



The Integrated Data Viewer (IDV) – A discipline agnostic analysis and visualisation tool for geoscience exploration

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Unidata has developed the Integrated Data Viewer (IDV) as a general purpose tool for displaying and analyzing geoscientific datasets. The freely available, Java™-based reference application is easily installed on most operating systems, including Windows, Macintosh and Unix computers. While the reference application's interface is geared toward atmospheric science, the underlying framework is general and discipline agnostic. Data only need to be georeferenced to be displayed in the IDV. Because of this, the IDV is being used in oceanographic, hydrologic and geophysical disciplines, as well as atmospheric science. Some users are accessing and displaying their data in the reference application while others are creating customized versions that meet the needs of their users.

The IDV "reference application" is a geoscience display and analysis software system with many of the standard data displays that a typical meteorological analysis and display software (e.g. GEMPAK and McIDAS) provides. The underlying VisAD data model enables the IDV to easily combine multidisciplinary data from local and remote sources in the same interface. It brings together the ability to display and work with satellite imagery, gridded data (for example, numerical weather prediction model

output), surface observations, balloon soundings, NWS WSR-88D Level II and Level III RADAR data, and NOAA National Profiler Network data, all within a unified interface. It also provides 3-D views of the earth system and allows users to interactively slice, dice, and probe the data, creating cross-sections, profiles, animations and value read-outs of multi-dimensional data sets. The IDV can display any Earth-located data if it is provided in a known format. The IDV software library can be easily be used and extended to create custom geoscience applications beyond the atmospheric science realm. This customization allows new applications to be tailored to specific datasets and provide customized user interfaces for different tasks. One example of a specialized IDV application is the GEON IDV for use with seismological and other types of data in the solid earth community.