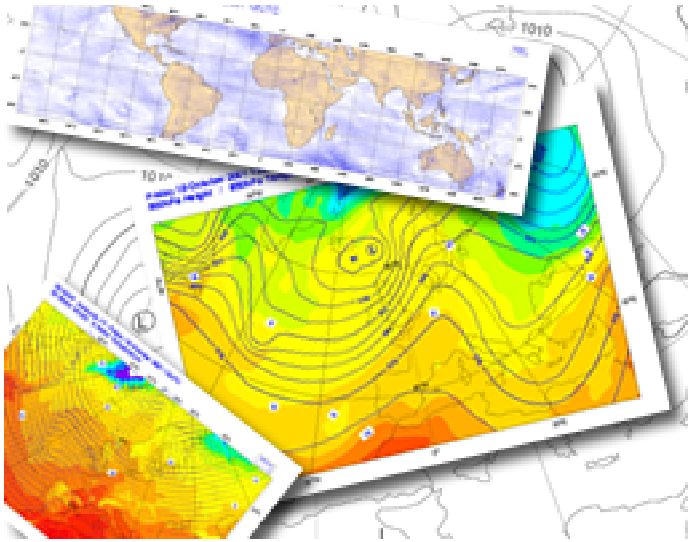
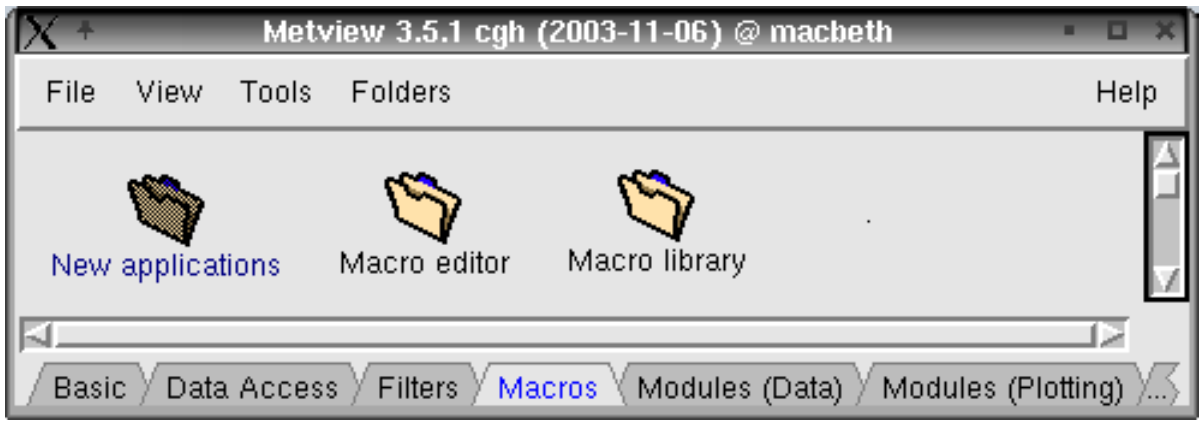
Metview Developments



Vesa Karhila

Contents

- Metview background: past and present
- New applications
- Enhanced Macro Editor
- Macro library
- Metview availability and future



Background

- Developed at ECMWF
  - Co-operation w/ INPE (Brasil) and Meteo-France
- Open design
  - Easy to add new modules and features
- Uses ECMWF standard software:
  - MAGICS – graphics engine
  - MARS – database engine
  - EMOSLIB – data coding (GRIB, BUFR) and interpolation
- Metview Macro language
  - Powerful meteorologically oriented mature language

