Content Access Characterization in Digital Libraries

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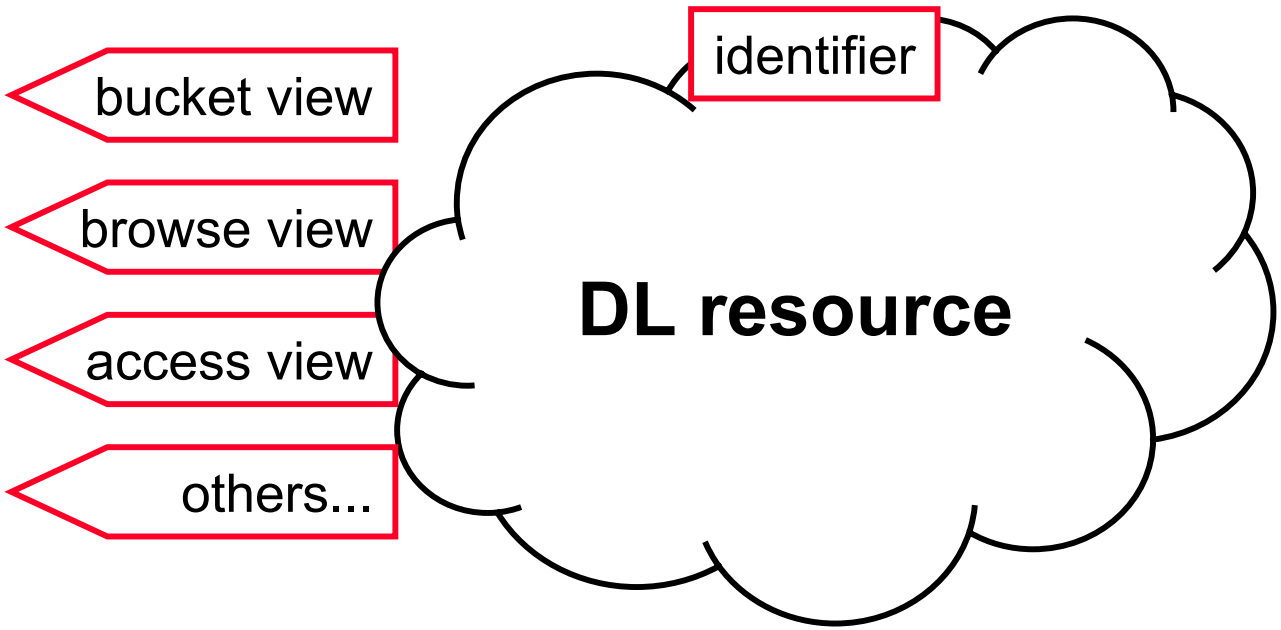
Motivation

- Provide meaningful, useful access to geospatial resources
- Geospatial resources are...
  - complex assemblages of components
  - large
  - accessible in various modes
  - often offer service-based access
- Close ties to data analysis environments
  - e.g., GIS

Context


identifier
bucket view
browse view
access view
others...
DL resource

Related work

- Content standards
  - Dublin Core: URLs
  - FGDC: multiple “distributions”
- METS
  - powerful, but complex
  - doesn’t make key distinctions

ADL access framework

- "Access point"
  - a single, independently accessible representation of the resource or subcomponent of the resource
  - four types

- Hierarchy mechanisms
  - Decomposition (multipart)
  - Alternatives
    - **multiple equivalent formats**
    - **individual components vs. single aggregate**
      - NB: hierarchy mechanisms nest

Types of access points

- Download
  - URL; format, MIME type, encodings, size
- Service
  - URL; protocol, definition
- Web interface
  - URL
- Offline
  - reference or citation

Example

- U.S. Geological Survey "Digital Raster Graphic" (scanned topographic map)
  - multiple components (files)
    - **image**
    - **georeferencing data**
  - multiple access options
    - **download TIFF**
    - **access via MrSID (hierarchical multiresolution)**
  - multiple offline locations
    - **depository libraries**

Conclusion

- Simple access framework
  - 4 types of "access points"
  - 2 hierarchy mechanisms: alternatives, decomposition
- Captures key distinctions important to programmatic clients
- Outstanding issues
  - integration with access control mechanisms
  - role of conversion services