



**Identity Ecosystem Steering Group, Inc.**

# **IDESG Standards Adoption Policy**

Version *1.0 draft 10*

*SCC Review Version with Committee Comments*

*08/01/2014*

## VERSION HISTORY

Version #	Implemented By	Revision Date	Approved By	Approval Date	Reason
			SCC		
#2	Clark	May 2013			
#3	Tilton	October 2013			
#4	Clark	November 2013			
#5	Clark	March 2014			
#6 "1.0d1"	Clark	April 2014			
#7 "1.0d2"	Clark/Tilton	May 2014			
#8 "1.0d8"	Drafting Comm	June 2014			
1.0d9	SCC	June 2014			(Version sent for IDESG Committee review)
1.0d10	Clark	July 2014			

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## 53 Introduction

### 54 1.1 Role of standards within the IDESG

55

56 The Rules of Association<sup>1</sup> of the Identity Ecosystem Steering Group (IDESG) state that “The  
57 purpose of the IDESG shall be to develop and administer the process for policy and technical  
58 standards development for the Identity Ecosystem Framework.” It further states that:

59

- 60 • “The IDESG shall not itself be a standards development body, but rather an organization  
61 that promotes the development of standards by other existing standards development  
62 organizations and develops policies that serve to accelerate the development and  
63 adoption of the Identity Ecosystem.” ~~← Some drafting committee members asked  
64 whether the Adoption Process still makes sense if we do not assume an IDESG Trustmark  
65 program. Committee agreed to raise that question with the SCC. →~~

66

67 The first activity within the scope of the IDESG is identified as:

68

- 69 • “Promote and Adopt Standards. The IDESG shall establish forums and procedures to  
70 review applicable standards and adopt those that support achievement of the NSTIC  
71 vision, conform to the Guiding Principles, and meet other established requirements.  
72 Additionally, the IDESG shall
- 73 ○ recommend standards be established when gaps are identified; and,
  - 74 ○ advocate for standards to be established and adopted in a timely manner and be  
75 sufficient to keep pace with emerging technology and market trends.”

76

77 Adopted standards form part of the Identity Ecosystem Framework, inform the work of the  
78 IDESG committees, and will be relied upon as part of the Trustmark program. “The IDESG shall  
79 encourage harmonization of standards and policies and shall always strive to recognize the  
80 impacts of policy and standards on all stakeholders in the Identity Ecosystem.”<sup>2</sup>

81

82 The IDESG Plenary will review, recommend, approve and adopt “standards related to the  
83 development and governance of the Identity Ecosystem.” The IDESG Management Council shall  
84 “Review proposals for the standards, policies, and other components of the Identity Ecosystem  
85 Framework prior to consideration by the Plenary.”

86

87 It is the purpose of this Standards Adoption Policy to define the policies and processes by which  
88 standards are adopted into the Identity Ecosystem Framework.

89

<sup>1</sup>

*Rules of Association of the Identity Ecosystem Steering Group (IDESG)*, Revised April 10, 2013,  
<https://www.idecosystem.org/ROA>.

<sup>2</sup>

Ibid.

## 1.2 Open standards

~~<<T1>> The purpose of an "open standards" criterion within the IDESG system is to implement the call of the White House NSTIC (the "National Strategy") promotes the adoption of existing, open standards to ensure the privacy, security, and interoperability of data interfaces and use in the identity ecosystem. In addition where new standards may be needed, the NSTIC strategy promotes non-proprietary, international, and industry-led standards development efforts. for the use of open standards as the preferred methodology for interactions in data regarding identity between independent parties within identity ecosystems. As noted in the National Strategy, and multiple prior governmental directives and best practices, widespread adoption and success for identity ecosystems depends on voluntary participation and widely available, cost-effective methodologies.~~

While some identity ecologies may have their own satisfactory proprietary or closed methods, the NSTIC open and scalable ecosystem concept depends on the ability of large groups of enterprises, institutions and individuals to federate and conduct interactions regarding identity data, voluntarily, with confidence that they will be able to use their own systems and methods, within their own environment, while confidently relying on identity data interactions with each other across organizational boundaries by means of stable, vendor-neutral methods with well-declared meanings.

That requirement of open accessibility to newcomers, in "openly federating" systems, generally can be addressed by the criteria for open standards use that are pervasive in US public policy. "Voluntary consensus standards" use is preferred, as a policy matter, because those methods are:

- Neutral as to vendors, and more accessible by DIY implementers. The transparency and quality generated in an open standards process generally results in higher quality, and methods less tied to the peculiarities of any one offering. These requirements also help address competition law issues, so that a government policy is not seen to favor a specific supplier.
- Open accessibility of a system to any implementer, regardless of system or software, also enhances positive network scale effects, by making it easier for newcomers to federate and transact without high switching costs. When a higher volume of transactions is enabled, this also can result in cost savings from the creation and marketing of common interfaces, tools and service providers.

