

Data Generator

1 Data Generator Concepts

For data generator, in fact this module is only used by ourselves facing with no appropriate data sources. For being a data generator, this module should allow users to do several things:

1. Name the output file;
2. Set the directory where the output file will be;
3. Set file format (Arc/Info ASCII or any other file format, different file formats require different file structures) since file format is important for cooperating with other modules;
4. Geometric info about this file (such as the coordinate origin, cell size, metric);
5. Filling the actual grid data;
 - (a) In what precision would the digital data be (int or float, what's the precision);
 - (b) How many rows and how many columns;
 - (c) What would be filled if there is no data;

1.1 Virtual class "DataGenerator"

Most of the function mentioned above should be the same for all file format, but how function 3, 4 would be implemented should depend on what the file format is. So for virtual class "DataGenerator" we only need to consider function 1,2,5. function 3, 4 would be left to subclasses to implement.