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SUBJECT: ISS/SSP Minutes

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I. INTRODUCTION

Ms. J. Sidotti convened the May 15, 2001 International Space Station (ISS)/Space Shuttle Program (SSP) meeting to discuss ISS/SSP plans and operations and review action items assigned at previous meetings.

II. TRACKING AND DATA RELAY SATELLITE SYSTEM STATUS

Mr. B. Gonzales reviewed the Tracking and Data Relay Satellite System (TDRSS) status (refer to the *TDRS Space Network Payload Status* attachment). F1, 49 degrees West, is configured for the WARTS and is not Space Shuttle schedulable. F3, 85 degrees East, has limited Single Access (SA) 2 and is stuck in Left-hand Circular Polarization (LCP). F4, 41 degrees West, is fully functional. There are some operational constraints. The satellite is kept in Right-hand Circular Polarization (RCP). The restriction is due to the F3 failure and the constraint is imposed as a preventive measure. Mr. T. Sobchak stated that the ISS and Space Shuttle programs need to concentrate on scheduling the inner satellites of the constellation. Scheduling services on the outer satellites imposes impacts on other users who do not have the scheduling flexibility of the ISS and Space Shuttle programs. Mr. Sobchak suggested that early handovers to TDRS East be scheduled to provide even greater flexibility. Ms. K. Watts stated that the software is configured to schedule early when possible. Mr. E. Klein stated that he will issue a flight note on the early handovers to reinforce the point. F5, 174 degrees West, has a fully operational SA2 with no polarization constraints. Satellites F6 and F7 are also fully operational. Ms. K. Watts stated that some requested holds for events are lost on resubmission. Using TUT to schedule, schedulers are required to schedule the handovers between events to ensure that everything makes the schedule. It was stated that entire events are being rejected even if only a portion of it is in conflict. JSC does not have the mechanism to indicate tolerances or minimum requirements on an event from the Network Control Center (NCC) scheduler. Ms. J. Sidotti stated that a part of the problem is that the Johnson Space Center (JSC) is not using the most current release of the UPS. JSC is a legacy user and does not have many of the new functions. A discussion ensued as to funding and sustaining engineering issues related to upgrading the JSC UPS to the latest release. Mr. G. Morse suggested that Non-maintainable Equipment (NME) funds might be used and that the problem should be investigated. Mr. B. Schneck was assigned an action item to work the UPS upgrade issues with Messrs. R. Harris and M. Blackwell (action item ISS/SSP-05-00-01).

III. MARSHALL SPACE FLIGHT CENTER 50-MB/SEC HIGH RATE INTERFACE DOCUMENTATION REQUIREMENTS

Ms. J. Sidotti provided a status of the Marshall Space Flight Center (MSFC) 50-Mb/sec High Rate (HR) interface Interface Control Documents (ICD) requirements (refer to the *MSFC/WSC 50 MB ICD Documentation Requirements* attachment). Ms. Sidotti stated that the current documentation does not address the MSFC 50-Mb/sec HR interface. The ISS NPRD references an ICD for details of the interface, but the ICD does not exist. She also stated that during a review of the JSC-11534, it was discovered that the JSC 50-Mb/sec HR interface is not addressed. MSFC management has stated that funding is not available to document the MSFC interface. She recommended that the interfaces be added to the JSC-11534. Mr. T. Sobchak stated that the JSC-11534 should be updated for the JSC interface and that documenting the MSFC interface was a MSFC responsibility. He further stated, that the decision by MSFC management and the documentation of the JSC interface should resolve the MSFC ICD issue. He stated that the White Sands Complex (WSC) should be documented as well. Ms. J Sidotti was assigned an action item to work with Messrs. R. Wegener and B. Vermillion to document in the JSC-11534, the Space Shuttle and International Space Station 50-Mb/sec WSC to JSC interfaces (action item ISS/SSP-05-00-02).

IV. EARLY COMMUNICATIONS SYSTEM STATUS

A formal status of the Early Communications (ECOMM) system was provided. The hardware and antennas have been returned to earth. The Radio Frequency (RF) power distribution box was retained onorbit.

V. WSC 50-MB/SEC INTERFACE

Mr. J. Smith discussed the WSC 50-Mb/sec interface (refer to the *ISS 5A.1 Network Interfaces [Ku-band Services]* attachment). The circuits to the Earth station have been installed. A manual switching process has been replaced by an 'OR' gate that automatically switches. Additional software changes are being made so that WSC will have insight to the 'OR' gate function. A Line Outage Recorder (LOR) is needed at WSC. The interface configured through the WSC LI is not typically configured for recording. GSFC has arranged for the use of existing recorders (McMurdo [MCM]). WSC engineering has developed an implementation plan. The ISS 3 Mb/sec forward link interface between JSC and WSC has been in question due to buffer overflow problems with the Network Link Interface Card (NLIC). For the interim, a Programmable Telemetry Processor (PTP) was put in place. Subsequent testing proved that the SCD 5.0 (modified PTP) increased performance (although still not within specifications). The SCD is now in place.

