

SMALL SATELLITE MISSIONS SYMPOSIUM (B4)
Small Satellite Operations (3)

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GENSO: A REPORT ON THE EARLY OPERATIONAL PHASE

Abstract

GENSO, the Global Educational Network for Satellite Operations, will be opened to the education and radio amateur communities in June this year, after a period of beta testing with a limited number of users. The network and associated software applications have been developed by students under the guidance of the ESA Education Office and its contractor SELEX Systems Integration Ltd. The European Operations Node is hosted at the University of Vigo, Spain.

In this paper, the authors will describe the functionalities of the operational network and capabilities of the software, which will provide autonomous operations for its target end users: mission operators and ground stations at university and amateur radio level. A roadmap for further enhancements which may be carried out within the GENSO open source development project will also be presented.

A performance study will provide an insight into what small satellite missions can expect from the network regarding the availability of ground stations, supported bands and global coverage. Moreover, several mission operation patterns have been identified, that can help the GENSO ground station community to optimise planning for their ground station availability.

The lessons learned during the transition of this educational project from the development to the operational phase will also be discussed.