

Marcia Zeng

Professor, School of Library and Information Science, Kent State University, USA

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

16.15-17.00 From Data Modeling to Ontologies

[After Eeva Murtomaa's and Maja Zumer's presentations on FR-family]

To prepare globally-shareable knowledge organization systems, one barrier to break down is making KOS machine-processable (machine-understandable). This was the concern that previously belonged to the domain of researchers in computer science and W3C pioneers (although some researchers came from the information sciences). Recently, the Interim Draft Report Recommendations from the Library of Congress Working Group (WG) on Future of Bibliographic Control (presentation: 13 Nov., 2007, Draft available: <http://www.loc.gov/bibliographic-future/meetings/webcast-nov13.html>) has brought this to the attention of the library profession. Among general and specific recommendations, one is to “Optimize LCSH for Use & Re-use.” The WG suggested decoupling [LCSH] subject strings and to make data (including subject authority data) directed to Web services in order to make them machine-processable. In fact, all traditional KOS face such an issue which needs immediate action. However, as Dr. Maja Zumer reported, there has been a lack of a conceptual model that could have been used across all KOS. It is necessary to have a model that will separate what a thema (i.e., subject/topic/concept, etc.) is from what it is called, referred to, and addressed as, (i.e., nomen) so as to construct and represent KOS in a machine-processable and understandable format for exchange. Ontologies, mostly applied to biomedical research areas until now, as evidenced by Protégé-based products, have demonstrated this conceptual model methodologically and technologically, despite lacking a formally defined abstract model (which consequently has led to a situation that the word ‘ontology’ has been inaccurately used and misused in some cases). This presentation will explain the conceptual model behind the current ontological approach and bring forth examples that support a good ontological approach based on applicable modeling.