

**InterDigital's submission to
TRAI consultation on 'Encouraging R&D in Telecom, Broadcasting,
and IT (ICT) Sectors' / CP N° 19/2023**

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About InterDigital

1. InterDigital, Inc ("InterDigital") is a research and development corporation with headquarters in Wilmington, Delaware and research centres in the US, France, the UK, and Canada. It is engaged in the development of foundational wireless video and AI communications technologies and derives its income from the global licensing of products implementing those technologies.
2. For over 50 years, InterDigital has been a pioneer in mobile technology and a key participant in and contributor to global cellular and other wireless standardization. It is also a key contributor to global video standards, conducting research in video, augmented reality, immersive content, and artificial intelligence technologies.
3. InterDigital does not manufacture devices; instead, it focusses on innovation through advanced research, often collaborating or partnering with other research-focused organizations on specific projects. In particular, InterDigital is regularly selected as a research partner in collaborative projects, for instance those funded by the EU's Horizon Europe program. In recent years InterDigital has invested around 50% of its recurring revenues in research and development and the development of the company's patent portfolio. Those R&D efforts have resulted in critical inventions covered by a portfolio of more than 31,000 patents and patent applications, spanning some 50 jurisdictions worldwide. InterDigital was recently recognised for its contributions to wireless and video standards in the LexisNexis Innovation Momentum 2023: the Global Top 100 report. This is the second successive year that InterDigital has been included in the report which not only looks at the impact of companies' innovation today but also assesses their likely impact in future years.
4. InterDigital creates the technology on which it secures patent protection: over 90% of its cellular wireless and video inventions were developed in-house by its engineers. In order to continue to fund its research and development efforts and its participation in the development of wireless, video and other standards at various standards development organizations (SDOs), InterDigital licenses its worldwide portfolio of patents covering its inventions. Many of the most prominent technology companies globally that are active in making wireless and other consumer electronics products implementing standardised technology have recognised the strength and quality of InterDigital's portfolio (including both SEPs and non SEPs) and entered into licences for InterDigital's patent portfolio. Among its current and past licensees are companies such as Apple, Asus, Ericsson, Fujitsu, Google, HTC, Huawei, LG Electronics, NEC, Nokia, Panasonic, Pegatron, RIM/Blackberry, Samsung, Sanyo, Sharp, Sony, Wistron, Xiaomi and ZTE.

5. As an innovator of such foundational technologies, as an active participant in and contributor to standardization of digital technologies, and as a licensor, InterDigital has a keen interest in ensuring the successful implementation of digital technology standards in emerging markets, such as the Internet of Things ("IoT"). While 5G is still being rolled out, InterDigital is already a leader in research for 6G. In the U.S, one of its senior wireless engineers has been re-elected Vice Chair of ATIS's Next G Alliance 6G National Roadmap Working Group. In Europe InterDigital was recently awarded five Horizon Europe 6G flagship projects which will help shape the 6G standard. Within the global Third Generation Partnership Project (3GPP), a company senior wireless engineer got elected by more than 200 3GPP member companies as the first woman to Chair RAN2. In Europe InterDigital is also very active in pre standardization activities and is leading several 'Special Interest Groups' in ETSI. In addition, one of the company's wireless engineers was recently elected to the ETSI board.

Response to the TRAI Consultation

6. The TRAI Consultation Paper correctly recognises that a strong IP system, and in particular a strong patent system, is key to a knowledge-based economy, and therefore to future growth and development in India, particularly in the ICT sector.
7. Access to such a system is also important, both in terms of the ability to recognise new inventions and file for patents, and in terms of the ability to license patents for key technology, whether as licensor or licensee.
8. A very important aspect of future technology is that much of it will be connected through the internet of things and by systems in smart cities and smart factories. Healthcare, public administration, manufacturing, energy generation, energy conservation, and transport are just some of the areas that will be affected.
9. Technologies for connection, such as cellular radio, wi-fi, and the various compression technologies for streaming and broadcast, are developed and continuously improved through open standardization. Because development through standardization is generally a commercial activity it is dependent upon a strong patent system, and in particular on income from patent licensing. Patent licensing is an important part of the virtuous cycle of innovation whereby revenues earned through licensing can be re-invested in the development of key standardized technologies. These technologies are developed through the open and cooperative standardization process and are made available for widespread adoption.
10. To ensure that patent licensing works to everyone's advantage, and to enable the whole standardization ecosystem, the FRAND principle is key.¹ Where there is disagreement about the application of that principle it is important that the Indian courts are able to assist, whether by issuing injunctions against implementers that refuse to pay FRAND fees for the use of others' technology, or by assisting parties in arriving at a common understanding of what FRAND terms are in a particular instance.

¹ The FRAND principle is addressed in section 2.7.10 of the TRAI Consultation Paper.

11. A patent system is ultimately only as strong as the enforcement mechanisms that may be used to ensure that patent rights are not infringed, and that FRAND licences are taken where necessary. The robust combination of strong patents and enforcement mechanisms encourage investment and participation in standardization work, which is key to developing the position of Indian companies seeking to grow within the knowledge economy.
12. As a long-term participant in standardization, and as a major technology developer, InterDigital therefore supports and encourages the efforts of the Indian government and the TRAI to develop clear and strong enforcement principles for FRAND licensing.
13. In particular, InterDigital welcomes the development of specialised patent courts, the development of Indian jurisprudence concerning the FRAND principle [and injunctive relief], efforts to make the application process for Indian patents more efficient, and educational initiatives to increase awareness of the role of research and development and standardization work to develop the connected technologies of the future.

The NIST consultation

14. The TRAI will no doubt be aware that in the US the National Institute of Standards and Technology (<https://www.nist.gov/>) is developing an implementation plan for the United States Government National Standards Strategy for Critical and Emerging Technology (USG NSSCET). The USG NSSCET is intended to support and complement existing private sector-led activities and plans, including the American National Standards Institute (ANSI) United States Standards Strategy (USSS), with a focus on critical and emerging technology(ies) (CET).
15. The USG NSSCET reinforces the U.S. Government's support of a private sector-led, open, consensus-based international standards system, corresponding to the World Trade Organization (WTO) Technical Barriers to Trade (TBT) Committee decision. This articulates and elaborates on principles that are fundamental to the development of international standards: transparency; openness; impartiality and consensus; effectiveness and relevance; and coherence.
16. In July 2023 NIST issued a Notice seeking information to support the identification and prioritisation of key activities to optimise the USG NSSCET implementation. In December 2023 InterDigital participated in the development of a response from the Alliance for Telecommunications Industry Solutions (ATIS) of which it is a member. The ATIS response can be consulted at [2023-Overview-2-2.pdf \(atis.org\)](#) in the hope that it will be of interest to TRAI.