MiFuture News

Industry news, papers and events related to 6G & MIMO

January 2025

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MiFuture News: Monthly Updates on 6G and MIMO Technologies

MiFuture News is a monthly publication of the MiFuture project, complementing the MiFuture Newsletter, which will be published every six months. While the Newsletter includes internal project updates, MiFuture News features articles and information from external sources freely available on the internet.

This publication aims to gather the most interesting industry news, relevant technical papers, and upcoming events related to 6G and MIMO technologies to share with supervisors and PhD students within the project.

If you come across any interesting news, please share it with us for inclusion in the next issue.

Industry news

LG Uplus said this test was carried out in collaboration with Infinera and Juniper Networks

November - Korean telco LG Uplus said it recently tested the All-Photonic Transport Network, which is a key technology designed to reduce power consumption in the era of future 6G networks. The demonstration, which was carried out in collaboration with global telecom equipment providers Infinera and Juniper Networks, has the main aim of minimizing conversions between electrical and optical signals to significantly lower energy usage.

6G-AI Mashups Will Reshape the Telecom Industry EU-U.S. joint initiatives are paving the way for next-gen wireless networks

December, 26 - Beyond faster data speeds and more reliable service, the next generation of wireless networks—6G—is expected to meet surging demands for data rate and coverage, plus new applications resulting from artificial intelligence. Telecommunications is one of the many industries expected to be affected by AI.

With 1.2 bn subscribers India's telecom sector is delving into AI and 6G advancements

January, 2 - With a subscriber base of 1.2 billion, the Indian telecom sector is now delving into Artificial Intelligence (AI) and pioneering 6G advancements. The sector has been on an extraordinary growth trajectory with average monthly wireless data usage soaring to 21.30 GB per user by October 2024..

NTT DOCOMO Marks Key Step Forward in 6G Development

December, 24 - NTT DOCOMO has announced a major step forward in 6G development, with the approval of a 6G Radio Access Network (RAN) study item at a recent 3GPP group meeting serving as a pivotal moment for next-generation mobile technology.

China makes world's first 6G test network field

January, 4 - Engineers from the Beijing University of Post and Telecommunications have made a significant advancement in telecommunications by establishing a field test network capable of 6G transmission using existing 4G infrastructure, Xinhua news agency reported following a conference in the Chinese capital.

A week in telecoms: AI RAN pilots in Japan and 6G collaboration in UAE

November 14 - UAE-based operator e& signed an agreement with Ericsson to collaborate on "exploring 6G technology," as the technology world continues to look ahead to the next generation of mobile technology.

2025 Telecom Trends: From Wi-Fi 7 to 6G, Juniper Research Predicts Major Changes

December, 4 - Juniper Research, the foremost experts in telecommunications markets, is proud to reveal the 10 trends that are poised to transform the telecommunications landscape in 2025. Juniper Research expects a year of seismic shifts, as telcos prioritise strategic investments in emerging technologies such as Wi-Fi 7, MVNO-in-a-Box, and early moves toward 6G – while technological innovations such as travel eSIMs and quantum computing open fresh opportunities for global connectivity.

Global MBBF 2024: Huawei announces several new innovations to embrace opportunities of the mobile AI era

November, 4 - Yang Chaobin, Huawei board member and president of ICT products and solutions, delivered a keynote speech on 31st October 2024 at the Global MBB Forum 2024, saying, "The upcoming mobile AI era will create huge opportunities for the mobile industry and profoundly shape the decade to come..

Nokia sees 6G and AI reshaping telecom landscape by 2030

December, 12 - Nokia laid out an ambitious roadmap for 6G development and network innovation at a recent Taiwan event, forecasting explosive growth in bandwidth demand and a shift toward AI-driven telecommunications platforms.

