Developing Technical Standards
Principles and Practice

Mary Beth Dewey
Office of Financial Research

Legal Specification Protocol Development Project: Initial Working Session with a Focus on Computable Contracts

CodeX Center for Legal Informatics, Stanford University
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Views and opinions expressed are those of the speaker(s) and do not necessarily represent official OFR positions or policy.
Principles and Practice

incorporated by reference
registration
supplier's declaration
documentary 2nd party
conformity assessment
de facto
due process
consortia
regional
technical standards
coherence
company
impartiality
flexible
international
mandatory
1st party
domestic
de jure
voluntary
openness
3rd party
testing
SDOs
transparency
effectiveness and relevance
consensus
timely
technical assistance
appeals process
TAG
appeals process
standards essential patents
accreditation
pay-to-play
<table>
<thead>
<tr>
<th>Principle</th>
<th>WTO</th>
<th>ANSI</th>
<th>OMB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transparency</strong></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Essential information regarding standardization activities is accessible to all interested parties.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Openness</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Participation is open to all affected interests.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Impartiality</strong></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>No one interest dominates the process or is favored over another.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Effectiveness and Relevance</strong></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Standards are relevant and effectively respond to regulatory and market needs, as well as scientific and technological developments.</td>
<td></td>
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</tbody>
</table>

**Sources:** World Trade Organization (WTO), American National Standards Institute (ANSI), Office of Management and Budget (OMB), OFR Analysis
### Principles of Standardization

<table>
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<tr>
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<tbody>
<tr>
<td><strong>Consensus</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Decisions are reached through consensus among those affected.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Performance Based</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Standards are performance based (specifying essential characteristics rather than detailed designs) where possible.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Coherence</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>The process encourages coherence to avoid overlapping and conflicting standards.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Due Process</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Standards development accords with due process so that all views are considered and appeals are possible.</td>
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## Principles of Standardization

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<tr>
<td><strong>Technical Assistance</strong></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Assistance is offered to developing countries in the formulation and application of standards.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Flexible</strong></td>
<td></td>
<td>✓</td>
<td></td>
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<tr>
<td>The process allows the use of different methodologies to meet the needs of different technology, product, and service sectors.</td>
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<td></td>
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<tr>
<td><strong>Timely</strong></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Purely administrative matters do not result in a failure to meet market expectations.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Balanced</strong></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>All affected interests are given due consideration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Appeals process</strong></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>The development process provides for appeals.</td>
<td></td>
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Standardization Practice

Standardization Dimensions

• “Community of Interest”
  – Company, Consortium, Industrial Sector, Government/Inter-Government, Cross-Sector, ...

• Form
  – Documentary, Physical Measurement, ...

• Purpose
  – Terminology, Testing, Product, Process, Service, Interface, Digital Representation, ...

• Geographic Scope
  – Domestic, International, Regional, ...

• Level of Obligation to Use
  – Voluntary, Mandatory, Quasi-Mandatory, ...

Source: The ABC’s of Standards Activities, NISTIR 7614; OFR Analysis
U.S. Standardization System

- Led by private-sector standards development organizations (SDOs).
- Is a public-private partnership.
- Is voluntary, decentralized, market-driven, and (sometimes) competitive and duplicative.
  - Differs significantly from the centrally coordinated standards systems of many countries.
- Reflects U.S. culture, traditions, and public-private sector dynamics.
- Relies on cooperation and communication among
  - Industry >> Academia
  - Stakeholders >> Government
  - Private-sector standards organizations

Source: United States Standards Strategy, ANSI
Standardization Practice

General Standard Development Process

1. Standards need identified, investigated, and proposed
2. Subcommittee/task group produces draft standard
3. Draft standard goes out for balloting and comments
4. Standard is reviewed and Subcommittee votes to revise, reaffirm, or withdrawal
5. Standard is approved and published

Source: NIST Standards Coordination Office; OFR Analysis
Standardization Practice

**International**

- **Technical Committee (TC)**
  - Participants: Countries
  - US Role: Represent US position

- **Working Groups (WG)**
  - Participants: Experts
  - US Role: Represent expertise in context of US position

**Domestic (Mirror Committee)**

- **U.S. Technical Advisory Group (TAG)**
  - Participants: Organizations
  - Role: Represent organization and US interest

- **Mirror Working Groups (WG)**
  - Participants: Experts
  - Role: Represent expertise

**Technical Work Reviews Standards Development**

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Source: NIST Standards Coordination Office
Questions
And
Appreciation