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The Challenge of the Electronic Environment to the Organization of Knowledge - Second International Seminar on Subject Access to Information, Helsinki, Finland, 29-30 November 2007  

Thursday Nov. 29  
10.10-10.45 Introductory Review of Current Knowledge Structures and Tools  

The presentation introduces different types of knowledge organization systems/structures/services (KOS) to provide a common terminology and background for the entire conference and participants. KOS have been structured and implemented in order to fulfill fundamental functions in knowledge organization. These systems model the underlying semantic structure of a domain and provide semantics, navigation, and translation through labels, definitions, typing, relationships, and properties for concepts. This review will introduce different types of KOS based on these functions, including: 1) structures designed to eliminate ambiguity (e.g., pick lists); 2) structures that emphasize controlling synonyms or equivalents (e.g., authority files, gazetteers, synonym rings); 3) structures that make explicit semantic relationships clear (e.g., taxonomies and classifications for hierarchical relationships, thesauri and semantic networks for both hierarchical and associative relationships); and 4) structures that present both semantic relationships and properties (e.g. ontologies). In today's networked environment, KOS are not used in isolation, nor are they only used for organizing, indexing, cataloging, and searching. KOS are applicable to learning, knowledge modeling, reasoning, and many other environments. They may be used, re-used, and re-purposed in web-based services. Networked KOS, i.e., NKOS, inherit most of the structures that the world has utilized well over a hundred years, yet they are not simply a repetition of past systems or structures. The presentations and discussions of these two day seminar will provide evidences that NKOS are becoming machine-processable (i.e., not simply machine-understandable) and are forming new semantic structures that will have a greater functional impact that is far more extensive than imagined.