SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
In Orbit - Postgraduate Space Education (4)

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# LESSON LEARNED FROM THE DESIGN AND CONSTRUCTION OF A CUBESAT PROTOTYPE (EREGBUSAT), FOR EDUCATIONAL AND LABORATORY PURPOSE

**Abstract**

This paper presents the lessons learned during the design and construction of a prototype Cubesat (EregbuSAT) for educational and experimental purposes. EregbuSAT was developed, as part of a research project, by the 2011/2012 academic set of the Satellite Communications course option of the Postgraduate Diploma Program of the African Regional Centre for Space Science and Technology Education in English (ARCSSTE-E), located in Nigeria. The main purpose of developing the system was to simulate, in real time, the communication between a satellite and its Ground Station, and to enable the students have a feel of what it takes to operate a satellite (send and receive data).

The project challenged the participants to receive hands-on experience in the life-cycle of a space related project. It also laid the groundwork and foundation for future Cubesat projects in ARCSSTE-E and in Nigeria.

EregbuSAT has educational and outreach components, requiring team members to make presentations to schools and various organization in their home countries. Thus, the project has the potential to create awareness in space technology, as well as inspire students to pursue careers in space related fields.