# Investigation on utilization of SWEET ontology to support Exploratory Search through NASA's documentation

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NASA missions are associated with large amounts of documentation that capture the processes, procedures, and results of the core NASA activities. This documentation includes information that spans the subjects of: engineering, management, requirements, standards compliance, science, and data management. While the documentation normally satisfies certain standards for information capture as specified by ISO or other standards bodies, specific content may be difficult for a non-specialist to locate within a large collection, due to the sheer volumes involved. Even when traditional keyword searches are available, it may be difficult to identify the appropriate keyword or keyword set to search upon, when technical vocabularies are involved. The limitation is that indexing schemes treat a text corpus as a "bag of words" without any understanding of its meaning or semantics. The objective of this project is to preliminarily investigate applicability of NASA's own Semantic Web for Earth and Environmental Terminology (SWEET) ontology to improve access to NASA mission documentation for both NASA and non-NASA personnel. We want to initiate research on a new, more human-like structural organization of NASA technical documentation that captures the semantics of its content, and to develop a prototype that exploits this information to assist searching. This activity is driven by recent discoveries in the information science disciplines of graph-based data mining and ontology-based information processing.

## Contact Info

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