## 1.3 IDESG Standards Registry

The corpus of standards adopted by the IDESG as part of the Identity Ecosystem Framework is contained within the IDESG Standards Registry. This registry shall list all standards that have been approved for adoption by the IDESG plenary, along with metadata about each such standard. Section 3 describes the process through which adoption occurs.

IDESG also maintains an informal web resource, uncritically listing all known standards, specifications and similar guidance, related to identity management and NSTIC's domain, of

which the IDESG is made aware. That wiki-based resource is intended to serve as a finding tool; inclusion of an artifact there is not as an evaluative statement.

## 1.4 Standards vs. specifications

In the course of its work, the IDESG will create and adopt many documents to serve its many purposes and activities. Some of these documents may be incorporated into, or be sanctioned as authoritative guidance within, IDESG's Identity Ecosystem Framework. In this document, the word "specification" generally refers to a specific data structure which is defined by a document. That may include markup languages, code, methodologies, APIs, policy guidance or other recommended behaviors; and may come from a single source or a group, and from industry, academic or governmental sectors or combinations of them. ▸

—Whatever their merit, not all specifications are standards. The word "standard" implies a higher degree of specificity and testability. According to the International Organization for Standardization (ISO):

- A standard is a document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose.

Section 4 describes the criteria for determining if a document is a standard, if it is an “open standard”, and if it is suitable for IDESG adoption.

## 1.5 Profiles and portions of standards

<<T2, T3>> An implementation profile, to apply an existing standard to the needs of a specific community or use case(s), may also be reviewed and processed by the SCC under this Policy, provided that the underlying standard that the profile elaborated has been reviewed, adopted and included in the IDESG Standards Registry.

Under this Policy, committees or other stakeholders may recommend adoption of only a specified portion or sections of an existing standard, rather than the entire standard; and the Plenary may elect to include only such a portion in the the IDESG Standards Registry.

## 2 Policy Statements

<<H0>> The following general principles and assumptions apply to the Standards Adoption Process described in this document.

### 2.1 IDESG/SCC is not an Standards Developer.

<<H1>> IDESG shall encourage and assist in the creation and adoption of data specifications and standards; however, neither IDESG nor its Standards Committee is intended to serve as a primary source of their drafting and for the creation of new data specifications or standards. <<H2>> The primary role of the IDESG is to empower and facilitate encourage and assist the creation of identity management and identity federation activity within and by individuals and groups of stakeholders (thereby creating or facilitating persistent "ecologies"); identify and describe their needs for information & communication technology ("ICT") methodologies, and to identifying and encouraging the development of standards to fulfill those needs. ThisThe Adoption Process provides structured methods for stakeholders, by working through is intended to structure and define IDESG, to develop's requirements, discovery, definition, cataloging, assessment and recommendation processes for ICT standards. The actual drafting and development of those standards, which largely are expected to be conducted developed by other, independent host Standards Developers. <<H3>>

### 2.2 IDESG/SCC will work with Standards Developers to promote for standards availability.

<<H4, H5>> The National Strategy calls for the identity ecosystems encouraged by the IDESG to be based on open and affordable standards to ensure wide adoption, vendor-neutrality and ready availability. IDESG expects that Standards Developers will participate in the development and discussion by the IDESG community of needs for ICT functionality and standardization within its identity management and identity federation scope. IDESG will communicate the discovered requirements and needs of its stakeholders, for new data standards, to Standards Developers for the purpose of encouraging requirements-driven development of standards projects. When an Standards Developer's output of standards and specifications is nominated as a method deserving broader adoption or consideration within IDESG's domain and identity ecologies, the Adoption Process will be used to evaluate its appropriateness. IDESG also will encourage candidate specifications which have useful functionality in its domain to work with Standards Developers to become approved as appropriate for inclusion in IDESG's ecology.

### 2.3 IDESG will establish suitability criteria for standards adoption.

<<H6, H7>> "Open standards," as that term and concept is used within the National Strategy, and by governmental policies requiring or encouraging the use of open standards, means ~~data~~-standards <<T4>> which have a set of "open" qualities referring to their availability, transparency, development process, licensing and neutrality. These qualities are defined, for

IDESG purposes, by the Standards Criteria (in section 4) as applied by the Adoption Process (in section 3). That quality is distinct from, and that assessment does NOT include, an evaluation of the fitness of a proposed standard for its particular purpose, or a functional assessment of its merit or interoperability with other specific technologies. That second inquiry belongs, within IDESG's activities, to the substantive committees or work panels having expertise in the functions in question. Thus, for example, a proposed cybersecurity standard, suggested for broad use within IDESG-endorsed frameworks, might have:

- its security functionality, and suitability for use, assessed by the Security Committee; and
- the degree to which it is an "open standard", and thus sufficiently available for use, assessed by the Adoption Process.

