The goals of the DREW project are to: create a schema useful in archiving components of a reference transaction in a standardized manner; work with services to turn their archives into the DREW format; collect, clean, and remove personally identifiable information; create an exploration space for library scientists to create new models, measures, reports, and generalizations about the reference process; and create the infrastructure to allow services to directly benefit from the models the researchers create. Both librarians and researchers will learn how they can participate in the collaborative DREW project.

KEYWORDS: Virtual reference, digital reference, libraries, data warehouse, knowledge base, research
Building DREW
A Data Warehouse for Digital Reference

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http://DREW.syr.edu
Overview

Context of DREW: A Broadening View of Digital Reference

Concepts in DREW’s Development

Applications of DREW
Context

- Digital Reference (Virtual Reference) Started with a Necessary Overemphasis on Human Intermediation
- Lead to Near Exclusive Emphasis on Numbers and Process
- Now We Need to Reintegrate Reference
Myth of Useless Knowledge Base

- Many Say Knowledge Bases of Digital Reference Transactions are Useless
  - Too Much Editing Effort
  - Unstable URL Pool and Fact Shifting
  - Context Dependent Nature of Questions

- Truth
  - Too Early to Say
    - Little Research on Utility of Knowledge Bases
  - Imprecise Terminology
  - Ignores the Obvious Utility of Data Stores of Digital Reference Data
    - Statistics, Reporting, Management, Training
**What is DREW**

- A Large-Scale Repository for:
  - Raw Digital Reference Data
  - Technologies & Policies to Control Access for Research and Practice
  - Shared Repository of Open Tools for Research and Exploration of Digital Reference Data

- Vital Infrastructure for the Advancement of Digital Reference Research in General
  - Question Trends, Citation Patterns, Reference Encounter

- Platform to Examine Reference Authoring and Knowledge Bases in Particular
Levels of Digital Reference Data

- **Human Editing** = Knowledge Base
- **Automated Cleaning** = Archive
- **Raw** = Data Warehouse
Levels of Digital Reference Data

Human Editing = Knowledge Base

Automated Cleaning = Archive

Raw = Data Warehouse
DREW Overview

CONCEPTS
Practical DREW Applications

Operational
- Basic Reporting
  - Questions, Interactions, Time, Cited Resources
- Cited Resources and Collection Utilization
- Cross-Service Benchmarking

Research
- Random Sample of Transcripts
  - By library type, by service mode, longitudinally
- “Anonymizing” Through Natural Language Processing and Machine Learning
- Classification Tools
- Aggregation Statistics Cross-Service
DREW Application

Reference EXTRACT

Expand Search to Referenced Sites

APPLICATION
Conclusions

• Vital Infrastructure for Research and Management in Digital Reference
  – Useful Data, Easy to Use

• Model of Integration of Research and Practice
  – Building a Community of Data, Tool Building and Exploration

• Part of an Integrated View of Digital Reference

• Beginning an Exploration of Reference Authoring
http://DREW.syr.edu
http://www.DavidLankes.org

Slides and More Information