PROGRID

This executable reads an input file Fullpos containing various fields in coordinates points of grid Latitude-Longitude and converts it into a file of grib type.
This grib file, operationally will be filed in the french data bank BDAP.
So there are many french «substilities» for instance number of transmitting center 85.
The fields can be traced by Metview.

General operation

Using the parameters contained in the file fullpos, Progrid determines the date (date of beginning, expiries), the domain (coordinated in degrees, the number of points in latitude longitude) and the factor of compaction for each field.
The heading of the gribs fields can be thus filled.
By reading the various fields of the Fullpos file, it puts in agreement the name Arpege of the field with a code grib characterizing the field and one (or two) code grib defining the level.
Thus the field Arpege SURF.TEMPERATURE will be defined by its code grib field 11 and its code grib of level 1.
But Progrib needs also external data, the directives provided by the intermediary of a file DAPDIR or of a namelist.
 These external data are:
the model number , example 212 for a forecast ARPEGE in double ;
the factor of gribage compression (C, K, L, X of weakest at the height);
 the activation of a key of chattering ;
 the number of transmitting center passed with 84 being used to differentiate different the runs from a seasonal french forecast.
The number of sub-centre to differentiate the runs from forecast PEACE.
And for the namelist, the names of the exit and input files and their number.

Use of entry parameters

● Utilisation DAPDIR
the name of the input file is obligatorily fort.11.
The name of the output file is generated automatically by the Progrid program.
 If Progrid recognizes the domain on which the fields are produced, for example EURAT5, file GRIDEURAT5 is created, if not Progrid manufactures a file of name GRIDBIZARRE.
Contents of DAPDIR
for example: CAT=212
 some possible values: 201 operational analysis, 211 operational forecast 12 operational assimilation, 202 analysis arpege doubles 212 double forecast, 22 assimilation doubles 255 climatology of surface, 177 Aladin France, 178 Aladin with a mask , 101 to 131 reserved for the seasonal forecast but for a transmitting center 84
COMPA=C (C or K or X or L)
BAVARD=OUI (Option of verbose impressions or not)
CATS = 84 (Only in the event of seasonal forecast, by defautlt 85)

CATZ=110 (only for PEACE, number of the transmitting sub-centre, by defect 0) .

To fill DAPDIR, one can use Unix orders like this :
 echo "BAVARD=OUI" >> DAPDIR
Caution this file of directives is read sequentially: if you forget a directive, you risk not to obtain exactly what you want!
For memory, as well as possible to manage the preceding expiries in the case of the minimal and maximum temperatures of the "old" files fullpos, an external file DAPECH can be used.

● **Utilisation NAMELIST** provided on fort.4
The name of the input file is given, but it can be fort.11.
The name of the output file can be provided.
Progrid can also treat a list of files to be transformed into format grib.

Contents of the namelist fort.4 for example:
INUMOD=212 (number of model are equivalent of CAT)
LLBAVE=.TRUE. (verbose)
CHOPER = X (factor of equivalent compaction of COMPA, by default K)
ISCI=84 (only for the seasonal forecast are equivalent of CATS, 85 by default) ISCIZ=110 (only for Peace, number of under transmitting center, by default 0)

And
NBDOM=1 number of fullpos files to read
CDNOMF(1) = PFFPOSGLOB15+0000 name of the input file
CLFSORT(1) = DOMAINESPECIAL name of the output file

Remark: if the input file is not fort.11 and if the name of the output file is not given, Progrid automatically creates a file name like this : GRID followed by an extract of the name of the file in input.
Example in entry
PFFPOSGLOB15+0000 exit GRIDGLOB15.
If the entry file name is fort.11 and if the output file name is not given, Progrid functions as DAPDIR.

The writing of the namelist can be made like DAPDIR,
example: echo "&NAML" > fort.4
echo "INUMOD=212," >> fort.4
echo "LLBAVE=.TRUE.," >> fort.4
 echo "CHOPER=X," >> fort.4
echo "CDNOMF(1) = fort.11" >> fort.4
echo "CLFSORT(1)=DOMAINESPECIAL" >> fort.4
echo "NBDOM=1," >> fort.4
echo "&END" >> fort.4

● **Neither DAPDIR neither namelist**
 If the data file of name fort.11 exists, Progrid can function without file of directives DAPDIR, nor namelist, but with default options for the compaction, the option verbose , the model number ...

Annexe

- **A little example on VPP**

cd $TMPDIR

utexec='ut28t3_progrid-pre29main.01.L0209.x.exe'

gget $utexec

/bin/cp $utexec progrid

on $TMPDIR input file is for instance PFFPOSEUROC25+0000

you must just use a NAMELIST like this

```
echo "&NAML" > fort.4
echo "INUMOD=211," >> fort.4
#                               to identify experience modele
echo "LLBAVE=.TRUE.,">> fort.4
#                               to have more informations
echo "CDNOMF(1)=PFFPOSEUROC25+0000" >> fort.4
#                               input file name
echo "CLFSORT(1)=GRIDEUROC25">> fort.4
#                               output file name
echo "CHOPER=K," >> fort.4
#                      compact
echo "ISCI=99," >> fort.4
#               caution  here code centre for instance  99 National code
echo "NBDOM=1," >> fort.4
echo "&END" >> fort.4
```

progrid

the result is ----- > on file GRIDEUROC25

- On other computers

  You must create Progrid with files of the directory progrid in library uti   using links with library xrd (package PALADIN for in stance) and library libemos (gribex, pbopen..) from ECMWF.

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