

Challenges & Benefits of 5G in Urban Air Mobility

FREQUENTIS
FOR A SAFER WORLD

5G! DRONES



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FREQUENTIS and Robots Expert to strengthen cooperation on U-space technologies in Finland and Estonia

By [Press](#) - 27 August 2020



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Call: H2020-ICT-2018-2020

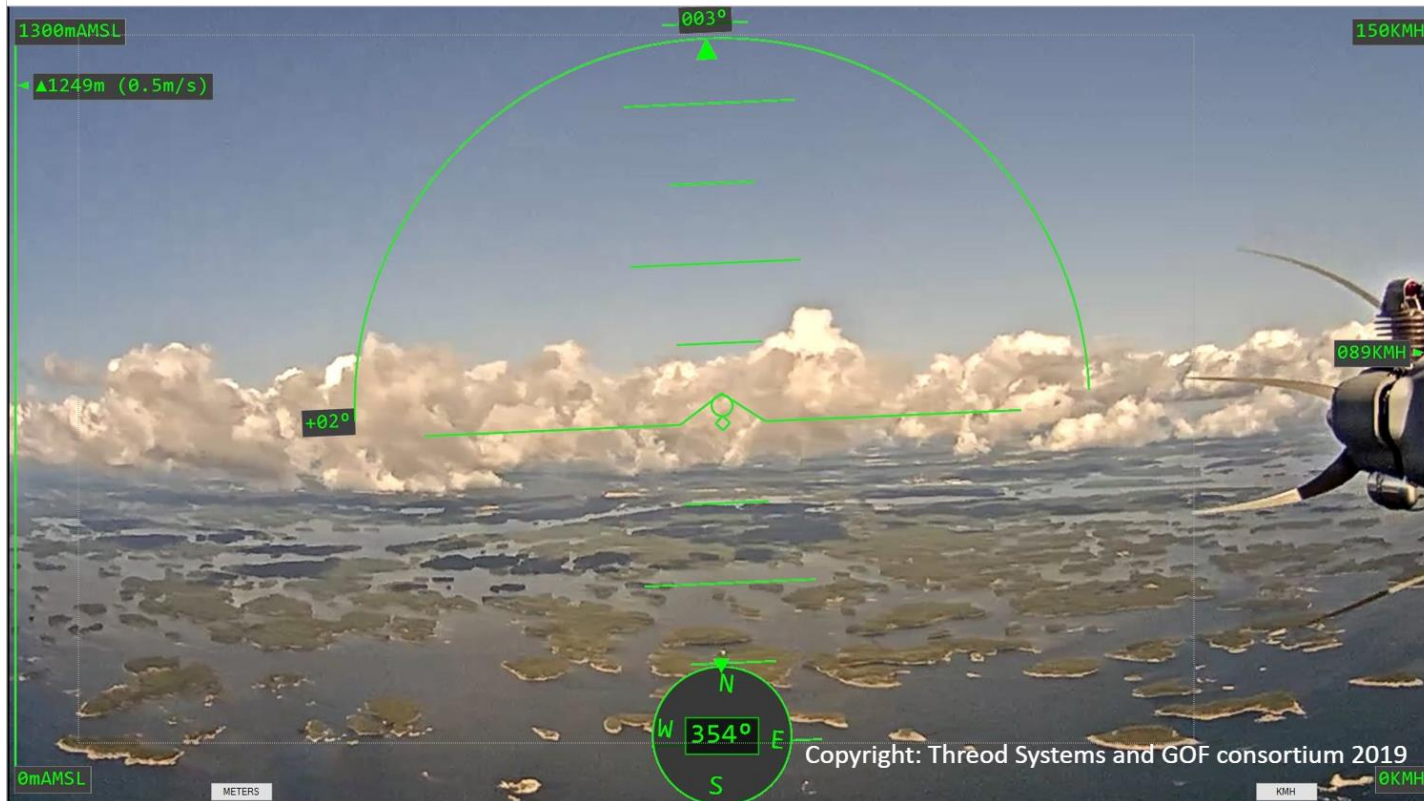
Topic: ICT-19-2019

Type of action: R&I

Duration: 36 Months

Start date: 1/6/2019

Approaching Finland at 1300m AMSL 150km/h!



