Overview of the Transportation Research Thesaurus

A controlled vocabulary for the transportation industry

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"Taxonomy is described sometimes as a science and sometimes as an art, but really it's a battleground."

——

BILL BRYSON

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What we call things, how we classify things depends on the context.
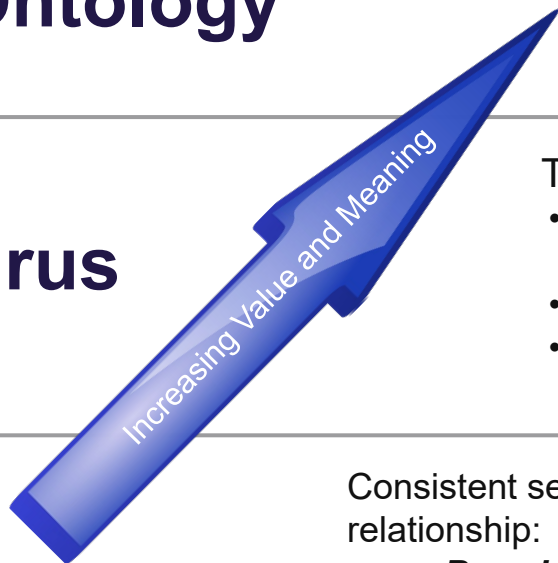
Controlled Vocabularies

Ontology

Defines Concepts and Terms
Relates Concepts and Terms

Thesaurus

Three Relationships
- **Hierarchical:** a term which is broader or narrower than another term
- **Equivalence:** synonymous terms
- **Associative:** related term

Increasing Value and Meaning

Taxonomy

Consistent semantics for parent/child relationship:
> *Broader than…*
> *Narrower than…*

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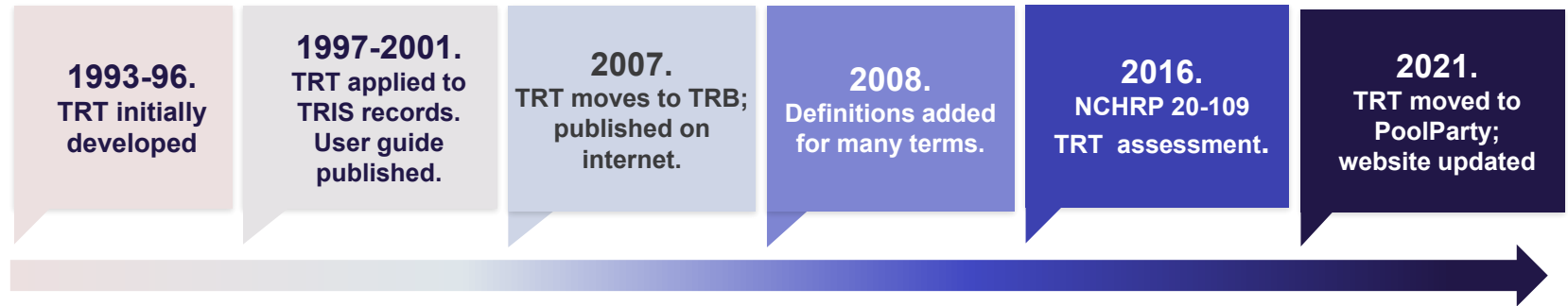*Sciences
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Basic Facts About the TRT

The TRT is a controlled vocabulary designed to improve the indexing and retrieval of transportation information. It provides a consistent language to facilitate information search and retrieval.

- Was started in 1990 at the Transportation Research Board

- Is located at https://trt.trb.org/

- Is organized into 21 facets

- Contains more than 12,000 controlled terms to use for indexing transportation information

- Contains index (subject) terms

- Is under efforts to make the TRT ISO compliant and more of semantic model

Timeline of TRT Developments

1993-96.
TRT initially developed

1997-2001.
TRT applied to TRIS records. User guide published.

2007.
TRT moves to TRB; published on internet.

2008.
Definitions added for many terms.

2016.
NCHRP 20-109 TRT assessment.

2021.
TRT moved to PoolParty; website updated

Facets of the TRT

The domain of the TRT covers all modes and disciplines of transportation.

