

Status of development and perspectives of generic HW+SW building blocks for PL management

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The lessons learnt from the CNES projects are that the institutes involved in the payload developments have to systematically develop housekeeping features, such as on-board computer board and OBSW in charge of platform interface management together with dedicated SVF/EGSE (PF/PL simulator in particular). CNES have therefore initiated some years ago generic developments in order to offer off-the-shelf building blocks that could be easily reused with a low level of adaptation effort, aiming therefore at decreasing the cost of the mission, and increasing the reliability of the payload developments. The institutes can consequently concentrate their efforts on real science high degree of expertise, especially on the science mission on-board software application part rather than housekeeping features.

The presentation will describe the technical choices that have been made in order to provide a high level of genericity enabling a clear and effective decoupling between housekeeping and science : adaptation to one mission is obtained through the fine-tune of the set of parameters with only a few software code change. It will provide status of development of the various building blocks, including visibility on some of the experimentations and demonstrations conducted to consolidate the concepts, the needs and their usage capabilities in real conditions. Finally the presentation will identify the deployment perspectives on future missions.