The Evolving RF and Microwave Landscape

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5G use cases

- High Data Rate Mobile Communications: Optimise for data rates
- Fixed Broadband Wireless Access: Optimise for latency
- Massive Machine Type Communications: Optimise for capacity
- Mission Critical Machine Type Communications: Optimise for latency

Data rates > 10GBps
Latency < 1ms
Capacity expansion x 1000
Energy efficiency per transported bit x 1000
RF Ecosystem

Based on original from KTN

RF, microwave and mmWave technologies

Health & lifestyle
Defence & security
Telecoms
Space
Transport
Industrial & scientific
Today’s Agenda

Konstantinos Mimis, Sony Europe-SES
*5G mmWave UE requirements and implementation options*

Olivier van der Aa, Huawei Technologies Research & Development
*Challenges in RF system design for narrow band IoT*

Eric Leclerc, UMS
*Packaged mm-wave GaN, GaAs and Si ICs for 5G and automotive radar*

Liam Devlin, Plextek RFI
*Power amplifier MMICs for mmWave 5G*

Dominic FitzPatrick, PoweRFul Microwave
*Understanding GaN device trade-offs through advanced load pull simulations*

Ralph Green, Airbus Defence and Space
*Microwave technology for broadband satellite communications*

Moche Cohen, Satixfy UK Ltd
*Integrated solutions for SatCom on the Move (and 5G)*

Alistair Wingfield, Dassault Systèmes SIMULIA
*Design challenges and considerations in the current climate with 5G and CAV*