

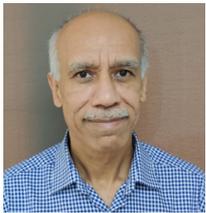
NEWSLETTER

TELECOMMUNICATION ENGINEERING CENTRE

January-March 2022

Pages-17

MESSAGE



From the desk of....

Sr. DDG & Head, TEC

Dear Readers,

It is a matter of great pleasure to release the January-March, 2022 issue of the TEC Newsletter.

I believe that this newsletter will serve as a window through which the complete profile of the TEC and its achievements, progress made and co-curricular activities during the stipulated period can be showcased.

We at TEC are committed to provide an ambience to standardize new telecom technologies and products and strengthen country's testing and certification infrastructure.

We look forward to your continued support and suggestions to further improve the Newsletter.

Congratulations to my entire team in TEC for their sincere efforts..

TEC wishes good health to all its readers ; stay safestay healthy.

Best Wishes and Warm Regards,

Ritu Ranjan Mittar

CONTENTS

1. TECHNOLOGY

- Building Public Trust in AI Systems
- IoT/ ICT Enablement in Smart Cities

2. STANDARDIZATION

- Standard Released
- Adoption of Standards
- TEC Contributions to ITU
- Technical Reports

3. TESTING & CERTIFICATION

- Mandatory Testing (MTCTE)
- Voluntary Testing
- CAB Designations Issued by TEC

4. KNOWLEDGE DISSEMINATION

- Webinar
- Talks & Meetings
- Study Papers

5. HR ACTIVITIES

6. हिन्दी गतिविधियाँ

7. UPDATES



INDIA SIGNS HOST COUNTRY AGREEMENT WITH THE INTERNATIONAL TELECOMMUNICATION UNION (ITU) FOR ESTABLISHMENT OF AREA OFFICE & INNOVATION CENTRE AT NEW DELHI



Shri Ashwini Vaishnaw, Union Minister for Communications, Electronics & IT and Railways, Government of India and H.E. Houlin Zhao, Secretary General of International Telecommunication Union (ITU) signed the Host Country Agreement (HCA) for the establishment of an Area Office & Innovation Centre of ITU in New Delhi on 3rd March 2022.

The Area Office and Innovation Centre of ITU at New Delhi is expected to serve South Asian countries. The Host Country Agreement provides the legal and financial framework for establishment and operations of the Area Office. The Area Office shall also have an Innovation Centre, which is expected to give impetus to R&D in telecommunication technologies in South Asia.

The Innovation Centre will provide opportunities to academics, start-ups and SMEs to showcase their innovation at a global stage. With signing of the Host Country Agreement, the Area Office and the Innovation Centre is expected to be operational by mid 2022. The agreement was signed in a virtual ceremony during the World Telecommunications Standardisation Assembly-20 (WTSA-20) being held in Geneva, Switzerland. WTSA is a four-yearly global conference of ITU dedicated to standardisation of the ICTs. India has proposed to host the next WTSA to be held in 2024.

Source: <https://pib.gov.in>



SH. RITU RANJAN MITTAR HAS TAKEN OVER THE CHARGE OF SR. DDG & HEAD TEC 🌸 🙏

Sh. Ritu Ranjan Mittar has taken over the charge of Sr. Deputy Director General & Head of TEC on April 01, 2022.

He is an ITS officer of 1985 batch having experience of over 30 years of services in various capacities in Department of Telecommunications, Government of India. Before taking over the charge of Sr. DDG & Head TEC, he was DDG (Telecom Security) in TEC.

He is actively involved and contributor in the ITU-T standardization activities and for his contributions, he has been appointed as Chairman of ITU-T Study Group-11 (Signaling requirements, protocols, test specifications and combating counterfeit telecommunication/ICT devices) at recently concluded WTS20 Assembly session of ITU-T at Geneva in March 2022.

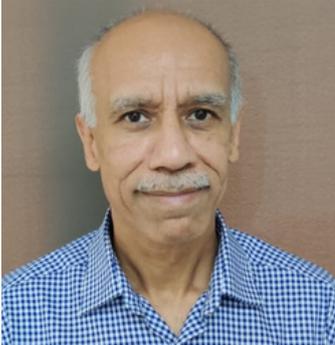


TEC BIDS FAREWELL ON SUPERANNUATION OF MS. DEEPA TYAGI, ADVISOR & HEAD TEC 🌸 🙏

TEC bids farewell to Ms Deepa Tyagi, Advisor & Head TEC on her superannuation from services, on March 31, 2022.



INDIA SECURES LEADERSHIP POSITION IN INTERNATIONAL TELECOMMUNICATION UNION (ITU-T) STUDY GROUPS



International Telecommunication Union at WTSA-20 assembly held at Geneva in March 2022, has announced the appointment of Mr Ritu Ranjan Mittar, Sr. DDG & Head TEC as the Chairman of ITU-T Study Group 11 (Signalling requirements, protocols, test specifications and combating counterfeit telecommunication/ ICT devices). He will remain as chairperson of ITU-T SG11 for the period 2022-2024.

The ITU is the UN specialized agency for ICTs



ITU-T at WTSA-20 assembly held at Geneva in March 2022, has also announced the appointment of Mr Abhay Shanker Verma, DDG (Mobile Technologies), TEC as Vice Chair of ITU-T SG13 (Future networks and emerging network technologies)

He will remain as vice chairperson of ITU-T SG13 for the period 2022-2024.



