



STANDARDIZATION GUIDE

.....
ADOPTION OF TSDSI / INTERNATIONAL TELECOMMUNICATION STANDARDS

TELECOMMUNICATION ENGINEERING CENTER

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Standardization Division

Version 1.0.2

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1.0 BACKGROUND

The purpose of this policy document is to outline the process to be followed and the procedure to be used by TEC, the technical wing of DOT, while ratifying/ adopting TSDSI /international Telecommunication standard as National standard in INDIA.

2.0 GENERAL

2.1 Telecommunication Engineering Center (TEC):

TEC under DoT sets specifications / standards for Telecommunication Equipment & Network in the country with an objective to establish State-of-the-Art, seamlessly interoperable Telecommunication networks. Telecommunication Equipment Manufacturers /Suppliers get their products tested and certified against these standards /specifications. TSPs specify these standards/specifications while purchasing the equipment for the networks being implemented by them.

TEC has been associated with International Standardization bodies like ITU in respect of developing global standards. National Working Groups in TEC corresponding to various study Groups of ITU contribute to Global Standards making process.

TEC being, the technical wing of DoT, represents it in the international bodies like ITU and APT to safeguard interests of the Indian Government at these international fora.

At present Telecommunication equipment used in Indian network is governed by Technical Conditions contained in the License Agreement for Unified License, which states as follows “the Licensee shall provide the details of the technology, proposed to be deployed for operation of the service, to the Licensor. For providing the Service, the Licensee shall utilize any type of equipment and product that meet TEC standards/ specifications, wherever made mandatory by the Licensor from time to time. In the absence of mandatory TEC standard, the Licensee may utilize only those equipment and products which meet the relevant standards set by International standardization bodies, such as, ITU, ETSI, IEEE, ISO, IEC etc.; or set by International Fora, such as 3GPP, 3GPP-2, IETF, MEF, WiMAX, Wi-Fi, IPTV, IPv6, etc. as recognized by TEC and subject to modifications/adaptation, if any, as may be prescribed by TEC from time to time”. Thus the Telecommunication standards /specifications developed or prescribed by TEC are regarded in India as National standards /specifications.

The Telecommunications Act, 2023 of Parliament has received assent of the President on the 24th December, 2023. Section 19 of the Telecommunications Act, 2023 empowers the Central Government of India to notify standards and conformity assessment measures in respect of -

- a) telecommunication equipment, telecommunication identifiers and telecommunication network;
- b) telecommunication services, in consonance with any regulations notified by the Telecom Regulatory Authority of India from time to time;
- c) manufacture, import, distribution and sale of telecommunication equipment;
- d) telecommunication security, including identification, analysis and prevention of intrusion in telecommunication services and telecommunication networks;
- e) cyber security for telecommunication services and telecommunication networks; and
- f) encryption and data processing in telecommunication.

Thereafter, the central Government in exercise of the powers conferred by section 19 read with clause (zj) of sub-section (2) of section 56 of the Telecommunications Act, 2023, and in

supersession of rules 528 to 537 of the Indian Telegraph Rules, 1951 relating to testing and certification of telegraph has prescribed the Telecommunications (Framework to Notify Standards, Conformity Assessment and Certification) Rules, 2025, on 16th May, 2025 hereafter referred as TFNSCAC Rules,2025.

The Telecommunication Engineering Center has been designated as an appropriate authority for framing the standards and conformity assessment measures in accordance with TFNSCAC Rules, 2025.

2.2 TSDSI

Telecommunications Standards Development Society, India (TSDSI), is an autonomous 'Not for profit' standards development organization for Telecommunication products and services in India. It is registered as a society under Societies Registration act XXI, 1860 and is recognized by Department of Telecommunication, Government of India as Telecommunication SDO.

2.3 Adoption of international Telecommunication standard?

It is important that the Standards developed or International Standards transposed (or adopted as the case may be) by TSDSI (or any other SDO) are adopted by TEC for use in India nationally rather than simply relying on the use of these Standards themselves. In this context, following points have been taken into account while formulating this policy and are worthy of consideration.