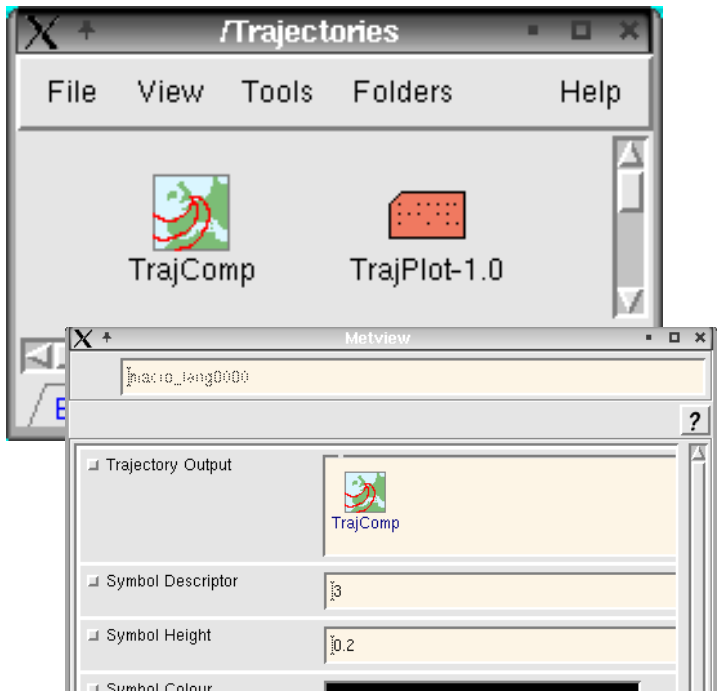
Current Developments

- **Mature software package**
  - **Continuous development**
    - → Adapt to the changing environment
      - **New data types**
      - **New visualisation requirements**
      - **New computational requirements**
    - → Add new features
    - → Bug fixes
- **Runs on different platforms**
  - **Portability and installability**

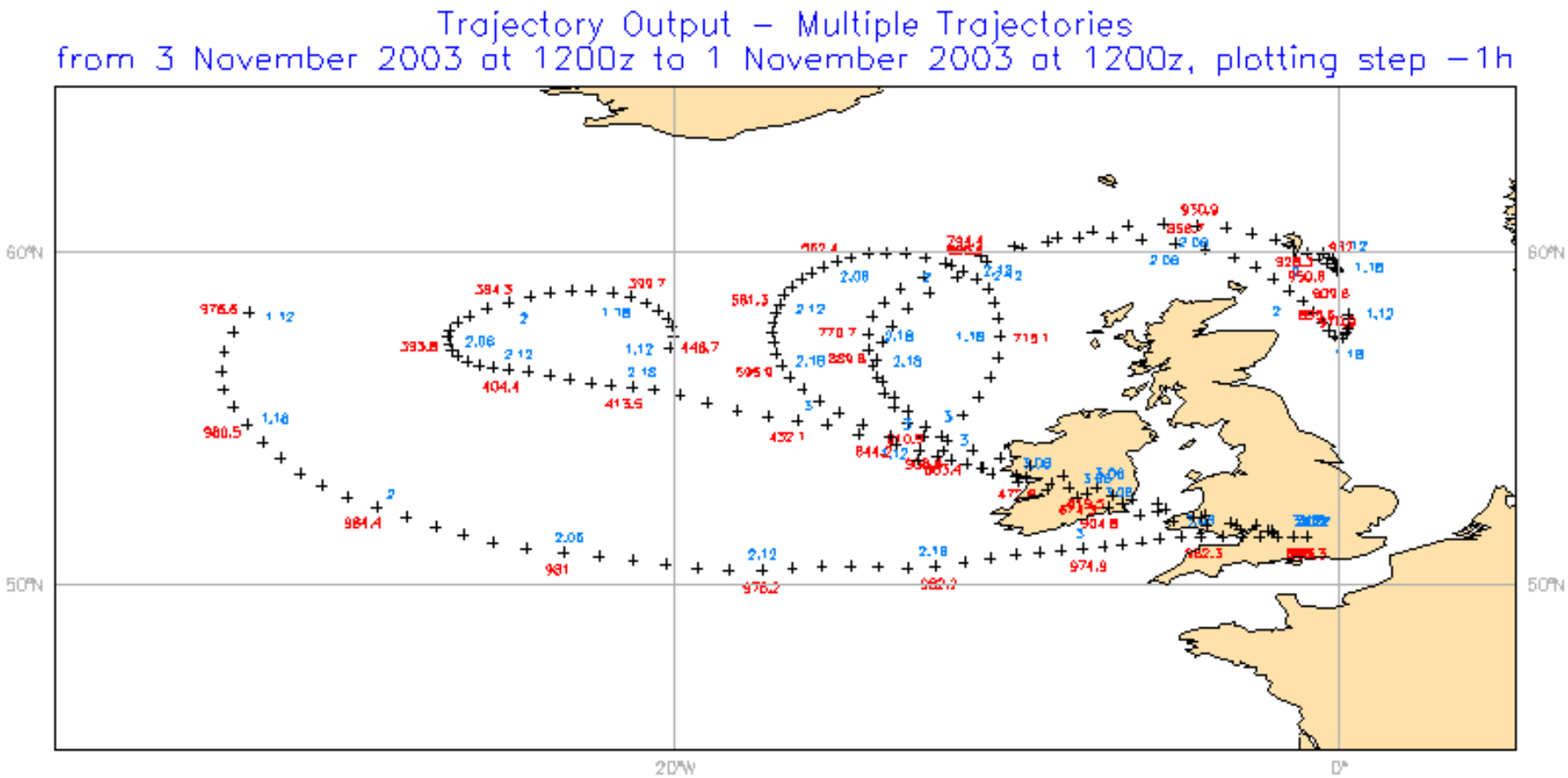
New Applications

- **GRIB-to-Geopoints**
  - **Easy way to get grid point values and locations into ASCII file**