VI. CRITICAL SUPPORT PERIODS

Mr. E. Klein stated that he wanted to discuss critical support periods to ensure that JSC was adequately conveying its requirements to the proper points-of-contact (POC) at GSFC. Ms. J. Sidotti stated that the lead SMM for ISS is Mr. F. Pifer and Mr. H. Toomer is the backup. Mr. B. Schneck stated that 1 day's notice of critical support periods is not adequate. Mr. E. Klein stated that JSC planning personnel were aware of this and were endeavoring to provide the information much earlier. Mr. Schneck suggested that a phone call and email be provided to Mr. Pifer. Mr. T. Sobchak asked if there was a weekly schedule that could be provided to GSFC. Mr. E. Klein stated that he was the JSC POC for ISS and SSP. Mr. E. Klein stated that he would look at the possibility of providing a regular schedule to GSFC for advance planning. It may be possible to provide information from the JSC planning sessions.

VII. PUBLIC AFFAIRS OFFICE EVENT SCHEDULING

Ms. L. Holmesly stated that there has been some difficulty scheduling Public Affairs Office (PAO) events. JSC would like to declare a certain number of PAO events as critical, especially those events associated with network events. Mr. T. Sobchak stated that this would be accommodated. Mr. E. Klein stated that these will be recorded in the weekly schedules. It will be known when the events move in the schedule. Mr. Sobchak stated that the event will be designated as a critical event; the network will not be frozen. Ms. J. Sidotti stated that should JSC be able to identify gross times, then the Goddard Space Flight Center (GSFC) could protest those times in the schedule. Mr. Klein stated that the ops planners can provide a weekly schedule and email it to Messrs. F. Pifer and H. Toomer and Ms. J. Sidotti. Mr. Schneck stated that Ms. Sidotti will let GSFC personnel know when an event is a PAO scheduled critical event or a mission critical event. Ms. L. Holmesly stated that weekly schedules can be provided and concurred that the PAO schedule critical events would not freeze the network. Responses to JSC from GSFC should be provided to Mr. E. Klein, Ms. L. Holmesly, the ops planning mailbox, Ground Controllers (GC) mailbox, and others that will be determined. A discussion ensued as to the appropriate way to document the critical period notices and planning. Ms. J. Sidotti was assigned an action item to determine if the TNOSP is the appropriate document for the ISS critical period notices and planning procedures (action item ISS/SSP-05-00-03). An action item was assigned to Ms. J. Sidotti and Mr. B. Schneck to, during the interim, develop the ISIs to document the procedures for the critical period phases (action item ISS/SSP-05-00-04). An action item was assigned to Ms. J. Sidotti and Mr. B. Schneck to determine the method that CSOC will use to notify the networks of the critical periods and freezes (action item ISS/SSP-05-00-05).

VIII. ACTION ITEM REVIEW

The following status was provided for previous action items:

- A. ISS/SSP-06-99-05. This item is closed.
- B. ISS/SSP-03-00-04. TDRS-H is not operational. It is not known when it will be declared operational. TDRS-I will be placed in storage. This item is closed.
- C. ISS/SSP-03-00-05. TDRS-H is not operational. It is not known when it will be declared operational. This item is closed.
- D. ISS/SSP-08-00-01. There has been no response to this item to date. The action item will be re-assigned to Mr. D. Simonson and will be tracked in the NSG. The ISS/SSP action is closed.
- E. ISS/SSP-08-00-02. The emails were provided. This item is closed.
- F. ISS/SSP-08-00-03. Wallops scheduling has been documented. The transition to WSC has not been documented. The ISS/SSP action is closed. The wording will be modified to replace 'WLPS' with 'WSC' and the item tracked in the NSG.
- G. ISS/SSP-08-00-04. This item is closed.
- H. ISS/SSP-08-00-05. This item will be followed-up with Mr. W. Mitchell. This item remains open.
- I. ISS/SSP-08-00-06. This item is closed.
- J. ISS/SSP-08-00-07. Some gross figures were provided on the cost of scheduling. This item will be reworded and remain open. The third Action item for the NSG was assigned during this discussion. Ms. C. Barclay, Mr. S. Sypher, and Ms. J. Sidotti: Determine how GN scheduling will be performed after the DSMC transition. Action item response due by October 1, 2001.

The following action items were assigned at the May 15 meeting:

ISS/SSP-05-01-01 Bruce Schneck

ACTION: Work the UPS upgrade issues with Messrs. Roy Harris and Mike Blackwell.

ISS/SSP-05-01-02 Jo Ann Sidotti

ACTION: Work with Messrs. Richard Wegener and Bobby Vermillion to document, in the JSC-11534 the Space Shuttle and International Space Station 50 Mb/sec WSC to JSC interfaces.

ISS/SSP-05-01-03 Jo Ann Sidotti

ACTION: Determine if the TNOSP is the appropriate document for the ISS critical period notices and planning procedures.

ISS/SSP-05-01-04 Bruce Schneck and Jo Ann Sidotti

ACTION: During the interim, develop the ISIs to document the procedures for the critical period phases.

ISS/SSP-05-01-05 Bruce Schneck and Jo Ann Sidotti

ACTION: Determine the method that CSOC will use to notify the networks of the critical periods and freezes.

(Original Approved By)
Ms. J. Sidotti