ITU-T at WTSA-20 assembly held at Geneva in March 2022, has also announced the appointment of Mr Vijay Kumar Roy, as Vice Chair of ITU-T SG2 (Operational aspects of service provision and telecommunications management)

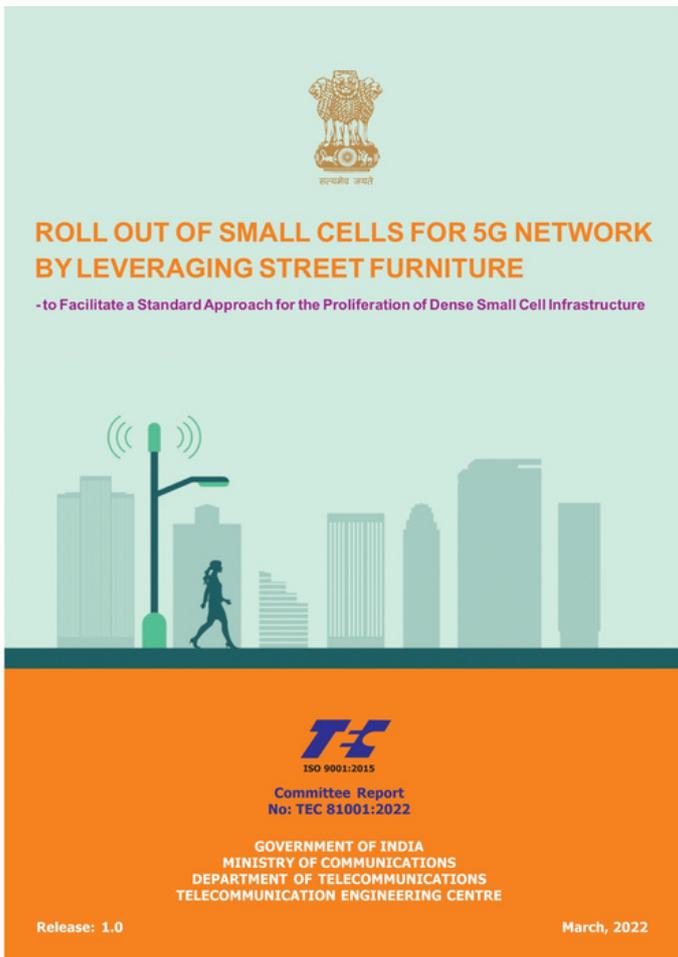
He will remain as vice chairperson of ITU-T SG2 for the period 2022-2024.

TEC congratulates the following experts from DoT HQ, Academia and Industry who have also been elected to leadership positions in ITU-T at the recently held WTSA 2020 Assembly. This is a recognition of contributions from India in development of global standards and a major milestone in India's Standardisation Journey.

- Mr SK Mishra, Advisor (Finance), Department of Telecommunications as Vice Chair SG3 (Tariff and accounting principles and international telecommunication/ICT economic and policy issues)
- Dr Pradipta Biswas, Indian Institute of Science (IISc) as Vice Chair SG9 (Audio-visual content transmission and integrated broadband cable networks)
- Mr Sudipta Bhaumik, Sterlite Technologies Limited as Vice Chair SG15 (Networks, technologies and infrastructures for transport, access and home)
- Mr Ashok Kumar, Director (Wireless Access), NTIPRIT as Vice Chair SG16 (Multimedia and related digital technologies)
- Mr Pushpendra Kumar Singh, DDG(Security Assurance), DoT as Vice Chair SG17 (Security)

SECRETARY (TELECOM) SH. K. RAJARAMAN RELEASES TEC REPORT ON- “ROLLOUT OF SMALL CELLS FOR 5G NETWORKS BY LEVERAGING STREET FURNITURE”

In order to achieve the objectives of timely and hassle-free rollout of 5G services in country, Secretary (Telecom), Sh. K. Rajaraman in presence of Member (Technology), Member (Services) and other senior officers of Department of Telecommunications (DoT) & Telecommunication Engineering Centre (TEC) released a report on "**Rollout of Small Cells for 5G Networks by leveraging Street Furniture**" (TEC 81001: 2022) on 28th March 2022.



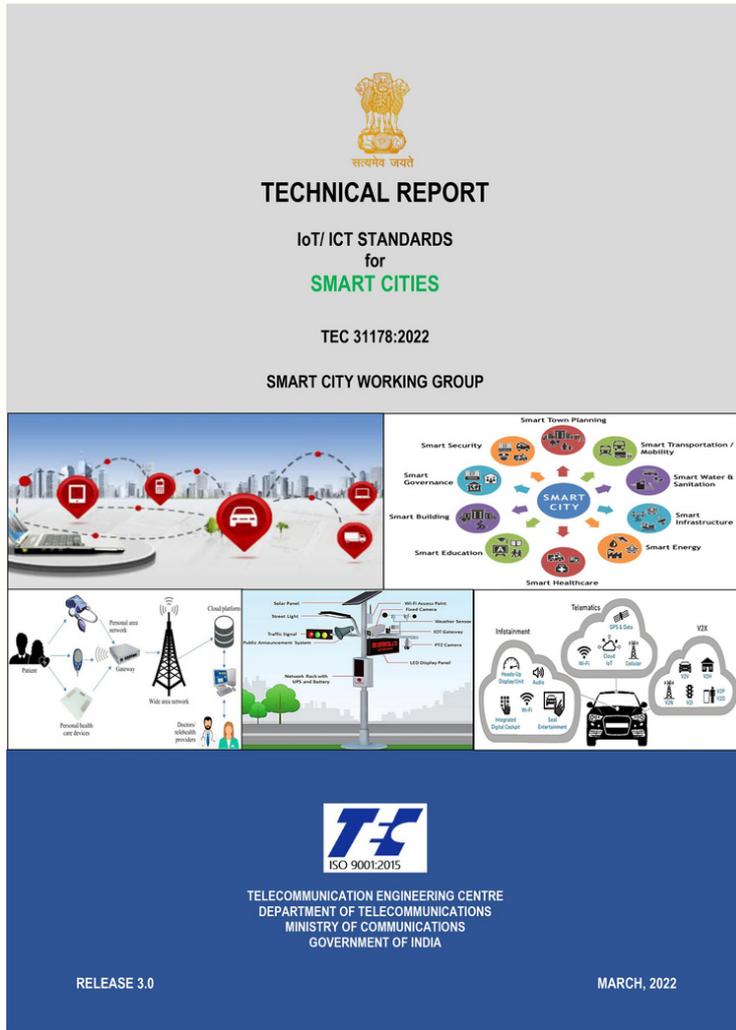
This report on Rollout of Small Cells for 5G Networks by leveraging Street Furniture will facilitate standard approach for proliferation of denser small cell infrastructure in the country for hassle-free rollout of 5G services.

