A Framework for Understanding S+DIs

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Characteristics of a (S)DI

• Group of loosely affiliated organizations coming together to pursue a shared interest
• Benefits and costs are spread unevenly across parties
• No central point of control or authority

• Observations
  – The infrastructure has little value without broad, sustained participation
  – Need a platform that allows middle-out participation
  – Do a better job of matching up risk with rewards (costs & benefits)
## An SDI Taxonomy

<table>
<thead>
<tr>
<th>type</th>
<th>capability</th>
<th>examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>file transfer</td>
<td><em>read</em></td>
<td>file sharing, FTP, Web download</td>
</tr>
<tr>
<td>file transfer with search</td>
<td><em>read/search</em></td>
<td>portals, such as GEOSS GEO Portal, Geospatial One-Stop</td>
</tr>
<tr>
<td>data infrastructure</td>
<td><em>read/write/search</em></td>
<td>Google MyMaps (plus Maps Data API)</td>
</tr>
<tr>
<td>spatial data infrastructure</td>
<td><em>distributed read/write/search/search/spatial search</em></td>
<td>GeoConnections Canada(?)</td>
</tr>
<tr>
<td>spatial compute cloud</td>
<td><em>distributed read/write/search/spatial search/spatial processing</em></td>
<td>?</td>
</tr>
</tbody>
</table>
### OGC Service Match with SDI Taxonomy

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<th>examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>file transfer</td>
<td>read</td>
<td>WFS, WCS</td>
</tr>
<tr>
<td>file transfer with search</td>
<td>read/search</td>
<td>add CSW</td>
</tr>
<tr>
<td>data infrastructure</td>
<td>read/write/search</td>
<td>add WFS-T (no WFS-T), GeoRM</td>
</tr>
<tr>
<td>spatial data infrastructure</td>
<td>distributed read/write/search/spatial search</td>
<td>add Cascading WFS, GeoSynchronization</td>
</tr>
<tr>
<td>spatial compute cloud</td>
<td>distributed read/write/search/spatial processing</td>
<td>add distributed WPS</td>
</tr>
</tbody>
</table>

WCS: Web Coverage Service  
WFS: Web Feature Service  
WFS-T: Web Feature Service – Transactional  
CSW: Catalog Services for the Web  
WPS: Web Processing Service  
GeoRM: Geospatial Rights Management
Distributed Data Processing: Yahoo! Pipes

![Yahoo! Pipes GUI for IWMW pipe](image)

- **Sources**
  - Fetch CS
  - Fetch Feed
  - Fetch Data
  - Flickr
  - Google BDE
  - Yahoo! Local
  - Yahoo! SDE

- **User inputs**
  - Operators
  - URL
  - String
  - Date
  - Location
  - Number

- **Operators**
  - Truncate
  - Regex
  - Union
  - Sort

- **Regexp**
  - Use regular expression patterns here:
    - Rules
    - In item.title replace (*) with [del.icio.
Read-Write GeoWeb: MyMaps Editor by Google

- With this application you can create, edit, share, and view personalized maps on your Android powered phone synchronized with the My Maps tab on Google Maps. Create a map on your desktop computer using Google Maps and then take it with you on the go and update it on location.