

Standards. . .

V1. Standards and standards organizations

Why standards?

The standards landscape

Standards from a process pov

Why standards?

Very generally:

standards promote reliable efficient communication,
with others now, and with ourselves in the future.

Less generally:

Much data curation involves representing information, if standards are used at every level of the abstraction stack efficient reliable representation is supported.

Much of data curation involves documentation; if metadata standards are used for documentation, then, again, efficient reliable representation is supported.

[Even more specifically: standards support the use of future and third party applications and tools, greatly improving efficiency and reliability and broadening access to users, now and in the future.]

Or with respect to data curation actions:

standards promote validation, authentication, preservation, regulatory compliance, . . . etc. etc.

Standards landscape in US

You know the joke: “The problem with standards is . . .”

NIST 1996 report:

- 93,000 standards produced
- Nearly 700 standard-creating organizations
- US government was the largest single creator and user of standards

Toth, R. (1996). *Standards Activities of Organizations in the United States*. NIST Special Publication 806.

Process issues: Development

Some standards emerge simply as a common practice, without any intention to create a standard for common use.

Some are developed by focused working groups or committees (e.g., ePUB, TEI, DCMI).

Some are developed by larger institutions or agencies (IETF, W3C).

Some developed (or managed) by standards organizations *per se* (e.g. ISO, ANSI, IETF) and designed for wider use.

Many are developed by governments, or global agencies on behalf of multiple governments,

Some standard begin in industry groups, but then are adopted by larger standards bodies to ensure maintenance and impartial evolution.

Process issues: compliance, transparency, access

Compliance may be entirely optional, or required by organizations or governments in certain circumstances.

Usually the requirement is of this sort: if you wish to . . . then you must . . .

i.e., receive our endorsement, use our software, bid on our RFP,
use interstate networks in X nation, sell commercial aircraft in X nation . . .

Most standards development is fairly open to broad participation -- in order to avoid the accusations of partiality that can seriously impeded adoption.

The principle obstacle to participation is the time and experience needed to master complex material, and, in most cases, fairly considerable travel expenses.

Some important agencies making data-related standards

American National Standard Institute

<https://www.ansi.org/>

ISO

<https://www.iso.org/about-us.html>

ISO 19115 Geographic information

ISO 14721 Open Archival Information System

ISO 16363 Trustworthy Data Repository

W3C

<https://www.w3.org/>

Dublin Core Metadata Initiative

<http://dublincore.org/>

Please spend at least half an hour exploring each site and looking at standards relevant to your work.