With the 5G networks expected to be rolled out in the country soon, the need for small cells will become even more critical due to the introduction of higher spectrum bands, which necessitate denser network deployments to support larger traffic volumes per unit area.

This report has been prepared based on the extensive discussions and deliberations by the committee constituted by Secretary (Telecom), in December 2021, under the chairmanship of Mr Rajeev Kumar Tyagi, DDG (Future Networks), TEC, comprising members from COAI, DIPA, MoHUA, Kerala LSA, CEA, Ministry of Power etc. for formulating standards/ policy for roll out of street infrastructure and small cells in 5G to facilitate a standard approach for the proliferation of Dense Small Cell Infrastructure, keeping in mind the best global practices.

SECRETARY (TELECOM), SH. K. RAJARAMAN RELEASES TEC REPORT ON "IOT/ ICT STANDARDS FOR SMART CITIES"

In order to achieve the objectives of development of standardized ecosystem for Smart Cities in the country, Secretary (Telecom), Sh. K. Rajaraman in presence of Member (Technology), Member (Services), Sr. DDG TEC and other senior officers of Department of Telecommunications (DoT) & Telecommunication Engineering Centre (TEC) released a report titled "**IoT/ ICT Standards for Smart Cities**" (No- TEC 31178:2022) on 28th March 2022.



The Technical Report on IoT/ ICT standards for Smart cities prepared by **IoT division, TEC** has covered the national and international guidelines and standards related to the development of IoT/ ICT based smart infrastructure in various verticals of Smart Cities namely Automotive, Power, City Surveillance, Water management, Waste management and health care.

This report also covers the standards released by ITU on IoT and Smart cities; and the Key Performance Indicators (KPIs) for assessing the smartness of the cities. This TEC report may be a good reference document for the stakeholders involved in developing the standard based ecosystem for Smart Cities.

This report is expected to work as a guiding document for Smart City SPVs, Consultants, OEMs and other stakeholders for the development of sustainable Smart Cities.

1. BUILDING PUBLIC TRUST IN ARTIFICIAL INTELLIGENCE SYSTEMS



Artificial intelligence (AI) and Machine Learning (ML) applications are increasingly being used in all domains such as Healthcare, Agriculture, Smart Cities, Transport, Logistics, Surveillance, and so on. Various Government organisations are also using AI/ML Systems for the delivery of public services and e-governance.

These systems are trained using training datasets, which could be real-life or synthetic data. They use various algorithms to learn from the training datasets and predict the outcome of a new scenario. As these systems are deployed, they keep learning from their experience. Biases can enter into these systems due to: (i) Imperfect datasets used for training, (ii) Algorithms used for learning and predictions, and (iii) User interactions. The biases could be on demographic attributes such as age, gender, race, caste, religion, nationality, etc., or on other attributes such as temperature, time, etc.

Researchers have shown that many such systems deployed worldwide were having unintended biases. Bias in AI Systems raises various ethical, social, and legal issues. While the users expect these systems to be fair in their outcomes, a biased AI System prefers certain demography while discriminating against others. When AI Systems are used for e-governance or by the judiciary, checking for their fairness would become a legal requirement. Therefore, one important requirement of Responsible AI is that the AI Systems should be unbiased and fair.

National Digital Communication Policy (NDCP)-2018 mandates for synergizing deployment and adoption of AI and for creating a framework for testing and certification of new products and services. National Strategy for Artificial Intelligence #AIforAll, and the Approach Documents for India, released by NITI Aayog, establish broad ethical principles for the design, development, and deployment of AI in India and provide an essential roadmap for the AI ecosystem, encouraging the adoption of AI in a responsible manner in India and building public trust in the use of this technology, placing the idea of 'AI for All' at its very core.

In achieving the objective of the Government of India of building public trust in Artificial Intelligence Systems (#AIforAll), TEC proposes to establish a framework for fairness assessment of AI Systems on a voluntary basis. Convergence & Broadcasting (C&B) Division TEC is holding public consultations for framing procedures for assessing fairness for different types of AI Systems, and for issuing fairness rating/ certification to AI Systems, as a benchmark of fairness. The consultation paper was floated for stakeholder inputs vide letter No.:4-3/2022-C&B/TEC/AI-Fairness dated 22-2-2022. Various leading MNCs, government organizations, IITs, industry associations, startups, domain experts, and others have furnished their inputs on the proposed framework.

