

Government of India
Ministry of Communications & Information Technology
Department of Information Technology

Title: Manual on the Implementation of Policy on Open Standards for e-Governance

Effective Date : The Manual is effective from the date of its notification

1. Purpose

This manual on the “Procedure for Implementation of Policy on Open Standards for e-Governance” (hereinafter referred to as “Manual”) is intended to provide details on the following topics of “Policy on Open Standards for e-Governance”(hereinafter referred to as “Policy”).

- Policy Implementation Mechanism
- Guidelines for Selecting Open Standards as per the Policy
- Rationale and Framework for the Policy

This manual should be read along with the Policy

2. Definitions

Refer to Annexure – I

3. FAQs

Refer to Annexure – II

4. Policy Implementation Mechanism

4.1 Government of India (GoI) shall identify and prioritize the domains to be considered for standardization from time to time based on the request from the stakeholders including industry.

4.2 The Principles of the Policy, for identifying a Standard for a “specific purpose with in a domain” (hereinafter referred to as “Area”) will be applied as given below:

4.2.1. First, the Expert committee will check the Identified Standard against the Mandatory Characteristics (Policy, Section 4.1)

4.2.2. In case step 4.2.1 does not result in identification of Single Standard, then the Standard which meets the maximal Desirable Characteristics (Policy, Section 4.2) shall be preferred.

- 4.2.3. In case step 4.2.2 results in multiple Open Standards (with equal number of Desirable Characteristics), then these Standards shall be referred to Designated Body for further evaluation. This body shall evaluate these competing Standards based on the functional and technical requirements and maturity of the standards to select a Single Open Standard.
- 4.2.4. If multiple competing Standards are still available, then the Apex Body on e-Governance Standards shall take the final decision to arrive at a single Open Standard.
- 4.3 In case of non-availability of an Open Standard for an Area, the Expert Committee for that Area shall appropriately apply Sections 4.3 and Section 4.4 of the Policy, and recommend suitable Interim Standard to be adopted for that Area. The Interim Standards would be reviewed regularly by Designated body to check if any of the Interim Standards (i) qualifies to be adopted as an Open Standard or (ii) Any other Standard has been identified as an Open Standard to replace this Interim standard in that Area.
- 4.4 Exceptions for selecting one or more additional Open Standard in an Area shall be applied by the Designated Body as per Section 5 of the Policy document.
- 4.5 GoI shall publish updated list of selected Open Standards along with recommendations, if any, for progressive adoption of the selected Open Standards by the stakeholders including industry.
- 4.6 GoI would establish suitable mechanism which would inter alia undertake activities like monitoring, testing, compliance and comparison of technical merits of competing Standards, developing Open extensions and enhancements as needed for e-Governance and other related activities.
- 4.7 All future Request for Proposals (RFPs) of e-Governance projects shall include the guidelines for ensuring compliance to Open Standards as per this Policy.
- 5. Rationale and Framework for the Policy**
(Refer Annexure – III)
- 6. Review of the Manual**
The Government has the right to review the Manual as and when required.
- 7. Point of Contact**
All queries or comments related to this Manual should be directed to JS (e-Governance), DIT (jsegov@mit.gov.in) and DG(NIC) (dg@nic.in)

Definitions

- A-I-1) **Apex Body:** A competent authority for Approval of Standards.
- A-I-2) **Expert Committee:** A committee setup by GoI under the institutional mechanism of the Standards to formulate Standards in an identified priority area by following laid down procedure in accordance with Policy on Open Standards for e-Governance and recommending that standard for ratification
- A-I-3) **Extensions:** Additional new-specifications added to the existing standardized-specifications in order to extend the capabilities of the existing functionalities.
- A-I-4) **Interoperable:** The ability to exchange and use information among multiple systems.
- A-I-5) **Open Source:** Open Source programs are software programs whose licenses permit users the freedom to run the program for any purpose, to study and modify the program, and to freely redistribute copies of the original or modified program
- A-I-6) **Patent:** A patent is a set of exclusive rights given by a Government of a country to a patent applicant in which the patent holder is granted the right to prevent others from making, using, selling, offering to sell or importing the invention for a specific period of time. Patents are usually granted for inventions that are considered to be non-trivial, new and novel. Patent grants are territorial in nature in that patents applied for and granted in one country are not automatically recognized in another country.
- A-I-7) **Vendor lock-in** or just lock-in, is the situation in which customers are dependent on a single manufacturer or supplier for some product (i.e., a good or service), or products, and cannot move to another vendor without substantial costs and/or inconvenience. This dependency is typically a result of Standards that are controlled by the vendor (i.e., manufacturer or supplier). It can grant the vendor some extent of monopoly power and can thus be much more profitable than would be the absence of such dependency. The term is commonly used in the computer industry to refer to the situation that can occur due to a lack of compatibility between different hardware, operating systems or file Standards. Such incompatibility can be intentional or unintentional.

