



Peter F Brown

Independent Consultant

Using Information Technologies to Empower and Transform

IDESG Standards Coordination Committee

Terminology Work

**Proposals regarding methodology
and process**

Peter F Brown

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? Content

- ▶ Rationale
- ▶ Introduction
 - ▶ Some things that ***we*** need to understand
 - ▶ Things that we want ***others*** to understand
- ▶ “Our” Terminology
 - ▶ Scope
 - ▶ “Hot topics” and Core (Starter) Terms
- ▶ Methodology
- ▶ Infrastructure and Tools



? Rationale

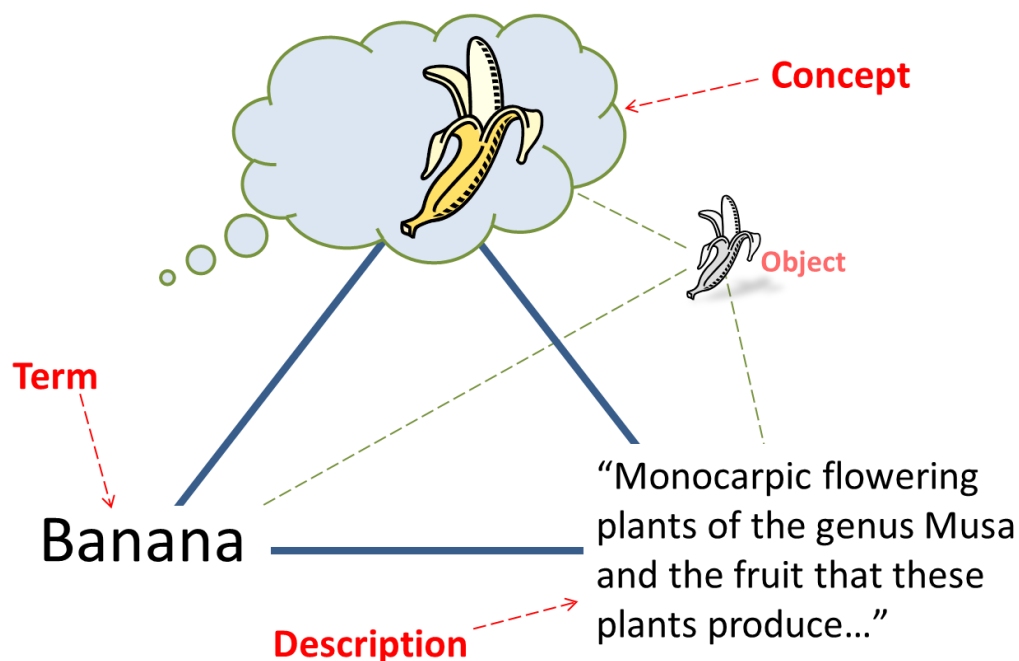
- ▶ A “terminology to call our own”
 - ▶ Provides a common **grounding** that helps us all communicate, within and between different groups of the IDESG, as well as externally
 - ▶ Provides a **formal foundation** for future information and system modelling
 - ▶ Allows us to establish “boundary objects”¹ – concepts described using ***our*** vocabulary that map to equivalent ideas in someone else’s – allows unambiguous conversations *beyond* our domain

1. Note that “boundary object” is a sociological construct and is not the same as the UML entity that uses the same name (although the UML entity is derived from this construct)



? Things that we need to understand

- We (as the lead/responsible group) need to understand – and agree to use, consistently – some key ideas for this work:



Concept “a distinct unit of meaning or knowledge”. It should not be confused with...

- The mental model of something

Term “a specific (usually language dependent) representation or expression of the concept”

- The label we give it...

Definition “a descriptive statement that serves to differentiate one concept from another”

- The way we describe it....

Rec #1: Use these three terms and concepts consistently in **all** discussions on terminology





Things that we want *others* to understand

- ▶ “This is what we mean in our domain”
 - ▶ “When we talk about concept **x**, we will consistently use the term **y**.”
 - ▶ “When we use the term **y**, it will always refer to concept **x**.”