#### **2.4 SCC will oversee standards adoption.**

The Adoption Process as defined in this document ~~will shall~~ be managed by IDESG's Standards Coordination Committee (SCC), ~~in the manners as specified~~ in Section 3 below, subject to the governance of the IDESG through its plenary and other governing mechanisms. The primary role of the SCC will be to arrange for evaluation of candidate standards, when nominated for evaluation, using the Adoption Process, which will result in recommendations and reports to the IDESG Plenary.

#### **2.5 SCC will be the primary point of Standards Developer liaison.**

The SCC ~~shall be the primary point of contact and oversight of approved liaison arrangements will be responsible for liaising~~ with Standards Developers. Liaison relationships will be initiated as needed and shall go through the Management Council liaison approval process. Interaction with Standards Developers will occur either (a) through the SCC, or (b) in cases where a particular IDESG expert committee initiates a relationship, will be advised to the SCC.

#### **2.6 Significance of Adoption Process.**

~~Only adopted standards will be normatively referenced within official IDESG work products and Identity Ecosystem Framework. The reason for the IDESG instituting a formal process for adopting standards is to ensure their suitability for inclusion in the Identity Ecosystem Framework (IDEF). Therefore, any standard so included should have been reviewed and approved for adoption before being employed normatively referenced within elements of that the~~ IDEF. Standards cited in draft work products intended for inclusion within the IDEF should be nominated while the document/work product is in draft form so that it will be found in the registry at the time of work product submission for approval. Note that this does not apply to references to documents or content that are not standards (i.e., they are specifications or other useful documents but which are not standards).



### 3. Standards Adoption Process

The process by which a standard is identified, evaluated, and adopted into the Identity Ecosystem Framework is described herein.

#### 3.1 Process flow

<<H12, H13>> Nominations for candidate standards to be used in IDESG's endorsed frameworks and identity ecologies may come from (a) IDESG's inventory efforts (described below), (b) <<T5>> IDESG committees (such as the Security Committee) who identify standards requirements or propose one or more specific candidates for review, or (c) from the results of IDESG's own use case development work. The SCC shall identify applicable standards and ascertain gaps in existing standards based on the established use cases and those incoming nominations. The SCC shall use designated IDESG liaisons for communicating any identified gaps to the Standards Developer and for monitoring progress of the standards project within the Standards Developer.

As candidate standards for examination are identified as relevant for consideration by an IDESG committee or stakeholder, they will be queued (by the Standards Committee) for review, as described in the next section. \_\_\_\_\_

Figure 1 depicts a high level functional view of the standards adoption process flow. << H14>>

