

MiFuture News

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

June 2025

Grant Agreement Number: 101119643 Project Acronym: MiFuture Project Title: ultra-massive MIMO for future cell-free heterogeneous networks Call: HORIZON-MSCA-2022-DN-01 Type of action: HORIZON TMA MSCA Doctoral Networks- Industrial Doctorates Granting authority: European Research Executive Agency Project start date: 01/01/2024

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.



Getting Ready for the Next Era of Wireless Connectivity: Global 6G Technology Standardization To Begin Soon

June, 5 - Our vision for 6G is an innovation platform connecting an expansive compute and intelligence fabric for the next decade and beyond. It is a new wireless system that builds on the technical foundation and deployment insights from previous generations. Although the commercialization of 6G networks and devices is not expected until 2030, a new wireless generation is not architected overnight and we have been working on advanced 6G research for many years now. With on-going work in radio technology, system architecture and core networks and protocols, we are now approaching a crucial milestone: the official beginning of the global technology standardization effort by 3GPP in June 2025.

Europe's 6G technology vision: Building the future of connectivity

June, 5 - As the world becomes increasingly dependent on fast, reliable, and intelligent connectivity, Europe is taking bold steps toward leading the next generation of wireless technology: 6G.

OdineLabs Files Patent for Gen Al Policy System Enhancing 5G/6G Networks

June, 3 - OdineLabs has successfully completed a patent application for a rule-based orchestration system developed with an artificial intelligence-driven approach, as part of its ongoing R&D efforts focused on next-generation mobile communication technologies. Positioned as a pioneering solution, the system is designed to set new standards for the intelligent communication infrastructure of the future.

6G Foundry: Securing the future of mobile connectivity

June, 4 - Ensuring a resilient and trustworthy communication ecosystem that protects data and maintains privacy for existing and future applications.

6G needs less, 6G needs more

May, 30 - From radios to core networks, a consensus is forming that 6G needs to offer more focused technology than 5G, or is it more technology? Energy, spectrum, and AI top the list of what 6G needs. EE World spoke with four

engineers who attended the March 3GPP meeting in Korea. Here's what they had to say.

'Breakthrough in 6G tech is set to change lives'

May, 22 - New microchip technology is being used to accelerate the rollout of 6G, which scientists say could revolutionise every aspect of human life.

University of Bristol semiconductor device to unlock 6G infrastructure

May, 22 - A cutting-edge breakthrough in semiconductor device technology is set to transform the future of communication, healthcare, and transportation.

European telecom giants urge swift action on 6 GHz band to secure 6G future

May, 12 - A coalition of Europe's leading telecom operators has issued a compelling appeal to EU policymakers, warning that the continent's digital competitiveness hinges on urgent access to the full upper 6 GHz band for mobile use.

6G, like 5G, may turn out to be a boring necessity

June, 2 - 6G could be needed to provide relief at congested 5G sites, but it is unlikely to be substantially different from 5G, and traffic growth is slowing.

India playing strategic role in early 6G discussions: GSMA's Vivek Badrinath

June, 6 - "India is playing an increasingly active and strategic role in early 6G discussions - particularly through initiatives like the Bharat 6G Alliance and its engagement with international standard-setting bodies. These contributions are vital to ensuring that the next generation of mobile technology reflects global diversity and supports broader development goals."

6G Technology: Revolutionizing Connectivity for the Future

May, 21 - 6G technology is expected to revolutionize enterprises by paving the way for ultra-reliable, high-speed communication that can drive automation.

Into the future: a glimpse of 6G in action in Nanjing

April, 19 - Leveraging 6G's ultra-high-speed connectivity and deterministic latency, industrial robots will achieve unprecedented agility and precision in executing intricate, high-skill operations. Future intelligent robots may even collaborate with other autonomous systems via 6G networks to accomplish complex missions," Huang elaborated.



6G explained

Nokia

Each generation of communication technology has shifted network priorities: 2G/3G focused on voice and text, 4G on data consumption, and 5G on IoT and automation. Looking ahead, 6G will integrate the digital, physical, and human realms to enable immersive, intelligent experiences and enhance human efficiency. Nokia Bell Labs is already researching 6G, aiming for commercial deployment by 2030, even as 5G continues to evolve. Future applications will rely on dynamic digital twin worlds—high-resolution, real-time digital representations of physical or virtual environments—redefining how we live, work, and interact with the planet.

Generative Al for provisioning

Nokia

Generative AI tops the list in telco transformation plans with many telcos reporting AI charters and strategies that incorporate this technology. Bell Labs Consulting has published a whitepaper entitled Generative AI implications for telco operations trying to look beyond the hype and provide a pragmatic approach to leverage its promise in transforming telco operations. This document is a quick dive into the service provisioning function that focuses on the benefits of leveraging generative AI in the provisioning process.

Are your AlOps investments effective?

Nokia

AlOps has historically leveraged data analytics and automation capabilities for IT operational efficiency and associated customer value. More recently, thanks to advances in big data and machine learning, AlOps has leveraged higher levels of intelligence and insights to enable autonomous networks and digital transformation. Telcos and industry bodies such as TM Forum now play a prominent role in advancing AlOps for efficiency, value generation and sustainability. This necessitates a move away from tactical AlOps of the past, to a more structured approach, that is part of an organization's digital transformation strategy.

The economic impact of quantum technologies extends beyond computing

Financial Times

While quantum computing often dominates the spotlight, significant advancements in quantum networking, security, and sensing are also poised to transform industries. These technologies will enable capabilities once considered theoretical, offering broad applications beyond computing alone. As a commercial ecosystem continues to grow, the quantum technology market is projected to reach \$173 billion by 2040. Organizations are increasingly exploring not only the power of quantum computing, but also how quantum networking, enhanced security protocols, and precise sensing tools can unlock new opportunities and efficiencies across sectors such as communications, healthcare, defense, and manufacturing.

6G-Status Update June 2025

GSA

As 5G and 5G-Advanced continue their commercial rollout, the groundwork for 6G is already underway, with a target launch around 2030. The transition between generations involves extensive global collaboration and relies on cutting-edge research at institutional, national, and regional levels. These early research efforts help shape the standardisation process. The International Telecommunication Union (ITU) has published the IMT-2030 framework to guide the development of 6G, emphasizing global interoperability and evolving from 5G. A key innovation in 6G will be the integration of sensing capabilities into mobile networks, enabling new types of services that go beyond traditional communications.

SNS TRIALS & PILOTS

SNS

This first SNS T&Ps Brochure includes 8 selected T&Ps from SNS JU funded projects. Each contributing project prepared a two-page flyer (as detailed in Section 2), presenting an overview of its T&P, including network architecture, deployment details, key results obtained and innovative features enabled by 5G, 5G Advanced and emerging 6G technologies.

These flyers emphasise the benefits and value brought by 5G Advanced and 6G networks, technologies and enablers, that previous generations of mobile networks cannot provide (i.e., their 5G, 5G Advanced and 6G empowerment).

Importantly, the featured T&Ps illustrate strong social relevance, economic potential, or the validation of ground breaking services and applications, demonstrating how 5G, 5G-Advanced and 6G are driving innovation and impact.





DGAIW 2025

ICDCS 2025 International Workshop on Distributed Generative AI for Wireless (DGAIW)

45th IEEE International Conference on Distributed Computing Systems (ICDCS) 20 July - 23 July, 2025 Glasgow, Scotland, UK

Host Conference: ICDCS 2025

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