- **Trajectory model**
  - **Second generation, fully integrated**
  - **Two icons**
    - ➔ One to compute trajectories
    - ➔ One to visualise (a macro w/ UI)
  - **Real-time trajectory database available on *ecgate1* (-15...+10 days)**
  - **Also from local data**



Trajectory Example



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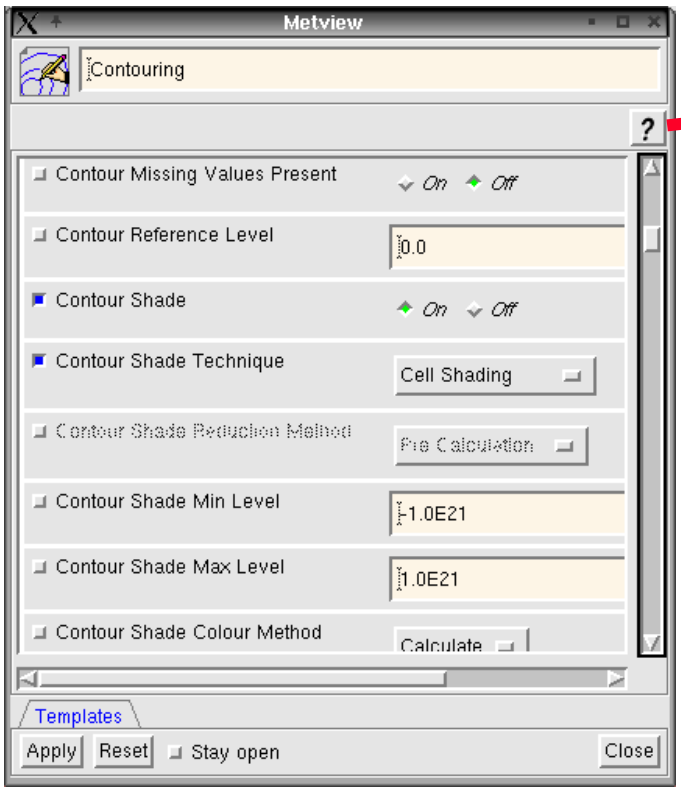
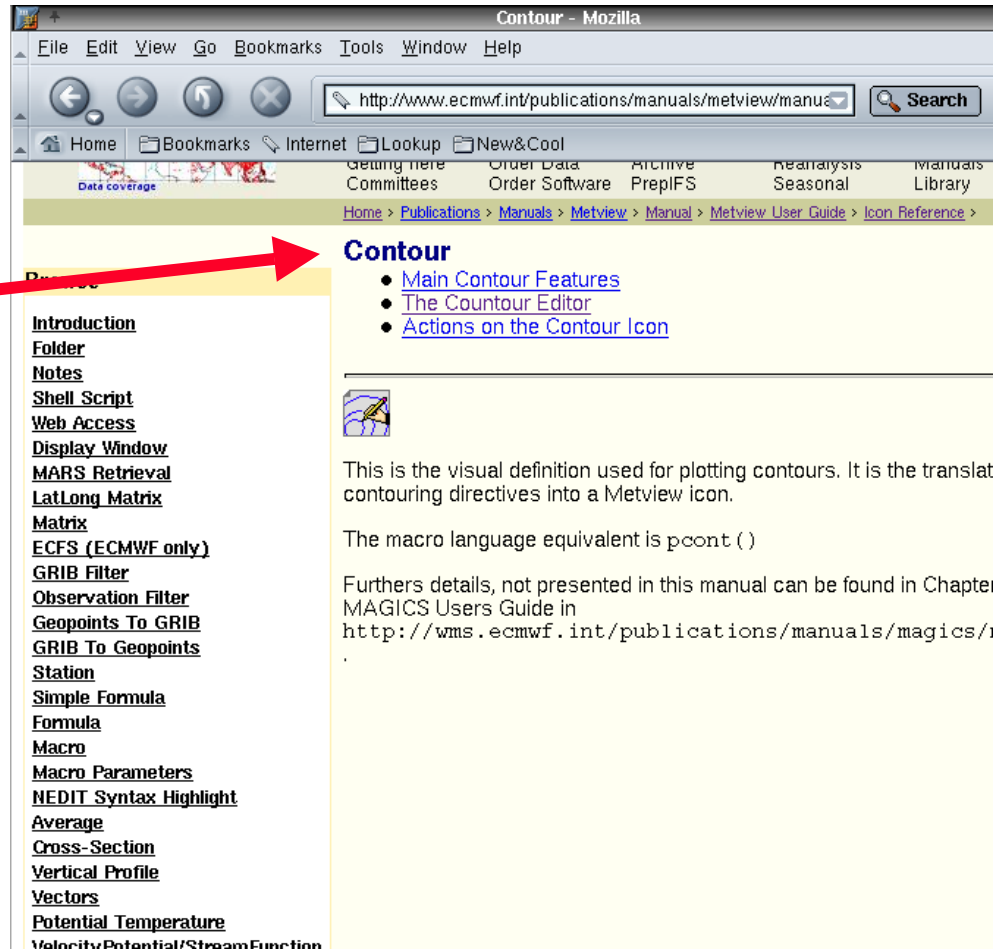
Help Connections

