Feature: Vocabulary Development as a Tool for Community-building
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Whether as formal as dictionaries or as tacit as locally-meaningful conversational words, vocabularies are a fundamental element of both science and daily life. As communicators, we easily slip between disparate vocabularies depending upon our context when speaking. Everyday examples include using different languages in foreign countries and the changing expressions we use when speaking with colleagues versus with neighbors or children. Formalizing vocabularies through publishing thesauruses or other reference lists creates an identifiable social commons that has the potential to improve understanding and communication.

A vocabulary reflects the perspectives of a community's participants; it may take different forms depending on community focus. For example, site scientists within the LTER may have a vocabulary list for different sampling locations and another for instrumentation types. Using these as a starting point, information managers (IM) can create separate vocabularies in the form of database field names and metadata content lists to best capture, describe and make available this local scientific information. For data to be shared, those diverse scientific and IM vocabularies must be brought together. This process is typically not easy and is frequently time-consuming, however the comparisons and discussions involved create an authentic foundation for cross-community understanding. The design and development of vocabularies at all scales serve to highlight and synthesize language in use within a community. As an articulation of common understandings, a vocabulary and the negotiations by which it is formalized can provide an important framework for social convergence and community development.

While technically straightforward, bringing two or more vocabularies together is

an underestimated social challenge. Given that vocabularies can serve multiple purposes, the seemingly simple vocabulary convergence task becomes even more difficult. Keywords, for instance, are a type of vocabulary with a variety of roles ranging across scales and perspectives. At a given site, keywords are often drawn from locally-familiar terminology for the purpose of local data findability, and perhaps even preliminary data categorization. However, keywords also have multiple cross-community purposes such as use for public data discovery and creating relations to other organizations through mapped terms. For example, at CCE and PAL we are working on mapping our local geographical keyword list to authoritative sources including the Getty Thesaurus of Geographic Names (http://www.getty.edu/research/conducting_research/vocabularies/tgn/), and the Encarta World Atlas (http://encarta.msn.com/encnet/features/mapcenter/map.aspx). Use of synonyms, different levels of language formality, different organizational mandates, group histories and interests are a few elements of many that create vocabulary differences and thereby complicate convergence. The process of comparing and contrasting vocabularies certainly underscores the diversity of communities and their perspectives!

Vocabularies frequently capture the ways a community changes over time and can play an important role in achieving community agreement for future trajectories. Because vocabularies can be a version of an ideal context rather than being limited to existing practices, their development and maintenance represent an opportunity to lay out an infrastructural foundation for the future. An example would be a scientific community developing a (or adopting/adapting an existing) sampling vocabulary that includes not just current technical terminology but also terms from instrumentation and practices that are prospective additions to the group's sampling schemes. In this way, vocabularies can aid in solidifying a community's identity and goals while keeping a record of legacy practices as well.

As multifaceted and ever-changing representations of numerous social, organizational and technical community perspectives, vocabularies and their formalization offer an opportunity to identify, appreciate and negotiate the complexity and diversity within and across communities.