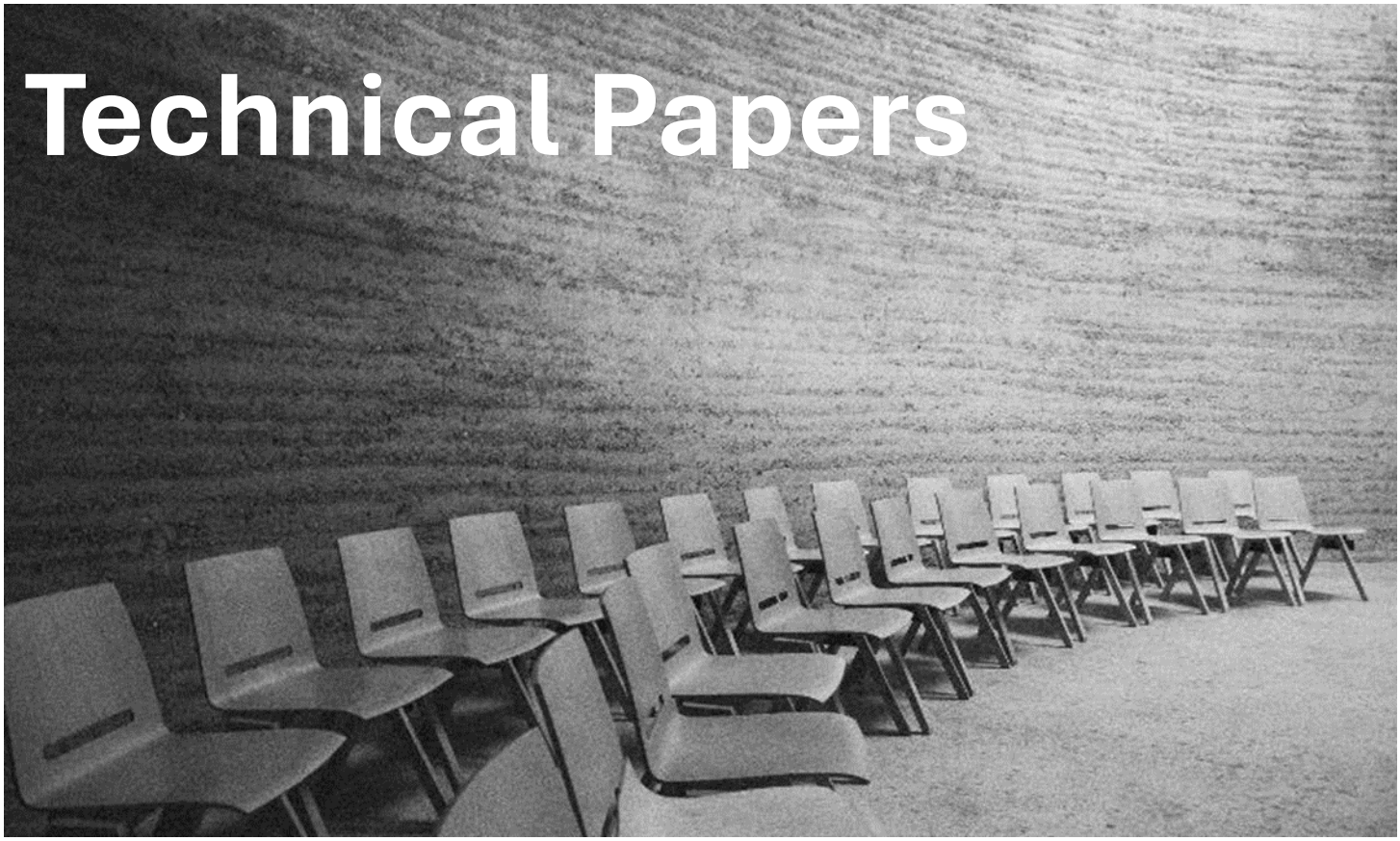
What will 2025 hold for telecoms?

December, 24 - 2025 will be make or break for Open RAN following some small-scale trials but I've still to see the proof that it can be deployed at scale, on a cost-effective basis. I'm expecting an acceleration in testing for Low Earth Orbit Satellites for mobile with commercial testing not too far behind.

6G Begins! Embarking on a New Journey of Global Interoperable Standards

December, 19 - On December 12th in 3GPP TSG-RAN meeting #106, Madrid, 6G RAN level study item supported by 56 co-signed companies was approved, which achieves a significant milestone of 6G standard. This study item aims at

interacting with ITU on 6G technical performance requirements. In the future, deployment scenarios, requirements and potential directions of 6G radio access technologies will be further identified and investigated in 3GPP.