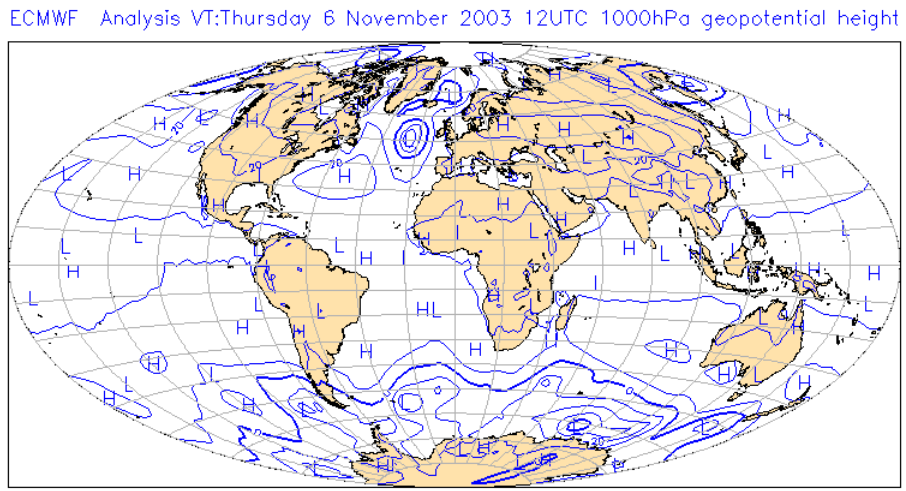
- Every editor has “?” button to access corresponding HTML manual page