Tässä se nyt lentää! Katso Volocopter-lentotaksin ensimmäinen lento Helsinki-Vantaalla

Suomessa Volocopterin luvataan tulevan liikenteeseen vuoteen 2030 mennessä.

Lentoliikenne 29.8.2019 klo 13.50 | päivitetty 29.8.2019 klo 14.18



Back To The Future

Nordic Drone Initiative

An enabler for sustainable cross-border goods and passenger transport with drones

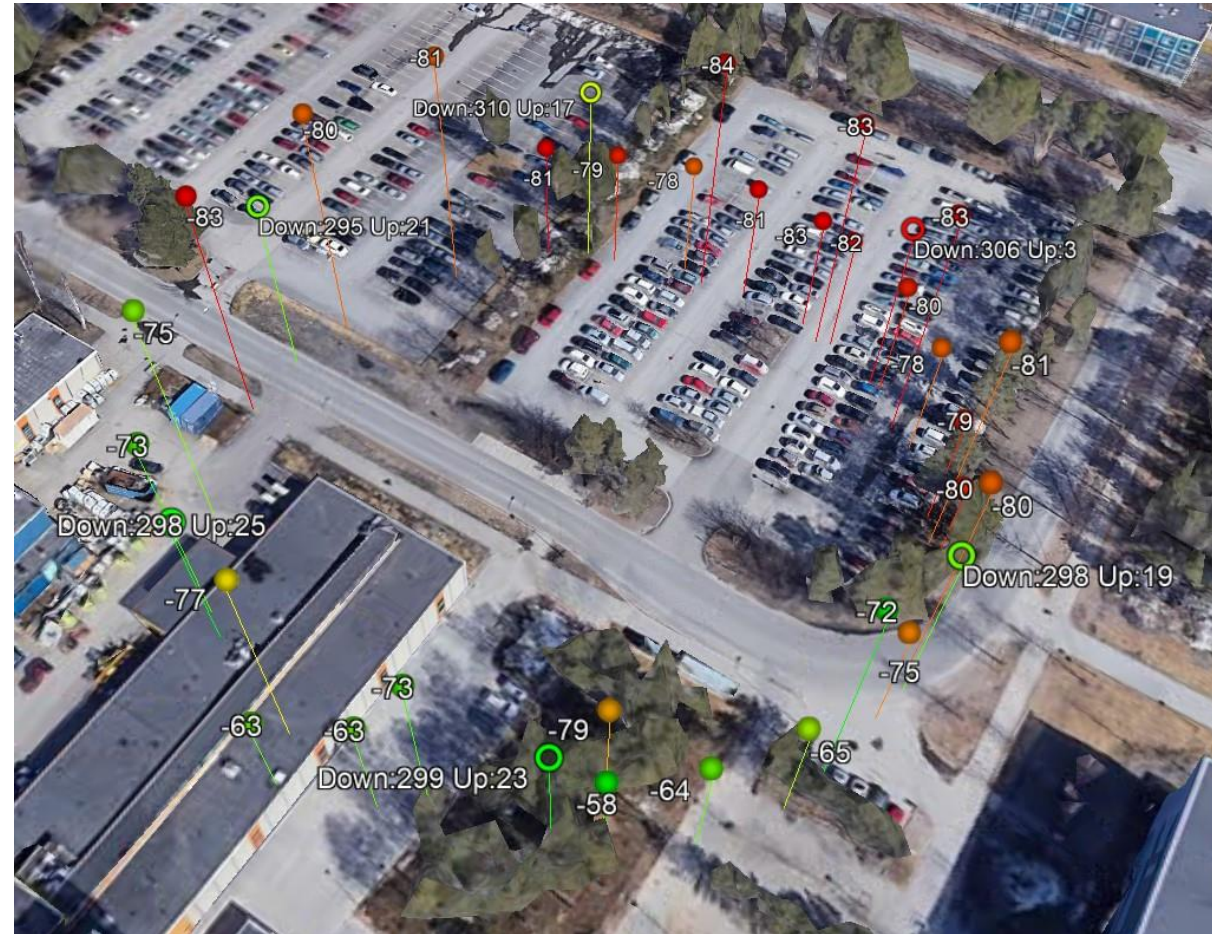
AIRMOUR

Enabling sustainable Air MObility in URban contexts via emergency and medical services

