Many communities use the term “standard” when they describe their metadata and, as a result, there are many missing “standards.” This approach favors attention on differences between communities. We use the term “standards” to focus attention on common concepts and goals.

Recommendations and Dialects

Recommendations reflect community experiences and documentation needs. Communities have common documentation needs, so recommendations overlap, particularly for the discovery use case. Sharing recommendations is an important mechanism for sharing those experiences and community knowledge.

A community creates a dialect ($D_1$) with recommendations at 3 levels ($R_1, R_2, R_3$). There is overlap between dialects and recommendations, particularly for the discovery use case.

A second community creates a dialect ($D_2$) with recommendations at 3 levels ($R_4, R_5, R_6$). Recommendations can also be purely independent, i.e. independent of dialects (e.g., Catalog Services for the Web).

Metadata Recommendations and Dialects

Metadata recommendations change as new communities and needs emerge. Metadata management tools are driven by dialects. Changing these tools and training people are difficult, so adoption of new dialects is relatively slow. This leads to gaps between existing organizational capabilities (dialects) and recommendations.

**Case Studies (IN21C-1699)**

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**Evaluating Completeness of Metadata Collections**

Evaluating completeness of metadata is important for new communities and needs emerge. Metadata management tools are driven by dialects. Changing these tools and training people are difficult, so adoption of new dialects is relatively slow. This leads to gaps between existing organizational capabilities (dialects) and recommendations.

**People and Organizations in ESDIS Metadata Collections**

People and Organizations in ESDIS Metadata Collections: Connecting users to people and organizations that can help them access, use, and understand data is an important metadata step. The ESDIS Common Metadata Registry (CMR) includes a responsibility element that defines responsibilities related to metadata. The ESDIS Common Metadata Registry (CMR) includes a responsibility element that defines responsibilities related to metadata.

**Contact Information / Email**

Contact information is critical. This table identifies people and organizations that include email addresses.

**How do dialects evolve?**

When communities need a new concept or a new dialect, the dialects can be extended to include those concepts. We examined 12 metadata collections (A-i) from the U.S. Science Base. Several of these have extended the CSDGM dialect to include elements to processing method descriptions. The DIAW includes 11 elements shown as rows in the Table. The Table shows the number of these elements / record in each collection.

Two groups (A and B) have complete descriptions of these elements for some records. Other groups have adopted several elements of the extension, most commonly method type (methtype) and description (methtype).