भारतीय सांकेतिक विज्ञान संस्था हैदराबाद्
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

IIT Hyderabad and WiSig Network's 5G Innovations attain mainstream paving the way for 6G at 3GPP meetings at Prague

Key Highlights:

- *RAN #108, Prague (Jun 2025): Consortium backs India's π/2-BPSK extension for stronger 5G coverage and to uplink-heavy apps (HD video, XR, on-device AI) while seeding 6G.*
- *From Lab to Global Standard: Developed at IIT Hyderabad in 2014 → National program → 3GPP 5G Rel-17 feature now used by operators and vendors worldwide.*
- *Team India + Global Allies: Led by Prof. Kiran Kuchi, Department of Electrical Engineering, IIT Hyderabad, with support from Qualcomm, Apple, Ericsson, Nokia, Samsung, MediaTek, DOCOMO, AT&T, Reliance Jio, Thales, and others—backed by DoT, MeitY, DST, and TSDSI.*
- *Next Stop 6G: IITH & WiSig are already advancing OTFDM and Structural MIMO tech in the new 6G Study Item to power future networks and devices.*

Hyderabad, 26th June 2025: At **3GPP TSG RAN #108 in Prague**, a global consortium proposed extending India's π/2-BPSK uplink waveform to further strengthen 5G coverage and unlock uplink-intensive services—such as high-definition video, immersive XR, and on-device AI—while paving the way for 6G.

Originating in 2014 at IIT Hyderabad as a single-institute effort, the waveform progressed into a national program with leading industry and academic partners, became a 3GPP Release 17 standard, and is now a mainstream 5G feature adopted by operators and vendors worldwide.

Prof. Kiran Kuchi, Department of Electrical Engineering, IIT Hyderabad, the driving force behind this success and founder of IIT Hyderabad spin-out WiSig Networks, remarked, "India's coverage-enhancement technology—created with fellow Indian institutes and global collaborators including Qualcomm, Apple, Ericsson, Nokia, Samsung, MediaTek, DOCOMO, AT&T, Reliance Jio, Thales, and others—has become an integral part of the global standard."

We gratefully acknowledge the efforts of various organizations of Government of India, i.e. the Department of Telecommunications (DOT), the Ministry of Electronics and Information Technology (MeitY), the Department of Science and Technology (DST), and the Standards Development Organisation, Telecommunications Standards Development Society, India (TSDSI) for their steadfast support in this regard.

Prof. B S Murty, Director of IIT Hyderabad, added, "IIT Hyderabad is committed to breakthrough research in the field of Wireless Communications that translates into globally adopted patents and products, propelling India toward Viksit Bharat."

As the 6G era dawns, IIT Hyderabad and WiSig Networks are already advancing technologies such as the OTFDM waveform and Structural MIMO within the newly approved 6G Study Item. Together with Indian and global partners, we will continue to imagine, invent, and deliver the next generation of communication technologies, networks, and devices.

About IIT Hyderabad:

IITH, established in 2008, has reached a respectable position in Academics, Research, Technology development and Startups in a short span of 16 years. In the National Institutional Ranking Framework (NIRF), IITH has bagged at 3rd in Innovation and 8th among Engineering institutes in the last two consecutive years, while it has maintained its rank within top 10 Engineering Institutes ever since NIRF was launched. IITH has been striving for excellence with a motto of "Inventing & Innovating in Technology for Humanity (IITH)".

With 325 full-time Faculty and 5,300+ Students (PG+PhD students accounting for about 60%), IITH has a strong research focus with ~ 4630 Projects worth of Rs. 1510+ Cr of R&D funding (Rs. 335+ Cr funding in 2024-25, i.e., Rs. 1+ Cr per faculty), 11,680+ Publications, 2,15,000+ Citations, 510+ Patents (210+ Patents in 2024 and a commitment to "Patent a Day: Mission 365" for 2025 to earn 365 Patents by the end of 2025), and about 260+ Startups (that have generated 1100+ jobs with a revenue of Rs. 1500+ Cr).

Media Contacts:
You can view all press releases/notes from IITH at: https://pr.iith.ac.in/press-release
Please direct all media queries to | Public Relations Officer, IITH | pro@iith.ac.in, 8331036099

About WiSig Networks Private Limited:

WiSig Networks, **a Startup incubated at IITH,** is a leading provider of wireless communications solutions, specialising in cutting-edge technologies such as Massive MIMO, 5G ORAN, NB-IoT SOC solutions, Open RAN and advanced 5G/6G technologies, played a crucial role in the integration and seamless operation of equipment throughout the trials. IIT Hyderabad's extensive indoor and outdoor facilities provided an optimal environment for comprehensive real-world wireless testing. With a commitment to innovation and excellence, WiSig is dedicated to shaping the future of Wireless connectivity. www.wisig.com

Media Contacts:
WiSig Networks: Media Relations, contactus@wisig.com