



NIST

Global Standards Information



Standards Development Basics

June 2, 2010

The U.S. Standards System

The U.S. standards system is voluntary, decentralized, sector driven and is, sometimes, competitive

The system relies on cooperation and communication among:

- private sector standards organizations
- industry
- government

The U.S. approach is one among many in the world



Standards

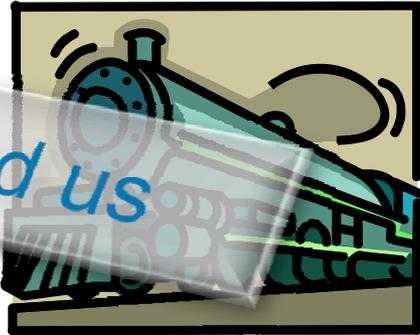
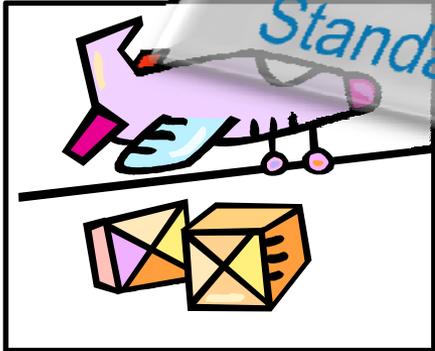
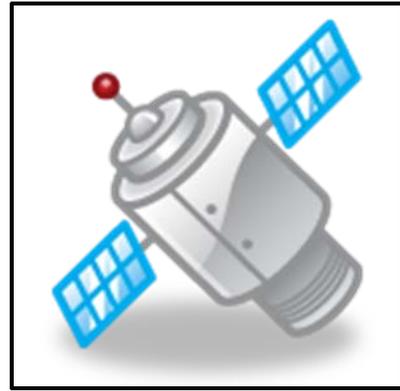
Market-driven technical specifications for a product, service, person, process or system, with which compliance is voluntary

Technical-Regulations

Technical specifications, which may include (or reference) particular standards, with which compliance is mandatory

Conformity-Assessment

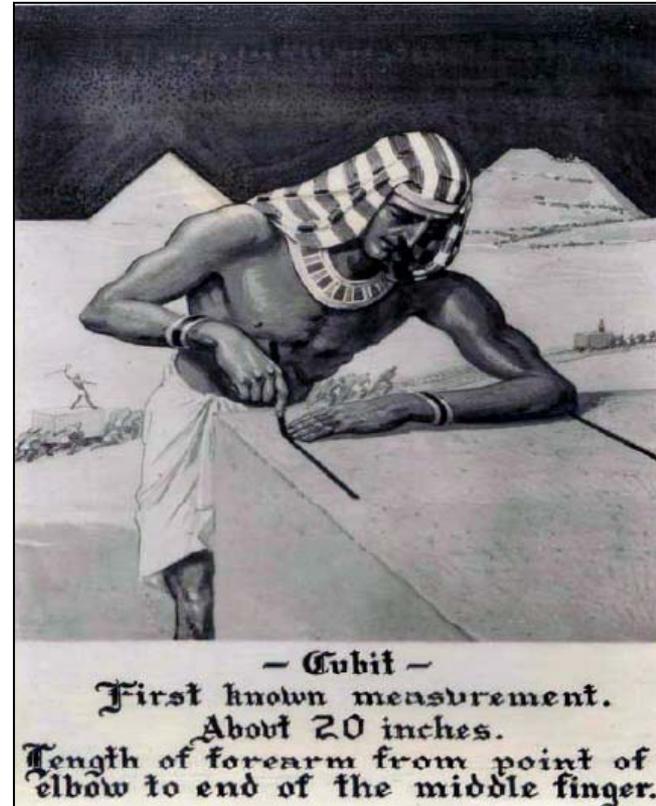
Processes used to verify the compliance of a product, service, person, process or system to either a standard or a regulation (e.g., testing, certification, inspection)



