Chapter 1

NFRA

NFRA-related tools and modules

include "nfra.g"

Description
Package for NFRA-related functionality

1.1 CSM - Module

Component Source Models

1.1.1 csm_gui - Tool

Package	**nfra**
Module	**CSM**

Inspection and manipulation of component source models
include "csm_gui.g"

Description

`csm_gui` is a (GUI) utility that allows the user to inspect, edit and otherwise manipulate component source models (csm). It serves as a frontend for the componentlist DO, which interacts with the regular tables where the component lists are stored. The user may also use the componentlist DO directly, or even access a csm table with the regular table tools.
The functionality of the GUI is a superset of that to which NEWSTAR users are used. The main functions are:

- Opening a csm table and displaying its components in a listbox.
- Different component parameters may be displayed using the listbox buttons labelled 'col 1' and 'col 2'. It is also possible to view these parameters in different units. AIPS++ measures are used throughout.
- Editing the parameters of individual components. A separate editing panel pops up after clicking on a component in the listbox.
- Displaying a simple 'image' of the components by plotting them as crosses with a size proportional to their flux.
- Deleting selected components. After removing them, the components are merely 'inactive': they are ignored but can still be recovered. They are really deleted by closing the list, or by purging it explicitly.
- Creating and appending new components, e.g. for creating (simple) component models by hand.

In addition, there is an AIPS++ program (see mdl2scn), which converts an ASCII version of a NEWSTAR MDL file into an AIPS++ csm.
As the componentlist DO becomes richer, the csm GUI functionality will grow with it.

Example

The csm GUI is started up by:

```
include "csm_gui.g"
```

Hopefully, the GUI will then be self-evident. The GUI, and all its secondary panels, should be removed by means of the 'quit' option in the 'file' menu.

1.2 tmstools - Module

Table browsers and other utilities for TMS
include "tmstools.g"

Description

Currently the TMS tools package, *tmstools*, consists of a set of table browsers specifically tuned to the individual TMS tables. In addition to providing a detailed view of each TMS table the browsers provide facilities for manipulating the tables, incorporate links between tables and, in some cases, links to other Glish applications.
tmstools itself is a front-end to the actual tools. Including *tmstools.g* starts a simple GUI containing a number of named buttons. Pressing a button starts one of the specific table browsers. The *tmstools* application additionally acts as a server for the table browsers providing a channel through which the browsers can communicate.
The applications currently contained in the tmstools package are:

measurement browser for the TMS Measurement table.

resource browser for the TMS Resource table.

dataset browser for the TMS DataSet table.

obslog browser for the TMS ObsLog table.

logbook browser for the TMS LogBook table.

The tables accessed by these application have predefined names and are expected to reside in the directory specified by the environment variable *tms_tbl*. This environment variable needs to be defined before starting tmstools. It must be set to the directory containing the TMS tables.
The TMS table browsers have a similar layout consisting of main frame with a menu-bar at the top. Under this is a list box where single lines entries from the table are displayed, one table entry per row. Below the list box is a status bar. The status bar typically displays the last query performed on the table (accounting for the current contents of the list box) and how many matches were found.
Reflecting the similarity in physical layout, user interaction with the browsers typically follows a particular pattern. A TMS browser is opened by clicking on one of the buttons in the *tmstools* GUI. Each browser performs a default query on their respective table at startup and the result of that query is displayed in the browser's list box. In most cases the default query is to fetch all entries in the table which occurred within the last 2 days. However, it is possible to redefined the default query by adding an entry to your .aipsrc file (see documentation on specific browsers below for details). After the default query