Press release – X-TREME 6G, an SNS JU project, has been kicked off in Grenoble on January 21st 2025 – X Transceivers & RF front-ends made in Europe's Microelectronics light house to Enable new 6G use cases

A new SNS JU funded project, **X-TREME 6G**, was kicked off on January 21st and 22nd 2025 in Grenoble, France. This project aims to create and design key disruptive next generation chiplets and chipsets for 6G use cases.

"We will unleash the full potential of 6G and enable the emergence of new applications through specific developments for the underpinning novel microelectronic technologies" says Didier Belot (ST MICROELECTRONICS), X-TREME 6G's coordinator. Indeed, X-TREME 6G's coordinated efforts for the foundation of an open microelectronics platform in Europe will lead to the creation of next generation chiplets and chipsets for 6G use cases, making of X-TREME 6G a substantial force for the realization of the SNS "*Microelectronics Lighthouse*" visionary initiative. This project aims to enable an open platform for all the duration of the SNS programme and to nurture the links with the emerging Chips JU newly launched pilot lines including low nodes CMOS, FDSOI and heterogeneous integration.

X-TREME 6G aims to provide tangible contributions towards an experimentation EU framework for 6G; while being open to dynamically support the emerging 6G ecosystem and evaluate additional 6G challenges and expectations. The idea is to unleash the full

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potential of best-in-class Silicon BiCMOS, InP and heterogeneous 3D integration for high capacity radio access technologies such as wireless back-hauling at sub-Terahertz frequencies, Joint Communication and Sensing, Non-Terrestrial Networks and Network as a Sensor. New classes of chipsets will unleash the full potential of 6G and enable the emergence of new applications through specific developments for the underpinning novel microelectronic technologies. X-TREME 6G also valorizes resource efficient 6G algorithms and an ML/AI software toolbox for computationally efficient silicon-ready baseband extensions.

This exciting project promises ground-breaking outcomes. 6G is expected to enable faster connection speed and unprecedented levels of interconnectivity, bridging the gap between people and devices, and allowing for the development of outstanding innovations in IoT, smart city solutions, or augmented reality. Given all the ethical issues raised by such a level of technical progress, the European Union, through projects such as X-TREME 6G, is committed to the achievement of a network-centric, democratized and open 6G ecosystem, at the intersection of material comfort, sustainability, and the respect of democratic principles.

Run by a pluridisciplinary consortium of 17 partners, X-TREME 6G connects actors and professionals from seven EU countries, towards a common goal. More information can be found on:

- https://x-treme6g.eu/,
- and https://www.linkedin.com/company/x-treme-6g.

Stay tuned!

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The project partners of X-TREME 6G are STMICROELECTRONICS CROLLES (ST-C), STMICROELECTRONICS FRANCE (ST-F), FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV (IZM), III-V LAB (III-V Lab), NOKIA SOLUTIONS AND NETWORKS ITALIA SPA (NOK-I), NOKIA NETWORKS FRANCE (NOK-F) KARLSRUHER INSTITUT FUER TECHNOLOGIE (KIT), UNIVERSITE DE BORDEAUX (UBx), DANMARKS TEKNISKE UNIVERSITET (DTU), COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (CEA), AMIRES THE BUSINESS INNOVATION MANAGEMENT INSTITUTE ZU (ABIMI), IMST GMBH (IMST), POLITECNICO DI MILANO (POLIMI), PANEPISTIMIO PATRON (UPAT), P-NET ANADYOMENA DIKTYA NEAS GENIAS & EFARMOGES IDIOTIKI KEFALAIOUCHIKI ETAIREIA (P-NET), ORANGE POLSKA SPOLKA AKCYJNA (ORANGE).

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