



Partner Program Directive

ISSP-PPD-504
September 09, 1997

TO: Distribution

SUBJECT: Charter for **SSRMS Integration Team**

OFFICE OF PRIMARY RESPONSIBILITY: NASA International Space Station Program Office

1.0 PURPOSE

This charter establishes the International Space Station Program (ISSP) Space Station Remote Manipulator System (SSRMS) Integration Team (SIT) forum. The SSRMS Integration Team (SIT) is established to provide a single forum at which integrated SSRMS Robotics analyses and related issues might be addressed through the following functions:

- Supports the technical interchange of data, information and philosophies in support of various SSRMS Robotics related analysis
- Allows access to and interaction of core stakeholders for defining, performing, and assessing SSRMS Robotics analysis on a regular and consistent basis
- Addresses all SSRMS Robotics related analyses for all Capture, Extraction, Berthing, and Release operations for Visiting Vehicles (including HTV) as well as ISS modules and payloads.
- Provides repository for data, analysis results, plans, and actions

This charter defines the scope and limits of the program authority and document control that is delegated to the SIT and it also identifies the panel core membership and specific operating policies.

2.0 POLICY

2.1 Authority

The SIT is chartered by the International Space Station (ISS) Robotics Integration Office to perform the following activities:

- Develop, perform, and review analyses required to support ISS SRMS robotic operations
- Provide a forum at which community contributors might share, discuss and exchange technical information

Authority is delegated from the International Space Station (ISS) Robotics Integration Office as specified in the following paragraphs. Changes to this authority will be reflected in updates to this charter.

The SIT will manage SSRMS Robotics integrated engineering analysis and will lead and coordinate the resolution of issues (and their operational implications) between the elements involved in the performance of SSRMS Robotics operations. This mandate includes consideration of and assessment of the effects on and interdependencies with the ISS, Visiting Vehicles, Payloads, Users and MSS on-board and ground segment systems. The SIT will assign actions as necessary to implement issue resolutions that are contained within its scope of work. Proposed issue resolutions or changes that affect MSS and/or ISSP cost, technical, or schedule baselines shall be presented to the MSS Integration Panel (MIP) for concurrence.

The SIT is authorized to convene task teams, comprising staff from NASA, CSA and contractors, as required to address SSRMS Robotics integrated engineering analysis issues. The SIT will interact with the other forums by taking on primary role for analyses actions as established or received from the MIP and



Partner Program Directive

SEWG forums, and report out-brief data, results and information to the MIP, SEWG and VRIF forums as analyses are performed and available.

The SIT, through the NASA Co-chairperson, will request development support from the various NASA organizations and contractors as necessary to conduct studies and analyses to assess issues and support the development and assessment of changes submitted to the ISSP. The SIT, through the CSA Co-chairperson, will request development support from the various CSA organizations and contractors as necessary to conduct studies and analyses to assess issues and support the development and assessment of changes submitted to the ISSP.

The following teams shall interface with the SIT for all technical matters affecting performance and functionality of the SSRMS Robotics engineering analyses:

- Math Model Working Group (MMWG) which provides model development and simulation validation in support of analysis requirements.

2.2 Scope

The scope of SIT activities covers the SSRMS Robotics integrated engineering analysis of SSRMS Robotics operations support efforts. Supporting Analyses include:

- Visiting Vehicle Capture/Release Feasibility
 - Crew Trials
 - Failed Capture Analysis
 - Drift Out Analysis
 - Visiting Vehicle Capture Loads
- ISS element to element Berthing/De-berthing
- Payload Extraction/Insertion
- Robotic Handoff (SSRMS/JEMRMS)

SSRMS Robotics analysis issues shall be worked through the SIT and shall report to the SEWG, MIP and VRIF forums.

This scope includes the definition and maintenance of a SIT analysis work plan and schedule, and evaluation of all issues and enhancements affecting the performance and functionality of the SSRMS Robotics systems, and development of plans for resolution. This includes consideration of and assessment of the effects on and interdependencies with the ISS and MSS ground segment systems.