- The national adoption of the international standards transposed by TSDSI or developed by any other SDO clearly indicates to the Standards-using community that the respective Standard has been reviewed and endorsed by TEC and found to be relevant to the economic efficiency or safety of the Indian community. It clearly indicates that the TEC has determined that the Standard adopted is used internationally by Indian trading partners and is not enshrining obsolete or little used technologies or practices.
- It enables, where appropriate, the selection of options for local usage that are provided for in some international Standards.
- It expands the portfolio of Indian Standards coverage and thus encourages those seeking standardization information to seek it from within Indian Standards.
- It provides Indian standards using community with the adopted international standard at a price that may be significantly lower than the international standard and thus encourage more use of standards for the benefit of trade and the Indian community.
- TSDSI or any other SDO in India may under its prescribed bylaws may be required to get the standard transposed/ developed by it ratified / adopted from DOT.
- It is the policy of TEC DOT to align Indian National Telecommunication Standards with International Standards as far as feasible.

3.0 DEFINITIONS

3.1 Standard

Rule 2(h) of TFNSCAC Rules, 2025 defines standard as a document issued by the Appropriate Authority which lays down the characteristics, related processes, codes, specifications, essential requirements, recommended practices, classification, test methods and procedures, in respect of any or all aspects specified under section 19 of the Telecommunications Act, 2023.

Most important advantages/needs of using Standards, with regard to telecommunication equipment/network/services, are to:

- Ensure quality and reliability
- Comply with regulatory requirements & Improve market acceptance
- Ensure system interoperability & facilitate interchangeability of parts

- Comply with customer requirements & ensure safety of user
- Achieve economies in purchase of equipment

3.2 Standardization

Standardization is a systematic process aimed at developing and implementing uniform criteria, guidelines, and specifications that are accepted by all relevant stakeholders. It involves establishing common principles, definitions, practices, materials, processes, and components to achieve maximum consistency and compatibility across products and operations. The primary goals of standardization are to reduce unnecessary diversity, enhance efficiency, and ensure seamless interchangeability and interoperability of equipment, parts, and systems. (*Adapted from ANSI, "Standards Management: A Handbook for Profit"*)

3.3 Voluntary standards

The term includes what are commonly referred to as "industry standards" as well as "consensus standards." A voluntary standard is a document which can be used by stakeholders at their own discretion. Stakeholders may choose to meet some or all the requirements on a standard in order to achieve objectives including:

- Improving processes, service delivery and production.
- Improve quality of goods
- Provide a basis for the acceptance or rejection of goods and services
- Improve environmental performance

Name of the voluntary Standards:

1. TEC Standard for Generic Requirements for a Product/Equipment
2. TEC Standard for Interface Requirements for a Product/Equipment
3. TEC Standard for Service Requirements
4. Standard document of TEC
5. TEC Test Guide (associated with the TEC Standard)

A voluntary standard may become mandatory as a result of its use, reference, or adoption by a regulatory authority, or when invoked in contracts, purchase orders, or other commercial instruments

3.4 Mandatory standard

A mandatory standard is a standard that requires compliance because of a government statute or regulation, an organization internal policy, or contractual requirement. Failure to comply with a mandatory standard usually may carry a sanction, such as civil or criminal penalties.

The criteria for recommending mandatory status include:

- Protecting the consumer or user against danger to health and safety
- Protecting public or industrial health, welfare or safety
- Protecting the environment
- Ensuring acceptable quality in products whether produced for home use or export
- Ensuring acceptable quality in any case where there is restriction in choice of source of supply
- Requiring adequate information to be given to the consumer or user
- Preventing fraud or misinterpretation arising from misleading advertising or labelling
- Protects national security

3.5 National standard

From an “official” perspective, a national standard is adopted by a national standards body e.g., TEC, BIS, ANSI, Standards Council of Canada, British Standards Institution etc and made available to the public. Practically speaking, however, a national standard is any standard that is widely used and recognized within a country

To be approved /adopted as a national standard it should meet certain requirements, including that it be:

- developed by consensus from a balanced committee of stakeholders,
- subjected to public scrutiny,
- published in the prescribed official languages,
- consistent with existing international and pertinent foreign standards, and,
- taking care of national requirements.

National standards may be developed in India or adopted, with or without changes, from international /regional /other standards. They may be used on a voluntary basis, or made mandatory by organisation policy, national or international regulation, or by law.