Further, TEC organized a webinar on "Framework for Fairness Certification for Artificial Intelligence Systems" on 22.03.2022 to explain the details of the TEC initiative.



Mr. A.K. Mittal, Member Services DCC inaugurated the webinar. Discussions in the webinar were on explaining the TEC initiative on AI, responsible AI, a real-time AI testing demo, and aspects of practical consideration for adopting fairness.

Way forward, TEC plans to hold public consultations to standardize the bias measurement on a linear scale so that a uniform scale can assess fairness and enable the comparison of AI systems based on supervised Learning Models. The Fairness Score and Bias Index proposed in [1] could be one of the solutions for measuring the fairness of supervised learning AI Systems. Reference [1] could serve as a base document for further work on creating the fairness assessment framework.

As these systems are being used in all aspects of our lives, the initiative of TEC would benefit every citizen of the country. Startups and MSMEs in particular and even large enterprises will benefit as their products will be more credible and acceptable if they are assessed and certified by a neutral government agency such as TEC. It would also act as a benchmark for fairness, so Researchers, College students and other individuals, Government organizations, and all segments of the society would benefit at large.

Reference:

[1] Agarwal, A., Agarwal, H. & Agarwal, N. Fairness Score and process standardization: framework for fairness certification in artificial intelligence systems. AI Ethics (2022). <https://doi.org/10.1007/s43681-022-00147-7>

[2] <https://tec.gov.in/convergence-broadcasting-cb>

-by C & B Division

2. IOT/ ICT ENABLEMENT IN SMART CITIES

To address the various challenges arising due to rise in population in the cities, it is required to have a comprehensive development of the smart infrastructure in various verticals such as transportation, health care, education, power, safety etc. covering four pillars of a city namely Institutional, Social, Economic and Physical, using IoT/ ICT technologies. It will help in improving the quality of life of the citizens and attracting the people and investments to the city, setting in motion a virtuous cycle of growth and development. Development of Smart Cities is a step in that direction.

It is well known that under Smart Cities mission of Government of India, around 100 cities are being developed as Smart Cities in phased manner by Special Purpose Vehicles (SPVs) created for this purpose. ICT/ IoT based solutions will be the core of smart infrastructure required for planning and implementing Smart Cities covering a number of priority verticals. These verticals may differ from city to city as per their requirements.

During the current pandemic (Covid-19), communication technologies have played an important role especially in disseminating information, tele-consultation and tele-education etc. Therefore, it has become necessity to digitally transform various verticals for creating smart services in the cities as well as in rural communities.

Initiatives taken by TEC in IoT domain:

TEC is working in M2M/ IoT domain since 2014 and has formed multi-stake holders working groups to study and release Technical Reports with the outcome intended to be used in the formulation of policies / standards. Total 18 Technical Reports have been released so far.



TEC invites inputs for

FRAMEWORK FOR FAIRNESS ASSESSMENT OF ARTIFICIAL INTELLIGENCE/ MACHINE LEARNING SYSTEMS

building public trust in AI/ ML Systems

#AIforAll

Visit what's new for more details

Important activities carried out by TEC in IoT domain have been listed in the report titled TEC initiatives in M2M/ IoT domain: An overview.

Out of these 18 TRs, three TRs as mentioned below, are related with the Smart Cities:

1. IoT/ ICT Standards for Smart Cities, released in March 2022
2. Design and Planning Smart Cities with IoT/ ICT, released in Jan 2019
3. ICT deployment and strategies for India's Smart Cities: A Curtain Raiser, released in Nov 2015.

The Technical Report on IoT/ ICT Standards for Smart Cities covers study of cross-sectoral requirements in Smart Cities related to telecom & ICT sector in various verticals like Energy, Transport, Water management, Waste management, City surveillance, Health, Smart homes/ buildings etc. National and international guidelines/ standards and best practices, being adopted for smart cities have been mentioned in this report. The TR also covers communication networks (OFC, LPWAN, Cellular networks); emerging technologies like AI/ ML, Digital Twin and Blockchain; Platform; Sectoral analysis and national requirements like human safety, environment, geographical/ climatic conditions, national security etc. in terms of specifications/ standards.

TEC standards GR/ IR/ ER related to the telecom equipment, which may be procured by Smart City SPVs for the development of communication network, have also been listed in this report. Technology development roadmap, details of communication technologies and suitable use cases, Smart pole etc. have been covered in the annexures.

This document has also listed the important recommendations related to various entities and verticals of the smart cities.

This technical report is intended for use by Smart Cities Mission (MoHUA), Smart Cities SPVs, Smart City consultants, Telecom Service Providers (TSPs), M2M Service Providers, and other related stakeholders.

Standardisation activities in ITU:

ITU constituted Study Group 20 (SG-20) on IoT and its applications in Smart Cities & Communities in 2015. SG20 has released a large range of standards related to city planning, stakeholders' engagement, Devices/ Sensors, Gateways, Platforms, Big data, Open data, Smart data Governance, Frontier technologies, Use cases, KPIs for assessing the Smartness of a City etc. To coordinate with ITU-T SG-20 and submit contributions to present Indian viewpoint, TEC constituted National Working Group (NWG-20).

(by IoT Division)



Leading IoT initiatives in India-

1. National Digital Communications Policy (NDCP) 2018
2. Smart Cities Mission (SCM) 2015
3. Technical Reports on IoT released by TEC
4. Policy on Internet of Things (IoT) in 2015
5. IoT Excellence centres in country.

