a sender and a lot of receivers, possibility of using control messages, totally configurable transmission parameters. Of course, a software toolkit supporting Linux is good addition indeed. MDP (Multicast Dissemination Protocol) can fit these features and is proposed as the protocol to be implemented over the transport layer.

This architecture can face severe security problems for any machine with the proper configuration could introduce some hostile or ill-intentioned data causing several problems in the system. To avoid this type of behavior, a very simplistic system using authentication of the server at the moment any information is sent has been developed. This authentication is based on possessing a key word or password that any "authorized" station must know. To implement this, we use the VTUN package that can create secure tunnels between two machines, the server and any client that asks for an authentication in our case.
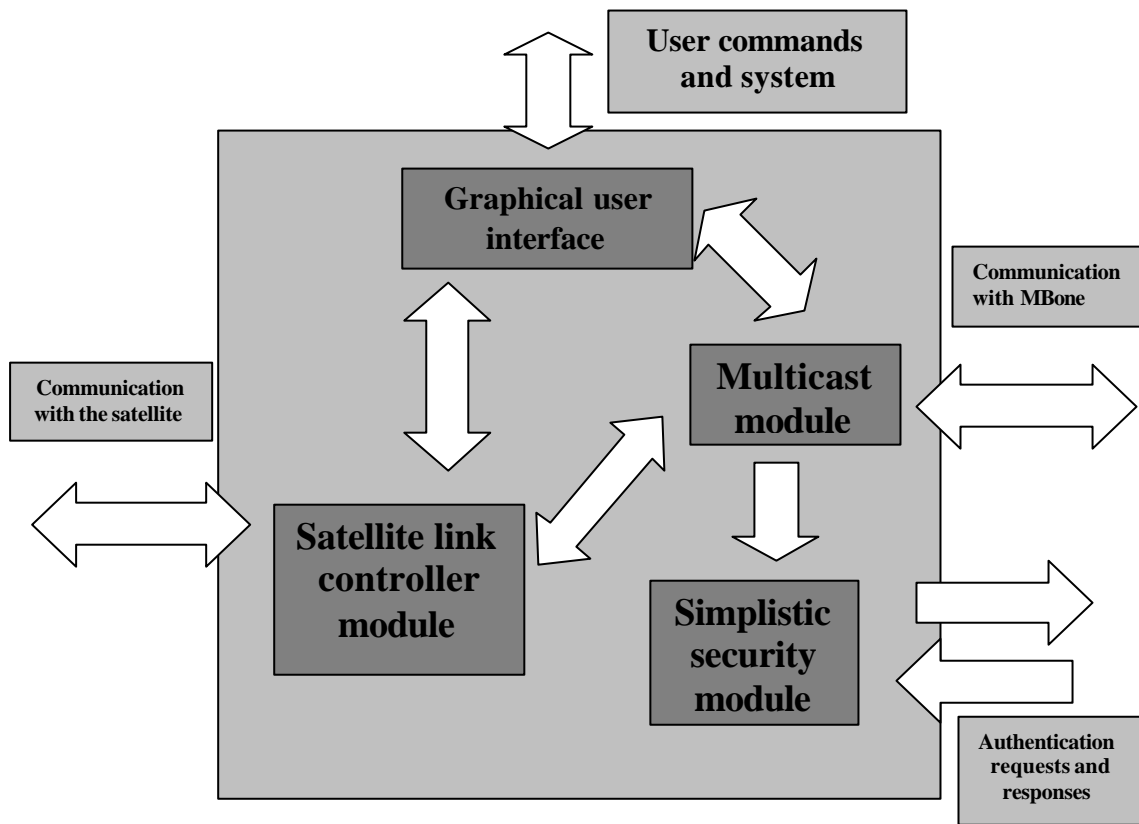
Figure 1. Different functional modules developed for the project

Implementation

Our implementation has taken the microsat suite as starting point. This set of programs manages the satellite link, both the uplink and the downlink, offering a group of extra functionalities such as presentation of telemetry data and downloaded messages.

The source code of the microsat suite is implemented in C, so it seemed reasonable to write the rest of the modules of the project with this language in order to reduce the