Rec #2: In all discussions with external groups, make it clear that **our** terminology is appropriate to **our** domain and that we will cooperate to map equivalent concepts

Rec #3: Ensure that the agreed IDESG Terminology is publicly accessible and that there is a clear but simple process for introducing new concepts and terms



? Scope

- ▶ Identify the main concepts important to the development of the identity ecosystem
 - ▶ Not identity terminology *per se*
 - ▶ Context of the IDESG - *multidisciplinary*
 - ▶ More centred on online trust
 - ▶ Not only a technology focus – also about policy, legal, regulatory environment, etc.
- ▶ “What is important for us”



? “Hot Topics”

- ▶ Several Committees/Working Groups responded
 - ▶ Concern about ambiguity around many *terms* being used, seemingly, to describe one key *concept*: what it means to be ‘the user’ in an online system
 - ▶ major discussion and insights
 - ▶ Realization that there are many concepts that need to be differentiated and clearly and separately defined
- Rec #4:** Establish a **core** terminology around the main entities and relationships in an “**identity** ecosystem”. Build outwards from there as necessary



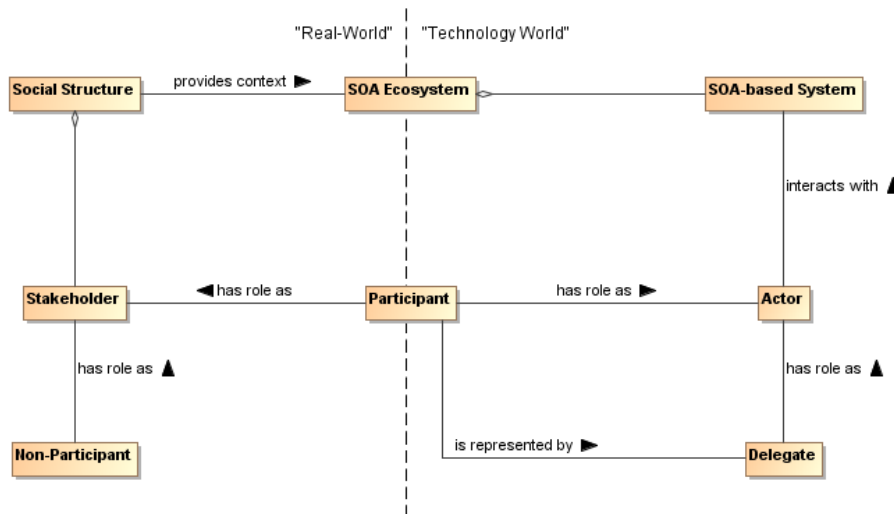


Some relevant sources for concepts and terms

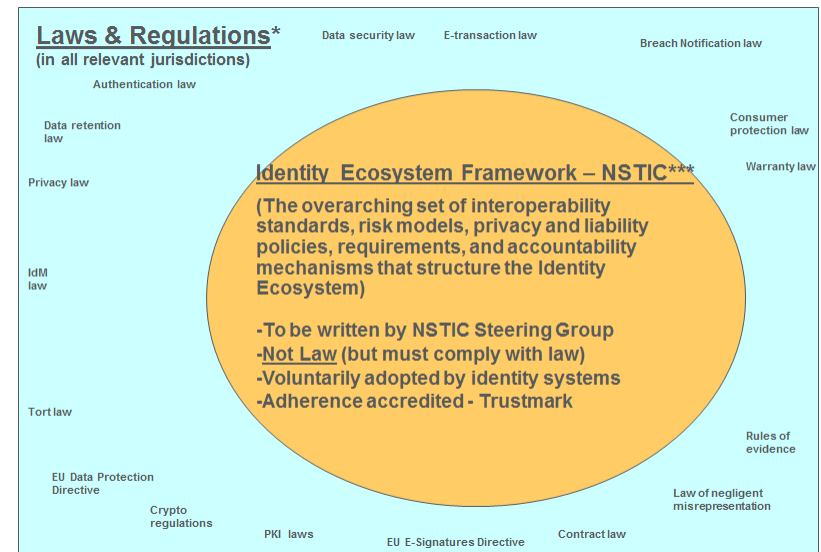
NATIONAL STRATEGY FOR TRUSTED IDENTITIES IN CYBERSPACE

Enhancing Online Choice, Efficiency, Security, and Privacy

APRIL 2011



Example model from OASIS Specification "SOA Reference Architecture Foundation"



From "Emerging Legal Framework for identity management", Tom Smedinghof



? Why?