Standards are all around us

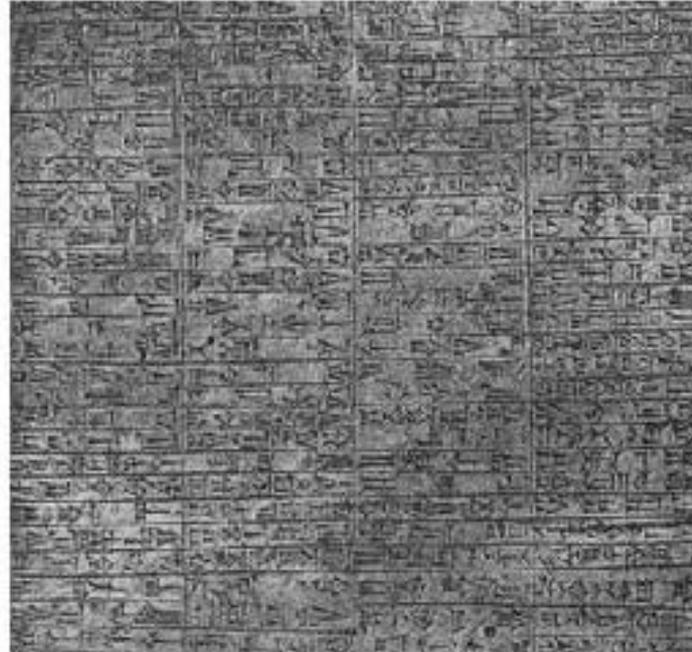


Standards in history





Standards in history





Early Drivers for Standards



Baltimore Fire
of 1904



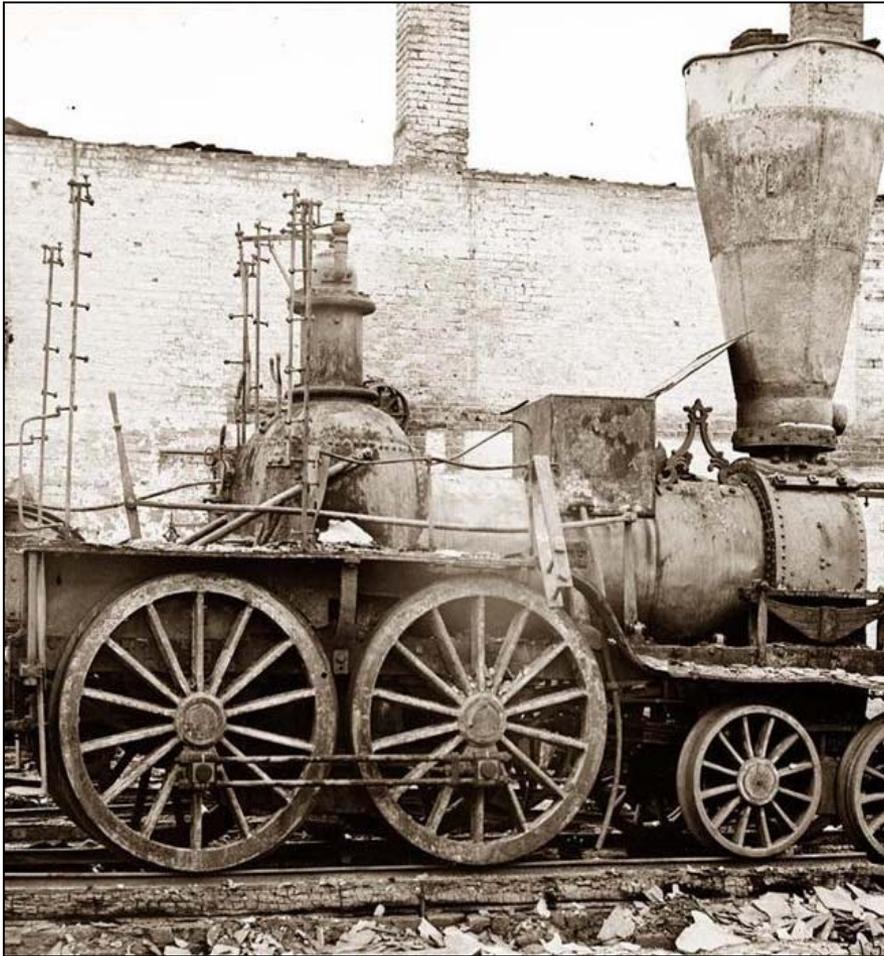
Early Drivers for Standards



New York City
Triangle Shirtwaist Fire
of 1911



Early Drivers for Standards



Uniform Practice in
Manufacture
of Train Rails
And Wheels

The U.S. Standardization Model

“One Approach Among Many in the World”

The U.S. “standardization” model:

- resembles the nation’s economic structure: sector-based and driven by market needs
- reflects U.S. culture and traditions
- reflects government/private sector dynamics
- relies strongly on diversity and decentralization

Key Concepts in Standards Development

Openness

- all stakeholders may participate; no single interest may dominate

Transparency

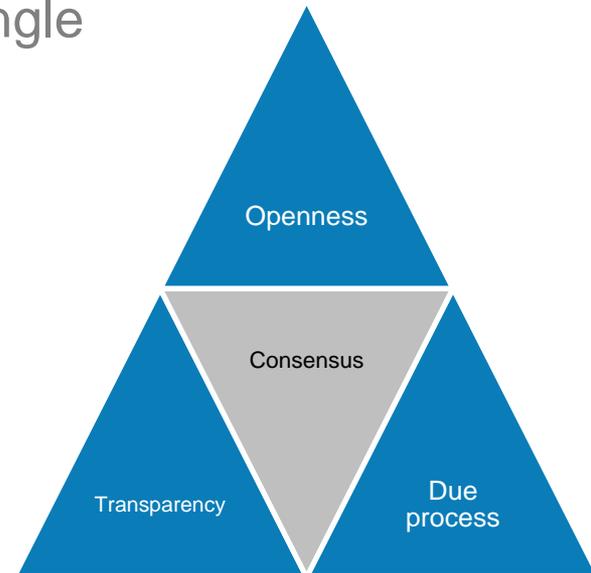
- records/ processes open and publicly available

Due Process

- appeals mechanism

Consensus

- decisions more than majority but not unanimity



Consensus-based Standards Development

Process

- Standards are written in committee
- Stakeholders proposes subject matter
- Proposer usually present a first draft
- Discussed at length
- Incorporate changes
- Balloting process
- Consider comments
- Possible re-balloting
- Final approval and publication
- Review (typically, every 3-5 years)

Consensus-based Standards Development

Characteristics

- Structured process
- Lengthy, laborious process
- Consideration of all views takes time
- Consensus takes time
- Procedural safeguards take time
- Volunteers workforce
- Very expensive

So who's involved, anyway?

Some Key Players in the US standards system

1. Standards Developing Organizations (SDO)
2. Committee members who provide technical input (includes government)
3. American National Standards Institute (ANSI)
4. National Institute of Standards and Technology (NIST)



Key Players

Standards Developing Organizations

- **Professional Societies** whose members seek to advance their professions, and also develop standards
- **Trade Associations** promote their industry's products, and also develop standards
- **Testing and certifying organizations** produce their own standards and may also use those of other organizations
- **Organizations that only develop standards**



Key Players

Consortia: Standards Setting Organizations

- **Consortia** (or fora) are groups of companies that come together to create a standard to address a (typically single) commercial need
- **Characteristics:**
 - Quick standards setting
 - Arose in the late 1980s to meet changing technological needs
 - Most often are joint ventures that “pay to play”
 - Recently, many consortia in the food industry and in the environmental/sustainability sectors
 - “Proprietary” standards
 - Enormous variation among consortia in terms of openness, transparency and consensus

Some Standards Developers WILL INCLUDE THOSE THAT EPA USES THE MOST



Thank You

Standards development basics

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