5G!Drones Feasibility Tests

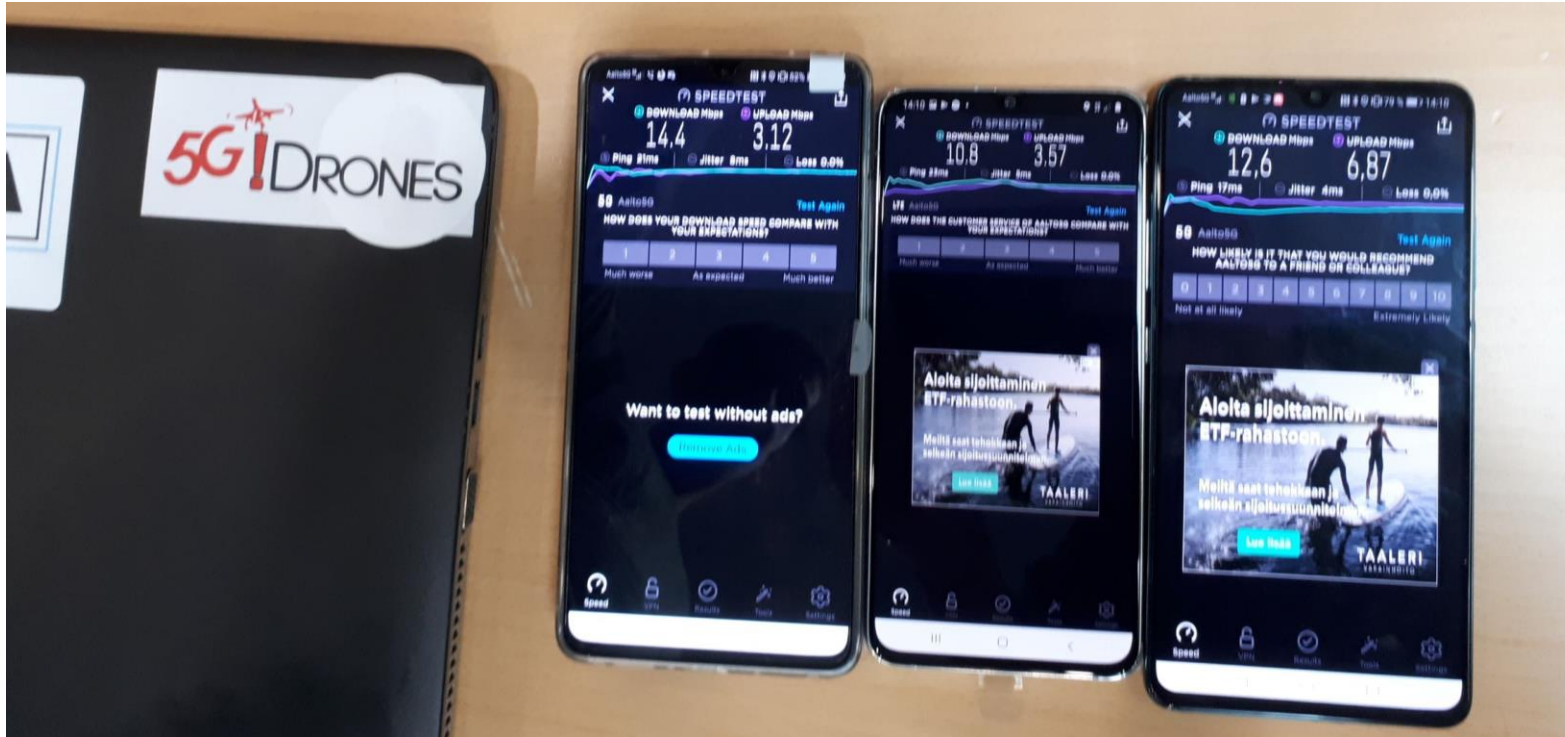


5G!Drones Feasibility Test Results



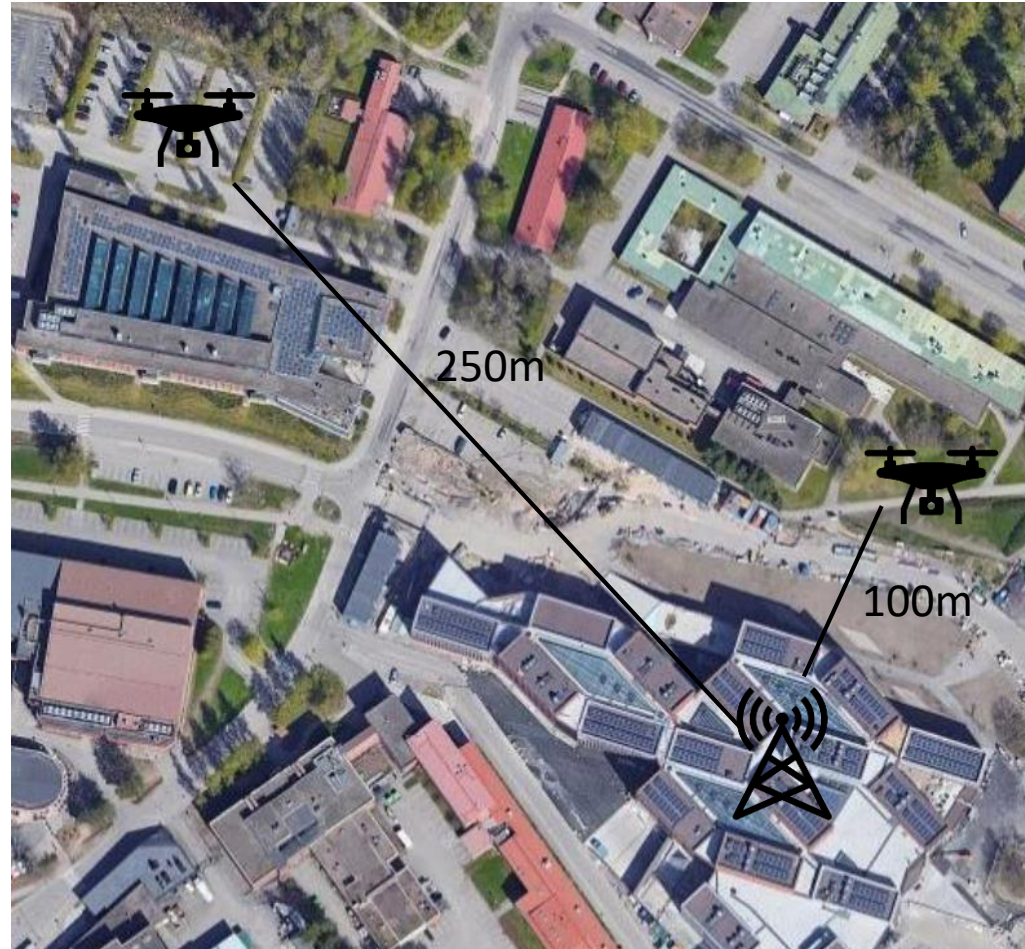
Oulun yliopisto – 5G QoS

5G!Drones Feasibility Test- Speed Test



UAM & 5G - Technical Challenges

1. Line of Sight
2. Receiver quality
3. Beam Forming – Not optimized for aerial applications yet
4. Download/Upload Fraction