- ▶ The original NSTIC Strategy document introduces the idea of an “identity ecosystem” and ecosystem framework
 - ▶ Be sure that we capture the intent of these references and define and use them consistently
- ▶ The “SOA ecosystem” model is appropriate to the core IDESG work:
 - ▶ IDESG context is that of an ecosystem
 - ▶ Understanding and definition of entities and roles played in analog real world, in digital systems, and the interfaces between the two
 - ▶ Uses ISO methodology (ISO 1087) and ISO/IEEE meta-model (ISO 42010)
- ▶ Smedinghof’s paper covers many of the core ideas that need to be addressed
 - ▶ Including defining what an “identity ecosystem framework” might be
- ▶ Analysis of these three papers will give us an initial set of core concepts
 - ▶ Identity ecosystem, ecosystem framework, parties and artifacts involved as well as the relationships between them
 - ▶ Policy issues, trust, etc.

Rec #5: Build the core terminology using concepts introduced and discussed in the original NSTIC Strategy document, as well as other sources relevant to identifying a core set of concepts





How to proceed



? Methodology (1)

► *Conceptually:*

- Distinguish it – make clear that there **is** a distinct concept
- Describe it – identify the “unique combination of characteristics” that underlines that distinction
- Define it – provide a descriptive statement that serves to differentiate the concept from another

If the assertion is maintained that a distinct concept exists

- Label it – give it a name
 - If the name exists already, decide whether a homonym is acceptable; if so, ensure the catalog highlights that different definitions/concepts exist for the same term and, ideally, the context(s) in which each would be used
- Catalog it – include it the terminology
- Publicize it



? Methodology (2)

► *Practically:*

- A person or group believes they have identified a distinct concept
- Use a standard template to make a first attempt to describe and define it
 - Use the IDESG Wiki “Add a concept...” page
- Publish “candidate concept”
 - Candidate concept and proposed term is locked by a terminology editor;
 - Associated Wiki “Discuss” page is open for comment and contribution
- Start a discussion and allow a comment period
 - Open method for commenting;
 - Use of IDESG web site Discussion Forum for more detailed debate
 - Tracking and roll-back of descriptions, proposed definitions and related materials (citations, etc.) on the Wiki concept page by terminology editor
- Terminology group reviews proposal and comments
- Confirms concept; rejects it as a duplicate; or refers it back for further discussion
- If confirmed, publish and lock the concept, term and definition
 - Comments should continue to be open and encouraged
 - A “snapshot” should be taken periodically of all agreed concepts and published as a distinct, version controlled document
 - A status update and most recent snapshot should be presented for information to each F2F plenary with, when necessary, an opportunity to present or discuss problematic concepts