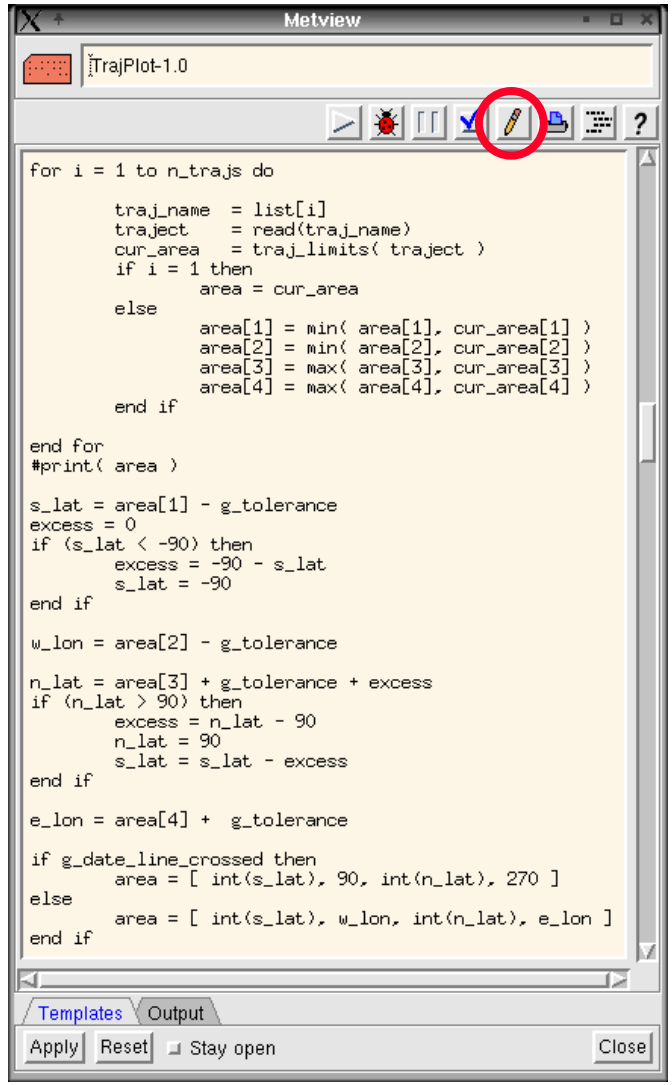
New Geographical Projections

- **Older projections:**
  - **Cylindrical Latitude-Longitude**
  - **Polar Stereographic**
  - **Mercator**
- **Newer ones:**
  - **“Ocean Cross Section”**
  - **Lambert**
  - **Aitoff**



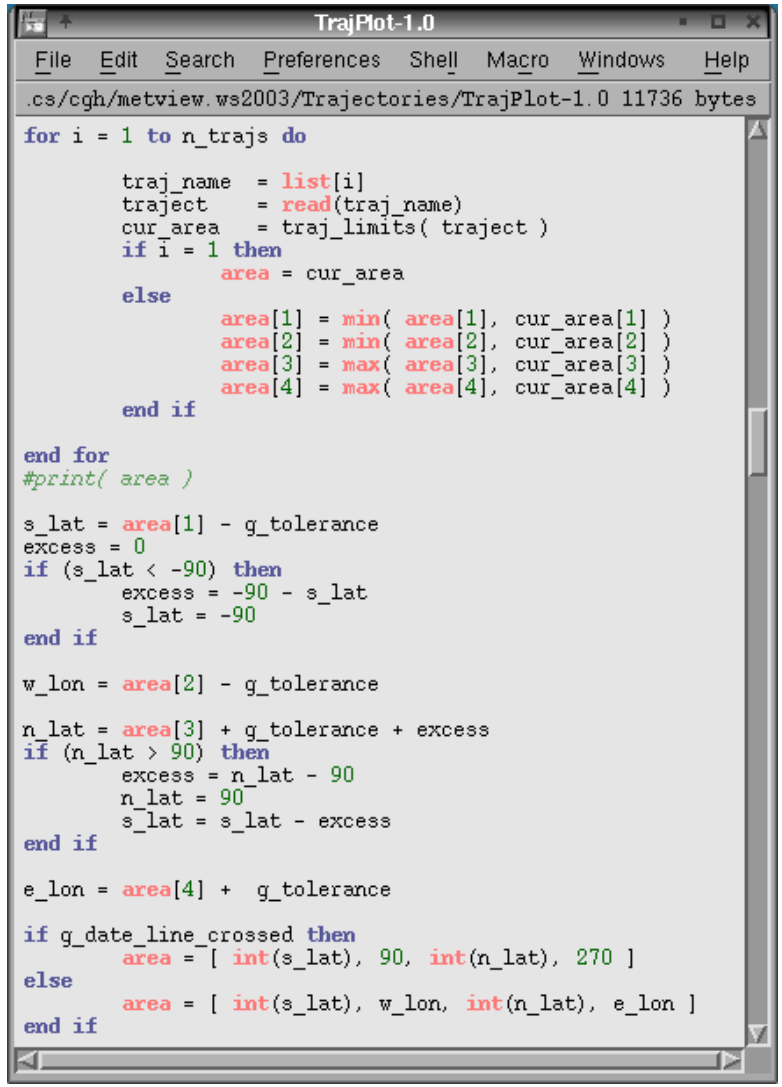
Macro Editor(s)

- **Based on a simple Motif widget**
  - **Limited editing functionality**
    - ➔ Write and delete text
    - ➔ Copy – with mouse only
    - ➔ No line numbers
- **Start an external editor**
  - **Editor defined by env.variable**
  - **Works with almost any text editor**
    - ➔ vi, emacs, jot, ie, edit, nedit,…
- **Some editors are easy to customise…**