STANDARDS RELEASED

- ER* (New)- **5G Core** (No. TEC40182205) lays down the Essential Requirements for 5G Core network elements/ functions to be used in Indian Telecom Network.
- ER (Revised)- **Router** (No. TEC37682204) is revised by addition of Cellular interfaces in all its variants.
- ER (Revised)- **LAN Switch** (No. TEC37942203) is revised by addition of 200G and 400G optical interfaces in all its variants.
- ER (Revised)- **Base Station for Cellular Network** (No. TEC42722002)- The parameters along with corresponding standards for the 5G base station are included in the existing document.
- ER (Revised)- **User Equipment** (No. TEC47722002) - The parameters along with corresponding standards for the 5G mobile user equipment are included in the existing document.
- Test Guide- **Evolved Packet Core(EPC)** (No. TEC22151:2022) enumerates detailed test schedule and procedure for evaluating conformance/ functionality/ requirements/ performance of EPC as per GR/IR/Applicant's spec. No TEC/GR/WS/EPC-001/01 March 2019
- Test Guide- **eNodeB** (TEC21051:2022) enumerates detailed test schedule and procedure for evaluating conformance / functionality / requirements / performance of eNodeB as per GR/IR/Applicant's spec. No TEC/GR/WS/ENB-001/01 March 2019.
- GR* (Revised) - **Hybrid Microwave Radio Equipment** (15, 18 and 23 GHz) (TEC 36050: 2022)
- GR (Revised)- **Millimeter Wave (E- Band) Microwave Equipment** (TEC 36060: 2022).

- GR (Revised)- **Packet Microwave Radio Equipment (15, 18 and 23 GHz)** (TEC 36090: 2022)
- GR (Revised)- **ADSS Optical Fibre Cable for Laying along Power Line Alignments** (No.TEC85190: 2022)
- GR (Revised)- **Router for MPLS based Transport Network** (No. TEC48050:2022). In the revised draft new categories of Router (Non-chassis based) have been included.
- GR (Revised) - **Aerial Drop Optical Fibre Cable** (No. TEC 85200:2022)

*ER- Essential Requirement;

*GR- Generic Requirement

*IR- Interface Requirement

STATUS OF STANDARD ADOPTION

- Meetings of Consultative Committee (CC), formed for adoption of **oneM2M Release 3** specifications (transposed by TSDSI), were held on 7th January and 17th February 2022. Public comments have been discussed and two webinars were also organized for the committee members. Report of Consultative Committee is under preparation and expected to be submitted by 15th April 2022.

STANDARD WITHDRAWN

- GR/IR (Withdrawn)- Location Based Services/Systems (LBSS) for CDMA 2000 Networks (No.TEC 22050:2006).
- GR (Withdrawn)- Long Term Evolution (LTE) & Evolved Packet Core (EPC) (No.TEC 22100:2011) - The EPC GR No. TEC 22150:2019 which takes into account technical specifications upto 3GPP Release 14 will supersede this GR.

TEC CONTRIBUTIONS TO ITU

1. Mr Sushil Kumar DDG (IoT), Mr V.K. Roy Director (MT-I) and Ms Preetika Singh ADG (TS) attended the **WTSA20 meeting at ITU-T HQ** at Geneva as part of the Indian Delegation and presented the WTSA resolutions as focal points.
2. **Resolution 58 related to establishment of National CIRT particularly in developing countries was presented** in recently held WTSA 2020 meeting at ITU-T HQ at Geneva. The submitted contribution was accepted.
3. APT common proposal on **Resolution 98 'Enhancing the standardization of Internet of things and smart cities and communities for global development'** on which IoT division submitted contributions in APT meetings held during 2020-21 and got it finalized, was presented by DDG (IoT), MR. Sushil Kumar. A final resolution on 98 covering the important agreeable points of all the regions was prepared in the common meeting in Geneva, it covers all important points for standardization required for the development of IoT eco system.
4. A contribution on ongoing work item ITU-T Y.ML-IMT2020-SANDBOX: **"Architectural framework for Machine Learning Sandbox in future networks including IMT-2020"** was submitted and discussed in the ITU-T SG-13 Q20/13 in interim virtual meeting held from 15-17 Feb 2022.
5. Mr. Sushil Kumar, DDG (IoT) presented on Role of IoT/ ICT and other emerging technologies in transforming Agriculture in the ITU webinar on Accelerating agricultural digital transformation through AI and IoT, 29th March 2022.
6. Mr. Sushil Kumar, DDG (IoT) **selected as the vice-chair** of ITU-T SG-20 Focus Group on 'Artificial Intelligence (AI) and Internet of Things (IoT) for Digital Agriculture (FG-AI4A)', during its meeting held from 30-31 Mar 2022

TECHNICAL REPORTS RELEASED

1. **"Rollout of Small Cells for 5G Networks by leveraging Street Furniture" (TEC 81001: 2022)**
2. **IoT/ ICT standards for Smart Cities' (TEC 31178:2022)**
3. **Framework of National Trust Centre for M2M/IoT Devices and Applications (TEC 31188:2022):** The report on National Trust Centre (NTC) outlines its framework for creating an ecosystem of trusted devices in the IoT domain. NTC will be having connectivity with all the IoT/ Smart city platforms for sharing of data, to address the security / vulnerability related issues of the M2M/ IoT devices reported by IoT/ Smart city platforms. [Click here](#) for more details.
4. **TEC Initiatives in M2M/ IoT domain- An overview (TEC 31198:2022):** The report TEC Initiatives in M2M/ IoT domain- An overview has listed the important works carried out by TEC in IoT domain such as Technical reports, Emerging points and the action thereof, participation in ITU-T SG-20 / APT meetings and the achievements etc. [Click here](#) for more details.

