

# The Role of Standards













































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# Standards do matter

Type	Outlet	Plug	Type	Outlet	Plug	Type	Outlet	Plug	Type	Outlet	Plug
A			G			M			S		
B			H			N			T		
C			I			O			U		
D			J			P			V		
E			K			Q					
F			L			R					



# An ITL introduction

Our mission: ITL promotes U.S. innovation and industrial competitiveness by advancing **measurement science, standards, and related technology** through research and development in information technology, mathematics, and statistics

Our purpose: **Cultivating trust** in IT and metrology through measurements, standards, and testing

# Standards – same word, different meaning

Standards – multiple types (physical standards, documentary standards, measurement protocols, etc.)



Source: NIST

Our focus is documentary standards

ISO/IEC definition (*emphasis added*): document, established by **consensus** and approved by a recognized body, that provides, **for common and repeated use, rules, guidelines or characteristics** for activities or their results, aimed at the **achievement of the optimum degree of order** in a given context [Ref: ISO/IEC



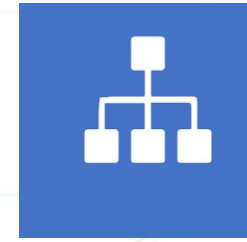
# Standards are essential to ITL



By the numbers:  
~95 participants &  
~100 standards  
groups



Part of program  
strategy with defined  
goal and impact



“She chose wisely”  
Variations in  
participation  
approach & role



NIST & ITL reward  
significant  
standards efforts



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# Purposes of Standards



Commercial  
communication



Public welfare



Quality &  
efficiency in  
manufacturing



Compatibility

# Ontologies, KGs and Standards

- Ontology and KG standards (for ontology/KG development)
- Role of ontologies and KGs in standards development
- NIST efforts



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There is a business side to standards development



Competitive



Business models



Motivations



# Getting to Fulfillment



Typical fire-fighter breathing apparatus damaged in NIST tests shows facepiece warping under high heats.

*Credit: NIST*



A standard is published. Now what? Adoption?



What does fulfillment look like? Are our expectations met?



Sometimes there is quick adoption

Sometimes there is slow adoption

Sometimes there is no adoption



Participation changes

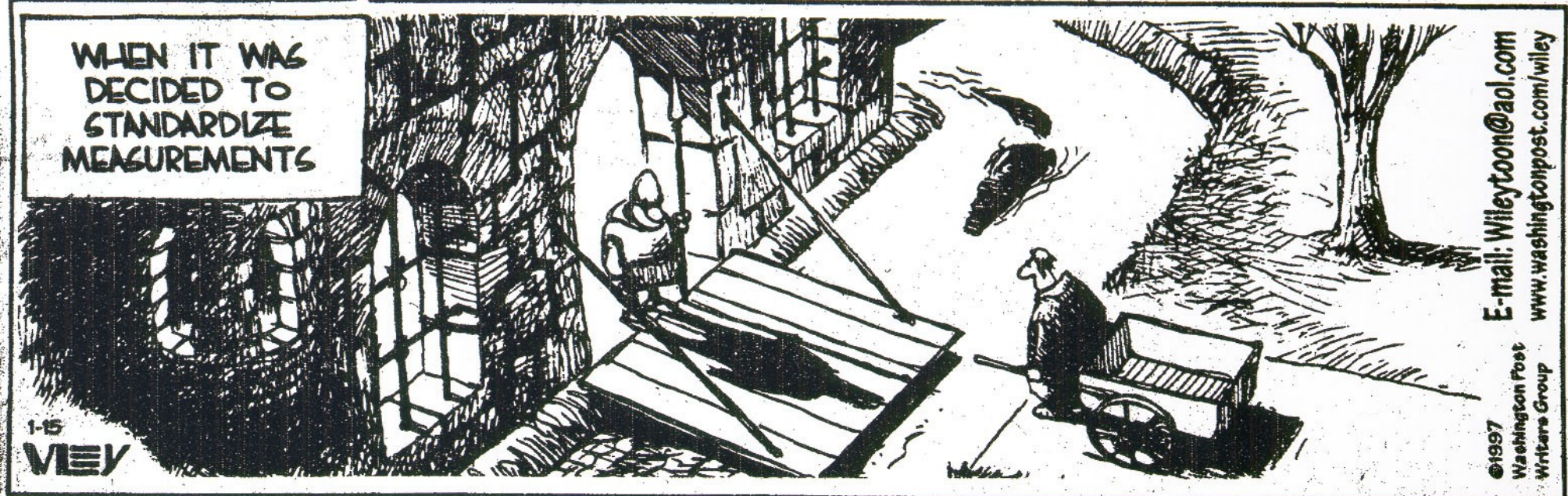
SDOs competing for new areas of standardization

Products implementing integrated standards

Impact of international market and regulatory environment



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