

# Online control and visibility recording :

## **PROGRAMING Used :**

Control and Monitoring programs for ONLINE system and GWB Systems are implemented using various programing and scripting languages, Such as C, C++, QT3, Bash, Perl, Perl-Tk, Tcl-Tk etc.

## **ONLINE System :**

GMRT Wide-band Back-end (GWB) can be controlled from Online Machines (both '*lenyadri*' as well as '*shivneri*'). For this, a socket is created, through which online sends the commands to GWB and receives their acknowledgments. This Socket program has been done using C, C++. In this way, data control and monitoring information is shared between the two systems (ONLINE and GWB).

## **GWB System :**

GWB data acquisition, data processing and data recording programs are written in C and C++. Where as Graphical user interface such as GWB DasConsole, GWB configuration, GWB Pulsar configuration, etc. are designed using C, C++ and QT3. Power Equalization, GAC-Config are written using C, Perl-Tk. Also, various other scripting languages like Bash, Perl, Perl-Tk, Tcl-Tk etc. are developed for most online as well as offline of the applications.

## **USER INTERFACE :**

After starting the data acquisition through GWB, we can control and Monitor it using both GUI and Command line tools as per the user's/observer's requirement. For this, DasConsole, GWB-Config, DasMon, Pulsar-DasConsole, Pulsar-Config, PowerEq, Phasing, GAC-Config etc. are Interface tools available.

## **OUTPUT DATA :**

Data acquired from GWB is stored in Standard GMRT LTA format. And Pulsar Data is stored in RAW formats. This data can be monitored using online/offline tools viz. DasMon. Itahdr, tax, xtract, rantsol, pmon, etc.