First Release of CodesUI
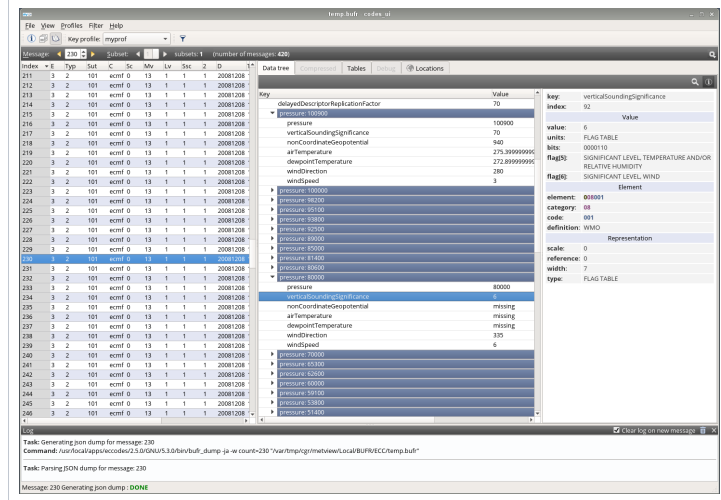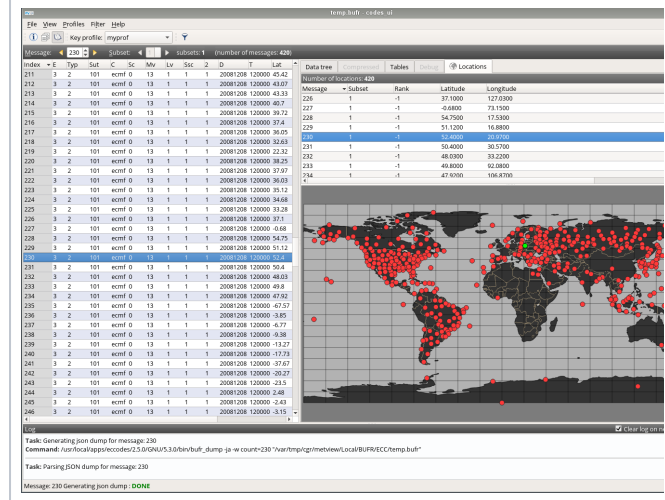
End of February saw the first external release of CodesUI, an interactive application built on ecCodes to inspect GRIB and BUFR messages. With CodesUI it is possible to inspect the structure of GRIB and BUFR files and examine the metadata and data of individual messages. For BUFR advanced filtering and data extraction (see the examples here) is available together with the plotting of observation locations on an interactive map.

The structure of a BUFR message	Interactive location map for BUFR observations

With all these capabilities CodesUI can be regarded as a replacement for BUFR ToolBox, a legacy Java-based application built on the old BUFRDC library, used by many at ECMWF to work with BUFR data.

Starting up CodesUI from a terminal at ECMWF (installed on the Linux Desktops and ecgate) is really simple, just type this to inspect any GRIB or BUFR files:

```
module load codes_ui
codes_ui your_bufr_or_grib_files    # wildcards accepted, e.g. *.bufr
```

CodesUI was developed to be both a component of Metview and a standalone software package with the minimum possible dependencies, in fact to build CodesUI only ecCodes and Qt5 are needed.

CodesUI will be the basis for the new GRIB and BUFR examiners in the forthcoming Metview release 5.1.0, which will use ecCodes for all its BUFR handling including its Observation Filter and Bufr Picker modules. We plan to add an even more advanced BUFR filter module to Metview, based on that in CodesUI, later this year.