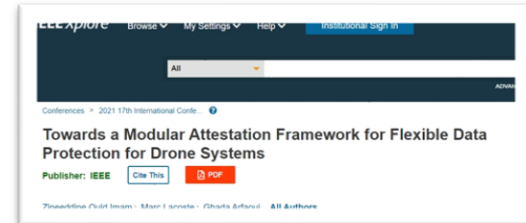


DISSEMINATION AND COMMUNICATION ACTIVITIES

JOURNAL AND CONFERENCE PAPERS

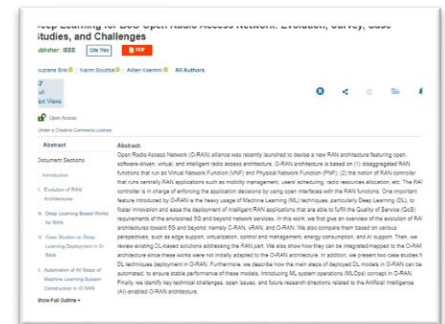
5G!Drones partners, Zineeddine Ould Imam, Marc Lacoste, Ghada Arfaoui, from Orange, released a conference paper entitled “Towards a Modular Attestation Framework for Flexible Data Protection for Drone Systems” in the context of IEEE WiMob 2021. You may learn more about the paper here:

<https://ieeexplore.ieee.org/document/9606269/authors>



5G!Drones partners, Bouziane Brik, Karim Boutiba, Adlen Ksentini from EURECOM released a journal paper entitled “Deep Learning for B5G Open Radio Access Network: Evolution, Survey, Case Studies, and Challenges” in the context of IEEE Xplore Journal of the Communications Society. You may learn more here:

<https://ieeexplore.ieee.org/document/9695955>



5G!Drones partners, Sagar Arora, Adlen Ksentini, Christian Bonnet, from EURECOM, submitted a conference paper entitled “Lightweight edge Slice Orchestration Framework” in the context of IEEE International Conference on Communications 2022, which was accepted. You may find it at: https://5gdrones.eu/wp-content/uploads/2022/02/icc2022_Lightweight-edge-Slice-Orchestration-Framework.pdf

Lightweight edge Slice Orchestration Framework

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5G!Drones partners, Karim Boutiba, Miloud Bagaa, Adlen Ksentini, from Aalto University and EURECOM, submitted a conference paper entitled “Radio Resource Management in Multi-numerology 5G New Radio featuring Network Slicing”, in the context of IEEE International Conference on Communications 2022 (ICC 2022). You may find the paper here:

https://5gdrones.eu/wp-content/uploads/2022/02/ICC2022_radio-source-management-network-slicing.pdf

Radio Resource Management in Multi-numerology 5G New Radio featuring Network Slicing

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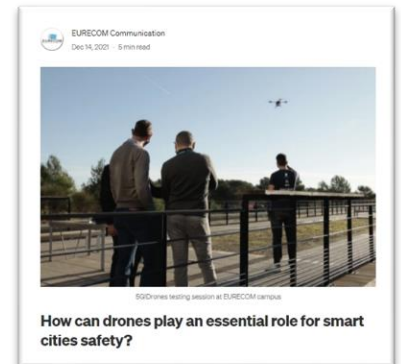
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More information on 5G!Drones publications is available online at 5G!Drones website at <https://5gdrones.eu/research-papers/>



ARTICLE

EURECOM, 5G!Drones partner, published an online article showcasing how the drones can play an essential role in the smart cities. The article also contains information about 5G!Drones trials and use cases. You may access the article online here: <https://eurecom-blog.medium.com/how-can-drones-play-an-essential-role-for-smart-cities-safety-a9e869901d82>



PRESENTATION - PANEL PARTICIPATION

Dr. Haris Koumaras (NCSR "DEMOKRITOS"), 5G!Drones partner, participated at Industry Panel "5G and beyond - The Perspective of European Research Projects" of IEEE GLOBECOM 2021, on 8th of December 2021, presenting and raising a discussion about the "Findings and lessons learnt from the 5G trials of 5G!Drones project". You may find more information here: <https://globecom2021.ieee-globecom.org/>



TRIALS DEBRIEFING VIDEO

5G!Drones partners, AIRBUS, INVOLI, CAFA Tech, robots.expert, FREQUENTIS, Unmanned Life and EURECOM, conducted UAV trials in the Eurecom premises, Campus SophiaTech, Sophia Antipolis, in France on the 16-18 December 2021. For better communicating the results of the trials, experiences, lessons learnt and recommendations, involved partners made their testimonies on air, recording them in video.

