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CABAÑAS: FIRST HONDURAN ACADEMIC GROUND STATION FOR SMALL SATELLITE
 MISSIONS

Abstract

This paper presents the ground component of the Morazan Project, a project led by honduran institutions that will develop a CubeSat -the first honduran experience in space- by central american professionals. The process of designing and developing a fully operational ground station inside an university environment in Honduras for the first time in the country is explained.

The methodology for the development of this project can be divided into two parts. The first part is the physical construction of the ground station for which the standards set by the International Amateur Radio Union will be followed, on the other hand the first advances are shown in the design and implementation of software for transmitting, receiving and displaying data of the satellite for its maintenance, control and use of the data. Finally, the process of developing our own applications is shown - through Python and SQL among others - for the management of opaque satellite to the user, utilities that will allow the average users to download raw data for independent analysis, and data processing. In the latter case, real-time graphs and maps will be implemented that allow monitoring and monitoring of risk areas in the country and its main river basins.