

Draft Policy on Open Standards for e-Governance
Government of India
Ministry of Communications & Information Technology
Department of Information Technology

Title of Policy : **Policy on Open Standards for e-Governance**

Effective Date : This Policy is effective from the date of notification

Preamble

Govt. of India (GoI) aims to make all Government services accessible to the common man in his locality and ensure efficiency, transparency & reliability of such services at affordable costs; in addition to this, GoI endeavours to provide services to all other stakeholders like public agencies and their employees and business communities. To meet this objective, there is a need to cooperate, collaborate and integrate information across different departments. Government systems characterized by islands of legacy systems using heterogeneous platforms and technologies and spread across diverse geographical locations, in varying state of automation, make this task very challenging.

There is a need to identify Open Standards for the consistent, standardized and reliable implementation of e-Governance solutions which meet laid down objectives of the Policy. While selecting Open Standards due consideration will be given to functional and technical requirements and maturity of the standard.

The “Policy on Open Standards for e-Governance” (hereinafter referred to as “Policy”) provides a set of guidelines for identifying such Open Standards.

1. Objective

The Policy provides a framework for the selection of Standards to facilitate interoperability between systems developed by multiple agencies while providing organizations the flexibility to select different hardware and software for implementing cost-effective e-Governance solutions. It, therefore, promotes technology choice, and avoids vendor lock-in. It aims for reliable long-term accessibility to public documents and information in Indian context.

2. Definitions

(Refer Annexure – I)

3. Applicability

The Open Standards for e-governance will be adopted /evolved based on this Policy.

- 3.1 They shall be applicable at interface and data archival level of all systems used for e-Governance.
- 3.2 They shall be applicable to all prospective e-Governance systems including businesses (G2G, G2B, G2E and G2C) from the date it comes into effect.
- 3.3 In case of legacy and existing systems :
 - 3.3.1 It will be the responsibility of the application owner to ensure that interfaces of legacy and existing systems adheres to Open Standards.
 - 3.3.2 New versions of the legacy and existing systems shall adhere to the Open Standards

4. Policy Statement

Gol shall adopt Single and Royalty-Free (RF) Open Standard progressively for a “specific purpose with in a domain” (herein after referred to as “Area”), to meet the laid down objectives of the Policy.

The Open Standard shall have the following characteristics:

4.1 Mandatory Characteristics

An Identified Standard will qualify as an “Open Standard”, if it meets the following criteria:

- 4.1.1 Specification document of the Identified Standard shall be available with or without a nominal fee. .
- 4.1.2 The patent claims necessary to implement the Identified Standard shall be available on a Royalty-Free basis for the life time of the Standard. If such Standards are not found feasible then in the wider public interest, Fair, Reasonable and Non Discriminatory terms and conditions (FRAND) or Reasonable and Non Discriminatory terms and conditions (RAND) with no payment could be considered.
- 4.1.3 Identified Standard shall be adopted and maintained by a not-for-profit organization, wherein all stakeholders can opt to participate in a transparent, collaborative and consensual manner.
- 4.1.4 Identified Standard shall be recursively open.
- 4.1.5 Identified Standard shall have technology-neutral specification.

- 4.1.6 Identified Standard shall be capable of localization support, where applicable, for all Indian official Languages for all applicable domains.

4.2 **Desirable Characteristics**

In case multiple Standards get qualified as Open Standards then the selection of a Single Open Standard shall be endeavoured by further narrowing down based on maximal desirable characteristics given below.

- 4.2.1 Open Standard having multiple implementations from different agencies.
4.2.2 Open Standard widely used in India or for which technical expertise and support exists in India.
4.2.3 Open Standard that allows creation of Open Extensions and / or Open Subsets. The mandatory characteristics shall also be applicable to these Open Extensions and / or Open Subsets.

4.3 **Non-availability of Open Standard which meets all Mandatory Characteristics**

In cases, where a standard for an Area meeting all the mandatory characteristics of the policy is not available, an alternate standard may be temporarily adopted (hereinafter referred to as Interim Standard) which shall be identified using the methodology outlined below.

The mandatory characteristics shall be relaxed one by one, on a case to case basis, by the Designated Body. until the standard becomes eligible as an Interim Standard. Due consideration will be given to functional and technical requirements and maturity of the standard.

4.4 **Non-availability of Standards which meets functional requirements**

In cases where no standard is available for an Area meeting the essential functional requirements of e-Governance, the Designated Body, GoI should adopt the most appropriate option, in the following order of preference, as an Interim Standard.

