5-year vision for an Arctic GIS

Components of an Arctic GIS

1. Functional clearinghouse for Arctic GIS data

   – Adopt NSDI framework standards

   – Central sites for metadata

     • NSIDC in Boulder for NSF products

     • USGS/ADC in Anchorage for Alaska and US Govt Agency data

     • GRID/Arendal for Eurasian data

     • Canadian site?

Components (cont')

2. Network of subnodes where data are housed for organized maintenance and dissemination of data and results

- Some would be archives and portals for regions or universities that have large data gathering facilities or multiple large data sets (e.g., UAF could serve as the node for data sets related to the Toolik Lake and Bonanza Creek LTER sites, Barrow, SAR facility, SynCon projects, etc.)
- Others could house single data sets.

Components (cont')

3. Two-tiered GIS database

- Circumpolar database constructed at 1:4 M scale with terrestrial and ocean components
  - permafrost, soil, and vegetation layers are nearly complete for terrestrial component
  - Arctic Ocean community would need to decide on the components for a marine GIS
- Large scale (1:500 to 1:5000) GISs for sites of focused research activities (e.g., Barrow, Toolik Lake, Bonanza Creek, Resolute, Wolf Creek, etc.)
- Hierarchical data bases that allow relatively easy extrapolation between scales