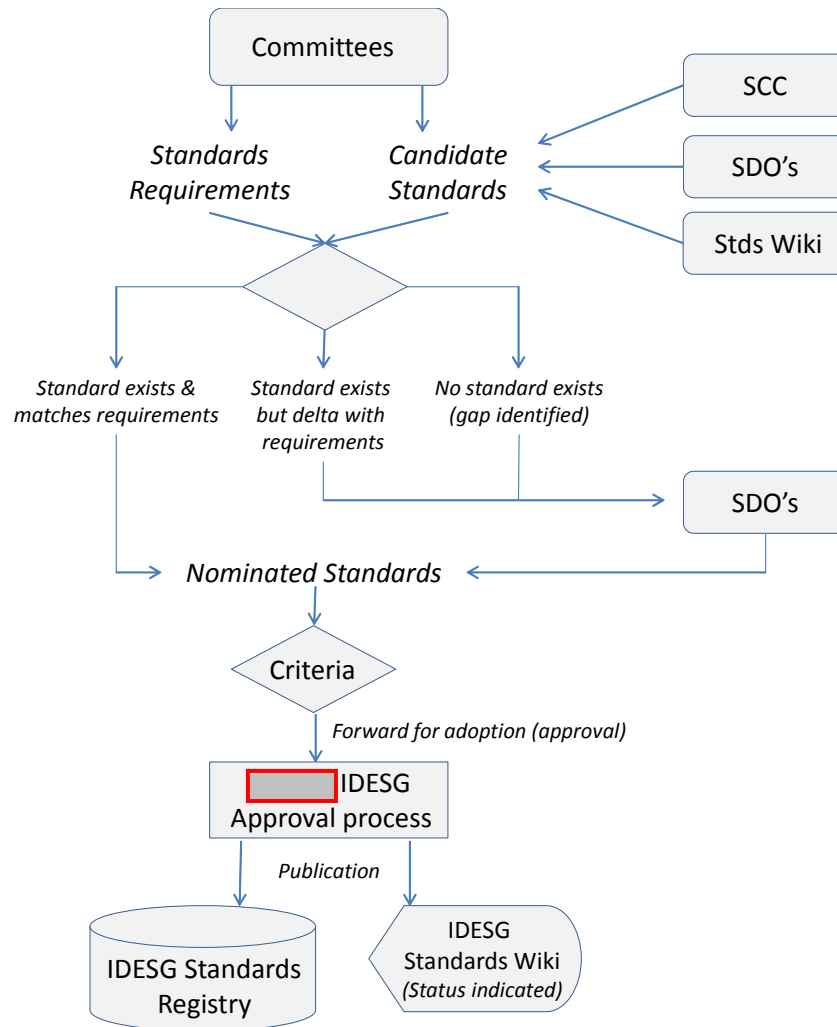


Figure 1. Standards Adoption Process Flow

### 3.1.1 Gap identification. <<H15>> Gaps in available standards to meet the needs of the IDESG and the Identity Ecosystem framework may be identified in several ways:

- Requirements analysis.** As part of their ongoing activities, IDESG committees may develop sets of requirements, including standards requirements. For example, in the development of a functional model of the Identity Ecosystem, requirements may be identified. Likewise, as the IDESG use cases are developed and analyzed from various perspectives, standards requirements may be derived. When these requirements are analyzed to determine whether they can be satisfied by existing standards, it may be determined that either
  - A standard exists, but needs to be revised (updated or expanded) to completely satisfy the requirement, or
  - No standard exists to address the specific requirement(s)

- “Known gaps”. <<H16>> As a community, we are aware of some identity-related standards gaps that for one reason or another have not yet been addressed by an Standards Developer. These may be collected through a solicitation process; ~~Stakeholder inputs. IDESG stakeholders may identify gaps to the SCC. For example, an IDESG committee, stakeholder group, or an NSTIC pilot may identify a gap and/or propose a standards project.~~

<<H17>> Once a gap is identified, it must be described and a proposal should be created for a standards project to fill the gap. ~~Once the scope of work is understood, an Standards Developer must be identified to execute the project.~~ If multiple gaps are identified in the same timeframe, the SCC shall prioritize the processing of those gaps in accordance with the current needs of the identity ecosystem framework and consistent with the principles contained in this document.

**3.1.2 Standards Developer selection.** <<H18>> Once a standards project proposal has been drafted, IDESG may wish to identify a suitable Standards Developer to take on and host that project, or may issue an open call for standards projects to fulfill the identified needs. When a selective request is made, Standards Developers shall be selected based on:

- Qualifications related to the subject matter
- Criteria for openness and affordability as described in Section 4
- Adequate personnel to progress the work

Standards Developer selection shall proceed as follows:

- Standards Developer nominations will be made to and by the SCC
- The SCC will evaluate the nominations, including interviewing of Standards Developers as appropriate, applying the above selection criteria
- If more than one Standards Developer has been nominated, the SCC will vote on the Standards Developer to be offered the project

Once selected, if a Standards Developer is neither a member of the IDESG nor has a formal liaison relationship between the IDESG and the Standards Developer, such a liaison shall be established and an SCC member assigned as the liaison representative. The liaison representative shall monitor the progress of the standards project and report back to the SCC. Other IDESG/SCC members may join the Standards Developer to participate in the project at their discretion.

## 3.2 Standards adoption life cycle

<<H20>> The standards adoption process is implemented through a staged process represented as a life cycle, as depicted in Figure 2 below.