3.6 Regional standard

A standard developed or adopted and promulgated by a regional organization e.g., European Committee for Standardization (CEN), CENLEC, ETSI or Pan American Standards Commission (COPANT). Regional standards are generally voluntary in nature, representing the joint action of the national standards bodies of a regional group of nations

3.7 International standard

Defining what constitutes an international standard is a subject of much discussion and there is not general agreement. Annex 4 of the World Trade Organization (WTO) Committee on Technical Barriers to Trade Report 2000 contains a good discussion of what constitutes an international standard. In short, the WTO suggests that a standard may be considered international, if the processes and procedures used to develop it are transparent, open, impartial, and provide meaningful opportunities for WTO members, as a minimum, to contribute to the development of the standard so that the standard does not favour any particular suppliers, countries or regions. Equally important, the standard must have a global relevance and use.

The international standard are normally understood to include -

- a) Standards published by Organisation for International Standardisation (ISO) and InternationalElectro technical Commission (IEC)
- b) Standards published by their international bodies having similar standing as ISO or IEC e.g. ITU, IWTO CIE, IETF, IEEE and
- c) A national or regional standard which in the absence of an international standard, is so widely used internationally that it is generally recognised as being de-facto international standard. In the recent years certain European regional standards produced by CEN and CENLEC and ETSI have achieved the status of de-facto international standards.

3.8 Harmonization

Harmonization is the process whereby two or more nations (or standards bodies) agree on the content and application of a standard. (Source: ANSI’s “Standards Management: A Handbook for Profit”)

4.0 POLICY GUIDE LINES:

- a) Due consultation process shall be followed for adoption of Standards from any SDO.
- b) The adoption shall be processed and approved as a National standard.
- c) The adoption may be parallel adoption i.e. during standard development phase (where TEC is participating in standard development) or after publication of the standard by TSDSI / international standard body.
- d) The national adoption shall be either identical to the standard document of TSDSI/ any SDO or be a modified version of the same in a manner consistent with ISO/IEC Guide 21 “Adoption of International standards as regional or national standards” which will be used by TEC as the guiding document(s) in this regard. However, modifications/ deviations shall be limited mainly to representing national interests i.e. incorporation of/ amendment in respect of national requirements/ parameters/ values.
- e) The adopted National standard shall be voluntary unless decided to be made mandatory as a result of its use, reference or adoption by regulation/ Govt. directive.
- f) Matter(s) related to IPR shall not be the subject matter of adoption process as the same will be governed by the IPR policy of respective standard development organizations.
- g) If subsequent to adoption of TSDSI/ any other SDO standard by TEC, the Global Standards Body like ITU etc. accepts/adopts a revised/ amended version of the parent International Standard, then TEC may adopt such revised/ amended version.

5.0 INSTITUTIONAL FRAMEWORK FOR STANDARD ADOPTION:

TEC shall implement the Standard Adoption process with the help of an institutional Frame Work which may consist of Telecommunication Standards Advisory Committee (TSAC), Consultative Committee(s) (CC) and Task Force(s) setup for this purpose. The process may be coordinated by one of the divisions in TEC preferably standardization division using its secretariat. One such reference frame work is given Annexure -C.

6.0 STANDARD(S) ADOPTION PROCESS:

6.1 General:

The principal objective underlying international standardization is to produce a standard, which the national standards bodies will adopt for use as a national standard. Therefore in all work on particular international project, the prospect of converting the resultant document into a national standard is kept firmly in mind. It is expected that the participating technical committee/ SDO of India clearly identifies during the standard development and submittal process that it is the intent of the standards project to adopt a specific international standard and provide notice in compliance accordingly and ensure that India's best interests have been taken care of by following due consultation process during development phase and reflected in the final version of the international standard.

However, if the national requirements have not been represented during the development phase, the same have to be taken care of during adoption of the standard post publication of the standard by TSDSI/ international standard organization.

6.2 Adoption process:

6.2.1 Receipt of a proposal for ratification/ adoption in TEC: The same shall be examined to see whether the standard proposed for adoption is duly approved by General body/ governing body of TSDSI / SDO concerned and whether the national requirements, which may include the aspects like national security, human health and safety, environment protection or fundamental climatic, geographic and technological reasons, have been represented / taken care of during standardization /transposition. TSDSI / SDO concerned may be required to confirm this.

