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Knowledge Management and Collaboration in Space Activities (2)

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ROSETTA KNOWLEDGE MANAGEMENT – LESSONS-LEARNED

Abstract

After an interplanetary cruise of 10 years, the Rosetta spacecraft and its Philae lander, will arrive in 2014 at comet Churyumov-Gerasimenko. All parties involved in the mission are aware of the potential decrease in knowledge during these years. In case of critical situations or problems, the European Space Agency must be confident that the necessary knowledge and information is available to allow a correct analysis of the situation and to be able to proceed with the right steps to solve the problem at any time in the mission. A range of measures has been implemented to support the preservation of knowledge by all involved parties. We will present the overall strategy and implementation of measures within the Rosetta Mission Management Team and the Science Ground Segment Team to ensure the preservation of information and tacit knowledge obtained during the instrument and spacecraft development and implementation phase. In addition, the experience during the in-orbit commissioning phase and the first years in flight had to be linked to existing information resources.

Examples to the different approaches are given, including video capturing exercise, document management system including parallel meta-data tagging, image database, tracking of expertise and early implementation of long-term mission archive. The approach will be discussed based on two critical examples in the past requiring the retrieval of technical expertise.