Standards Inventory	Standard Revision/ Development	Standard Nomination	Standard Review	Recommended (Submitted)	Approval & Adoption
<ul style="list-style-type: none"> <li>Collection of existing identity-related standards.</li> <li>Standards Wiki – <ul style="list-style-type: none"> <li>Collection</li> <li>Access</li> <li>Feedback</li> </ul> </li> <li>Source of candidate standards</li> </ul>	<ul style="list-style-type: none"> <li>When gaps exist, work with SDO to either: <ul style="list-style-type: none"> <li>Initiate a new standards project to develop a new standard</li> <li>Initiate a revision of an existing standard to better meet IDESG requirements</li> </ul> </li> <li>Requirements come from SCC &amp; other committees</li> <li>Liaise throughout project</li> </ul>	<ul style="list-style-type: none"> <li>IDESG committee or SCC nominates a standard for adoption</li> <li>Nomination form (online)</li> <li>Nominator defines purpose/relevance and GPs addressed.</li> </ul>	<ul style="list-style-type: none"> <li>SCC reviews nominated standard.</li> <li>Standard criteria applied (answer the question – “Is this a &lt;an open&gt; standard?”)</li> <li>SCC may meet with nominator for Q&amp;A.</li> <li>SCC may liaise with Privacy Committee for preliminary review.</li> </ul>	<ul style="list-style-type: none"> <li>Standard to be balloted by the plenary for IDESG adoption.</li> <li>Adoption means inclusion in the IDESG Standards Registry.</li> <li>Undergoes all MC and plenary approval processes as defined in the RoA.</li> </ul>	<ul style="list-style-type: none"> <li>Approved IDESG work product.</li> <li>Included within “IDESG Standards Registry” – list of standards which form part of the Identity Ecosystem Framework.</li> <li>Ready for use to inform (and be normatively referenced within) other IDESG work.</li> </ul>
<p><b>Progression gate:</b></p> <ul style="list-style-type: none"> <li>Standard is nominated for consideration.</li> </ul>	<p><b>Progression gate:</b></p> <ul style="list-style-type: none"> <li>New/revised standard published</li> <li>Standard entered into Inventory</li> </ul>	<p><b>Progression gate:</b></p> <ul style="list-style-type: none"> <li>Nomination form submitted</li> </ul>	<p><b>Progression gate:</b></p> <ul style="list-style-type: none"> <li>Meets ‘standards’ criteria.</li> <li>SCC approves forwarding standard for adoption (recommends it for adoption).</li> </ul>	<p><b>Progression gate:</b></p> <ul style="list-style-type: none"> <li>Plenary ballot passes.</li> </ul>	<p><b>Progression gate:</b></p> <ul style="list-style-type: none"> <li>N/A.</li> <li>Standard may be removed from the approved list or may be replaced by newer version by ballot.</li> </ul>
Individual/ AHG	SDO	Committees	SCC	MC/Plenary	IDESG

Figure 2. Standards adoption life cycle

The Standard Adoption Lifecycle phases are designed to provide a framework for effectively achieving the goals of the SCC to review applicable standards and adopt those that support achievement of the NSTIC vision, conform to the Guiding Principles, for standards to be established and adopted in a timely manner and be sufficient to keep pace with emerging technology and market trends.

The Standards Adoption Lifecycles consist of six **dynamic** phases: <<H21>>

**3.2.1 Standards Inventory:** <<H22, H23>> SCC will lead the collection of existing **relevant identity-related** specifications and standards, on an uncritical basis, welcoming all data, and establish a standards Wiki for access and feedback and identifying their sources.

**3.2.2 Standards Revision and Development:** SCC will work with Standards Developers to close gaps. If needed, SCC may initiate or seek the initiation of new standards development projects, and/or revisions to existing standards, for alignment with IDESG requirements. (See Section 3.1.1.) SCC will assist IDESG committees in integrating their substantive requirements into those communications.

**3.2.3 Standards Nomination:** When a candidate standard is proposed for use in an IDESG-endorsed process, by an IDESG committee or SCC standards nomination (from its gap analysis review), then it is flagged for official review as described below, before the Plenary's approval. SCC should develop a nomination form for the Standards Wiki for all such submissions and nominations, which establishes a forum for a nominator to articulate the purpose, relevance, and source information for candidate standards, as well as consistency with the NSTIC

Guiding Principles and NSTIC and IDESG's values in navigating the new identity-enabled online world.

**3.2.4 Standards Review:** SCC will review each nominated candidate standard, against the Standards Adoption Criteria, and post a notice to the IDESG community inviting feedback on the candidate standard's open attributes (including its availability and any IPR issues), and its satisfaction of the Adoption Criteria. The results of that review and open feedback process will be compiled into a report provided by the SCC to the IDESG Plenary.

**3.2.5 <<P1>> SCC Recommended/Submitted Standards for IDESG Approval Plenary Ballot:** <<H28, H29>> Those SCC reports will be used to inform any proposed IDESG Plenary action to which includes the approve or endorsement of a candidate standard, and shall be transmitted to Plenary members before their decision, <<H27>> as well as to any intermediate bodies whose approval may be required by the IDESG RoP. ~~should include (in addition to the functional suitability recommendations from the appropriate IDESG Committee(s)) an explicit decision to endorse, or reject, the SCC's report on the candidate standard's openness and availability.~~ The outcomes of those ballots, and that report, ~~shall~~ should be incorporated into the information made available in the IDESG standards registry.

**3.2.6 Approval and Adoption:** <<H26, H30>> Once the Plenary has approved a standard, using the procedure described above, that, the standard ~~shall be~~ is listed within the IDESG Standards Registry. Standards in the registry may be removed or replaced by plenary ballot.

### 3.3. Roles and responsibilities <<H36>>

**3.3.1 Standards Committee - <<H31>>** ~~The SCC will build on and use existing standards and specifications as much as possible.~~ The SCC will maintain the Standards Wiki and Standards Inventory - identifying and publishing lists of new and/or existing open standards relevant to the NSTIC Identity Ecosystem. When there is a need to modify existing Standards, then the SCC will work with the IDESG committee having expertise in that domain to document the recommended modifications and work with the relevant Standards Developer to initiate the work. In cases where it is not feasible for the owning Standards Developer to modify the standard and there are no alternative standards, the SCC may provide recommendations on how to proceed. The SCC shall be the primary entity within the IDESG for the establishment and maintenance of Standards Developer liaisons.

