Web services at the IRIS DMC to support integration of data sets

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At the IRIS Data Management Center (DMC) we have developed web service interfaces to almost all of the data types we manage. These service interfaces provide access to raw time series data and associated metadata. In addition, we offer services that apply processing to the data before it is sent to the user. Whenever possible we chose open and recognized standards. The services themselves use only a simple subset of widespread web service technologies and methods, ensuring the widest possible support in programming languages and operating systems.

To promote easier access to seismological and other geophysical data we are coordinating our web service developments with national and international parters. We are working within the Federation of Digital Seismograph Stations (FDSN) to define web service standards for international seismological data centers. Additionally we are working with key partners in Europe to complete the initial implementation of these international standards. Within the United States we have started coordinating with other data centers for related geophysical data types (e.g. geodetic) with the intention of facilitating cross-domain data discovery and use. The overall goal of these efforts is to make data more open, easily found and used by research scientists regardless of the repository in which any given data resides.

To foster integration across geophysical domains the IRIS DMC is also making information available in the form of higher level products. These products often are more easily understood by a wider audience than the more esoteric seismographic time series. The support of products will support better integration of data sets.

We will present the status of our web service developments and the related coordination efforts in addition to the next steps and vision for the future.