EUROPEAN VISION FOR THE 6G NETWORK ECOSYSTEM

6G SNS IA

This white paper discusses the global drive toward 6G networks, targeting a commercial launch by 2030. It emphasizes a unified vision, spearheaded by key stakeholders and organizations like Europe's 6G-IA, which leads in research and standardization efforts. 6G aims to enhance sustainability, integrate AI, ISAC, and advanced security, and address societal and environmental challenges. Use cases span immersive experiences, collaborative robots, digital twins, and trusted environments, supported by KPIs like data rates and latency. Innovations include flexible networks, AI, and seamless terrestrial/non-terrestrial integration. To achieve 6G, global standardization, regulation, and sustainability-focused strategies are critical, building on 5G advancements.

Smart city trials in Europe – Summary of activities in smart city vertical segments/use cases

6G SNS IA

This document concentrates on 5G and communication systems in concept of Smart City vertical, basic requirement and expectations of various stakeholders for future communication infrastructure. The report provides summary of the key 5G PPP Phase 3 projects related to smart city use case trials and validations. The more comprehensive information of project foci and results can be found from each project web page. The selected use cases for some of the projects are also presented in annual 5G PPP Trials and Pilots brochure, which is available at [5GPPP-T&P]. The part of the work on expectation and best practices for innovation and experimentation facilities and building the platforms was carried out with interviews for Digital Transition Partnership actions. Part of the summary on joint

innovation and city partnership networks is also available in public within Urban Agenda for EU – Digital Transition Partnership progress report documents at EC and thus reflects the advances and requirements also outside 5G PPP and collaboration with European city networks.

Transforming the 6G vision to action

Nokia

6G will support the vast and growing device ecosystem and harness and accelerate the power of AI along with many other emerging technologies—besides addressing the increasing need for network capacity. 6G will realize the next level of digital inclusion by offering greater accessibility, affordability and consumability. It will be sustainable and “Green” by design, trustworthy and highly secure. In this white paper, we outline Nokia’s views for the 6G era, how the key emerging technologies enable this vision, and what to focus on for 6G day one to ensure it paves the way for commercial success and establishes a firm foundation for the future.

6G Terminal Vision White Paper

GSMA

Facing the 6th generation mobile networks (6G) industry in 2030, this research is to explore the vision of "6G terminal" in the 6G era based on the 6G vision reached by ITU-R, the current 6G research results of the industry, the research results of GSMA Intelligence, the development trend of the terminal itself and the emerging technologies.

6G Architecture Landscape

5GPP

The 5G Architecture Working Group, part of the 5G PPP Initiative, identifies trends and technological enablers for 5G and 6G architecture. It consolidates insights from various projects, presenting harmonized architectural concepts. The first white paper (2016) outlined 5G architectural trends and enablers, with updates in 2018, 2020, and 2021 reflecting findings from 5G PPP Phases I–III. Phase IV now focuses on defining 6G architecture. The latest white paper consolidates Europe's vision for 6G design, incorporating outcomes from previous phases and setting technical directions for the next-generation architecture.


Events


5th IEEE
International Symposium on
Joint Communications & Sensing
January 28 - 30, 2025
In Finland & Streaming Worldwide

IEEE WCNC

IEEE Wireless Communications and Networking Conference

24-27 March 2025 // Mico Milano Congressi, Milan, Italy

6G Horizons: Bridging Beyond Wireless

IEEE ComSoc
IEEE Communications Society

International Workshop on Resilient 6G Networks (WResNet 6G)

24 March 2025

IEEE 6G Summit Dresden 2025

May 14–15, 2025 in Dresden, Germany

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6G Summit

Discover the future of mobile networks at the 6G Summit, where industry stakeholders gather to envision the next generation of connectivity.

Industry stakeholders are already talking about the next generation mobile networks, known as **6G**, and what this might look like. Many research and white papers have already been published by reputable organisations—from vendors and CSPs to standards bodies and universities—that discuss the potential 6G technologies represent. Partnering with **ATIS** and **Next G Alliance** provides access to valuable insights in the USA and data on global telecommunications.


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