- Specifications as per proven Open source reference implementation
- Specifications as per published proprietary extensions or sub-sets
- Development of a new standard by a GoI identified agency

5. Exceptions for Selecting One or More Additional Open Standard in an Area

Gol shall endeavour to adopt Single and Royalty-Free (RF) Open Standard for an Area. However, in view of the sufficient technical justification and in the wider public interest, additional standard(s) in the same domain may be considered by Gol based on the recommendations of the Designated Body. Such standard shall be compatible and bi-directionally interoperable with the already existing selected Standard.

6. Review of the Policy

The Government has the right to review the Policy as and when required.

7. Point of Contact

All queries or comments related to this Policy shall be directed to JS (e-Governance), DIT (jsegov@mit.gov.in) and DG(NIC) (dg@nic.in)

8. Implementation Manual

“Manual on the Implementation of Policy on Open Standards for e-Governance” can be referred for implementation of this Policy through guidelines, FAQ and rationale.

Annexure – I

- a. **Designated Body** An agency/ committee, which is responsible for identifying a standard for an Area, filling the gaps, if any in that standard and recommending that standard for ratification.
- b. **Domain:** A sub-category under an Information Technology field is Domain; specific purpose within a “Domain” is known as “Area”. For example, “Document type for Web publishing content” is one Area under the “Presentation” domain.
- c. **e-Governance** A procedural approach in which the Government and its citizens, businesses, and other arms of government are able to transact all their activities or at least majority of activities using Information and Communication Technology tools.
- d. **Functional Requirement** A function is described as a set of inputs, the behavior, and outputs in a specific Area. A functional requirement describes the functionality that the system is expected to execute; it may be calculations, technical details, data manipulation, processing, any other specific functionality supposed to accomplish in the specific Area. For example, “Loss-less compression raster image” is an Area under “Presentation Domain”, whose Functional Requirement is an image format with compression, but without any loss of quality while doing repeated editing. Whereas “Lossy compression raster image” is another Area under “Presentation Domain”, whose Functional Requirement is an image format with high compression and small size by compromising quality
- e. **G2B** A set of services exchanged between government and the business community.
- f. **G2C** A set of services exchanged between government and the citizen.
- g. **G2E** A set of services exchanged between government and government employees.
- h. **G2G** A set of services exchanged between government agencies.
- i. **Interim Standard** A standard temporarily adopted by relaxing mandatory characteristics, until an appropriate standard is identified, which meets all the mandatory requirements.
- j. **Identified Standard** A standard which meets maximal essential functional requirements for an Area of e-Governance systems.

- k. **Interface** A boundary across which two independent systems meet and act on or communicate with each other.
- l. **Legacy System** An old method, technology, computer system, or application program that continues to be used, typically because it still functions for the users' needs, even though newer technology or more efficient methods of performing a task are now available.
- m. **Maturity** An Standard is considered mature if different implementations, commercial/open, are available, widely adopted and have been stable for some time
- n. **New version of Legacy System** The legacy system which has undergone a major version change due to re-engineering like functional changes, architectural changes, technology changes , change in storage mechanism, design implementation changes.
- o. **Not-for-profit** Not-for-profit organisations include major internationally recognized Standards bodies such as the IETF, ISO, IEC, W3C, OASIS including any agency recognized or designated by the Gol as such for the purpose of Open Standards.
- p. **Open Standard** A standard which meets all mandatory characteristics.
- q. **RAND** An abbreviation for Reasonable And Non-Discriminatory , is a phrase that international standards groups use to describe terms to which a patent contributor to a standard must adhere. If a technology which is part of the standard is to be licensed for a fee, the terms must be (i) non-exorbitant, (ii) published, and (iii) the same for all implementers (rather than subject to individual negotiation).
- r. **FRAND** An abbreviation for Fair Reasonable And Non-Discriminatory , is a phrase that international standards groups use to describe terms to which a patent contributor to a standard must adhere. If a technology which is part of the standard is to be licensed for a fee, the terms must be (i) impartial, (ii) non-exorbitant, (iii) published, and (iv) the same for all implementers (rather than subject to individual negotiation).
- s. **Royalty** A stream of payments for use of a certain type of asset/technology, most typically an Intellectual Property Right (IPR).

- t. **Royalty-Free (RF)** A license is made available with no royalty. The license does not impose any further conditions like restrictions on the use of any asset/technology, intellectual property rights etc
- u. **Specifications document** A document that consists of a set of concise statements of requirements for a system.
- v. **Standard** A specification, method, process or practice for a system that is both widely used and accepted or is sanctioned by a Standards Organization.
- w. **System** A group of interacting, interrelated, or interdependent elements forming a complex whole. Information System is a combination of people, hardware, software, communication devices, network and data resources that processes (can be storing, retrieving, transforming information) data and information for a specific purpose.