



CELTIC-NEXT

Innovate UK Summer

Briefing

20th August 2019, London

Pitch of the Project Proposal

5G Air to Ground Connectivity

AIRBUS

Jean-Christophe Schiel / Airbus Defence and Space
Jean-Christophe.Schiel@airbus.com

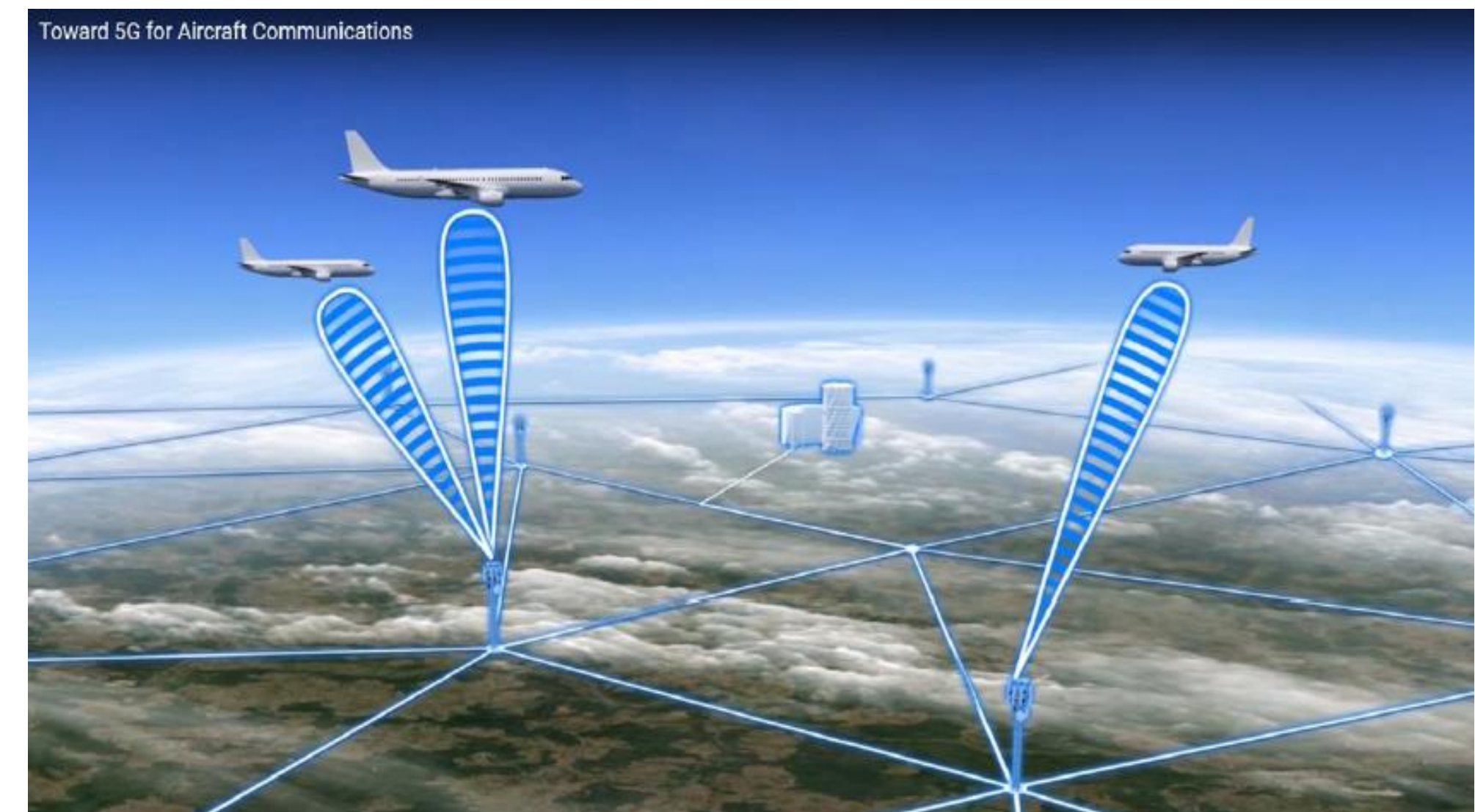


Teaser

- Growing demand for ubiquitous broadband connectivity for all type of flying platform → 5G Air to Ground Connectivity:
 - Commercial aircrafts are usually using the satellite communication to offer connectivity to the passengers
 - Currently €€€ but it is improving (LEO satellites)
 - Still the only solution when flying above the oceans → natural complement of LEO satellites
 - The idea is then to add Air-to-Ground-connections when available to offer more connectivity at a lower cost and to benefit from the 5G technology.

Proposal Introduction (1)

- *The idea is to connect aircraft like a 5G user on the Ground*
 - *But an aircraft is NOT a conventional user*
 - *Altitude: 10000ft-40000ft @ up to 1000km/h*
- *Modifications*
- *on the 5G Airborne SDR modem*
 - *On the Base Stations*
 - *On the antennas*
 - *On some protocols (handover ...)*



- *It needs Flight Certification or at least the minimal requirements the fly in an aircraft: EMC, environmental, fire & explosion proof etc ... for a prototype*

Proposal Introduction (2)

- *Expected benefits:*
 - *Higher data rates*
 - *Low latency*
 - *Cheaper*
 - *Good service availability in dense areas*
 - *Worldwide standard*
- *Challenge and Weakness:*
 - *Doppler, latency, base station hand over*
 - *Can't cover the oceans and the low density areas (TBC)*
 - *Radio or system prototype prepared for flight test*

Project Duration could be 36 months

Project outcome: ideally a demonstrator with a prototype of a modem with flight tests (dependant of Airbus internal funding)

Partners



CELTIC-NEXT
Next Generation Telecommunications

- No Consortium for the*
- Profiles and type of partners*
- *Telco operator / Service provider*
 - *Telecommunication equipment manufacturer*
 - *5G Base station*
 - *Airborne Antenna*
 - *SDR flight certifiable Modem side*
- Overall system view*
- for*

Contact Info



For more information and for interest to participate please contact:

Jean-Christophe Schiel
Airbus Defence and Space
Jean-Christophe.Schiel@airbus.com
Phone: +33 6 73 69 38 38
1 Bld Jean Moulin
78990 Elancourt
France
www.airbus.com



Presentation available via:

Join the follow-up Telco

11 September 10-10.30 CET

Meeting number (access code): 955 745 706

Meeting password: ZexxcKJQ

Join the Meeting:

<https://eurescom-meetings.webex.com/eurescom-meetings/j.php?MTID=me9dbf557f6ccb5aebc0788888f25e9f3>

Join by phone

+49-6925511-4400 Germany toll

Global call-in numbers

[Can't join the meeting?](#)

