Telecom Technology Development Fund (TTDF) scheme

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Why is in news? C-DOT and CSIR-National Physical laboratory sign agreement for 'Development of NavIC based IST traceable Primary Reference Time Clock for Telecom Sector

Centre for Development of Telematics (C-DOT), the premier Telecom R&D Centre of the Department of Telecommunications (DoT) and CSIR-National Physical laboratory (NPL) signed an agreement for '**Development of NavIC based IST traceable Primary Reference Time Clock (PRTC) for Telecom Sector**'.

The agreement is signed under the **Telecom Technology Development Fund (TTDF) scheme** of the DoT for providing funding support to domestic companies and institutions involved in technology design, development, commercialization of telecommunication products and solutions to enable affordable broadband and mobile services in rural and remote areas.

The project focuses on the development of a device which shall provide **direct Indian Standard Time (IST) traceability** to all the Telecom Service Providers (TSPs) and Internet Service Providers (ISPs) within $\pm$ 20 ns.

This shall benefit India in multiple ways starting from reducing the dependency on GPS, shifting to IRNSS/NavIC, digital forensic analysis of transactions, cyber secure networks, reduce call drops & further synchronise all the telecom services with one reference time source IST, developed by CSIR-NPL.

Time synchronization of the telecom networks **will be foundation for a strong cyber secured nation**, as every bank transaction, stock market transactions and exchange of information is through the TSPs and ISPs. Development of NavIC based IST traceable Primary Reference Time Clock (PRTC) is an initiative which aims towards achieving the objective of "One nation One time".

Telecom Technology Development Fund (TTDF) scheme:

Universal Service Obligation Fund (USOF) a body under the Department of Telecommunications, officially launched the Telecom Technology Development Fund (TTDF) Scheme on October 01st, 2022.

Aim:

Telecom Technology Development Fund (TTDF) aims to **fund R&D in rural-specific communication technology applications and form synergies** among academia, start-ups, research institutes, and the industry to build and develop the telecom ecosystem.

Additionally, the Scheme aims to **promote technology ownership and indigenous manufacturing**, create a culture of technology co-innovation, reduce imports, boost export opportunities and creation of Intellectual Property.

Eligibility:

The following Indian entities are **only eligible for support** from this fund.

Domestic Company (ies) with focus on telecom R&D, Use case development

Start-ups / MSMEs

Academic institutions

R&D institutions, Section 8 companies / Societies, Central & State government entities / PSUs /Autonomous Bodies/SPVs / Limited liability partnerships- with focus on telecom research and development

Collaborative consortium of above entities

For Pilots: The above entities may partner, inter alia, with PSUs, TSPs, Central/State Government entities, government autonomous bodies, SPVs etc.

Technology domains:

5G development under 'India 5G Stack'

6G & Beyond technology development

IoT & M2M development

Other Telecom Technologies under various research program

Entrepreneurship Cell (for early-stage Start-ups)

Research Scholarship program

Under the scheme, USOF is also targeting to develop standards to meet countrywide requirements and create the ecosystem for research, design, prototyping, use cases, pilots, and proof of concept testing, among others.