TITLE: The Roles of Digital Reference in a Digital Library Environment

AUTHOR(s): R. David Lankes

PUBLICATION TYPE: Presentation

DATE: 2004

VENUE: International Conference of Digital Library-Advance the Efficiency of Knowledge Utilization, Beijing, China


KEYWORDS: Virtual reference, digital reference, china, complexity, knowledge base
The Roles of Digital Reference in a Digital Library Environment

R. David Lankes
Executive Director,
Information Institute of Syracuse
http://www.DavidLankes.org
What is Digital Reference

• “The use of human intermediation to answer questions in a digital environment”

• An Active International Community, Primarily Library-Based, of Practitioners and Researchers
  – Digital Reference as a Peer-to-Peer Library Service

• Philosophy that Every Digital Library needs a Digital Librarian
• Technical Standards
  – QuIP -> NISO AZ
• Quality Standards
  – Quality Study
• Education Initiative
  – DREI
• Research Agenda
• Software Market Place
• Traditional Model
• Annotation Model
• Accretion Model
• Information &Referral
• Expert Serves as “Advocate” to the Collection
• Expert can Synthesize and Span Collection Limitations
• Intermediation and Direct Access are Equivalent in Reach
Digital Reference Enriches the Collection
Persistent Annotations
Annotations Consist of Pointers and Comments
“Reference Review” as New Form of Quality Assessment

Annotation Model
• Reference Authoring
• Answers are Part of the Collection
• Annotations to Resources Outside Existing Collection Creates Stub Record
AskERIC/EduRef as Example
Accretion Process
• Will the Collection Cluster or Build on the Edges
• Or do Users Ask at the Edges of their Knowledge
The Next Frontier: Knowledge Bases

• Possible Utility of Knowledge Bases
  – Alternative Source of Answers
    • Help Desk Model, Saturation
  – Resource for Expert
    • “Brain Box”
  – “First Order” Resource
    • Disconnected from Reference Process
• All or Edit
  – Either all transactions are searchable or services use an extensive deductive editing process
• Primarily Deductive
  – Context Dependencies
  – Metadata Creation
  – Chunking
  – Fact Shifting and Temporal Dependencies
• Seed and Weed
  – Edit them in, then have to weed the archive
• Treat the Output of Reference Transactions as Semi-Structured Digital Object
• Semi-Structured Objects have Static and Dynamic Attributes
  – Static: User ID, Expert ID, Content
  – Dynamic: Age, Topicality, Annotations
• Create a “Space” for These Objects/Agents to Interact
• Create Performance Systems for Agents

A New Approach: Induction
• Performance System
  – Tags (Object Attributes)
  – Internal Model
    • Weighting Scheme for Object Comparison
  – Geometry
    • Means of Determining Proximity for Clustering
• Attributes of the Environment
  – Means of Comparison (Pairwise? Neighboring Nodes?)
  – Synchronization Scheme
• Digital Reference has a Proven Place in Digital Libraries
  – Different Levels of Integration of Human Expertise
• Digital Reference is Increasingly Institutionalized
  – Standards (technical and quality)
  – Software
  – Research
  – Community
• Librarians, not the Collection make a Library