The proposal will then be put up to the Apex level committee (say TSAC) for examination whether the standard can be adopted as national standard which will, inter alia, take into consideration all or some of the following points while deciding on the matter:

- Whether the standard has been developed as a result of consensus from a wide and balanced body of stake holders across the globe.
- Whether adoption is important from the point of view of framing technical regulation/ Essential requirements.
- Whether national interests have been represented.
- Whether demand/ requirement for such TEC standard exists from manufacturers/ TSPs/ traders/ Govt.
- Whether adoption will be significant/ relevant for economic efficiency or safety of the Indian community.

Note: -

- I. In case, the proposal for which TSDSI/other SDO was involved in the development process as an 'organizational partner' and same kind of adoption cases have been processed in the past, i.e. 3GPP and oneM2M, then the initial meeting of TSAC may not be required and consent of TSAC members for such proposals may be obtained through email to save time for circulating for public comments.
- II. In case, the proposal for which TSDSI/SDO was not involved in development process and adopted the standards (not transposed), or case being received for the first time, then such proposal shall be submitted along with a checklist available at **Annexure-D**.

6.2.2 Proposed standard once agreed for adoption as national standard shall become draft TEC standard for circulation. The draft standard shall then be circulated electronically for inviting public comments through -

- a. Posting on TEC web site
- b. Creation of a link on DOT web site for access of the draft standard on TSDSI/ SDO/ TEC web site.
- c. Intimation through mails to -
 - Key manufacturers
 - Key technologists
 - Licensees and recognized testing laboratories
 - Associated Govt. departments / cross sector standardization organizations
 - Members of advisory/ consultative committees involved in ratification/adoption process.

6.2.3 If the proposals not agreed/ approved for adoption as national standards, TSDSI or the source of the proposal may be intimated accordingly.



Broad process outline for adoption of TSDSI standard

6.2.4 A draft standard shall normally be available for public comment irrespective of its national or international origin. Further, only technical content or the Amendments affecting the technical content of standard shall be open for public comments.

The Period of circulation shall be as per the TFNSCAC Rules, 2025. In case TEC is participating in international standard development, TEC will circulate the draft for comments including a Liaison Statement for comments to global SDO which has been used as a reference for the work –

- Whether the draft document is required to be a national standard?
- Is the reference drawn from globally harmonized SDO?
- Comments and suggestions on various sections/sub-sections of the document.

6.2.5 Resolution of comments: The comments received on wide circulation of the draft shall be compiled and discussed/ reviewed.

If no comments other than the editorials are received, the draft shall be recommended for ‘identical adoption’ after making editorial changes.

If comments/ deviations related to incorporation of/ amendment in respect of national requirements/ parameters/ levels are received, the standard shall be modified accordingly in a manner consistent with ‘ISO/ IEC Guide 21’ and submitted for approval as ‘modified adoption’.

If substantive comments / amendments affecting technical content are received, additional review with a review period of three weeks will be held. The comments received, if not of editorial nature, shall be examined and discussed.

Process of seeking comments and discussion/ review may be repeated to resolve all the issues. After completion of the process, the draft shall be finalized and submitted for approval.

If there are still substantive comments leading to change in specification(s) or if comments reveal a lack of general consensus, the draft standard will be sent back to TSDSI /SDO concerned for amendment/ possible resolution of the issues. If no solution can be reached, the document will be rejected for approval as a national standard.

Comments received are not normally acknowledged, but in ensuring that the committee takes comments properly into account, consultative committee may consider the desirability of

inviting leading contributors to discuss their comments with the committee, if they do not belong to an organization already represented.

7.0 WAIVING OF WIDE CIRCULATION

In exceptional circumstances, the apex empowered committee (e.g., TSAC) may dispense with the wide circulation of a draft standard where the subject matter is non-controversial or the urgency of the standard necessitates immediate action. Such dispensation shall be supported by adequate justification and reasons recorded in writing, including–

- (a) the necessity of provisional notification to expeditiously achieve a policy objective; or
- (b) the risk of non-fulfilment of such objective if provisional notification is not undertaken.