You may watch this debriefing video, recorded right after the trials, on the 5G!Drones YouTube channel here:

<https://www.youtube.com/watch?v=U3RavtowRI4>



5G!Drones trials debriefing video - EURECOM trials Use Case 2



TRIALS

EURECOM TRIALS

On 16-18 of December 2021 in EURECOM's facilities in Sophia Antipolis 5G!Drones partners, AIRBUS, INVOLI, CAFA Tech, robots.expert, FREQUENTIS, Unmanned Life and EURECOM, conducted drone trials. For the first time in the world 5G!Drones partners used 5G SA to control a drone! The trials took place in the context of Use Case 2 "Public safety/saving lives". 5G!Drones partners worked in three different labs discussing the trials context in EURECOM facilities, in order to proceed and achieve this goal.



6G-IA SNS ASSOCIATION

The 6G Smart Networks and Services Industry Association (6G-IA) is the voice of European Industry and Research for next generation networks and services. Its primary objective is to contribute to Europe's leadership on 5G, beyond 5G and SNS/6G research. The 6G-IA represents the private side in both the 5G Public Private Partnership (5G-PPP) and the Smart Networks and Services Joint Undertaking (SNS JU). In the 5G-PPP and SNS JU, the European Commission represents the public side.

The 6G-IA brings together a global industry community of telecoms & digital actors, such as operators, manufacturers, research institutes, universities, verticals, SMEs and ICT associations. The 6G-IA carries out a wide range of activities in strategic areas including standardization, frequency spectrum, R&D projects, technology skills, collaboration with key vertical industry sectors, notably for the development of trials, and international cooperation.

For more details: <https://6g-ia.eu/>

An online calendar for upcoming events is also provided at <https://6g-ia.eu/events/list/>

A News section, for promoting 6G-IA and projects activities is also available at <https://6g-ia.eu/news/>

Information for 6G-IA members application (<https://6g-ia.eu/about/5g-ia-membership-application/>) and eligibility criteria for associate members (<https://6g-ia.eu/associates-members/>) also available online through the 6G-IA website.





SUBMITTED DELIVERABLES

D2.5 Trial controller software final release - M33: This deliverable will provide the full implementation of the trial controller to be used in the trials.

D2.6 Data analysis and visualisation software implementation - M33: This deliverable is regarding the software that will be used in WP4 for data analysis and visualisation.

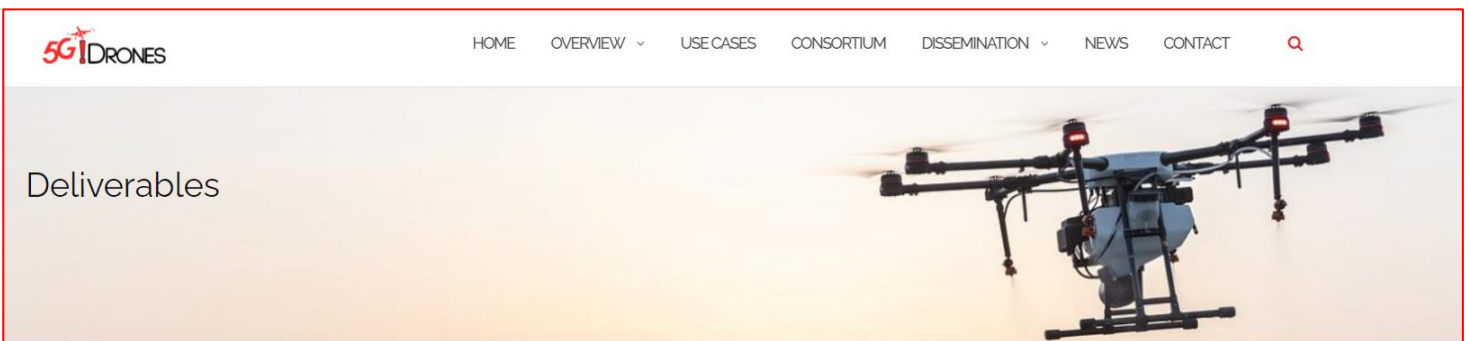
UPCOMING DELIVERABLES

D3.3 5G!Drones Enablers Software Suite - M35: A software suite containing all the 5G-infrastructure-level enablers that were developed in tasks T3.1-T3.3.

D3.4 UAV use case service components - M36: Implementation of the vertical-service-level components that constitute the use case scenarios to trial.