2.3 Document Control

The SIT shall manage and maintain the Analysis Database and SIT Website, where Visiting Vehicle Capture and Release abstracts, agendas, minutes, action items, presentations, Initial Condition Database (ICDB) documents, Mass Properties (MP) reports, and analysis data reports will be made accessible.

2.4 End-to-End Integration Plans

The SIT will review the development and implementation of plans for end-to-end integration of the SSRMS related analyses. This includes review of the plans, schedule and results for integrated analyses and testing.

2.5 SIT Analysis and Integration Schedules

The SIT will prepare, approve and maintain the SIT analysis schedule. Changes to analysis schedules which impact ISSP schedule milestones must be submitted to the MIP for awareness and concurrence.



Partner Program Directive

2.6 Deviations, Waivers, and Exceptions

3.0 SPECIFIC PANEL OPERATIONS

The SIT will be operated in accordance with the ISSP Management Directive OA-002, "Space Station Control Board Operations Policy," with specific SIT operations provisions specified in this section

The SIT will attempt to achieve consensus among its members and affected participants, however, the co-chairs have the authority to jointly determine the disposition of issues or changes which are presented to the forum.

The SIT NASA Co-Chair will prepare agendas, minutes reflecting agreements and actions and assure that agenda items/presentations have been prepared in accordance with current policy and that the SIT meeting is properly staffed/coordinated prior to presentation to the SIT.

The SIT NASA Co-Chair will prepare minutes and action items for SIT community review and approval nominally within one working day after the SIT. Upon approval by the co-chairs and SIT community, the SIT NASA Co-Chair shall either post to the SIT Web site or distribute minutes and actions to the SIT membership, affected participants and actionees, via email.

The SIT NASA Co-Chair will prepare and maintain an action item log for the SIT.

3.1 Meeting Frequency

The SIT will meet weekly via both teleconference and face to face meeting options. Core member representation is required on a weekly basis. Full membership attendance will be requested as determined necessary by the team chairs.

3.2 International Partner Coordination

Requests for analysis updates with International Partner impacts are reviewed by the SIT to develop a disposition recommendation prior to being taken to the MSS Integration Panel (MIP). The SIT will strive to resolve issues that impact International Partners, within the scope of this charter. Those that cannot be resolved must be taken to the MIP with a SIT recommended disposition.



Partner Program Directive

4.0 MEMBERSHIP

Joint Chairs:

NASA Co-Chair
CSA Co-Chair

The co-chairs may appoint temporary alternates as needed in their absence. However, they may not sub-delegate their co-chair responsibility and authority on a permanent basis without approval from MIP and the CSA CCB . Decisions by alternates shall be binding.

Secretariat:

NASA Co-Chair

Members:

Note: Core Member Organization Participants are expected to participate in all SIT meetings. Core Members shall designate a primary and alternative point of contact to ensure their organization is represented at all SIT meetings. Ad Hoc Members are expected to participate in SIT meetings as necessary. SIT meeting announcements will include Core Member primary and alternative representatives and will identify any other key participants needed for particular meetings.

SIT – Core Member Organization Participants

NASA Robotics Engineering (ER3)
CSA Robotics Engineering
MDA Robotics Engineering
NASA Structures Engineering (ES)
NASA ISSP Robotics (OM7)
NASA Crew Office Robotics
NASA FOD Robotics (CX)
NASA ISSP SM&A (OE)
NASA Transportation Integration Office (ON)

SIT – Ad Hoc Members

NASA RPOC (EG)
NASA Safety (NE)
NASA Vehicle Integrated Performance (VIPER)
NASA Operations Support (OSO)
NASA Habitability and Environmental Factors (SF)
Vehicle Providers (Orbital, SpaceX, JAXA)



Partner Program Directive

Signature/Date:

Manager, International Space Station Program (ISSP)

Prime Program Manager

Director General, Canadian ISSP, Canadian Space Agency (CSA)

N/A
Manager, Columbus Systems and Integration, European Space Agency (ESA)

N/A
Manager, National Space Development Agency of Japan (NASDA)

N/A
Manager, Russian Space Agency (RSA)

N/A
Manager, Mini Pressurized Logistics Module, Agenzia Spaziale Italiana (ASI)