(1-24-07)

PIO current supports the following configuration:

1. -

- Parallel Disk I/O for:

1. -binary files using MPI-IO
2. -netCDF files using pNetCDF

- Data rearrangement via MCT

Ongoing Work:

1. -

- Rearrangement of directory structure and improvement of build procedure. [Loy]
- Evaluate extensibility of PIO interface [Vertenstein, Craig, Eaton, Worley]
- Debugging of the MCT ...

  > Unknown macro: {binary files,pNetCDF}

  files. This problem only appears to occur for a small number of IO processes on BGL (<32) [Loy, Dennis]
- Debugging of

  > Unknown macro: {binary, pNetCDF}

  files. This problem only appears to occur for a small number of IO processes on BGL (<32) [Dennis]
- Refining of prototype implementation of PIO in POP. [Dennis]

1. - Writing of 'holes' in the output file.
2. - Support for record numbers.

Additional Work:

1. -

- Add support for sequential binary IO
- Improve support for 1D and 3D arrays in PIO. Create a test code that exercises 1D and 3D array writes.
- Improve parallel performance. Possibly through the use of MPI-IO hints, or careful use of MCT and layouts.
- More extensive testing is need. Currently it has only been lightly tested on BGL and AIX5.
- Support for use of serial netCDF calls. Use MCT rearranger to redistribute data to a single processor. Disk I/O is subsequently performed by calling the serial netCDF interface. [Loy]
- Support for use of serial binary calls. Use MCT rearranger to redistribute data to a single processor. Disk I/O is subsequently performed by calling a FORTRAN read or write.[Loy]
- Support for calling of PIO from non-MPI environment.
- Need to simplify the interface to PIO_initDecomp. This could probably be done by using a single global segmap or GDOF approach. Code within PIO_initDecomp could subsequently translate decomposition information for use by MPI data structures or pNetCDF.
- General restructuring of the PIO internals. Need to modify code such that it can be easily compiled without pNetCDF, or without MPI-IO, etc...