

IAF SPACE OPERATIONS SYMPOSIUM (B6)
Ground Operations - Systems and Solutions (1)

Author: Mrs. Julie GUIRAUD

Centre National d'Etudes Spatiales (CNES), France, julie.guiraud@cnes.fr

Mr. Claude AUDOUY

Centre National d'Etudes Spatiales (CNES), France, claude.audouy@cnes.fr

PROJECT PRESENTATION FOR IMPLEMENTING THE NEW WAY OF OPERATING THE CNES
NETWORK OPERATIONS CENTER

Abstract

The main objective of the CNES multi-mission network of ground stations is to ensure the links between control center and satellites during the routine phases, positioning and station keeping, deorbiting or during any rescue operations while station keeping. It also ensures the reception of payload data from satellites and their transmission to their users. The CNES multi-mission network is composed of a set of satellite tracking stations, geographically distributed, as well as a set of resources centralized at CNES Space Center in Toulouse: • The Network Operations Center (NOC), the central node for network communications and responsible for coordinating the operations. It is mainly based on the planning, remote management and the data transmission System tools • The Orbit Computation Center (OCC), mainly responsible for orbit determination and antenna pointing computation. The role of the NOC is to establish and coordinate communications between the various satellite control centers (CNES or partner ones), the OCC and the CNES or partnership stations.

The CNES multi-mission network has a roadmap defined for 5 years and 10 years with a global strategy for the network, i.e. the NOC and the ground stations in order to support the future CNES projects, market competitors and support to the French institutional projects. In order to remain competitive and to allow the viability of some scientific or university projects, it is necessary to reduce the operating costs of the current CNES multi-mission network. To achieve this strategic objective, the GORFOU project has been decided.

After a brief description of the CNES multi-mission network, its functioning, its missions and the operations currently executed, the first part of the presentation will be focused on the genesis, the approach and the organization of the project: how it has been set up, why it has been created, the resources (human, financial and calendar) allocated to the project, the strategy, the specificities and the objectives of the project...

At the end of the project, a new operating plan will be implemented, i.e. operating the NOC in a new way. The second part of the presentation will describe in detail this future operation plan targeted and the implementation of the project to achieve this new plan (such as new systems implemented or upgrade of the current ones). The presentation will conclude on the way the change has been conducted with regards to the CNES multi-mission network users and customers.