On the basis of such recommendation, the Appropriate Authority may notify a standard or conformity assessment measure on a provisional basis without prior consultation as per Rule 5(3) of TFNSCAC Rules, 2025 subject to the following safeguards:

1. The reasoning for provisional notification shall be recorded in writing, citing clause (a) or (b) above.
2. Within sixty (60) days of such notification, the Appropriate Authority shall initiate a consultation process.
3. Stakeholder comments received shall be duly considered for–
 - finalisation of the standard or measure, with or without modifications; or
 - withdrawal of the provisional notification, if deemed necessary.

Note: Even where wide circulation is waived by TSAC, all other procedures prescribed in the Standardization Guide shall continue to apply.

8.0 CONFLICT MANAGEMENT

The approach followed to resolve conflicting opinion and positions will be consensus based. In case, the committee to collate/ review public comments, is not able to reach on consensus, it will submit its report/recommendations for consideration of Apex committee, after which the draft will be sent back to TSDSI for a possible resolution of the issues. If no resolution can be reached, the document will not be adopted as a national standard. In case of adoption of a standard other than TSDSI standard, if no consensus is reached, the process shall be terminated.

9.0 CONSENSUS

Interpretation of 'consensus' as provided in the BIS "Manual for standardization" which states as follows shall be used. "As per clarification sought from Additional Solicitor General by Legal Department (vide ref: Law/8/392/2004 dated 28 Jan 2004) it was clarified that the word 'consensus' read with the phrase 'substantial support' indicates that the decision does not have to be taken on the basis of unanimity but having regard to the views of reasonably more than the majority of members reflecting different institutions/interests".

10.0 TIMELINES

The entire process shall be completed in a period of 4 months from the date of circulation of draft as per 6.2.2. In case, there is need of extension due to additional review or any other reason the same would be requested from Sr. DDG by DDG (Standardization).

11.0 PUBLICATION, PRESENTATION, LABELING, NUMBERING AND IMPLEMENTATION:

11.1 TEC shall use the following ISO /IEC Guides as the guiding documents while adopting the standards.

- ISO/IEC Guide 21-1, Regional or national adoption of International Standards and other International Deliverables – Part 1: Adoption of International Standards

- ISO/IEC Guide 21-2, Regional or national adoption of International Standards and other International Deliverables – Part 2: Adoption of International Deliverables other than International Standards

11.2 Levels of Equivalence and Local variations:

Even though the objective is to exactly align TEC Standards with the corresponding TSDSI/ International Standards, there will be Standards in which local changes have to be incorporated as there may be legitimate reasons for varying the technical requirements of TSDSI/International Standard. When variations to a TSDSI/International Standard have been included in the equivalent national (TEC) Standard, it is essential that the degree or levels of technical variations are clearly identified and explained in the TEC Standard. ISO/ IEC Guide 21 has identified three levels of international equivalence i.e. Identical (IDT), Modified (MOD) and Not Equivalent (NEQ). For details, **Annexure A** may be referred.

11.3 Publication, Presentation and Designation:

For Publication, Presentation and Designation of nationally adopted standard, procedure prescribed at **Annexure B** may be followed.

12.0 Maintenance of Standards:

While adopting a TSDSI or international standard, all existing amendments and technical corrigenda to the standard shall be considered. Amendments and technical corrigenda published after the adoption of the TSDSI / international standard should be considered for adoption as soon as possible. Adoption of amendments shall follow the same procedure as for the adoption of the original standard.

Standards will be maintained through a change request (CR) process which will be submitted by TSDSI / SDO concerned once a new amendment or a new release is made available by the concerned global SDO on an existing standard.

13.0 Repository of National Standards

The downloadable directory of the national standards will be made available on TEC web site.

Annexure A:

Definitions of Levels of Equivalency of National Adoptions of ISO or IEC Standards

Normative, as applicable

The definitions contained in this annex are excerpted from *ISO/IEC Guide 21 – Adoption of ISO or IEC Standards as regional or national standards*. This annex is normative in connection with actions related to the national adoption of ISO or IEC standards. Any changes in document layout (e.g., in relation to pagination, font type and font size etc.) especially in an electronic environment, have no impact on the degree of equivalence.