Rec #6: Agree and publicize this simple workflow

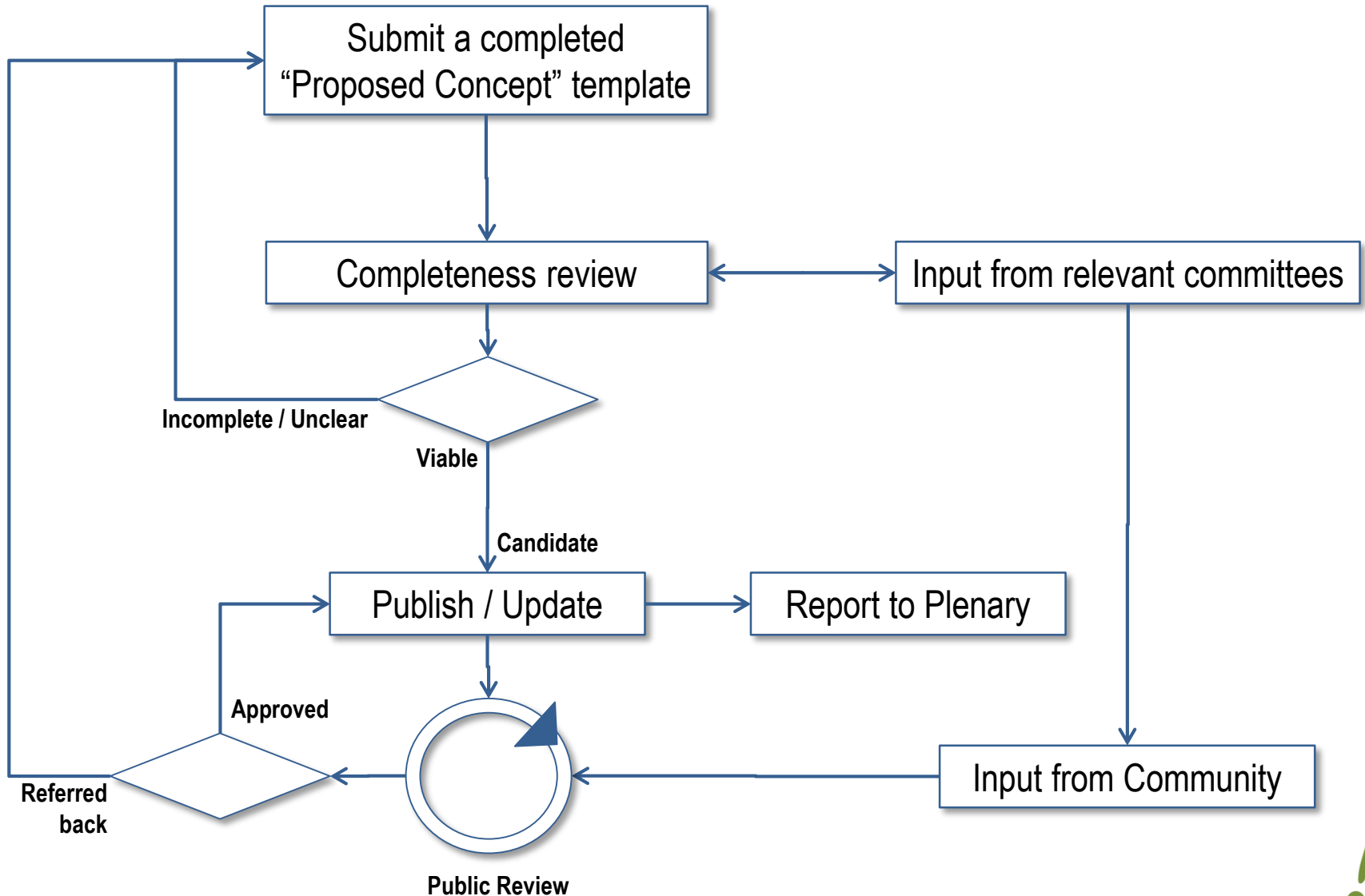
Rec #7: Agree and publicize a “candidate concept” submission template using the Wiki

Rec #8: Create and publish entries for initial candidate concepts





Proposed Workflow





Proposed Candidate Concept Template

The screenshot shows the IDESG (IDENTIRAMA) Wiki interface. On the left is a sidebar with links: Main page, IDESG Wiki News, Wiki_Guidelines, Recent changes, Random page, Help, IDESG Website, and a dropdown for IDESG Activities containing Terminology, Standards, and Use Cases. The main content area has tabs for 'Page' (selected), 'Discussion', 'Read', 'View source', and 'View history'. The title is 'Identity'. Below the title, the status is 'Proposed' (highlighted in red), with a note: 'This concept has been submitted as a new entry to the Concept Catalog. It has not yet been validated or reviewed.' A 'Contents [hide]' box lists sections: 1 Description, 2 Rationale, 3 Value and Context for Use in IDESG, 4 Formal Definition, 5 Source materials used, 6 Potential problems, and 7 Disambiguation. Under section 7, there are links for '7.1 Same term, different concept?' and '7.2 Different term, same concept?'. To the right of the contents box, it says 'See also:' followed by a link to https://www.idecosystem.org/wiki/Concept_Creation_Guidelines. The top right corner says 'Example Wiki Page'.

► Describe your concept

- Spell out the characteristics of the concept that help distinguish it

► Explain the rationale for defining the concept and its value to IDESG

► Define your concept

- Give an initial, dictionary-style, proposed definition that, if needed, also helps distinguish your proposed concept from other concepts with which it could be confused

► Name your concept

- Choose a name (the proposed “term”) that is likely to be clear, familiar and unambiguous

► Provide references or anecdotes

- If you are aware that the concept has already been defined somewhere or has been identified as a distinct concept in an ongoing discussion, provide some pointers



?

Methodology (3)

Then,

- ▶ Identify concept and term ‘clusters’:
 - ▶ *Types* of entity; organization; role; relationship; process; activity; etc.;
- ▶ Identify context-dependent uses of terms; underline ambiguities; alternate uses; flag up ‘danger words’; etc.;
- ▶ Add granularity as required

Rec #9: SMEs (drawn from different committees) to discuss and propose candidate concepts for initial clusters - some started on mailing lists already

- ▶ Start with clustering the terms used in the NSTIC strategy document (ecosystem, identity, trust, etc.)