Areas and regions
Communication and control
Construction and maintenance
Disciplines
Economic and social factors
Environment
Facilities
Information, data, and knowledge
Management and organization
Materials
Mathematics
Organizations
Persons and personal characteristics
Physical phenomena
Planning and design
Safety and security
Testing
Time
Transportation
Transportation operations
Vehicles and equipment

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Sample Term from the TRT

- Term display shows
  - Preferred term
  - Place in hierarchy
  - Definition
  - Use for (i.e., synonyms, non-preferred terms)
  - Broader terms
  - Narrower terms
  - Related terms

Highways

Top Terms > Facilities > Transportation, hydraulic and utility facilities > Highway facilities > Roads > Types of roads > Principal types of roads > **Highways**

Public ways for purposes of vehicular travel, including the entire area within the right-of-way.

(Recommended usage: in urban areas-highways or streets; in rural areas-highways or roads.)

(Source: AASHTO Glossary)

Broader Term
Principal types of roads

Narrower Terms
Arterial highways
Depressed highways
Divided highways

Related Terms
Highway access management

Find Related Records
RIP
TRID
PubsIndex

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How the TRT is Used

The TRT is a controlled vocabulary designed to improve the indexing and retrieval of transportation information. It provides a consistent language to facilitate information search and retrieval.

- Is housed in PoolParty Semantic Suite

- Is used to index bibliographic information in TRID, Research in Progress database, publications index, research statements for TRB, other taxonomy projects at NASEM

- Is used for a classification tool at TRB

- Is used for selecting terms for the Technical Report Documentation Page for government research reports

- Is used to provide descriptors for analyzing and indexing documents for the National Transportation Library digital repository, ROSA-P

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Aspects of Data Governance

As a controlled vocabulary, the TRT is governed by a subcommittee with established policies, procedures, roles, and responsibilities.

- TRT subcommittee is comprised of 16 members of the transportation library community.

- TRT subcommittee meets on a regular basis to consider new terms.

- The subcommittee has developed principles for the development and maintenance for the TRT.

  - The principles document is intended as a policy statement for specific practices within the organization and development of the TRT.

  - It is intended to provide scope and structure to those involved in the development of the thesaurus.

Mechanics of Data Governance

- Members collaborate using a Google site.

- Two TRB staff members research prospective terms for the subcommittee to consider.

- Members review prospective terms and make comments during a review period.

- Members attend a conference call to discuss and vote on terms.
  - Term form (e.g., plural versus singular, right concept)
  - Definition of term
  - Placement in the hierarchy
  - Synonyms (i.e., lead-in terms, non-preferred terms)
  - Related terms

- Possible outcomes:
  - Approve
  - Approve conditionally
  - Decline
  - Park

Term Research

- Two subcommittee members research the prospective terms.

- They consider the shown elements.

- This process is outlined in the *TRT Development and Maintenance Procedures* documentation.

TERM Research: Term requested   Date requested: 20140101

TRT Usage/Related terms (terms/placement considered):

TRID Usage:
"Term Requested"
Keyword search – ____ hits
Title search = 216 hits
Index term = 1,545 hits
Abstract = 582 hits

Other notes on related terms or how the indexers used the requested term.

Resources/Research

GENERAL SEARCHES
Google search - term requested = x number of hits

DEFINITIONS
– usually from .gov sites or other authoritative resources.

LITERATURE SEARCH
-how the requested term is used in the literature. Authoritative sites that may assist in determining where to place a term in the TRT Hierarchy.

OTHER AUTHORITY LISTS/TAXONOMIES
Usually include:
AASHTO Glossary of Terms
ATRI:
IEEE Thesaurus (2009)
NASA Thesaurus

Notes and Placement recommendations:

Action to be taken on the Requested Term (Park, Decline, Add as PT, Add as NPT)

Justification for the recommendation and placement, when appropriate.

Your Input, Please

The TRT subcommittee values your input as we continuously strive to make the TRT more usable and accessible to librarians and users across the transportation industry.

- How do you use the TRT?

- What other controlled vocabularies do you use?

- Do you have any suggestions for the TRT subcommittee? trt.trb.org

- Are there any obstacles that keep you from using the TRT?

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Suggest New TRT Terms

Use the form below to suggest up to 5 new terms for inclusion in the Transportation Research Thesaurus. Use the comment box to include any information supporting the request for the new term such as a citation or source and to recommend where the new term should appear in the hierarchy.

Name:

> Your name

Email:

> Your contact email address

Affiliation:

> Your agency, school, company or organization

Suggested Term 1

Term Name:

> Your suggested term

Note (optional):

> Note about this suggested term

Questions?

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