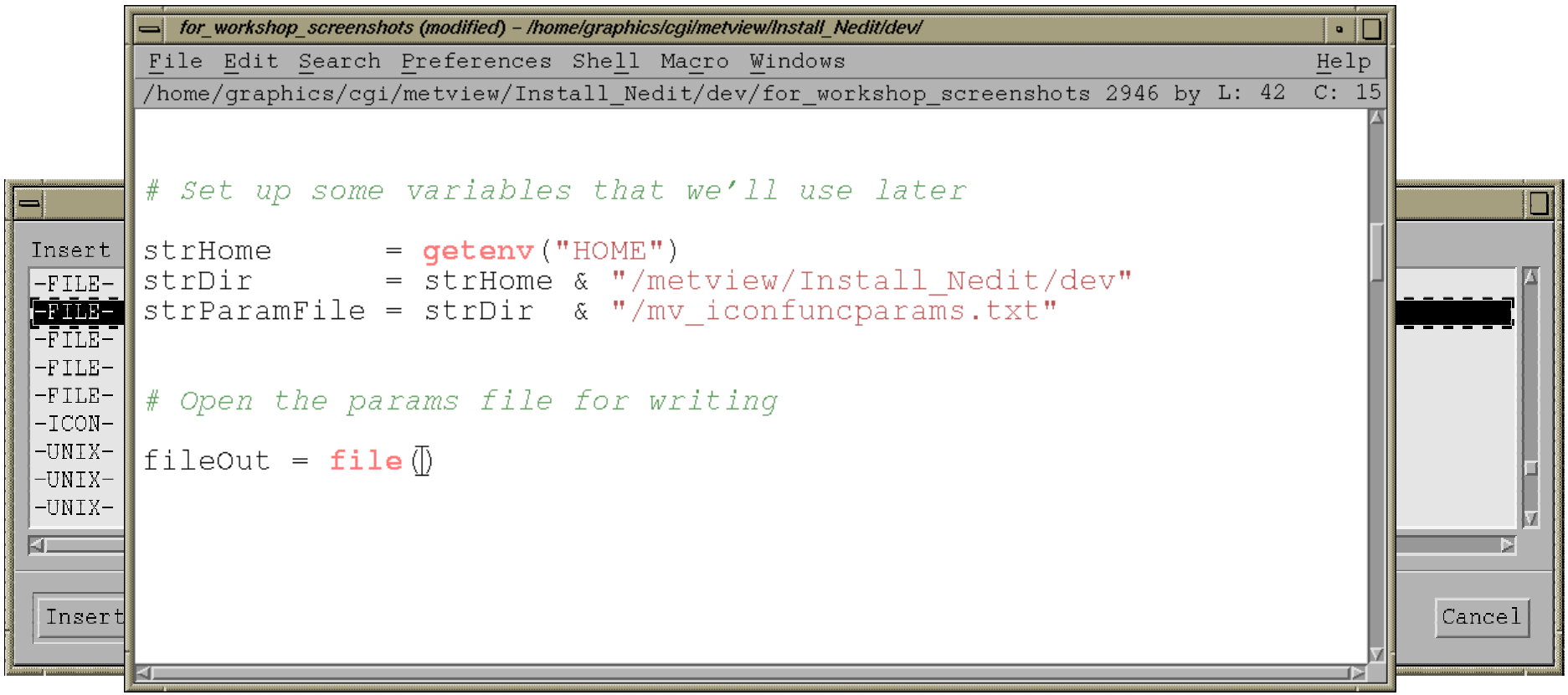
Enhanced External Macro Editor

- Based on *NEdit* (public domain)
- *NEdit* can be customised with a Metview Macro!
- Already implemented
  - Macro syntax highlighting
- We are working on ….



