DECT Forum AIR

One Year of Bridging Research and Industry

DECT World 2026

Dr. Andreas Wilzeck, Member of DECT Forum Board

One Technology, Many Opportunities for Collaborative Research

DECT NR+ enables innovative research.

- **Professional Communications**
  - Enterprise communications
  - Wireless audio
  - Media production
- **Industry & Operations**
  - Factory automation
  - Autonomous mobile robots
  - Condition-based monitoring
  - Asset tracking
- **Public Infrastructure & Resilience**
  - Disaster-response ad-hoc networks
  - Mission-critical communications
  - Public-safety and government drones
  - Environmental and maritime monitoring
- **Connected Places**
  - Smart buildings
  - Smart street furniture
  - Smart metering and telemetry
  - Healthcare



Core application areas include applications of the System Reference Document on DECT-2020 NR, ETSI TR 103 943

Standing on the Shoulders of Giants

Why academia and industry progress faster together on DECT NR+

dect forum

Industry products
Stacks, gateways, and systems
reach real applications

Opener stack
Lower entry barriers and enable reproducible research

Academic research
Projects test the limits and prove concepts

Standards
ETSI TS 103 636 defines DECT NR+
as the shared foundation

ETSI

What each side brings

Academia

- Fundamental research, new ideas
- Open, reproducible results
- Next-generation talent

Industry

- Real requirements and use cases
- Products, scale, and market access
- Funding and deployment paths

Shared work lets everyone see further.

What is DECT Forum AIR?

The DECT Forum AIR (Academia Industry Roundtable) is established to foster collaboration and cooperation between the industrial and academic communities, recognizing these partnerships as essential to the long-term advancement and success of future DECT technologies.

The group serves as a bridge among diverse stakeholders and acts as a catalyst for innovation, resource sharing, and strategic development.

Objectives and Activities

- Connect representatives from industry, research institutions, and universities.
- Exchange insights on research, technology trends, and study needs.
- Share information on funding opportunities.
- Initiate and support collaborative research projects and joint initiatives.
- Promote visibility of research through publications, events, and standardization activities.
- Facilitate partnerships to strengthen the impact of DECT community efforts.

Participation

The DECT Forum AIR is open to individuals with planned or ongoing involvement in collaborative and publicly co-funded research related to DECT technologies.

The Year 2026 at a Glance

Session	Date	Spotlight
Kick-off	26 Jan	Overview on AIR
#1	23 Feb	Funding Opportunities Overview
#2	23 Mar	DEBUT (Aalen), Aurora (Tampere)
#3	20 Apr	VITEC, STRATUM 9, OpenDECT-X/Opener (Ostfalia)
#4	18 May	GlobalSys, Codium
#5	15 Jun	SEW-Eurodrive
#6	13 Jul	Qartia, UPCT
#7	10 Aug	TU Dresden
#8	7 Sep	Manulytica
#9	5 Oct	Sennheiser
#10	30 Nov	IMT-2030 Focus Session

Main Themes

- Funding Opportunities: Horizon Europe, ZIM, German Calls, EU Calls
- Updates from ETSI TC DECT
- Industrial: factory automation, intra-logistics, machine control, infrastructure monitoring
- Audio and video: Aviation headsets, low-latency video, PMSE trials and Audio Layer work
- Opener stack initiative as foundation

One Year of AIR in Numbers

64
Members
subscribed in Orgo for DECT Forum AIR

11
Meetings
in 2026

20–35
Participants
per meeting

Some DECT NR+ Projects Presented in AIR

Finished

- **Aurora** (Tampere University): January 2025 to October 2026. Sensing and control for heavy machine automation.
- **USWA** (Ultra Scalable Wireless Access): December 2022 to November 2025. Ultra-scalable, affordable wireless for industrial and professional use.
- **INGA** (Integrated automation for distribution grid and DERs): September 2022 to August 2025. Distributed automation for grids with distributed energy resources.
- **MERCI** (Media and Event production via Resilient Communication on IoT Infrastructure): November 2022 to April 2025. A BMWK-funded Franco-German project on DECT NR+ for PMSE and IIoT, which demonstrated low-latency audio and video.
- **Hypr Mesh**: Covered NR+ security, a multi-hop MAC extension, and an open 5G testbed.

Initiative

- **Opener Initiative**: Community for NR+ stack development, supported by OpenDECT-X.

Ongoing

- **DEBUT** (Aalen University and partners): June 2025 to December 2026. Multi-channel base station with up to five NR+ daughter cards, aiming for an FT/PT reference implementation.
- **OpenDECT-X** (Ostfalia, Sennheiser, LMS; Nordic as associated partner): Ten months from May 2026, BMFTR-funded. Groundwork for an open reference stack.
- **IGNITE-6G**: September 2026 to August 2029. DECT NR+ in the 6G context, with safety systems, smart grids, and building automation use cases.
- **Energy consumption** evaluation of DECT-2020 NR (Thabo Monoto, supervised by Prof. Theo G. Swart).
- **UPCT/Qartia projects** using DECT NR+
  Smart monitoring of remote critical civil infrastructures (IoT and industrial), Remote Critical Asset Monitoring System at ILBOC (industrial), PAVER: Soil monitoring in greenhouses (agricultural IoT), USION: Ethylene monitoring in refrigerated containers (food value chain), BoND1: Non-cellular B6G for IoT and non-terrestrial networks, VASINet: Multi-hop and mesh features.

Shaping the DECT NR+ proposal for 6G

On **30th Nov 2026** is the Next Meeting of DECT Forum AIR

1st Focus Session on IMT-2030

Agenda

- Recap: the IMT-2020 process
- Overview: IMT-2030 requirements
- Strategy: Towards a potential DECT technology proposal
- Community input: ideas, expectations, and perspectives on IMT-2030

Goal

- Understand the community's vision for 6G, plus its capabilities, expertise, and interests

Call for Contributions

- Short slots are welcome, and one or two slides are enough
- Send your proposal to Mareike.Zocher@sennheiser.com,
  or upload your slides to the "0 Focus Session IMT-2030" folder on Orgo

Thank You

Interested in DECT Forum AIR?

Scan to join!