ODI Abstract

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The Open Data Interface (ODI) is a software system to store data and metadata. The metadata syntax follows the CDF/ISTP[1] guide lines. The ODI system relies on a MySQL[2] database to store its data and metadata. There are MySQL database drivers for all major computer platforms (Linux, Mac OS X, Unix, Windows) and libraries have been implemented for all major programming languages (e.g. C, C++, IDL, Java, Mathematica, Matlab, Perl, PHP). This means that data in ODI are accessible to a wide variety of software systems.

The ODI system contains: software to ingest data and metadata for a number of specific datasets from plain text files; software to ingest data and metadata from ISTP compliant CDF files; software to export data into plain text files or CDF files; a set of command line tools to administer and explore the database; scripts to automatically download datasets; scripts to automatically ingest datasets; scripts to set up scheduled download/ingest (based on Cron).

The core ODI system has been developed in PHP which should make it platform independent. However, some datasets rely on platform dependent code and the CDF export utility relies on IDL/Dataminer[3]. As the syntax for data originating from plain text files is not standardized custom text parsing code is necessary. Several parsers are included in ODI and new parsers can be added to allow the ingestion of additional datasets. New parsers are automatically identified by the system.

A set of software systems, namely SAAPS[4], SEDAT[5], and SPENVIS[6], have been updated to make use of the ODI system.

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[1] http://spdf.gsfc.nasa.gov/sp_use_of_cdf.html
[2] http://www.mysql.com/
[3] http://www.ittvis.com/ProductServices/IDL.aspx
[4] http://www.lund.irf.se/saaps/
[5] http://www.wdc.rl.ac.uk/sedat/
[6] http://www.spenvis.oma.be/