Open Data, Data Services, and Cross-Disciplinary Collaboration in Geophysics

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Over the last few decades, seismologists, geodesists and other geoscientists have accumulated vast holdings of geophysical data from global networks, regional networks, and temporary deployments. Most critically, almost all of this data is freely and openly available, which enables scientists everywhere to use it in an ever-increasing variety of ways. Currently, the IRIS and UNAVCO facilities are both re-engineering their data management systems to use modern web services and similar means to distribute data and products. This approach promises gains in efficiency, and also enables an increased exploitation of multi-disciplinary data sets because data and products can be accessed using integrated discovery tools and transfer mechanisms. The future NGEO facility, which is expected to be operated by an alliance of IRIS and UNAVCO, will require closer collaboration and coordination between the two organizations. This provides an opportunity to provide both raw data and data products to an expanded user community, and to develop new products for cross-disciplinary topics such as seismo-geodesy.