Annexure -II Frequently asked Questions (FAQs)

A-II-1) Who is the audience for the Policy on Open Standards?

The DIT Designated Body / agencies responsible for standardization / adoption of Standards must apply this Policy to check the openness of each standard identified for the respective domain. All projects under e-Governance (G2C, G2E, G2G, G2B) shall adhere to this Policy. However other projects (B2B and B2C) are also encouraged to adhere to this Policy.

A-II-2) Whether the legacy system shall be modified to give Open interface for inter-operating with other systems?

Yes. The legacy system should be able to interoperate interface level with other systems. The other systems should not be modified to give non-open-standard-interface for inter-operating with legacy systems.

A-II-3) Will any standard, with patent and free from IPR related encumbrance, be considered as Open Standard?

Yes. The standard with patents can be considered as Open standard if adheres to mandatory characteristics of the Policy.

A-II-4) How long the Open Standard should be supported by Solution Provider?

The Open Standard should be supported until the end-user interest ceases rather than when implementer/Solution Provider business interest declines.

A-II-5) Should the future version of the selected Open Standard have backward compatibility?

While upgrading to a new version of the selected Open Standard for an Area, the new version should ensure backward compatibility to the maximum extent for interoperability. The new version should be considered for adoption if it is superior to the earlier version.

An Open Standard is considered to be superior to another Open Standard in the same Area, if it is having better proven characteristics like technical and functional efficiency, stability, quality, maturity, proliferation and performance.

A-II-6) Explain the term “Technology Neutral Specifications”.

Technology neutral specifications are platform independent, where platform can be Operating System/Hardware/Data transmission devices, etc.

A-II-7) How can a single Open standard improve the technology choices?

Here “Choice” implies freedom to select the appropriate implementation of the single selected Open Standard from the available multiple implementations of the standard.

A-II-8) If extensions are made to a standard without publishing it, how does this affect the main/primary standard?

Open Standard from a not-for-profit organization allows creation of Open Extensions and/or Open Subsets. If some stakeholders create extensions / subsets without publishing, then these extensions / subsets shall not be recommended for use in e-Governance applications by Designated Body. However, the main/primary standard can still be considered without these extensions / subsets.

A-II-9) What is meant by the phrase “Identified Standard should be recursively Open”?

The mandatory characteristics are applicable recursively to the normative references of the Identified Standard i.e. standards which are essential for the implementation of the Standard of a particular version of the Standard.

A-II-10) Explain the term “Adopted” with reference to the Standard.

Not all Standards are developed by the Standards Body. A Standard could be adopted by bringing together related industries and communities of users, government, vendors, industry and other Standards body. The Standards body articulates requirements, evaluates the existing Standards, identifies the gaps, reorganizes overlaps, fills gaps, publishes guidelines and promotes interoperability.

Annexure – III

Rationale and Framework for the Policy

- A-III-1 Technical Standards are used to establish uniform engineering or technical criteria, methods, processes and practices. To ensure interoperability of e-Governance solutions developed by multiple agencies for various Government departments, it is essential that these solutions conform to established Technical Standards.
- A-III-2 For many domains, there are multiple competing Technical Standards that have evolved for various reasons. These Standards also often get reviewed, revised and updated. For any e-Governance application to simultaneously support multiple Technical Standards is a very complex task. A naive approach would require a quadratic number of en-converters/de-converters- one for every pair of available Standards.
- A-III-3 Each of these would also require frequent modification and maintenance whenever there are any updates/modifications in any of the Standards. Supporting any new Standard would also require considerable development effort and substantial man power. All this will lead to unstable and unreliable systems, defeating the purpose of standardization for e-Governance.
- A-III-4 The naive approach is neither desirable, nor necessary. The usual way out is for each application to be based on a single Standard to which other choices can be bi-directionally converted and/or interfaced. A judicious choice of this single Standard is very critical. Ideally it should be a well established, unencumbered, Open Standard, adopted and maintained in a collaborative and transparent manner by all stake holders. This will ensure maximum choice and a level playing field for all technical innovations which only need to ensure complete conformance with the single selected Open Standard.
- A-III-5 This Policy has been designed to meet these objectives. This Policy recognizes that for some Areas, there may not be any Standard which meet all the mandatory characteristics of Openness. Here, the GoI shall use the procedure outlined in Policy for this purpose.
- A-III-6 This Policy also recognizes that in some rare cases, for pressing national needs, , GoI may require the use of additional Standards for certain domains. GoI shall use the procedure outlined in Policy for this purpose.