**3.3.2 IDESG Committees - <<T6>>** The ~~substantive~~ committees may nominate candidate standards for adoption, as being relevant to the ecosystem or an included element in a set of procedures recommended for IDESG endorsement. IDESG committees may offer requirements for identified standards and seek new projects, or modifications to existing projects, from relevant Standards Developers (via the SCC). Committees are encouraged to contribute to the Standards Inventory.

397

398     **3.3.3 Standards Developers** - <<H33, H34, H35>> Standards Developers should identify  
399 existing standards applicable to the NSTIC effort, and suggest new standards projects or revisions  
400 of existing standards to meet NSTIC identity ecosystem needs. The SCC will focus on direct  
401 collaboration with relevant Standards Developers such as *de jure*, consortia, professional society  
402 and industry associations (e.g., IETF, OASIS, W3C, ISO, ITU, and relevant other consortia), ~~in the~~  
403 ~~area of Security and Identity Management. IDESG will seek to Standards Developers will~~  
404 establish or maintain liaison relationships with relevant Standards Developers ~~the IDESG/SCC~~  
405 when standards projects are initiated.

406

## 407 4 Standards Criteria

### 408 4.1 Common Principles

409 There is a common constellation of principles generally used to determine the suitability of  
 410 proposed specifications for broader implementation in the service of public policy goals. Each of  
 411 the following requirements appears in some manner in each of the principal systems described  
 412 in Section 1.2 above. <<H37, H38, H39, H40, H41>>

413

414 This Standards Adoption Policy should be reviewed and refreshed by the SCC as needed, and  
 415 transmitted to the ~~and sent through Management Council review and~~ Plenary adoption (and any  
 416 intermediate bodies whose approval may be required by the IDESG RoP) <<P2>> periodically, or  
 417 at a minimum every 3 years.

418

419 <<T7, T8>> In some cases, determinations on the criteria listed below may be specific to a  
 420 proposed standard under review. In others, a recent positive determination regarding a  
 421 standards developer's process or characteristics may be applicable to subsequent proposals  
 422 from the same developer, avoiding the need for re-evaluating the same matters.

#### 423 4.1.1 Primary characteristics

- 424 • *Participatory openness*, in the sense that anyone reasonably can participate .
  - 425 ○ Openness facilitates balanced input, and retards the exclusion of stakeholders or
  - 426 use cases. Some standards developers have explicit "balance" composition rules.
  - 427 Others believe that better results come from proactive recruiting, and level-
  - 428 playing-field rules that make participation attractive for minority stakeholders,
  - 429 than from quota approaches.
  - 430 ○ Some standards developers vary in the degree to which individuals, as opposed to
  - 431 companies, may participate.
  - 432 ○ <<H43>> Some degree of participation fees have generally been found
  - 433 appropriate, although it's possible that a "rich players club" with too high an entry
  - 434 barrier might be found inappropriately exclusionary. (See "Affordability" below.)
- 435 • *Fairness and due process* rules to enforce balanced decisions and consensus
- 436 methodology. <<H44>>
  - 437 ○ At a minimum, published rules and an absence of a track record of ignoring them
  - 438 seem essential.
  - 439 ○ Usually includes enforcement mechanisms reasonably assuring that the rules are
  - 440 followed. This can be difficult to measure or assess in the case of small or
  - 441 volunteer-run groups.
  - 442 ○ In practice, it appears that some agencies run spot-checks on this issue by seeking
  - 443 and evaluating assertions that significant points of view were excluded.
- 444 • *Transparency*, or openness in the sense of public access to inputs and results. <<H46>>
  - 445 ○ The degree of availability of draft material (as opposed to final products) varies
  - 446 widely among standards developers at present. Their justifications for securing



