Field interpolation software

The interpolation software described here is used by the ECMWF meteorological archival and retrieval system (MARS) and also by the ECMWF graphics package Metview. It consists of Fortran functions which generate new fields from old; the fields can be GRIB formatted messages or arrays of Fortran numbers.

The functions are:

- INTIN, which is used to describe the input field. If the input field is in GRIB format, it already contains enough built-in information to be self-defining and this function does not have to be called.
- INTOUT, which specifies the output field. If the input field is in GRIB format, this function is only called to describe features of the output field which are different from the input.
- INTF, which carries out the interpolation. Interpolate GRIB-1 data only .
- INTF2 interpolate both GRIB-1 and GRIB-2 data

There are special routines for generating U and V wind components from vorticity and divergence fields:

- INTUVP, which creates GRIB-coded U and V wind components from GRIB-coded spectral vorticity and divergence fields.
- INTUVP2, which creates GRIB-2 coded U and V wind components from GRIB-2 coded spectral vorticity and divergence fields
- INTUVU, which creates Fortran arrays of U and V wind components from Fortran arrays of spectral vorticity and divergence fields.