A.1 Identical (IDT)

The regional or national standard is identical to the ISO or IEC standard under the following conditions:

- a) the regional or national standard is identical in technical content, structure and wording (or is an identical translation), or
- b) the regional or national standard is identical in technical content, although it may contain the following minimal editorial changes:
 - substitution of decimal point for a decimal comma;
 - correction of any misprints (e.g., spelling errors) or pagination changes;
 - deletion of text in one or several languages from a multilingual ISO or IEC standard;
 - inclusion of any technical corrigenda or amendments issued to the ISO or IEC standard;
 - changes to the title to be consistent with an existing regional or national series;
 - substitution of “this regional/national standard” for “this ISO or IEC Standard”;
 - inclusion of any regional or national informative material (e.g., informative annexes that do not alter, add to or delete from the provisions of the ISO or IEC standard); examples of informative material are advice to users, training guidance or suggested forms or reports;
 - deletion of informative preliminary material from the ISO or IEC standard;
 - changes in wording, i.e., use of synonyms to reflect common language use in the region or country adopting the ISO or IEC standard, such as the use of “elevators” for “lifts” in certain countries;
 - addition, for informative purposes, of recalculated values of quantity units where a different measurement system is used in an adopting country.

A.2 Modified (MOD)

The regional or national standard is modified in relation to the ISO or IEC standard under the following conditions. Technical deviations are permitted provided they are clearly identified and explained. The regional or national standard reflects the structure of the ISO or IEC Standard. Changes to the structure are only permitted if an easy comparison of the content and structure of the two standards continues to be possible.

For transparency and traceability, it is strongly recommended that a national standard adopts only one single ISO or IEC standard. Under certain circumstances, it may be appropriate to adopt several ISO or IEC standards within one national standard. However, this is only practicable for the user if an easy comparison of the content is provided in a list identifying and explaining the changes. Modified standards may also include the changes permitted under identical correspondence.

A modified standard can include such cases as the following:

- a) “The regional or national standard contains less.” The regional or national standard only applies a subset of the available choices in the ISO or IEC Standard, has less stringent requirements, etc.
- b) “The regional or national standard contains more.” The regional or national standard adds aspects or types, has more stringent requirements, includes additional tests, etc.
- c) “The regional or national standard alters a part of the ISO or IEC Standard.” Part of the content is identical, but both the regional or national standard and the ISO or IEC Standard contain some differing requirements.
- d) “The regional or national standard provides an alternative choice.” The regional or national standard provides a provision of equal status, which may be used as an alternative to that given in the ISO or IEC Standard.

(Note: See Annex A of the *ISO Guide* for examples of lists of technical deviations and their explanation.)

A regional or national standard can include an ISO or IEC Standard in its totality and can contain additional technical provisions, which are not part of the ISO or IEC Standard. In this case, the degree of correspondence to the ISO or IEC Standard is either “modified” or “not equivalent”, depending on whether or not the differences are clearly indicated and technical deviations are listed and explained, although the part composed of the included ISO or IEC Standard may not have been subject to any modifications.

A.3 Not Equivalent (NEQ)

The regional or national standard is not equivalent to the ISO or IEC Standard in technical content and structure and the changes have not been clearly identified. This also can include the case where only a minority in number or significance of the ISO or IEC provisions remains in the regional or national standard. This degree of correspondence does not constitute an adoption.

Annexure B

Publication, Presentation and Designation of a nationally adopted standard:

Publication and Presentation:

The adoption of a TSDSI or international standard shall ensure that the identification of the parent standard is clearly stated. ISO/IEC Guide 21 specifies two methods for presentation/ adoption i.e. 'Endorsement' and 'Republication (reprinting/ translation/ redrafting)'

TEC shall use the republication method for adoption of the standards. It will electronically reproduce/ reprint the TSDSI/ international standard as a PDF file, and add a preface/ forward which sets out the TSDSI/ international origin of the document and whether there are local variations, and the reasons for these variations. One of the methods of indicating technical deviations and editorial changes as prescribed in ISO/IEC Guide 21 may be followed. The variations shall preferably be presented in an Annexure following the source text instead of applying them to the text of the source document, such as the use of strikethrough, highlighted inserted variations or marginal bars. Additional normative or informative material may also be added as annexures.

While republishing, a national identifier of the organization (TEC) adopting the TSDSI/ international standard shall appear on the cover page and all other pages of the national (TEC) standard.

