

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

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CNES'ISIS PRODUCT LINE - FIRST OPERATIONS: LESSONS LEARNED AND WAY FORWARD

Abstract

The ISIS Product Line is the implementation of the command-control center, part of CNES' ISIS Project (Initiative for Space Innovative Standard). The ISIS project is an initiative to optimize the CNES space systems development through standardization of its mission interfaces and operational concepts. The project is maintained in partnership with CNES' main spacecrafts manufacturers: Thales Alenia Space and Airbus Defence and Space. The ISIS Product Line is designed as a set of modular and reusable components plugged on an actor framework derived from the CCSDS MO standards.

The ISIS Product Line is operationally used for the first time at CNES since the end of 2021, and has successfully brought to orbit three satellites simultaneously. It is also used as an AIT test bench for the MMX rover. With this launch and early operations, we managed to look back at our development. We have analyzed with our operational teams the strengths of the new system but also the remaining items that need short term improvement or long term attention.

In this paper, we will briefly remind the LP ISIS architecture and give an overview of the command control center system (and its usage in AIT and flight software functional validation context). Based on this, we will give an overview of the first operational feedbacks, and some lesson learned from the development that we are injecting in the maintenance activity. A roadmap of the corresponding follow-up development will also be given.