ETSI Conference on
Non-Terrestrial Networks,
A Native Component of 6G

German 6G-Platform: 3D Networks

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6G *Platform Germany*

German 6G Program

6G program announced in April 2021

- 6G Platform, October 2021 – 2025

- Four 6G Research Hubs, 2021 – 2025

- Eighteen 6G Industry Projects, 2022 - 2025

- Seven Projects on Resilience, 2023 – 2025

- AI-NET, 2021 - 2024

Armin Dekorsy

Our Mission

- Umbrella organisation and networking platform for 6G program
- Managing liaisons and collaboration with other international 6G programs
- Harmonisation of concepts and results for joint dissemination to standardization bodies
- Creating an innovation network with SMEs and start-ups
- Ensuring acceptance of 6G concepts in society by a bidirectional science communication process
- Creating harmonized German contributions to UN SDGs

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6G Platform Germany Working Groups

WG1 Science Communication

Acceptance of innovations

WG4 A 6G vision

Vision, use cases and roadmaps

WG ...

Working groups on architecture, terrestrial networks, campus networks, spectrum

→ Enabling e2e solutions for consistent 6G systems

WG2 Sustainability

Societal perspective

WG5

Security, resilience, and trustworthiness

WG3 Innovation Management

*Maximizing impact
Involving vertical industries, SMEs*

WG6 3D Networks

*Connect the unconnected, partizipation*

Armin Dekorsy

Working Group 6: 3D-Networks

Armin Dekorsy, Dirk Wübben

Vision

"Connect the unconnected"

- Vision is to design a **unified 3-dimensional network**

- **Holistic design approach** with terrestrial devices, drones, airplanes, and satellites

- Facilitate network access for different participants (companies, private, government, science community)

- 3D needs to bring together mobile communication sector, aerospace sector, and user sector
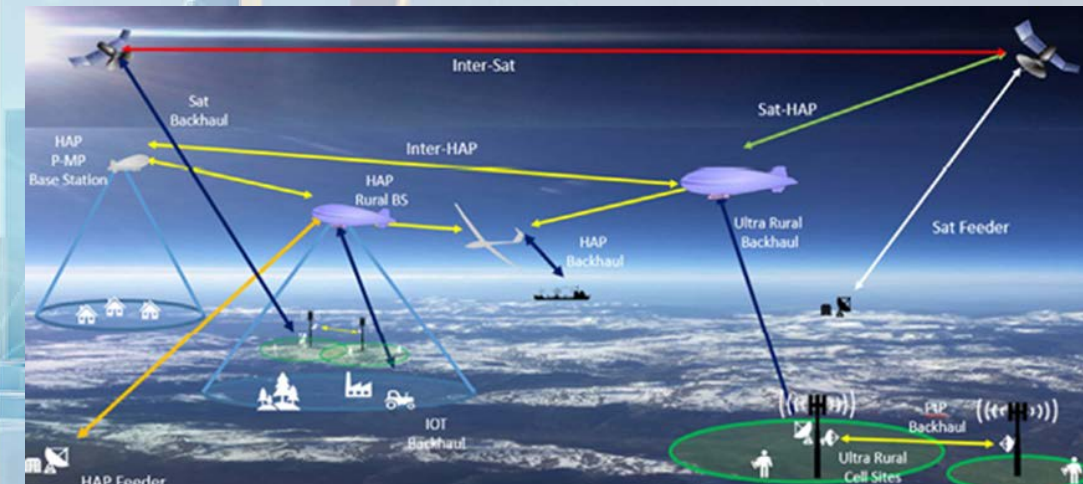
Source: E-Band mmWave Technology for HAPS and LEO Satellite Systems

WG 3D-Networks: Contributors

14 Projects

- Open6GHub
- 6G-RIC
- 6G-TakeOff
- 6G-ICAS4Mobility
- KOMSENS-6G
- 6G-SKY
- 6G CampusSens
- 6G Terakom
- AI-Net ANITLLAS
- 6G-LICRIS
- 6G-TERAKOM
- 6G-ADLANTIK

24 Organizations

- **Airbus Defence and Space GmbH**
- **Creonic GmbH**
- **Deutsche Telekom**
- DFKI
- DLR
- **DSI Aerospace GmbH**
- **EANT GmbH**
- Fraunhofer FOKUS
- Fraunhofer HHI
- Fraunhofer IIS
- IHP
- **IMST GmbH**
- Uni Würzburg

- **Nokia**
- **Otaris**
- **Rohde & Schwarz**
- RPTU Kaiserslautern
- RWTH Aachen - INDA
- RWTH Aachen - MCC
- **Telefonica Germany**
- TU Darmstadt
- TU Hamburg
- University of Bremen
- Zentrum für Telematik / Uni Würzburg
- **ZF Friedrichshafen AG**

Objectives

Harmonization of 3D concepts and results for joint dissemination to standardization bodies

- **Identification** of major topics / functionalities / architecture aspects
- **Grouping** of identified **topics** and **setting** of common performance **scenarios**
- Performance **investigations**, comparisons and **alignment of results**
- Matching of **architecture proposals**
- Consolidation of topics towards on **agreed concept**
- Analysis of actual **spectrum needs**, alignment with regulatory bodies (e.g. ITU) and industry associations (e.g. 6G-IA)
- **Exchange of knowledge and results** gained by validation of 3D capabilities in experiments
- **Discussion and elaboration** of aerospace-specific needs, including possible needs for dedicated certifications
- Coordinated drafting of **documents**, e.g. submissions for 3GPP study items, white papers

6G Plattform

Contact WG 6
3D-Networks

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