SOP 2X007: Engineering Request Submission

PURPOSE: To outline the steps necessary to submit a request for scheduling an ER through the OFLS

PARTICIPANTS: FOT

PROCEDURE:

20XXX.1 OVERVIEW

Engineering Requests will be submitted by the FOT Subsystem Engineers to the FOT Mission Planners for scheduling through the OFLS. This document outlines the required information to enable the Mission Planner to correctly input the Engineering Request into the system.

20XXX.2 REQUEST TYPES AND INFORMATION

In order to correctly process and schedule each Engineering Request, the Mission Planner will require certain information from the requesting engineer. Below you will find the lists of required information common to all requests, and the lists of specific information required for each ER type.

COMMON INFORMATION

Name:
> Name of the requested ER.

Description:
> A brief description of the intent and expected behavior of the ER.

Preferred Time:
> The preferred execution time in UTC format.

Earliest Start Time:
> The earliest acceptable time for execution of the ER in UTC format.

Latest End Time:
> The latest acceptable end time for the execution of the ER in UTC format.

Duration:
> The expected duration of the activity.

Altitude Requirements:
> Any required attitude constraints. (e.g. NSM, NPM, etc.)

Radiation Avoidance (Required or Not):
> Whether the activity must be accomplished outside currently known radiation limits.

Priority (1-Highest to 3-Lowest):
> Request priority for scheduling. Priority 1 requests are guaranteed to be scheduled, others may not be, depending on resource allocation.

Prerequisites:
> Any prerequisite activities that must be completed before the ER can be scheduled.

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ACT

ACT requests consist of any request to schedule the execution of a Command Sequence Definition.

CSD:
File containing the commands and logic to execute a specific sequence on the spacecraft. File should have an extension of .ATS.

Pass-through Parameters:
Any parameters needed for correct execution of the CSD that are not nominally contained in the ER syntax. Should be in the form of <Parameter Name> = <Value>.

CAL

CAL requests can be used to schedule desired attitude for the spacecraft as well as the use of a given science instrument (ACIS or HRC) in next-in-line mode for testing or calibration operations not requiring the instrument to be in the focal plane.

Science Instrument:
Requested science instrument for Next-In-Line mode.

Target:
Pointing request for observatory in RA/DEC coordinates. This parameter is not required if a Maneuver parameter is specified.

Maneuver
Eigen-axis/Roll maneuver to be performed by spacecraft. This parameter is not required if a Target parameter is specified.

MOM

Maximum Momentum:
Maximum momentum allowed for the spacecraft. A momentum dump will be scheduled when the predicted momentum on the spacecraft exceeds this amount.

TLM

TLM statements are used to request desired telemetry format changes.

Telemetry Format:
Requested telemetry format.

20XXX.3 REQUEST FORM AND SUBMITTAL

Attached at the end of this SOP is the ER Request Form. Once the correct ER type has been chosen and the required information has been gathered, the requesting engineer should proceed to fill out the Request Form, providing all information, and then submit the form to the Mission Planning Team for review and scheduling.

All ER Request Forms must be submitted to the Mission Planning Team by the Friday two weeks prior to the requested scheduling time.

Author: Kevin A. Marsh **EST. Time :** 00:15

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Requesting Engineer:_____   Request Number:_____

Engineering Request Information

Name:_____
Description:

Type:_____
Request Specific Information:

General Information:

Preferred Start Time:_____
Earliest Start Time:_____
Latest End Time:_____
Duration:_____
Altitude Requirements:_____
Priority (1-Highest to 3-Lowest):_____

Radiation Avoidance (Required or Not):   **Yes   No**

Prerequisites: