



# **Flight Software Affects on Ground Systems - JAXA's Approach -**

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**GSAW 2010**

**March 2010**



# JAXA's Approach

- ◆ JAXA is developing a new approach to develop flight software.
- ◆ In the past, each piece of flight software was designed independently, and its descriptions were always given informally without any standard or guideline.
- ◆ Because of the above situation, the spacecraft operations teams had a hard time understanding the operational rules of each spacecraft and onboard instrument.
- ◆ In order to solve this problem, JAXA adopted a model-based approach.
- ◆ In this approach, the behavior of each piece of flight software is described based on a Functional Model of Spacecraft (FMS), and the descriptions are stored in a standard database.
- ◆ We are also developing a tool that partially generates a code from the contents of the database.



# Model-Based Development of Flight Software

