



MM5IDL: A Flexible Framework for Post-Processing MM5 Weather Data

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A common approach for post-processing data from the MM5 weather model has been to convert the data from the native format to a more convenient one, i.e. netCDF, RIP, GRADS, etc. This approach has serious flaws if the dataset is large (waste of disk space) and/or extends over a long time period (some of the post-processing tools used for MM5 are limited to relatively short time-series).

In order to handle these shortcomings a novel software framework, the MM5IDL, has been created. The package is targeted at meteorological researchers using the MM5 model, and wanting to unleash the flexibility of IDL to analyse their simulation results.

At the core of the package is an IDL class hierarchy which deals with reading, and to some extent writing, files from the MM5 weather modeling system. On top of this core, a flexible framework for analysing the data has been built. The aim of the framework design is to enable the casual IDL user to add his/her own data analyses and mapping routines as "drop-in" classes. Programmatically, such analysis routines are then applied to time periods as simple, single-line constructs.

At present, a couple of post-processing tools have been developed under this framework. Using the GUI capabilities of IDL, it is also straightforward to add a UI layer on top to create a full-blown application.

The software is distributed under the GPL license.