

A History of IRIS Data Usage Quantified: Visualizations from 15+ years of research support, monitoring and education.

Authors: Tim Ronan, Jerry Carter, Chad Trabant, Dan McNamara, Rob Casey

The thriving and data-hungry seismological research community's desire for openly accessible, globe-spanning data sets was one of the main motivations leading to the formation of IRIS and other federated data centers. These centers provide open access to large volumes of geophysical data. Paradigms for data capture, archiving, and processing were developed and refined over decades to satisfy the needs of the research community.

As we transition from IRIS to EarthScope Data Services, we are looking at historical seismic data usage to provide useful insights that can be leveraged to guide future services. Ever-refining our tracking processes, the IRIS Data Management Center (DMC) recently updated its systems to enhance the collection and processing of usage statistics. During this upgrade, we migrated the historical IRIS usage data that have been collected since December 1999. From this compilation of usage information we can examine more than twenty years of IRIS data usage, observations of user behaviors, and trends in seismic data usage. We will present an overview of these statistics, including interesting observations and lessons we can apply to the future facility.