D6.5 Annual report, year 3 - M36: The 3rd annual report of the project containing the project results and their evaluation

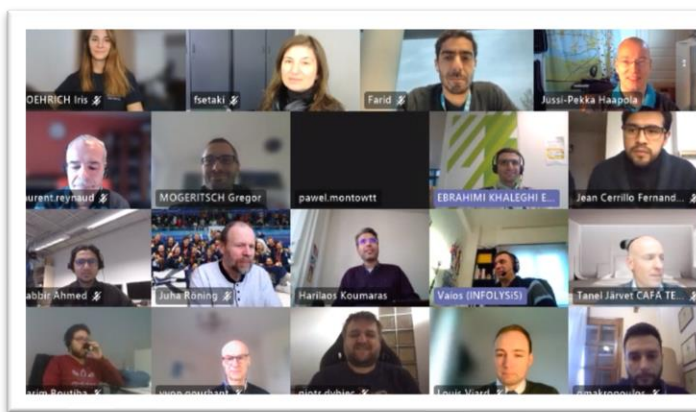
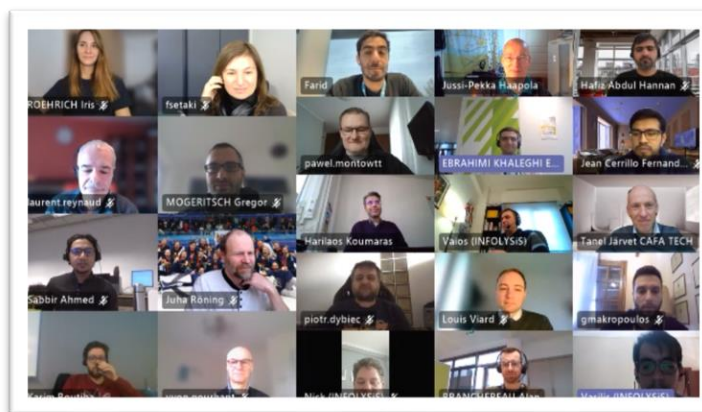
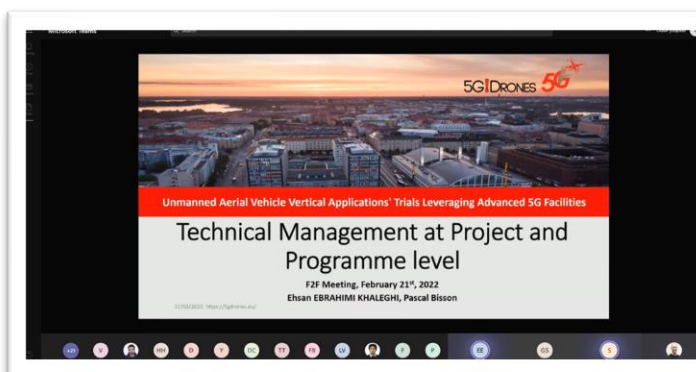
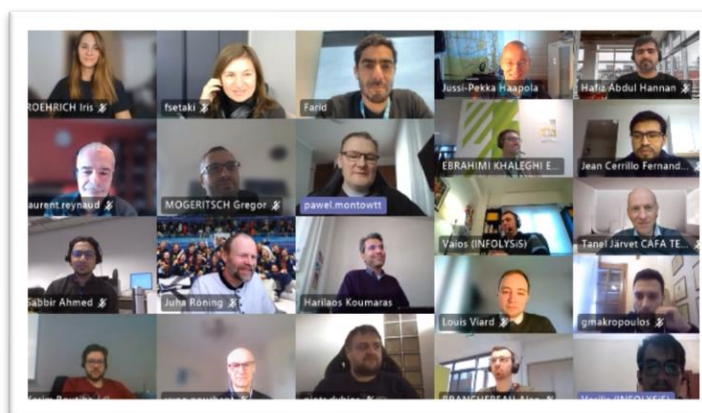
You may access online all 5G!Drones public submitted deliverables at <https://5gdrones.eu/deliverables/>





9TH 5G!Drones GENERAL ASSEMBLY (21-22 FEBRUARY 2022)

The 9th 5G!Drones virtual GA meeting took place on 21st and 22nd of February 2022 and lasted two full days. During the first day of the meeting, WPs progress and activities were presented. Also upcoming deliverables and the technical specifications of the project were discussed with focus on the next period activities and trials. On the second day of the meeting the discussion was focused on trials planning and administrative issues. Also, during the second day, the group photos of the consortium members were also taken in a virtual way.



Communication Channels



<https://5gdrones.eu/>

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Call: H2020-ICT-2018-2
Topic: ICT-19-2019
Type of action: R&I
Duration: 42 Months
Start date: 1/6/2019