ACCELERCOMM
SUPERCHARGED WIRELESS

AccelerComm

Introduction

Prof Rob Maunder
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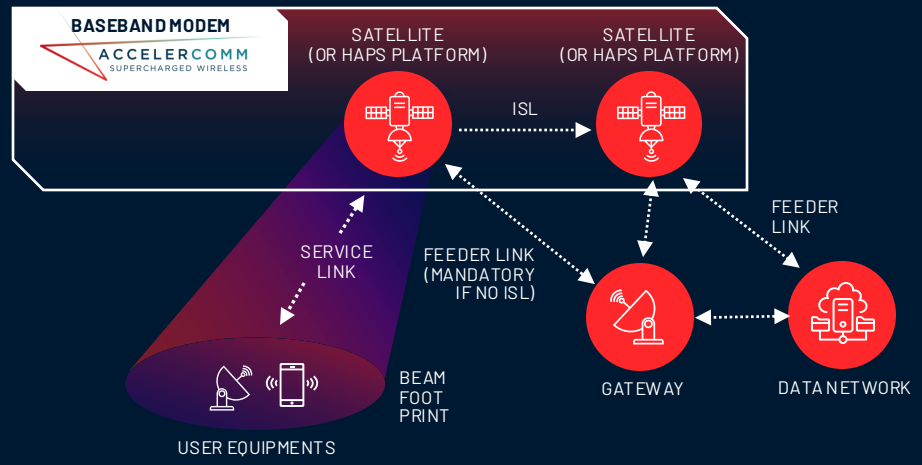
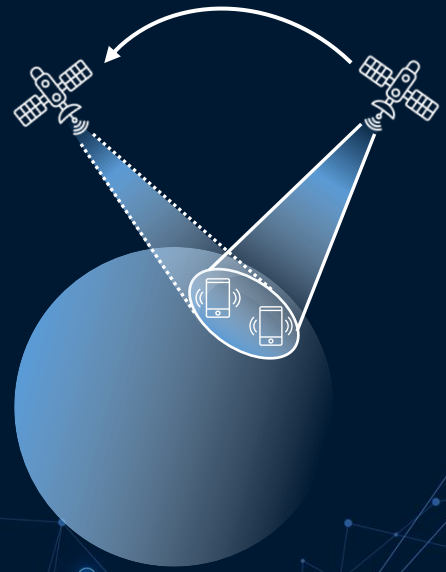
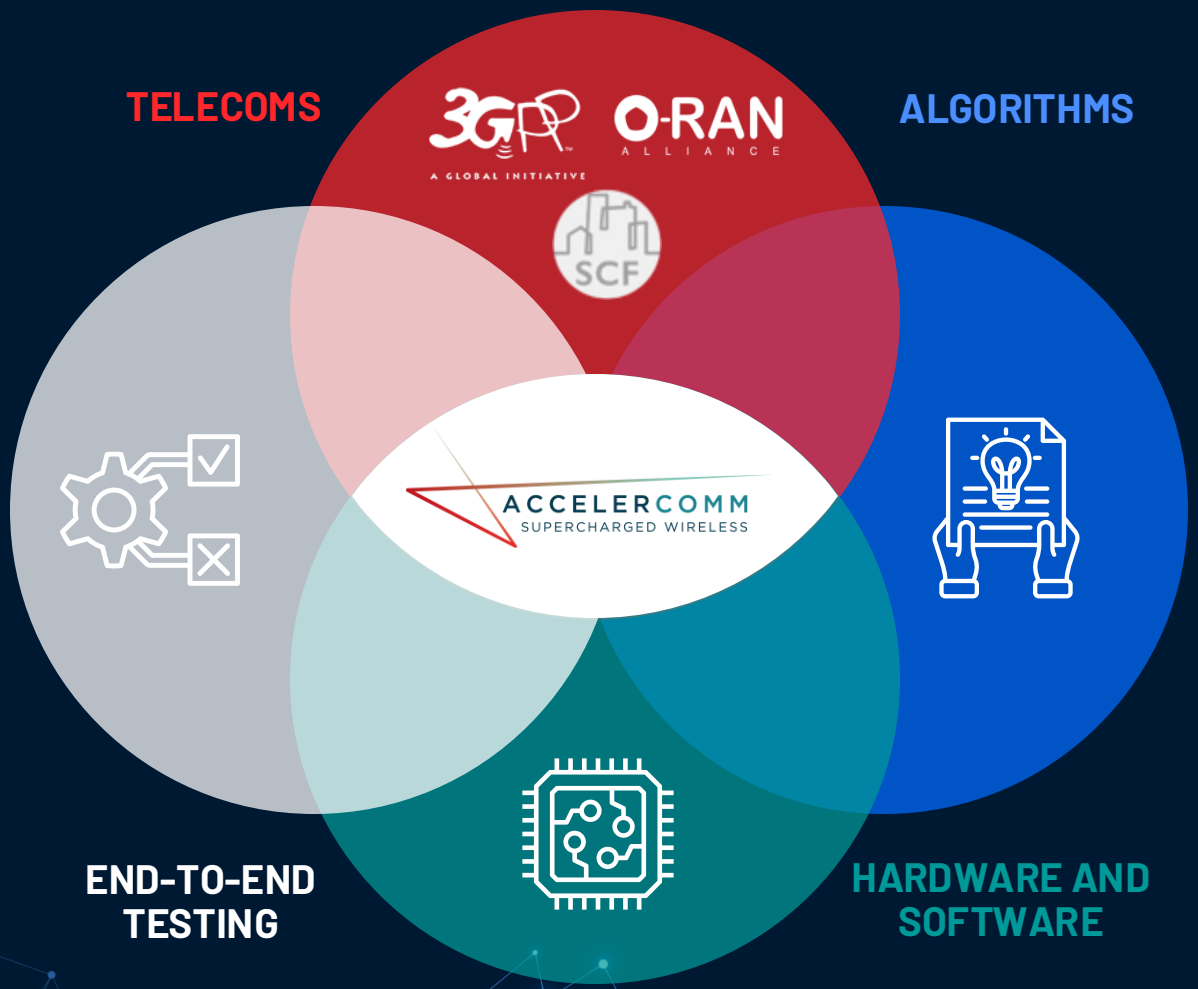
The 5G NTN Opportunity