All Technical reports are available on TEC website www.tec.gov.in

CONSULTATION PAPER

C&B Division, TEC has initiated consultations on framework for Fairness Assessment of Artificial Intelligence / Machine Learning systems. The suggestions were sought from stakeholders in a template of questionnaire during Feb-2022. Many inputs have been received and the draft framework is being prepared.

TEC HAS CONSTITUTED VARIOUS NATIONAL WORKING GROUPS CORRESPONDING TO ITU-T SGs FOR STUDY PERIOD 2022-24

TESTING AND CERTIFICATION

MANDATORY TESTING (MTCTE)

Indian Telegraph (Amendment) Rules, 2017 provides that telecom equipment are to be mandatorily tested and certified against EMI/EMC, Safety, Technical, Security and other requirements like SAR, IPv6 etc before its sale, import or use in India.

a) Certificate issued:

- Quarter Q4 =10
- Total Certificate issued =184

b) Status of OEM registration:

- Indian OEM =57
- Foreign OEM =97

More details about MTCTE are available at <https://www.mtcte.tec.gov.in/>

VOLUNTARY TESTING

- Certificate issued in Q4 = 5 (4 Type Approval Certificates (TAC), 1 Interface Approval Certificate (IAC)
- Total certificate issues from 01.04.2021 to 31.03.2022 = 14 (7 TAC, 4 IAC, 1 Certificate of Approval (CoA) and 2 Technology Approval)

CAB DESIGNATION ISSUED BY TEC

CAB designation Issued -

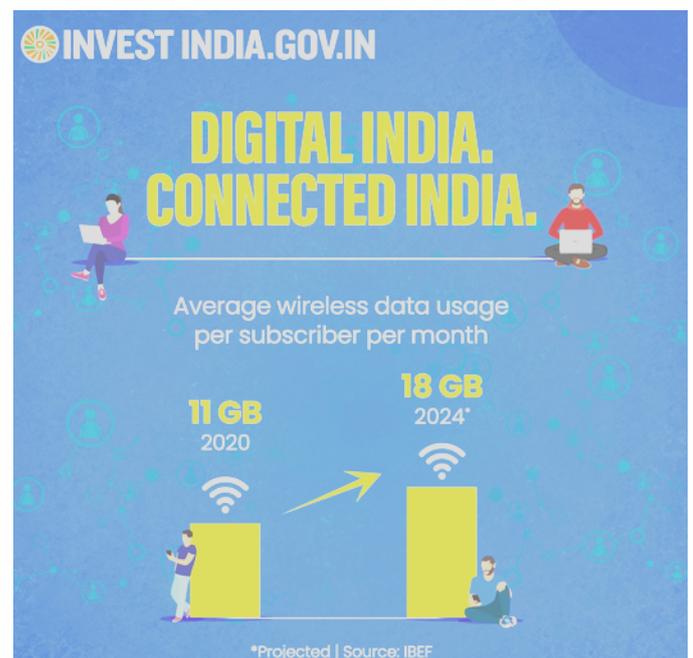
- New CAB Issued = 02
- Renewed = 03

Total Designated CABs as on 31.03.2022 = 63

- For Safety Testing =46
- EMI/EMC Testing = 35
- SAR Testing = 4
- Environmental Testing =24

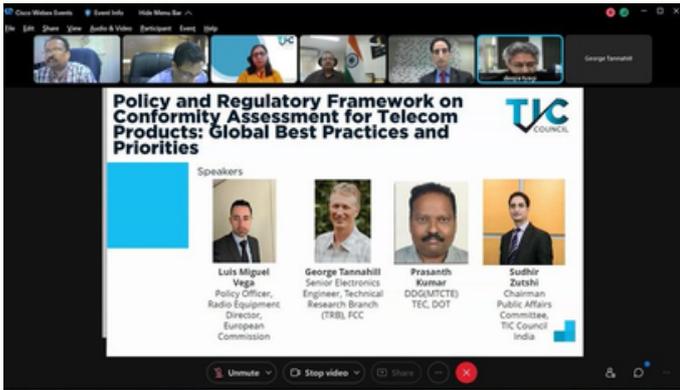
UPDATES

- With a view to support and encourage ecosystem for Start-ups and MSMEs in Telecom and related ICT sector, Telecommunication Engineering Centre (TEC) has incentivized DPIIT registered Start-ups and registered MSMEs for Testing & Certification of Telecom Products under Voluntary Certification Scheme of TEC by total exemption of testing & certification fees for their products. This exemption is valid for a period of 5 years.
- Further, in order to encourage the firms to get their Certificates renewed after a period of 5 years, the renewal fees has been reduced substantially (by 50% to 95% as per product category). The existing administrative fees (Rs.10,000 or Rs. 20,000 based on product category I to X) under voluntary certification scheme will be charged as renewal fees if the product hardware remains same & TEC Standard/Specifications is valid. The said renewal Certificate will be valid for a period of 10 years.



WEBINARS-

- A webinar on **"Policy and Regulatory Framework on Conformity Assessment for Telecom Products: A Global Update"** was organized by CA division of TEC in coloration with TIC Council India on 15.03.2022, under the chairmanship of Secretary (T), which had speakers from FCC, USA and European Commission, Europe.



