

National Transportation Library Comments on Washington Department of Transportation's "White Paper: Aligning the Transportation Research Thesaurus with Expanded Transportation Business Needs"

Washington State Department of Transportation's "White Paper: Aligning the Transportation Research Thesaurus with Expanded Transportation Business Needs" is a timely contribution for the beginning of the next management evolution of the Transportation Research Thesaurus (TRT). Over the past six months, the Transportation Research Board (TRB) and the National Transportation Library (NTL) have been actively planning, preparing, and implementing changes in the management and administration of the TRT. These changes have yet to be announced to the broader community and answer many of the procedural issues and concerns raised in the White Paper, underscoring the need for changes in these areas. In response, the following comments will outline the current management process and respond to other issues raised.

On October 1, 2007, NTL became the maintenance body for the (TRT), which is an international standard for transportation concepts and topics. The new management process is consistent with NCHRP Report 450's ongoing maintenance recommendations:

NTL is the official maintenance body for the TRT

The primary iteration of the TRT, upon which all others are based, is hosted and maintained by NTL using Access Innovation's Data Harmony software. The Data Harmony TRT version is the one from which iterations used by the *Transportation Research Information Service (TRIS)*, the *NTL Digital Repository*, the Texas Transportation Institute (TTI), and other users are derived. From Data Harmony, the TRT (or segments of it) will be exported to the Transportation Research Board (TRB), NTL Integrated Search, TTI, and any other parties using the TRT. The NTL, members from the TRT Subcommittee (under TRB's Library and Information Science for Transportation committee), and interested transportation librarians and information professionals are able to login and interact with the TRT (e.g., view and/or edit, depending on permissions, candidate terms, change histories, definitions, scope notes, etc.), as appropriate. For most purposes, however, user access to the complete TRT will be available from the TRB and NTL Integrated Search websites.

TRB TRT Subcommittee (for technical review)

The current TRT Subcommittee is now a technical review committee which will receive, evaluate, vet, and recommend new terms for the TRT. Members of the TRB Subcommittee include information professionals, ontological professionals, engineers, and researchers, representing both information management and content experts. The TRT Subcommittee should establish relationships with domain experts within the field of transportation to solicit feedback about candidate terms (e.g., AASHTO and TRB committees). Each committee member could be asked to liaise with a set of committees to query when vetting terms appropriate for committee expertise. The TRT Subcommittee's initial and continued contact with subject experts throughout the discipline serves two purposes: 1) marketing the TRT to the greater transportation community and 2) creating buy-in and a sense of ownership of the TRT throughout the field.

Approval process for new, merged, and deleted terms

- I. Collecting Candidate Terms
 - a. TRIS reports of top uncontrolled terms and keywords used in records (Literary Warrant)
 - b. Reports of top search terms used in NTL Integrated Search and TRIS (User Warrant)
 - c. TRT Subcommittee can solicit terms from the transportation community (Organizational Warrant)
- II. NTL Review of New Candidate, Merged, and Deleted Terms
 - a. NTL compiles the list of candidate terms
 - b. NTL evaluates candidate terms, as well as terms to be merged or removed during an evaluation cycle
 - c. NTL provides recommendation status for candidate, merged, and deleted terms to the TRT Committee for technical review
- III. Technical Review Process
 - a. NTL submits quarterly report on all reviewed terms (including scope and recommendation)
 - b. The committee should vet terms with content experts (including TRB and AASHTO committees)
 - c. TRT Subcommittee provides accept/reject recommendations, definitions, lead-in terms, etc. within three weeks

As noted in the White Paper, the most recent management of the TRT by one qualified expert lacked the benefit of a diversity of perspectives that initial maintenance (by a team of experts) and through the new TRT Subcommittee enjoy.

Planned Strategic Scoping and Direction for the TRT

To start, the NTL suggests that the TRT Subcommittee could get an overall evaluation of the TRT to determine strengths and weaknesses (for long-range planning of the tool). Washington DOT's White Paper is the foundation for the review to build upon, specifically the "Gap in Terminology," "Managing Scope," and "Managing an Evolving Vocabulary" sections. Additionally, the NTL is active in a Federal knowledge management community of practice, specifically in the taxonomy shared practices group and the Ontolog Community of Practice. NTL has already approached the Taxonomy Tuesday group with a project to review and evaluate the TRT. The group is poised to provide experienced input on the development, structure, and best practices for building a thesaurus.

Regarding scope, as a concept, the TRT was intended philosophically to serve the concept of "transportation." In practice, however, it has been primarily driven by TRIS needs and therefore has served as a controlled vocabulary for a wide range of resources rather than a concept (or relationship) map for transportation. As suggested by the White Paper, the NTL agrees that the TRT should focus on transportation as a concept. Moreover, relevant concepts falling outside of transportation could be managed by acknowledging sister vocabularies such as National Agriculture Library Thesaurus (NALT) and MEDical Subject Headings (MESH). A purer focus for the TRT will facilitate semantic interoperability and the development of a more conceptual ontology for the transportation discipline.

With information gained from strategic review both within and external to transportation, TRB, the TRT Subcommittee, and NTL can refocus the scope and craft a strategic vision and plan for the development of the TRT into the future. Recent and current NCHRP projects have made improvements in use and usefulness for both TRIS indexers (through application enhancements) and users (through the addition of definitions for terms). Content review is a longer-term initiative which, with current resources, will be best handled through the new partnership with TRB, the TRT Subcommittee, and the NTL.

Usage: Thesauri vs. Taxonomies

The TRT is not all things to all purposes. Document management is specific to the organization, its processes and records structures. Browsing within a document management system should be within the framework of the organizations activities and objectives. While TRT terms are of assistance in identifying relevancy, as are Library of Congress Subject Headings, they do not substitute for a method for organization or classification in this context.

Similarly, creating a browsing tool for an organizational website also requires sensitivity to the practices, goals and purposes of the organization and the objectives and intended customers of the website. The TRT, while a useful tool, does not substitute for a web taxonomy. It may be considered in creating such a taxonomy, and parts incorporated, but as a whole, it is too deep and wide to be reasonable in this context.

Staffing

Optimal staffing for maintenance of the TRT consists of 1-2 FTE. With current resources, neither the TRB nor the NTL can employ dedicated staff for the tool. Two other libraries use two staff to maintain their thesauri: the National Agriculture Library (NAL) and the Congressional Research Service (CRS) at the Library of Congress. The NAL uses indexers for the AGRICOLA database to suggest candidate terms for the NAL Thesaurus (NALT). *TRIS* indexers currently perform the same function for the TRT. Two dedicated staff maintain the NALT. The CRS also uses two full-time staff members to maintain its 12,000-term thesaurus. The NTL and the TRT Subcommittee jointly perform this function currently.