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Scientific Meetings: Rigor, Relevance, and Variety

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Scientific publications come in a variety of forms with different levels of rigor in peer and editorial review. During 2002, LTER Information managers participated in the Systemics, Cybernetics and Informatics (SCI) conference, in association with the LTER Information Managers Meeting. At two sessions organized by the LTER Information Managers, 12 papers were presented and also published in the voluminous conference proceedings (http://intranet.lternet.edu/ committees/information_management/sci_2002/). This conference was selected because it was large (1,000+ attendees), international and multidisciplinary in character and provided a venue for peer-reviewed publication at a time when few journals dedicated to environmental and ecological informatics existed. However, questions about the scientific legitimacy of SCI have been raised when "nonsense" papers (in one case written by a computer program) were submitted and accepted (http://news.bbc.co.uk/2/hi/americas/4449651.stm; http://www.timesonline.co.uk/article/0,,11069-1571285,00.html). This has led some to propose removing all references to SCI from LTER web pages and publication lists, while others suggest this would be an overreaction, because inspection of the published papers in SCI indicates that most have scientific value. Here are addressed some broader issues regarding meeting venues and a suggested response to this controversy.

Meeting Dimensions
Meetings are a community resource with multiple dimensions such as organizational structure, information exchange, community building, and themed networking as well as scientific scholarship, publication, and domain validation. SCI addresses the first four of these in providing for conference structure, session dialogue, engagement opportunities, and community organized sessions. The latter three elements are considered in more detail below.

1. Scientific Scholarship and peer-review: A review process provides quality control for manuscripts. Paper acceptance at the SCI conference can take one of two forms, reviewed or non-reviewed. In the SCI organizational scheme, session chairs are key to manuscript integrity in terms of carrying out the review process. With the paper acceptance policy now provided online, one can argue that the SCI review process is flawed from the outset in 1) accepting papers based on an author's CV and 2) providing a non-reviewed paper acceptance especially if it is not publicly distinguished from reviewed papers. The SCI procedure is to accept papers as non-reviewed when there is no review process conducted. Thus, when session chairs who do not carry out their responsibilities coincide with participants intent on fraud, there is no scientific validation.

Because the LTER community handled the review process of papers in our sessions, the scientific scholarship of our collection of publications stands on its own. Not only did our active participation

create a combination learning opportunity and training event for information managers who had not previously engaged in publication, review, or international conference presentation activities, but also we were able to ensure the thoroughness of review in carrying out the process according to professional conventions.

2. Validation and sanctioning: In considering validation, it is important to recognize there are many sources of validation, ie individual, institutional, organizational, professional society, community familiarity or even 'success' itself. The LTER Information Manager (IM) meeting is associated with the LTER, an ecological community. When a meeting is held independently, it is no less valuable but for the IMs is validated as an LTER meeting rather than via association with another organization. When an LTER IM meeting is held in conjunction with an associated meeting, some crossover exchange and potential collaboration occurs. It is valuable to ask as we do periodically at our annual meetings: 1) What are associations of interest? and 2) What are the venues that stimulate and facilitate learning? An ecologist could respond with interest in associating with the Ecological Society of America. A computer scientist might point to Very Large Databases (VLDBs). A digital librarian might say the Digital Library for Earth System Education (DLESE). An organizational theorist might say Digital Government Organization (DGO). An information scientist might mention the American Society for Information Science and Technology (ASIST). They are all good responses. For an information manager, there is no single overarching source of validation but rather diverse associations and sources of validation.

3. Publication and journal ranking: Ranking of publications in and out of academia is an ongoing, contested, and valuable exercise debated and carried out separately by each individual, field, and academic unit. In addition, publication venues are currently in transition. For instance, unlike the past, new journals including e-journals are frequently not associated with commercial publishers. One way of classifying publications is by designating them as reviewed or non-reviewed. The proliferation of refereed journals brings forth a multi-tiered ranking ranging from top (A) journals such as Science and Nature to B & C journals In an academic arena where the review process insures high quality work, electronic and interdisciplinary publications are creating new situations - and bringing classification challenges along with new modes of information exchange. For instance, there are a burgeoning number of conferences and conference proceedings. Traditionally non-reviewed, these conferences are now frequently timely mechanisms of dissemination that are both reviewed and associated with professional organizations.

Question Responses
A set of summative LTER papers captured many aspects of the state of LTER information management in 2002. These papers continue to be available for other data managers, scientists and communities. The value of having prepared for and participated in the LTER sessions contributed to and remains a valuable part of our individual and collective experience bases. That is, the process was as valuable as the product. A few brief responses to other questions that arise:

- Will the LTER IM community attend a SCI meeting as a community again? Unlikely because the IM community has changed as well as the meeting and the publication landscapes.
- Does the tempest exposing the weakness of the SCI review system invalidate our publication collection or our experience? No.
- Should we regret having been part of this process? No.
- Would having a paper published one year in this forum have negative consequences on advancement of an information manager? Doubtful if there is not a multi-year trend. The full body of an individual's work is typically considered.
- Did having a paper published in this forum have a positive consequence in terms of conceptual advancement of LTER information management? Yes.

In Summary
The SCI 2002 forum provided a useful impetus to the LTER IM community work in terms of articulating LTER information management issues, contributing to expanding a shared vocabulary, and developing local theory grounded in practice. Yet the SCI format seems to lack the capacity to converge

a robust body of knowledge within a professional or commercial association; that is, it's very openness and inclusion brings with it a negative. Although the LTER IMs today have alternative forums and have associates of more direct interest to their work, one wonders about the value of loose, open forums for other emergent communities and professions outside traditional academic and professional support structures. Having a range of meeting types is valuable in any field to ensure a variety of forums are available to meet the wide range of community needs.

Given the issues involved, one method of acknowledging our work is to keep the public posting of the LTER paper collection but add a statement that clarifies circumstances. A draft of such a statement might read:

The following collection of papers represents work of the LTER information management community. The papers were presented in two sessions at the SCI 2002 meeting. Since the review process at this large scientific meeting has been demonstrated to vary, it is important to document that the review of these contributions was handled by LTER session chairs in accordance with traditional professional conventions including a minimum of two written reviews for each paper and mandatory revisions when necessary.

This is a time of transition in terms of dealing with recorded information. As members of the LTER information manager community-of-practice, we have some flexibility - even somewhat of a mandate - to explore new approaches and types of venues for information exchange and professional growth. Scientific rigor and scientific relevance involve a constant re-balancing. Choices are rarely black or white. The LTER IM community periodically chooses to reach outside-the-box technically, socially, and organizationally in order to adapt to changing contexts, capabilities, and understandings.

What influenced the balance and choices of meetings in 2002? It was less the need for validation than the need for broadening the environment within which to self-organize. Though an emergent profession with changing publication venues, we in the interim have things to say, experiences to synthesize, and stories to tell. A variety of forums and formats are needed. In taking the opportunity to look back to ask 'Is SCI a valid meeting?', let's also look forward to consider 'what are the needs of the LTER IM community?' and 'what types of meeting and publication arrangements meet the LTER IM community needs?'