
Is single-window data search a myth or can it be made real? Developing federated search for polar oceanographic and terrestrial data

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Single-window metadata search across multiple data repositories has been a constant desire of science communities in high latitudes environments. Near the poles, observations are sparse and logistical challenges severe. These factors make existing observation data particularly valuable to researchers. However, due to the international and interdisciplinary nature of these science communities, the data are fragmented across a bewildering array of data centres and catalogues. For example, the Southern Ocean Observing System (SOOS) has identified at least 50 catalogues that hold data of interest to the Southern Ocean science community. Federated search is a promising set of technologies that may allow scientists to achieve their dream of single-window search.

SOOS, the Standing Committee on Antarctic Data Management (SCADM) and the Arctic Data Committee (ADC) have formed POLDER, a working group to develop federated search for polar regions. POLDER is investigating and working with the available tools and initiatives in this field to ensure that the polar data communities are working together with our colleagues in the rest of the world to avoid reinventing any wheels.

In this presentation, we introduce POLDER and report on its progress to solving the technical and human challenges that have so far prevented the scientific community of meeting its goal of finding “all” the relevant data in a single-window search. We invite the marine data community to work with us to solve this common problem.