

# **From Online Catalogs to Digital Metadata Infrastructures and Grid Services for Digital Libraries and Archives**

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This talk will look back on the development of online systems for libraries and archives, and a look forward to research developments in this area. One interesting aspect of the evolution on systems for libraries and archives has been the persistent need for consistent structured metadata. Metadata is ordinarily used to describe documents, but it can also constitute a form of infrastructure for access to networked resources and for traversal of those resources. One problematic area for access to digital library resources has been the search for time periods and events, whether of historic import or of significance in individual lives.

This presentation will also describe our recent research in designing and developing digital library services, and will focus on approaches to indexing and searching in a steadily increasing range of genres and materials. An important aspect of this research is concerned with providing effective and scalable IR services for digital libraries as these diverse collections grow to sizes measured in terabytes and petabytes. We will examine how metadata is increasingly central to these tasks, and how "old" metadata from library catalogs is getting new lease on life in dealing with very-large-scale collections of digitized materials, such as the books scanned by the Open Content Alliance.