- draft information range from preserving it as a member-only benefit, to keeping it distinct from final work ready for implementation, to assertions that technical debates may be more robust if not conducted transparently.
- There is a related but difficult-to-measure problem with groups who have transparency rules in theory (such as posting and archiving practices, and meeting notice rules), but tend not to honor them in practice. <<H47>>
  - *Function-oriented description*, as opposed to specifying design or product-specific characteristics. <<H48>>
    - This requirement obviously retards lock-in or tying to a single product or methodology other than the specification itself.
    - Description of the proposed functions also allows a review process to assess the market demand, and the ecosystem niche or role which the reviewed method may fill – thus supplying guidance on the appropriateness of its inclusion.
    - Descriptions by performance feature (as opposed to "do it like this exemplar product") tend to give better guidance to developers of new conforming products, and are more readily adaptable into useful conformance clauses for testing purposes. Examples of function-oriented descriptions should usually be found in the scope statements of standards projects, where intended outcomes and boundaries are described in detail, but proprietary processes generally are not referenced.
  - <<T9>> *Affordability*, such that the benefits of the standard are within the means of all stakeholders <<H49>> across the economic spectrum ranging from individuals, entrepreneurs, micro and small enterprises to large enterprises.
    - <<H50>> Some published standards are available only by purchasing a copy (or access) for a stated price. Current US government public policy often finds it appropriate for SDOs to pass along the reasonable costs of development. There is some pushback on this principle from the "open data" movement, on the grounds that public policies which are amount to regulatory requirements should be freely available, to enable review and compliance.
    - Standards may also bear royalty requirements or similar costs that require users to pay for their use. Those new costs may affect its suitability for use in the identity ecosystem. Some governments express a preference for low-cost, royalty-free, freely-available or open source standards in order to support wide implementation and access.
    - Other activities related to the development of, participation in, or use of a standard may give rise to other costs which must be considered in assessing its affordability, including participation costs (see "participatory openness"), implementation costs, and certification costs. Innovations that reduce the cost of standards participation are encouraged.
    - The significance of these costs may depend on the nature of the use (*e.g.*, is it to be used only through large software installations, or by all citizens?) and market effects (*e.g.*, are alternatives available, or likely to evolve?).
  - *Relevance*
    - A standard should be consistent with the needs of the Identity Ecosystem and with the NSTIC Guiding Principles.



#### 4.1.2. Requirements derived from the primary characteristics <<T10>>

- <<H52>> Minimum Adequate public review procedures creating genuine opportunities for, and consideration of, feedback from non-participants.
  - Parties who do not wish to invest the time or licensure necessary to actively contribute to a standard still may represent stakeholders whose views should be considered.
  - Several of the above bodies explicitly require minimum durations for public review, or replies or acknowledgments of public comments received, or both.
- *Stable hosting arrangements* likely to support the intended access and permanence of the outputs and relevant archival material.
  - <<H52>> Artifacts must be persistently available with a stable host: The access and openness deliverables noted above are of little value if artifacts cannot be found and relied upon, over time, after their issuance. ~~Even in the relatively fast-moving ICT sector, it appears that the lifecycle of use for data standards may be measured in decades, while the hype cycle that supports their dot.org activity may be limited to years, or even months.~~
  - This archival imperative may apply to draft inputs and metadata as well as final approved outputs.
  - <<H53>> To some degree, provisions for monitoring and enforcing the maintenance phase of published standards – managing errata, maintaining their integrity via copyright management, and maintaining conformance or interoperability criteria – also may be relevant. The need for these functions may vary widely depending on the nature of the standard.
- *Intellectual property rules* with sufficient certainty, access and enforcement.
  - The same principles of clearly-stated rules, and reliable enforcement, noted for process rules, above, also should apply here, so that stakeholders who adopt or contribute to a project can do so with reasonable knowledge of the known rights consequences.
  - Outputs that are only available on extraordinarily-limited license terms may not serve the goals of a broadly implementable standard. Some governments take this issue further, and express a preference for royalty-free, freely-available or open source standards in order to support wide implementation and access. Standards with disproportionately expensive usage fees or royalty requirements are unlikely to promote a widely-useable ecosystem.
  - Standards whose development allows contributors to attach complex conditions, of the outset (hostage-taking at the design stage), may not develop freely in response to feedback from other stakeholders.
  - Overly-restrictive licenses required to implement a final standard, especially those which require negotiation or surveillance by competitors (hostage-taking at the implementation stage), may impede use of the standard or related technology, as is implied in the SEP cases.

## 4.2 Special Requirements for Early-Stage Technologies

<<T11>> One weakness of the foregoing traditional analysis is that it treats all standards as if they don't really exist until they are finally issued. In practice, modifications and new technologies are coming along constantly. At any given time, there ~~often~~<sup>always</sup> are ~~relevant~~<sup>worthy</sup> <<H54>> projects in development that have not yet fully brought themselves into an accredited standards process. At the same time, of course, there also are private projects that either have no intent of becoming open, or publicly available; or that present themselves as "standards" without ever satisfying the openness needs suitable to public policy use. Accordingly, any identity ecosystem, and its implementers, must make choices about the adoption of methods that might later lead to open standards, or might turn out to be a unsupported dead end, or a proprietary path under the control of a single vendor or stakeholder group.