Macro Editor – Function Listing

- We are working on (I):
  - Listing of all available library functions…



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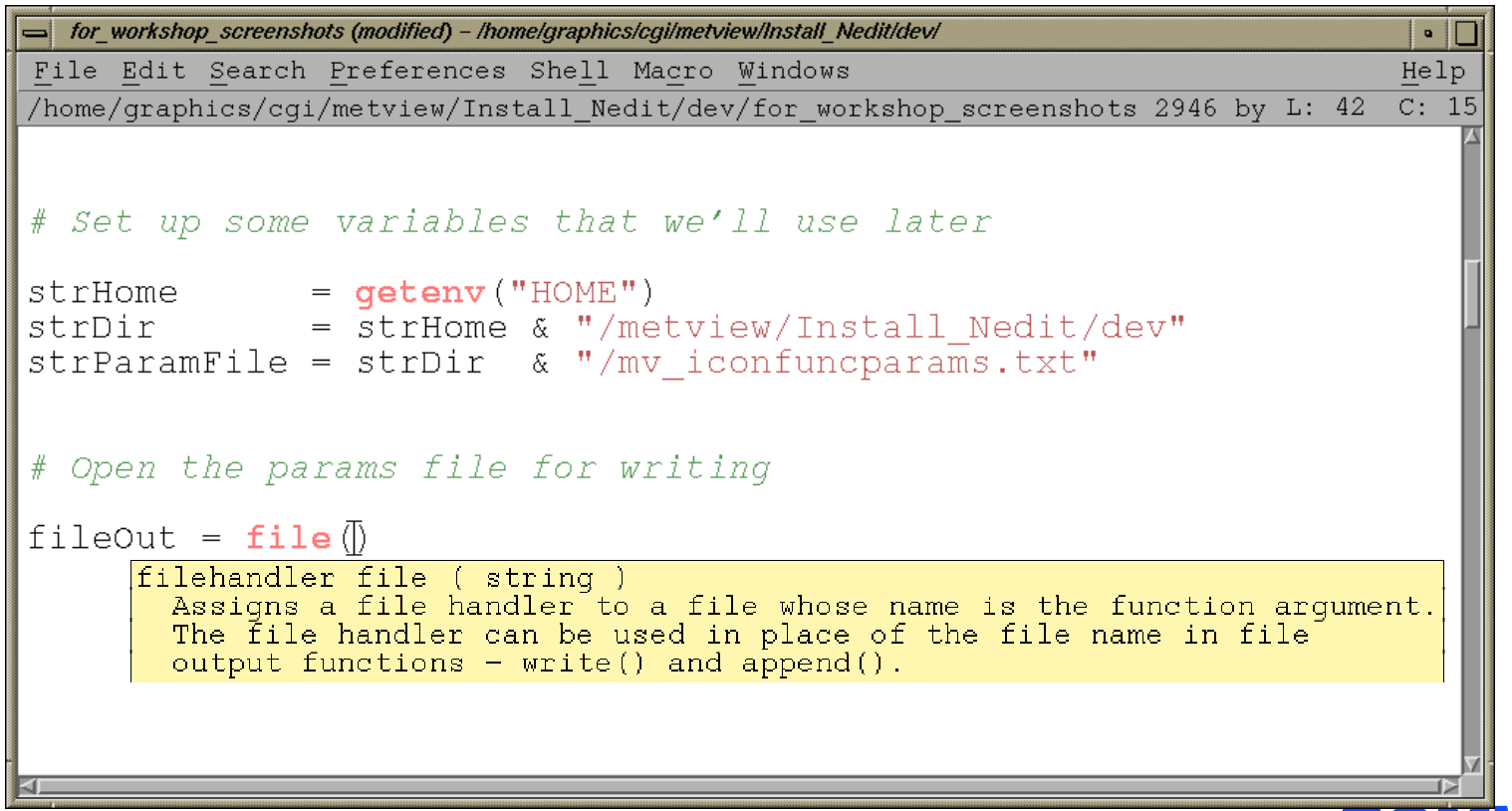
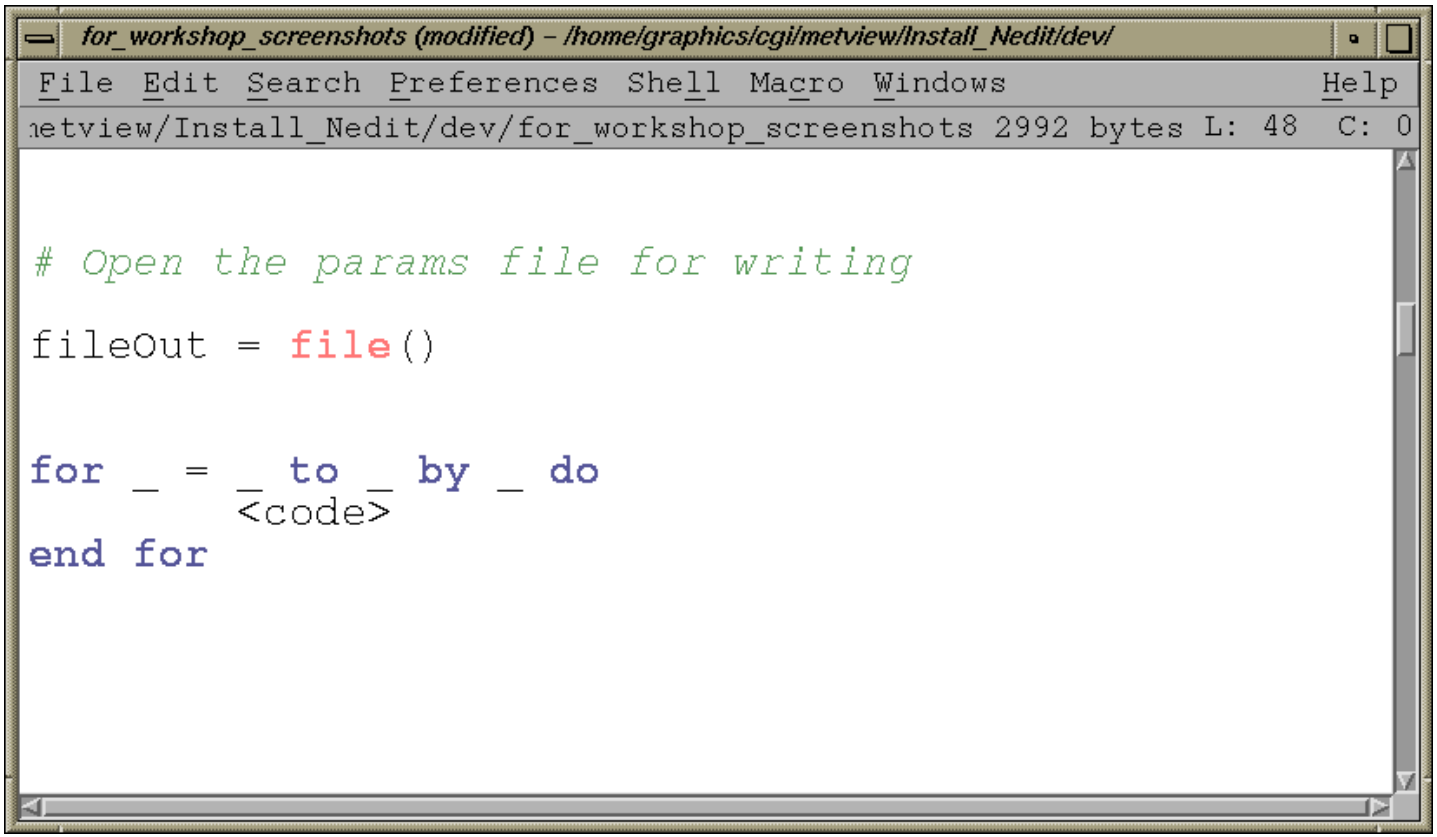
Macro Editor - Calltips

