ARMAP, AOV, ISO Metadata, and RESTful Architectures for Data Sharing and Interoperability

IASC/SAON Arctic Data Committee meeting
26 October, 2015
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Arctic Research
Mapping Application

http://armap.org

Project Locations
Arctic Research Mapping Application

http://armap.org

Arctic Observing Viewer

http://arcticobservingviewer.org

Project Locations

Data Collection Sites
Each project location is a logistical base of operation.
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Each data collection site is a sensor, monitoring asset, observing platform, or wherever repeat measurements have been taken.

And each data collection site can have many datasets.
• 2400+ project locations
• high order
• Title, funding agency, funding program, discipline, point of contact, start and end dates, etc.
• All Arctic science
• 18 agencies & organizations
• 2400+ project locations
• high order
• Title, funding agency, funding program, discipline, point of contact, start and end dates, etc.
• All Arctic science
• 18 agencies & organizations

• 7700+ data collection sites
• high resolution
• Collection type, site name, elevation or depth, science keywords, links to datasets, etc.
• Arctic Observing
• multiple networks
**Project Life Cycle:**

**Project Planning**
- Who is doing what, when and where?
- How do we plan for logistics?
- Where are medical facilities, field research stations, ship tracks, airports, etc.?

**Collection Site Monitoring**
- Where are existing data collection sites?
- Where are more sites needed?
- Who operates and manages existing sites?
- Which sites can I use?

**Dataset Usage & Understanding**
- Is this dataset suitable for my research?
- Does it cover my area for the right time period?
- How was it created?
- What are the errors?
- Who do I contact with questions?
Connecting information systems with ISO metadata and RESTful services:

Metadata can be distributed across multiple organizations through web services.
Connecting information systems with ISO metadata and RESTful services:

ARMAP and AOV have adopted ADIwg community standards.
Data sharing and interoperability can be improved through use of “recommendations”. A recommendation is a set of information concepts that is independent of metadata dialects (standards), driven by user needs.
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A few established “recommendations”:

- ADIwg
- ARMAP
- AOV
- ADIwg
- LTER
- CSW
- FGDC
- GCMD
- DataCite
- ADIwg
- ...
Data sharing can cycle “backwards” to populate databases, and to improve completeness and accuracy.
Recommendations can be used to evaluate metadata ... 

... and to improve metadata consistency, completeness, & interoperability.
Please see John Kozimor at the poster,

visit armap.org and arcticobservingviewer.org,

and feel free to contact any of us anytime.

Thank you!