Remember:

- ▶ we are a multi-disciplinary organization
- ▶ We have multiple audiences
- ▶ do **not** make assumptions that terms or even concepts are shared – ‘if in doubt, spell it out’

Rec #10: Have the terminology group report regularly to Plenary and Committee Chairs’ Group; and update regular “snapshot” document





Methodology (4)

- ▶ Plenary 4 (Santa Clara, May 2013) agreed the following next steps:
 - ▶ Plenary discussion (done)
 - ▶ Assign terminology editor
 - ▶ Work through definitions
 - ▶ Initiate any copyright requests
 - ▶ Call for comments
 - ▶ Resolve comments
 - ▶ Provide definitions to other Committees' work items
 - ▶ Iterate as necessary



? Examples of progress to date

► Broad Consensus on:

- **Identity** *“one or more attributes that allows an entity or entities to be sufficiently distinguished within context”* (Contextual note: we use “identity” uniquely in the context of digital cyberspace)
- **Identifier** *“a unique data attribute used within a particular context to represent identity”* (modified from FIPS 201)
- **Attribute** *“A named quality or characteristic that is claimed to be inherent in or ascribed to someone or something”* (modified from SP 800-63)
- **Authentication** *“A process of verification of an attribute, or a set of attributes, in order to obtain statistically acceptable assurance in a claimed identity”* (modified from SP 800-63)



? Infrastructure and Tools (1)

► Wiki

- Principal tool for capturing initial ideas, discussion, and ongoing work
- Website Discussion Forum and mailing lists may be more practical for intense discussions
- Not the *authoritative* resource

► IDESG Website

- Discussion Forum not ideal but can be useful for membership-wide discussion
- Mailing lists are *de facto* the channel of choice for many discussions and are publicly archived
- Committee document repositories can capture stable “snapshot” documents of work progressed and signed-off on by specific committees

Rec #11: After presentation to plenary, regular terminology update snapshot document should be easily available as a single document on the website



? Infrastructure and Tools (2)

► Image-centred tools

- Good for visualization of concepts *and* the relationships between them

- Major considerations:

 - Simplicity - Concept Map(s)?

 - Formality/Tractability – UML, ISO Topic Maps, RDF/A, OWL

- Tools?

 - Plenty of enterprise-grade options

 - Need to assess cost/benefit – keep it simple but no simpler

Rec #12: Discuss requirements with other committees/working groups likely to require similar visual modelling tools. Flipcharts and pens are good enough to start with



? Summary of Recommendations

- ▶ **Rec #1:** Use “concept”, “term” and “definition” consistently in **all** discussions on terminology
- ▶ **Rec #2:** In all discussions with external groups, make it clear that **our** terminology is appropriate to **our** domain and that we will cooperate to map equivalent concepts
- ▶ **Rec #3:** Ensure that the agreed IDESG Terminology is publicly accessible and that there is a clear but simple process for introducing new concepts and terms
- ▶ **Rec #4:** Establish a **core** terminology around the main entities and relationships in an “identity ecosystem”. Build outwards from there as necessary
- ▶ **Rec #5:** Build the core terminology using concepts introduced and discussed in the original NSTIC Strategy document, as well as other sources relevant to identifying a core set of concepts
- ▶ **Rec #6:** Agree and publicize a simple workflow
- ▶ **Rec #7:** Agree and publicize template for “candidate concepts” using the Wiki
- ▶ **Rec #8:** Create and publish initial entries for candidate core concepts
- ▶ **Rec #9:** SMEs (drawn from different committees) to discuss and propose candidate concepts for initial clusters - some started on mailing lists already
- ▶ **Rec #10:** Have the terminology group report regularly to Plenary and Committee Chairs’ Group; and update regular “snapshot” document
- ▶ **Rec #11:** After presentation to plenary, regular terminology update snapshot document should be easily available as a single document on the website
- ▶ **Rec #12:** Discuss requirements with other committees/working groups likely to require similar visual modeling tools





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Mail: peter@peterfbrown.com

Web: www.peterfbrown.com

Blog: PensivePeter.wordpress.com

Twitter: [@PensivePeter](https://twitter.com/PensivePeter)