Clustering Metadata for improved Querying Patrick Trinkle, UMBC tri1@umbc.edu

Goals

- Glean information from GUI rather than searching through endless lists.
- 2. Change the way people who read reports find collaborative and augmenting information.
- 3. Facilitate discovery of new information.

Previous Work

- •Scatter/Gather list tree view, hierarchy.
- •Cluster Interface for scientific data.
- •Metadata Extraction automatically grab features.
- •Normal Listing Engines lists of results.
- •Co-occurrence reframing the problem.

Input/Process

Corpus

- •Reports about one or several closely related subjects.
- •Reports contain metadata.

Source, Author, Region, GPS,
Date Timestamp

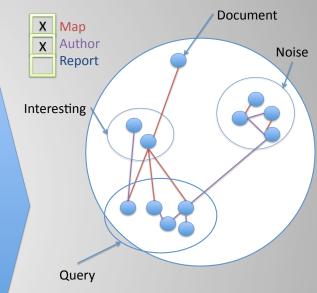
Contents

Object References: maps,
photos, charts/graphs,
reports...

Process

- Extract Metadata and keyword information.
- 2. Build vectors with metadata and references.
- Group documents
 by features; documents with
 more features/content in
 common are in small
 clusters.
 - *Clustering algorithm can be chosen based on experimental performance.

User Interface



- •Demo Graph is 2-dimensional, people can interact in up to 3 Euclidian dimensions.
- •Distance between points indicates how closely they're related.
- •The style of the lines between documents specify type of relationship.

Future Work

- •Build system.
- •Effectiveness with different data sets?
- •Other problems addressable with system?