Further in describing the degree of alignment or levels of correspondence between a TEC and a TSDSI/ International Standard, the TEC Standard shall be described as either being identical (IDT) or modified (MOD) in relation to the TSDSI/ International Standard. These terms shall be used, which are based on those of ISO/IEC Guide 21-1: 2005. The degree of correspondence to the TSDSI/ international standard shall appear after the TSDSI standard title and reference number including year/date.

Designation / Numbering of national standards that are identical adoptions:

When a national standard is identical to a TSDSI/ international standard, this should be evident to the reader immediately on the cover and title page. The recommended method of identification for identical adoptions consists of including the international standard reference number (letters and number) in combination with or in association with the national designation. Depending on the method chosen, in order to improve transparency, the year of publication of the international standard and/or that of the national standard is added to the number wherever possible. Acceptable methods of numbering in case of adoption of ISO or IEC standard include

a) Single-line numbering: e.g. ANSI ISO 1234:1999 and

b) Two-line /dual numbering e.g.

ANSI ABC 331:1999
ISO 1234:1998

Or

ANSI ABC 331:1999/ISO 1234:1998)

In case of adoption of TSDSI standards, two line approach will be followed with first line mentioning TEC (national) standard reference number followed in second line by TSDSI standard reference number in a manner as given below.

TEC TS – 0001 V1.0.0

Functional Architecture

Adopted from

TSDSI STD T1.oneM2MTS-0001-2.10.0 V1.0.0

2.0 Designating national standards that are modified adoptions:

For modified adoptions, only a regional or national reference number is permitted.

Modified adoptions shall not include the reference number of the adopted international Standard

Example:

TEC TS – 0001 V1.0.0

Functional Architecture

(TSDSI STD T1.oneM2MTS-0001-2.10.0 V1.0.0 MOD)

Annexure C:

Institutional Frame Work for Standard Adoption:

Standard Ratification/ Adoption process shall be implemented with the help of institutional Frame Work consisting of Telecommunication Standards advisory committee (TSAC), a consultative Committee (CC) and Task force(s) setup for this purpose and coordinated by standardization division using its secretariat.

Standardization division

It shall be the nodal division to coordinate ratification/adoption process. It will securitize the proposal(s) received to see, whether the standard proposed for adoption is duly approved by General body/ Governing Council of TSDSI/SDO concerned and whether the national requirements have been represented / taken care of during standardization/transposition. It will further get the proposal examined and approved for adoption as national standard through TSAC before inviting public comments. Standardization secretariat shall also compile the comments received and put up to CC / TSAC for review / approval as the case may be.

The functions/ scope of work and constitution of TSAC, CC and Task force are as follows:

Telecommunication Standards Advisory committee (TSAC)

The Telecommunication Standards Advisory committee (TSAC) shall function at the apex level and shall have following responsibilities. TSAC shall –

- a. examine the issues e.g. whether a TSDSI or an international standard can be adopted as national standard or whether to waive off wide circulation etc.
- b. evaluate and endorse standards for approval/ adoption
- c. perform an oversight role in reviewing the standardization program
- d. strategize and prioritize work areas /standardization activities
- e. advise TEC on matters like ratification/ adoption of standards, formulate standardization policies and strategies to be adopted, best practices to be followed and setting up and dissolution of consultative committee(s)/ task force(s)etc.
- f. collaborate with other standard formulating bodies/ organizations within country and abroad

Constitution of TSAC:

TSAC shall be headed by DDG (Standardization). It will have maximum eleven members including the chairman. The constitution of TSAC shall be as follows:

- DDG (Standardization), TEC
- DDG (Telecommunication Security), TEC
- Chairman consultative committee
- Member CDOT
- Member TSDSI
- Other members - Member(s) from other Govt. bodies /cross-sector organizations, technology experts from industry (OEMs), Members from Network/service providers, and academia /R&D*

(* to be nominated by Sr. DDG (TEC) from amongst the names received)

- Director (Standardization) TEC - as Member Convener

The members from industry / organizations other than those from TEC/ DOT shall be nominated from amongst the persons of repute /having sufficient experience in the field of Telecommunication technology /standardization.

TSAC shall be constituted for a period of two years. However a member may be re-nominated for another term if the competent authority, so decides.

Consultative committee:

Consultative committee shall be a working group constituted under TSAC. Members of Consultative committee shall be technical experts in the respective field of ICT industry, based in India, who are nominated to participate in the standardization related work allocated to the committee.