- We are working on (II):
  - “Calltips” to describe function parameters and usage

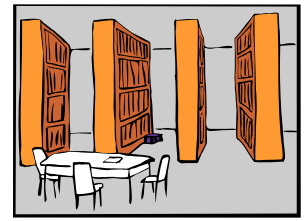


Macro Editor – Code Templates

- We are working on (III):
  - Code templates



Common Macro Library



- Why write a macro if somebody else has written it?
- Metview provides macro function library facilities
  - User level - private (Metview/Macros folder)
  - System level - common (shared directory)
- We are planning to expand our Common Macro Library
  - Full application macros
  - Macro functions
- New Enhanced Macro Editor will help accessing and using library macros
- Common Macro Library is distributed with Metview Export

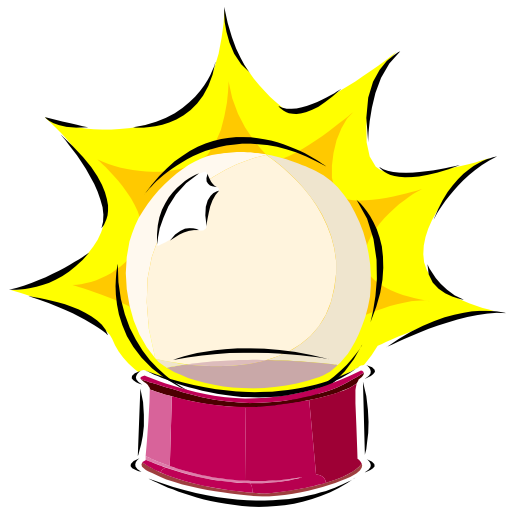
Metview Availability

- Member State users can run Metview on *ecgate1*
- Metview can be installed and run locally
  - Installed in ~25 countries
  - Latest export version 3.5 released 1 October 2003
  - Runs under Unix operating system
- Platforms:
  - Linux, AIX/IBM, IRIX/SGI (used at ECMWF)
  - HPUX/HP, Solaris/Sun, OSF1/Alpha (tested at ECMWF)

Future

- Finalise Macro editor and build up Macro library
- Keep up with changing environment
- Add new requested features
- “Compute-only” Metview for HPCF environment
- Use internally new Magics++

- Celebrate…



Happy 10 Year Birthday !

- Metview first release December 1993!

- PS: Metview demo on Thursday in Classroom
- PPS: Metview training course in March 2004