A balanced approach that allows for flexibility and innovation may need to establish some general principles for working appropriately with new, incomplete proposed methodologies for handling and structuring information. Here are some draft principles for further consideration:

While long-term, large-scale deployments and dependencies require the assurances and qualities sought by ~~the NTTAA~~ <<H55>> ~~and~~ the National Strategy, any developing ecosystem also will have a number of pilot projects, small implementations, and experiments. These may not yet be the basis for a mandate or wide roll-out, so the use of not-yet-standardized methods may be perfectly appropriate. Among the foregoing (draft) common criteria, the requirements of:

- *Participatory openness,*
- *Fairness and due process, and*
- *Stable hosting arrangements*

probably are premature and reasonably might not be applied to experimental pre-standardization projects. The other six criteria, plus one additional special one, should still be applied even to the assessment of early-stage efforts:

- *Transparency to the public:* Transparency often still is needed, even if to a lesser degree, so that the outputs of a proposed methodology can be evaluated by a ecosystem participants. As an example, note that the NSTIC funded pilot projects have been required by NIST to make public interim reports to the IDESG. The projects are not obligated to produce all results publicly. However, some degree of public information and reporting puts the IDESG and stakeholders in a position to assess whether to consider incorporating a candidate technology into broader systems; and whether open standardization or sourcing of that technology would be an appropriate next goal.
- *Function-oriented method descriptions:* The ability to understand a project's methods, free of specific proprietary product or method use, significantly assists

implementers in replicating the experiment's success with different tools. That view into a project more readily lends itself to future standardization and broad use, than would a statement like "we used the Foo Inc. product."

- *Minimum public review procedures:* <<R1>> Similarly, external projects that seek preliminary endorsement or use in the ecosystem should be subject to exposure for meaningful feedback, as the cost of that interim recognition. Without that mechanism, there would be little opportunity or motivation for those emerging methods to socialize into, and collaborate with, other technologies so as to become sufficiently interoperable.
- *Intellectual property rules:* To some degree, the eventual license availability of a developing technology should be clear from a project's launch. Often the license terms applicable to a final standard are dictated by the practices used, and contributions, permitted during its formation. For that reason, any experimental method that seeks to be embraced as part of a large and widely available ecosystem should be able, *at its initiation*, to demonstrate adequate open licensing and availability will be possible, on terms are reasonable in light of its intended use. In that way the ecosystem can be reasonably assured that its resources are doing more than providing public support to private for-profit product development. For that reason, a statement of intent or declaration about future IPR availability should be required at a very early stage. (For example, if a particular functional domain was expected to be directly accessible to consumers without cost, it might be an appropriate constraint, imposed by the IDESG endorsement process, that projects to develop standards needed to implement that function be scoped not to bear royalties.)
- *Affordability:* A new project may not have clearly developed market prices or plans for economic affordability. Nevertheless, in the same sense as its eventual anticipated licensing (above), its anticipated path towards availability for all stakeholders should be assessed at its outset.
- *Relevance:* The degree to which the developing technology is consistent with and fulfils the NSTIC Guiding Principles is a necessary consideration even for early-stage projects.
- *Prospective commitment to open standardization:* If an identity ecology is asked to give early recognition or support to an emerging method which is not yet standardized -- as contemplated by the applicable public policy -- an IDESG endorsement process should require a commitment to completing its standardization, as a condition of the initial support or endorsement. A variety of approaches are possible, including (a) seeking aspirational but unenforceable statements of intent; (b) making some kind of support contingent on progress; or (c) taking binding contributions on a delayed basis for later use, subject to updating.

## 5 Appendix A: References

The following table summarizes the documents referenced in this document.

5.1.1.1 Document Name	5.1.1.2 Version	5.1.1.3 Location
Rules of Association of the Identity Ecosystem Steering Group (IDESG)	rev 1, 10 April 2013	<a href="https://www.idecosystem.org/ROA">https://www.idecosystem.org/ROA</a>
National Strategy for Trusted Identities in Cyberspace	15 April 2011	<a href="http://www.whitehouse.gov/sites/default/files/rss_viewer/NSTICstrategy_041511.pdf">http://www.whitehouse.gov/sites/default/files/rss_viewer/NSTICstrategy_041511.pdf</a>

## 6 Appendix B: Key Terms

The following table provides definitions for terms relevant to this document.

6.1.1.1 Term	6.1.1.2 Definition
Specification (Section 1.4)	["Specification" generally refers to a specific data structure which is defined by a document. That may include markup languages, code, methodologies, APIs, policy guidance or other recommended behaviors; and may come from a single source or a group, and from industry, academic or governmental sectors or combinations of them.]
Standard (Section 1.4)	[The word "standard" implies a higher degree of specificity and testability. Section 4 of this Policy describes the criteria for determining if a document is a standard, if it is an “open standard”, and if it is suitable for IDESG adoption.]

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629 **7 Appendix C: Standards Wiki**

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631 &lt;insert description of Wiki and its use related to this policy&gt;