- A virtual workshop on **"Advancements in Optical Fibre for Optical communication and Passive Optical Network (PON) Technology"** was organized on 23/02/2022 by RTEC, Mumbai. Speakers from Industry, TEC ,CDOT and IIT Bombay made presentations on Optical Fibre, PON and FTTX provisioning. TEC also initiated its efforts in 25G WDM PON & 100G Radio over Fibre technologies which will help in 5G front hauling and facilitate 5G upcoming ecosystems.

- A webinar on **"Standard based Solutions in Smart Cities"** was organized by IoT div on 24th Feb 2022, having speakers from MoHUA, C-DOT, Interdigital USA, Qualcomm etc. The webinar was inaugurated by Secretary(T) DoT. This webinar was in line with the Government of India initiatives for the development of Smart cities in India.



- A webinar on **"Framework for Fairness Certification of AI Systems"** was held on 22 March. The distinguished speakers were from IBM, TCS and Advisor, HoD of the Principal Scientific Advisor to GOI. (by C&B Div).



- A webinar on **"Communication and Security Aspects in Smart Grid"** was organised by IoT div, TEC on 15th Feb 2022. This webinar was having expert speakers from Qualcomm India/ USA, Power Grid Corporation, Seimens and TEC.



- Webinar on "Free space optical communication" on January 12, 2022 by Tx division

STUDY PAPERS RELEASED

- Achieving telecom connectivity for all-challenges & way forward. (by AL Division)
- Disposal of electronic memory devices to prevent abuse of information contained therein. (by AL Division)

DO YOU KNOW ?

India is one of the highest data consumers per day, with 5 hours of daily time spent on smartphones!

IMPORTANT MEETINGS & ACTIVITIES

- **Design and Standards for Common Ducts and Posts Infrastructure:** A committee to prepare "Design and Standards for Common Ducts and Posts Infrastructure to be established along public pathways for facilitating sharing of ducts and posts infrastructure" comprising all concerned stakeholders was constituted by TEC under the Chairmanship of DDG (FN), TEC in March 2022, as per the recommendations of TRAI and directions from DoT. The first meeting was held on 29.03.2022.
- **A Task Force to look into the matter of regulations and stability of electric poles** to be used as street furniture for installation of 5G Small Cell, has been constituted under the co-chairmanship of DDG (FN) TEC & Jt. Secretary, Ministry of Power, as per the directions of DoT, based on the committee report on "Rollout of small cells for 5G network by leveraging street furniture". The first meeting of the Task Force was held on 25.03.2022.
- A virtual meeting under the chairmanship of Member(S) DoT was held on 25.03.2022 for IPv6 adoption in India. The meeting was convened by DDG(IT) TEC. The participants included NT wing DoT, TS Division TEC and CN Labs.
- Mr. Sushil Kumar, DDG(IoT) delivered a talk on oneM2M - Smart Home/Smart Building in a webinar organized by India-EU ICT Standards Project on 4th Feb 2022.
- ADG(TS), Ms Preetika Singh, was assigned as vice chair of Asia Pacific region under IPv6 Ready logo program and reviewed results of 33 products of Asia Pacific region based on which IPv6 Ready logo certification was awarded to these devices.
- An e-meeting with NPL regarding implementation of Time Synchronization in the ISP network was held on 05.01.2022
- DDG (IoT) chaired the 19th meeting of BIS Sectional Committee, LITD 27 on 'Internet of Things and Related Technologies' on 23rd March 2022. ADG (IoT) also participated.
- **eOffice implementation in TEC:** The eOffice accounts, the VPN accounts has been created for officers in TEC and RTEC by IT Division, being Nodal Division for eOffice. The training on eOffice familiarisation and usage was imparted by IT team, DoT HQ on 02.02.2022. The eOffice in TEC is functional now.
- In accordance with in-principle approval given by Secretary (T) for setting up of Open RAN testing facility in TEC in collaborative mode to facilitate the testing of Open RAN products for upcoming 5G technology, an Industry Consultation, inaugurated by Member(S), DOT, with various companies, TSPs, OEMs, indigenous Startups, Academia, Institutions and other stakeholder associated with deployment of Open- RAN technology and testing solutions was held on 07.01.2022.
- Further online interactions were done with M/s Keysight Technologies, M/s Spirent and M/s Rhodes and Schwarz on 18, 19 and 24 Jan 2022 respectively w.r.t. setting up of Open RAN testing facility in TEC.
- **TEC website related:**
 - 1.The Security Audit of TEC website through CERT-IN empanelled agency was done between 15-25 March 2022 and the Security Audit Certificate is awarded to TEC website.
 - 2.The testing facility in Control Lab in TEC can be availed by stakeholders through online slot booking. For this purpose, a form has been created and the stakeholders can book their slot for testing by submitting details in the form available on TEC website.

TEC WELCOMES ON NEW JOINING 🙏

- Ms. Mudita Chandra, ADET(Tx)
- Shri Yogesh Goyal, ADET(Estt.)
- Shri Rajneesh Kumar, ADET(IoT)
- Shri Natthu Ram Bhimwal, AAO Cash(Finance)
- Shri J.L. Gupta, Director(FA)

TEC BIDS FAREWELL ON TRANSFER 🌸

- Shri R.K. Arora, ADG(F&A)- transfer to DoT HQ
- Shri Souvick Kumar Das, Director(ER), RTEC - transfer to Arunachal Pradesh NE LSA

CONGRATULATIONS ON PROMOTION 🌸

- Ms. Deepa Tyagi, Advisor TEC- HAG to HAG+

HAPPY RETIREMENTS 🌸

- Ms. Deepa Tyagi, Advisor & Head TEC- Superannuation on 31 March 2022

हिंदी गतिविधियाँ

- राजभाषा कार्यान्वयन समिति की त्रैमासिक बैठक का आयोजन किया।
- हिन्दी कार्यशाला का आयोजन किया।



हिन्दी कार्यशाला

TRAINING

1. The training on eOffice familiarisation and usage was imparted by IT team, DoT HQ to TEC and RTEC officers on 02.02.2022.

