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Knowledge management for space activities in the digital era (2)

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KNOWLEDGE MANAGEMENT CASE STUDY FOR CRISIS RELIEVED DURING THE
FORMOSAT-5 EARLY ORBIT OPERATION

Abstract

The Formosat-5 is a remote sensing satellite that was successfully launched on August 25, 2017. However, the National Space Organization, NSPO, ground operation group quick to found that they could not control the Formosat-5 solar array facing to the sun. That anomaly directly caused power consumption not enough for the satellite mission operation. The NSPO satellite control center engineers do not know what was happened and felt panic at the first time. If the NSPO couldn't solve the satellite power continued reducing anomaly, the Formosat-5 would facing missing eventually.

This paper presented how the NSPO outstanding management utilized the Quality Information system, QIS, and relieved the crisis. The QIS is a holistic system which allows NSPO engineers to generate a community of shared and useful information and knowledge. This QIS environment pushes towards understanding what critical knowledge is, how it can help NSPO engineers rescue satellite anomalies and seeing solutions.

There are many satellites are launched annually. After the satellites were launched, during the early orbit operation, sometimes satellites had a series of problems information flooding in such as navigational system errors and how to solve the anomalies and keep satellites have enough power, an adequate and fast data and knowledge management is required and important.

This paper is a case studies of Formosat-5 "Taken" actions include successful to locate anomaly problems via analyze and corrective actions in the application of QIS management during the satellite flight operation. More detail of risk management methods that allow data, information or knowledge exchange within in support the crises solved will be released in the paper.