Interactive Information Access to Federations of DL Services

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1. From Information Access to Information in Context

- Information Access
- Considering Context
  - Time
  - Work
  - Social
Information Access

Text Facts 2D 3D Speech Audio Video

\{ unstructured semi-struct. fully struct. hyperlinked \}

Ad-hoc Retrieval Filtering/Routing Classif./Clustering Question Answering Summarization

Media/ Objects Structure/ Relationships Access method

Most methods do not consider any context!
Considering Context

social context

work context

time
Time-dependence

- Batch retrieval
- Constant information needs (Filtering → adaptation)
- Interactive retrieval
- Personalization:
  - Preferences
  - Seen items
  - Evolving interests
Work context

- Context-free
- Task-specific searches
- Workflow (e.g. DL Life Cycle)
Social context

- Single user
- (Fixed) user groups
  - Collaborative information access
- (Open) communities
Context dimensions

- Social dimensions:
  - Social
  - Communities
  - Teams
  - Single users

- Work dimensions:
  - Application workflow
  - Generic problem solving

- Time dimensions:
  - Ad-hoc retrieval
  - Interactive retrieval
  - Batch retrieval
  - Personalization
2. Federations of services for interactive access

- Homogeneous federations
- Heterogeneous federations
- Interactive access
Federations of Homogeneous Services
Access to federations of heterogeneous services
Federations of Services

- Services may specialize with regard to:
  - Content
  - Users
  - Usage

- Mediating Services
Highly interactive access

Fast interaction vs. wide distribution of services
Conclusion

- Information access in context:
  - Time
  - Work
  - Social

- Federations of heterogeneous DL services
  - Specialized wrt. content, usage and users
  - Highly interactive use vs. distributed services