2. TEC launches Skill Development training program on Telecom testing (EMI/EMC) for girl students from rural areas-

On the occasion of **International Woman's Day, the 8th March 2022**, TEC in collaboration with industry has organised a skill development training program for girl students from rural background.



25 girl students from far flung rural areas of various states have enrolled for this one week training programme, starting from 08.03.2022.

The launch event was graced by Shri Ashok Kumar Mittal, Member (S), DoT as chief guest & Smt. Deepa Tyagi, Sr. DDG(TEC) as head of TEC. The session was moderated by Smt. Sunita Chandra, DDG (Pers), TEC & Shri Prasanth Kumar, DDG (MTCTE), TEC.



International Woman's Day celebration in TEC

DOT #CQAS (COVID-19 QUARANTINE ALERT SYSTEM)

DoT #CQAS (Covid-19 Quarantine Alert system) project has been selected and published in United Nations World Summit on the Information Society (#WSIS). The Coronavirus (COVID-19) Response - ICT Case Repository CQAS is an #indigenous #Innovation of India for tech based monitoring and enforcement of isolation and #Quarantine of covid19 positive and potentially positive persons.

BROADBAND FOR ALL

Sh. K. Rajaram, Secretary (T), DoT inaugurated the Webinar on "Broadband for all: Handling RoW in the execution of projects" on 3rd February 2022, conducted by the National Telecommunications Institute for Policy Research, Innovation, and Training (NTIPRIT)

25 YEARS OF THE TRAI ACT, 1997

Shri Ashwini Vaishnaw, Hon'ble MoC inaugurated seminar on "25 Years of TRAI Act: The Way Forward for Stakeholders (Telecom, Broadcasting, IT, AERA and Aadhaar)". He said: 'Antyodaya' and 'Aatmanirbhar Bharat' are guiding philosophies of our govt.

WEBINAR ON USE CASES OF 5G

Sh A.K. Tiwari, Member (Technology), DoT inaugurated Webinar on use cases of 5G in Health and Agriculture sectors" on 16th March 2022. Eminent speakers from IARI, Reliance Jio, VI, Capgemini, innogle, TCS and Easiogy took sessions in the webinar.

Global Collaboration In Telecommunications

- India will play a larger role in the ITU through stronger representation
- Foster Research and Innovation
- Build collaborative platforms for R&D organisations
- Opportunity to the Academia, Startups and SMEs to showcase their innovation

social media handles: /ashwiniVaishnawbjp, /AshwiniVaishnaw, /ashwini.vaishnaw, /ashwiniVaishnaw

“ Telecommunication in general, and 5G technology in particular, can enable growth and offer job opportunities

PM Modi at Post-Budget Webinar on 'Technology Enabled Development'

Date: 2nd March 2022

myGov logo: मेरी सरकार

#DIDYOUKNOW:

India produces over 600 units of mobile phones every minute!
2nd largest mobile manufacturer in the world

- Telecommunication Engineering Centre (TEC) is an ISO 9001:2015 Organization.
- Standards Setting organization (SSO) for telecom & related ICT sector
- Designated Authority (DA) for implementation of Mandatory Testing & Certification of Telecom Equipment (MTCTE) and designation of Conformance Assessment Bodies (CAB) & Certifying Bodies (CBs)
- Designated Authority (DA) for Testing and certification of Conditional Access System (CAS)/ Subscriber Management System (SMS) in broadcasting sector as per TRAI notification
- Designated Authority (DA) for Voluntary Scheme such as Type Approvals/Interface Approvals/Technology Approvals
- Designated National Enquiry point for WTO -TBT (Technical Barrier to Trade) for telecom sector
- Complaint resolution Authority for local content under PPP-MII (Public Procurement Preference to Make in India) Policy
- Technical arm/attached office of DoT, responsible for technical inputs to DoT and other Govt. Departments/Regulator on all technology/policy matters
- Nodal agency for all ITU-T Study group Activities and ITU-R SG 5.
- TEC coordinates and participates in the meetings of standards development organizations, viz., ITU, APT, WRC, 3GPP, ETSI, IEEE etc. TEC also interacts with stakeholders and associations, viz., COAI, AUSPI, ISPAI, SAI, TEMA, CMAI, FICCI, CII, etc
- In addition:
 - 5G Pilot Trials- Test Guide finalised in consultation with stakeholders
 - BSNL 4G Proof of Concept (PoC)- Committee for monitoring of PoC trial being chaired by TEC
 - oneM2M and 3GPP 5G standards of TSDSI- Adoption as National standards

"Imagination is more important than knowledge. For knowledge is limited, whereas imagination embraces the entire world, stimulating progress, giving birth to evolution."

---- — **ALBERT EINSTEIN**



SUGGESTIONS/ FEEDBACK ARE WELCOME AND MAY BE SENT TO-

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Disclaimer: The TEC Newsletter provides only technical and general information and it does not reflect the views of DoT, TRAI or any other organizations. TEC shall not be responsible for any errors of omission or incompleteness