Scope of work of Consultative committee:

Consultative committee shall collate public comments against any standard, review them and accordingly prepare a report towards inclusion or rejection of those comments. It may also offer recommendations, if any.

Matter(s) related to IPR shall not be the subject matter of adoption process and therefore discussion/ review by consultative committee as the same will be governed by the IPR policy of respective standard development organizations.

Only technical content / Amendments affecting the technical content of standard shall be open for public comments and therefore discussion/ review by consultative committee.

Constitution of Consultative committee:

Consultative committee shall consist of a minimum of ten members including one Chair, two Vice-chairs, one rapporteur and convener cum co-rapporteur. It will be constituted based on the standard(s) to be adopted (applicable technology sector) for a prescribed time period. DDG of concerned technology division shall be the Chairman, vice chairs shall be from the industry/academia, a member from the industry shall be rapporteur and Director of concerned technology division shall be the 'co-rapporteur cum convener' respectively of the committee. Consultative committee members shall be drawn from the following depending upon the standard to be adopted.

- a. TSPs
- b. OEMs of Telecommunication NW equipment and mobile hand sets
- c. VAS providers
- d. R&D including CDOT
- e. Academia
- f. TSDSI/ SDO
- g. Govt. bodies & cross sector standardization organizations
- h. Technical officers (Mobile, Radio, Security, IoT, SN, IT etc.) from TEC
- i. Technical officers (Licensing, NT, Policy, WPC and security etc.) from DOT

Vice Chair and the rapporteur of Consultative committee shall be the persons having sufficient experience in the field of Telecommunication technology /standardization and nominated from amongst the members of consultative committee.

Concerned Technology Division of TEC shall recommend the constitution of Consultative committee as per adoption cases. The Consultative Committee shall be constituted for the period of two years. The concerned technology division may nominate/add new members as expert from the Industry/Academia on case to case basis if required.

Task Force(S):

TSAC /Standardization division may constitute a Task Force for a specific or inter-related work. Task force will submit its recommendations to Consultative Committee or TSAC.

Secretariat:

TSAC and standardization division shall be supported by a secretariat provided for handling the techno-administrative work related to ratification/ adoption of standards and associated standardization activities. The secretariat shall work under the administrative control of standardization division.

Annexure D:

Check-List: TSDSI/SDO concerned will provide all the information/details while sending any new proposal/case for adoption as national standards by TEC as below;

S. No.	Point	Details to be given by SDO concerned	Tick Mark (If provided)
1.	Title of the Standard		
2.	Name of the Standard Development Organization		
3.	Brief purpose of the standard		
4.	Brief the justification for adoption of the standards as National Standards.		
5.	What are the other alternatives available? Names of the competing standards, if any.		
6.	Selection criteria for adoption of the standard.		
7.	Whether the standard proposed for adoption is transposed or adopted by SDO concerned.		
8.	Transposed or adopted identically or with modifications		
9.	Whether the standard proposed for adoption is duly approved by General body/ governing body of SDO concerned.		
10.	Whether the standard was developed as a result of consensus from a wide and balanced body of stake holders across the globe.		
11.	Whether the national requirements have been taken care during standardization /transposition. If yes, kindly brief the same here.		
12.	Whether adoption is important from the point of view of framing technical regulation/Essential requirements.		
13.	Whether requirement for adoption as national standards is received from manufacturers/ TSPs/ traders/ Govt.		
14.	Whether adoption will be significant/ relevant for economic efficiency or safety of the Indian community including Telecommunication industry.		
15.	Whether the Standard proposed for adoption is used internationally by Indian trading partners and is not enshrining obsolete or little used technologies or practices.		
16.	Whether any indigenous requirements (as and when required at later stage) can be included in the adopted national standards.		
17.	IPR and Copyright challenges (if any in future)		

References:

1. ISO/IEC Guide 21-1, Regional or national adoption of International Standards and other International Deliverables – Part 1: Adoption of International Standards
2. ISO/IEC Guide 21-2, Regional or national adoption of International Standards and other International Deliverables – Part 2: Adoption of International Deliverables other than International Standards
3. Manual for standardization - BIS
4. USNC policy on adoption of IEC standards as American National standards (ANS)
5. Standardization guide 007; Adoption of international standards (Standards Australia)