



TIMES PRESS RELEASE

6G network, the TIMES project closes with concrete results and paves the way for the next industrial innovations

Wireless THz ever closer to wired, with advanced production scenarios

- *The European TIMES project concludes the three-year phase with significant results, confirming the potential of THz communications in real industrial contexts.*
- *Proof-of-Concepts tested on machines, robots and production systems show performance close to wired ones, with ultra-low latency and high reliability.*
- *TIMES represents one of the first steps in the development of 6G for industry, with future activities aimed at the industrialization of advanced wireless networks.*



Photo from Face-to-Face Consortium Meeting held in Bologna

The first phase of the European project TIMES ("THz Industrial Mesh networks in Smart sensing & propagation environments"), which has brought wireless communications at **Terahertz** (THz)

frequencies from the field of research to industrial scenarios, closes with concrete results.

Co-funded by the European Union under Horizon Europe and promoted by the Smart Networks and Services Joint Undertaking (SNS JU), TIMES demonstrated **how 6G technologies can approach the performance of wired networks**, while ensuring the flexibility and reconfigurability typical of wireless.

In the last three years, the project has validated **two Proof-of-Concepts** in representative production environments: from industrial packaging to digital factories, with fixed and mobile devices. Tests confirmed the ability of THz networks to provide **high throughput, ultra-low latency, pinpoint location accuracy, and reliability comparable to wired**.

"TIMES has shown that 6G in the THz band is not just a futuristic vision, but a concrete opportunity for the digital transformation of European industry – comments Francesco Meoni, CTO of BI-REX. – These results mark one of the first important steps towards the full integration of 6G networks in production contexts, paving the way for new automation and industrial interconnection scenarios. The tests, - adds Meoni - although in laboratory contexts, were carried out on industrial machinery. Now the challenges that await technology are that of industrialization and above all of finding an industrial location in terms of costs, benefits, performance and reliability."

The project **laid the foundations for further developments**, highlighting both the potential and the challenges still open, particularly in dynamic scenarios with mobile devices. Future activities will focus on consolidating developed technologies, optimizing intelligent mesh protocols, and integrating advanced sensors, thus continuing the path towards mature and scalable 6G industrial networks.

TIMES involved **ten partners** including research institutions and companies from five European countries, coordinated by CNIT – National Inter-University Consortium for Telecommunications (Italy). Partners include Aetna Group Spa (Italy), Anteral SI (Spain), BI-REX Big Data Innovation & Research Excellence (Italy), CNRS – Centre National de la Recherche Scientifique (France), Fraunhofer Gesellschaft (Germany), Huawei Technologies Duesseldorf GmbH (Germany), Technische Universität Braunschweig (Germany), Telenor ASA (Norway), and University of Stuttgart (Germany).

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