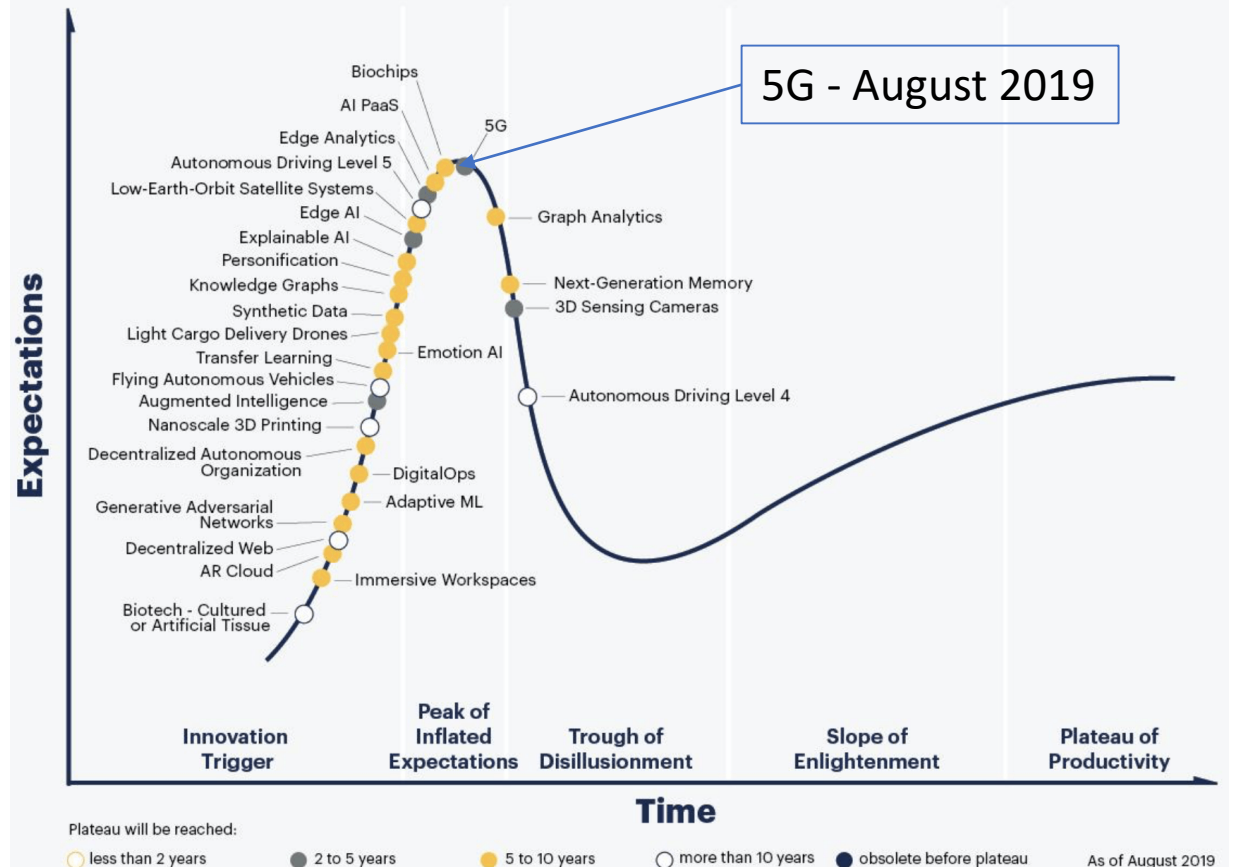


Aalto-yliopisto

UAM & 5G – Practical Challenges

- Business Models
- Scalable Deployment
- mmWave vs low-band spectrum: Bandwidth vs Range
- Cybersecurity
- Gartner Hype Cycle
- Public Acceptance

Gartner Hype Cycle for Emerging Technologies, 2019





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