- 5G standards for non-terrestrial networks will allow smart phones, IoT devices, vehicles and building access points from diverse manufacturers to connect to LEO satellites. This will enable a widespread proliferation of satellite connectivity and will become a cornerstone for 6G.
- There is a need for a 5G New Radio NTN basestation that can be integrated into LEO satellites, comprising:
  - Low-power, radiation-tolerant on-board processor capable of running a 5G NTN basestation
  - 5G NTN modem, including integration of hardware IP, software and interfaces
  - 5G NTN stack
  - Antenna array
- AccelerComm's 5G modem can uniquely run on the low power, radiation tolerant chips that are required in satellite applications
- Other applications include basestations for lunar networks, high-altitude platforms and ruggedised defence applications.





ABOUT ACCELERCOMM



EXPERTISE

- Staff having diverse expertise (honed at Arm, Qualcomm, NXP, Huawei, Motorola) spanning the complete 5G modem development flow

EXPERIENCE

- Spun out of University of Southampton in 2016
- Backed by £40m venture capital investments
- Development team and system test lab based in Southampton UK and Irvine CA USA

EXTENSIVE ECOSYSTEM

- Eco-system partnerships to deliver complete 5G basestation solutions
- RADISYS, CAPGEMINI

PROVEN

- 5G New Radio NTN modem for demo satellite launching later this year (see next slide)
- 5G error correction ASIC design for satellite constellation launched 2023
- 5G error correction FPGA accelerator board with AMD for Tier 1 basestation manufacturer
- Numerous 5G signal processing ASIC and FPGA component design wins with various basestation manufacturers

AccelerComm's 5G NTN modem

- AccelerComm's 5G NTN modem comprises:
  - FPGA hardware accelerator IP for data channel signal processing
  - Arm software for control channel signal processing
  - Standardised interfaces to 5G NTN stack and RF front end
  - Integrated onto low-power, radiation-tolerant AMD FPGA and NXP CPUs
  - End-to-end real-time automated test environment
- An AccelerComm customer has built a 5G New Radio NTN basestation by integrating AccelerComm's 5G NTN modem (Layer 1) with Radisys 5G NTN stack (Layers 2, 3 and core) onto a space-qualified on-board processor.
- This customer will launch it on their satellite platform during 2025 and provide the world's first demonstration of NTN user devices on the ground connecting to a 5G NR basestation in orbit.
- This represents a 2-year head start on the rest of the industry.

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