

Signal Server – a real-time software radio data server

Modern software defined radio (SDR) systems stand in stark contrast to traditional hardware radios in their ability to deal with very large bandwidths, both in receiving and transmitting. A single device often has sufficient bandwidth (MHz or more) to “listen” to an entire radio frequency band simultaneously.

This project aims to build an open-source “radio data server” which will allow clients to connect to it and listen to relatively small chunks of radio spectrum, streamed as data over the internet.

Research Field

Radio Astronomy/Engineering

Project Suitability

Masters, Eng 4th year

Honours (as appropriate)

Project Supervisor

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Co-Supervisors

Aims of project

- (i) Survey of existing closed-source radio data server APIs
- (ii) Design of system
- (iii) Implementation and testing in the CIRA lab

This project would suit a student interested in radio engineering and signal processing, with good computing skills.

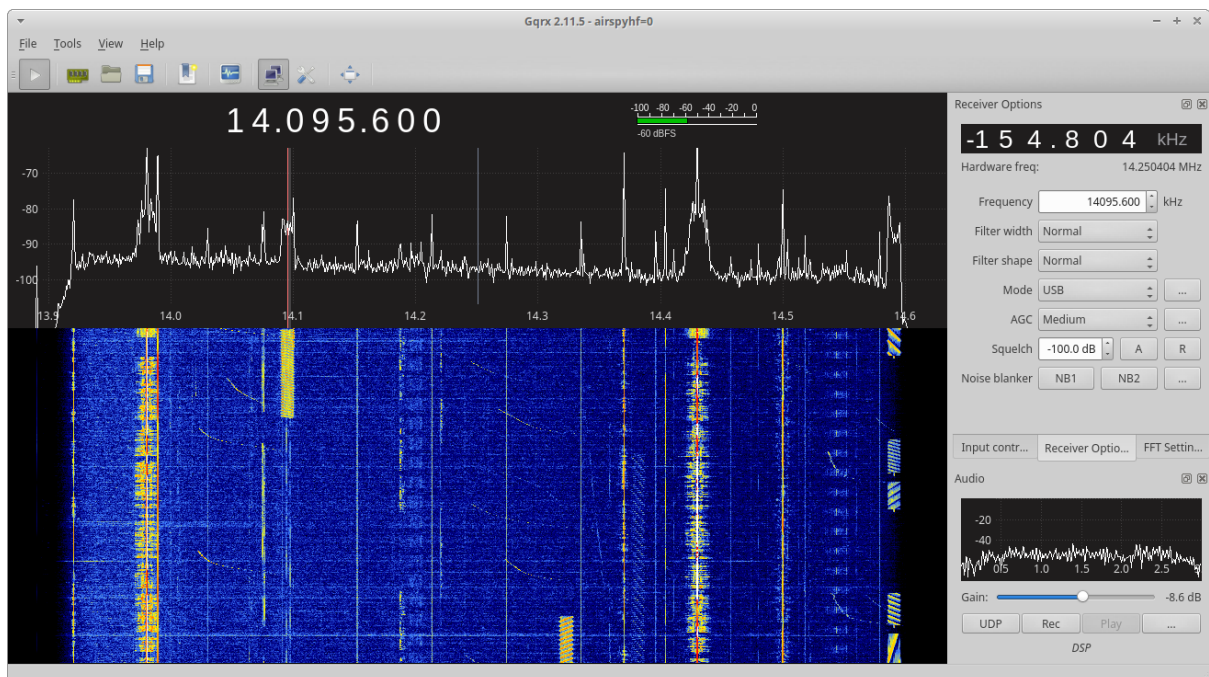


Figure 1: Screenshot of software radio system "gqrx" based on a software radio interface