

**Jet Propulsion Laboratory**

**INTEROFFICE MEMORANDUM**

930-03-001-JV/ESB: lc

January 15, 2003

TO: J. A. Wackley

FROM: E. S. Burke

SUBJECT: Minutes for the DSS-43 Downtime Readiness Review (DTRR) held on Monday, January 06, 2003

**DSS-43 Downtime Readiness Review**

The DSS-43 Downtime Readiness Review (DTRR) was held on Monday, January 06, 2003, at JPL , with Alan Robinson (CDSCC), Kevin Knights, Steven March, and Kevin Piechowski participating via the teleconference link. Andrew O’Dea, the task engineer, presented the NSP implementation Project materials. The DTRR was to review and assess the readiness for all NSP activities planned for implementation beginning January 07, 2003.

**Review Board**

Gene Burke, Chairman	DSMS Operations
Greg Rogers (for Bob McMahon)	CSOC Engineering
Allen Berman	DSMS Operations
Alan Robinson	CDSCC
Ken Kimball	DSMS Operations
Jim Buckley	DSMS Operations

**Attendees**

Berman, Al	Kimball, Ken	Marina, Miguel
Berner, Jeff	Klose, Chuck	Phan, Tuan
Berry, David	Knights, Kevin	Piechowski, Kevin
Buckley, Jim	Kurtik, Susan	O’Dea, Andrew
Burke, Gene	Kwan, Al	Rogers, Greg
Hampton, Sherrill	Landon Art	Valencia, Jose
Hewitt, Susan	March, Steven	Yetter, Byron

**DSS-43 Downtime Activities Reviewed:**

NSP Modkit Delivery Status  
Demo Pass Schedule  
Acceptance Test Plans  
NSP Training Status

## CDSCC Status and Readiness

***NSP Hardware Modkit Status*** - DTT equipment transfer agreement has been initiated and the MSAs for both the Uplink and Downlink are signed. All required drawings and support documentation have been released. There is a lien on the OMM documentation, but the date of the lien was not known at the time of the review. A. O'Dea commented that a date had been assigned and that he would provide that information to the Board.

All new configuration files have been delivered and validated and the SPPA at MDSCC and CDSCC have been tested to confirm that the system can receive all support products to configure the DTT and UPL subsystems. NRF and CRF files have been created and installed. J. Berner asked if a CAD had been sent out to the station. G. Rogers commented that a CAD would be provided. Changes to the NMC and CS resources files have been implemented to cover the new equipment.

A. Robinson confirmed all Uplink and Downlink Hardware Modkits (ECO) are on site, but is missing the software *NSP v3.2.1* "Green Disk," and the Uplink and Downlink hardware spares. A. O'Dea commented that the Meskits were shipped to DLF on December 13, 2002. Action Item (AI#1) was assigned to S. Hampton, to determine the status of the DFL shipment of software package *NSP v3.2.1* "Green Disk," and the Uplink and Downlink hardware spares.

***NSP V3.2.X Overview*** – The Engineering build of V3.2.2 was completed December 09, 2002, and it addresses all critical anomalies outlined by Operations in the DDR. The Network Simplification Project (NSP) is working toward a late January 2003 release of NSP v3.2.x to support DSS-43 and DSS-65, pending approval from DSMS Operations. The scope of this delivery will be narrow to facilitate regression testing. A. Berman commented that Operations would assess the readiness and the strategy for delivering NSP v.3.2.x.

***Acceptance Test Plans*** – D. Berry provided a detailed test schedule for DSS-43 that combines an SPT schedule submitted by A. Robinson and a Demonstration pass schedule submitted by A. Landon. The detailed test schedule is posted on the NSP Task Web page.

K. Piechowski requested that System Performance Testing (SPT) procedures for DSS-43 be provided as soon as possible. He also requested a copy of DSS-24's SPT results, a listing of the estimated test completion times so that comparisons can be made with test results obtained at DSS-43, and a set of Uplink and Downlink Doppler/Ranging predicts for conducting Ranging/Doppler SPTs. G. Rogers responded that he would provide all necessary SPT procedures as well as DSS-24 test completion times, but commented that the SPT procedures for DSS-43 will not contain the full set of tests conducted at DSS-24, because the NSP does not modify the DSS-43 front end, thus the full set is not required.

A. Robinson commented that his group is ready to begin SPT testing and would like to have all required test procedures as soon as possible. T. Pham responded that he would provide the Telemetry SPT procedures by Tuesday, January 7, 2003. S. Abate has provided the Radio Science SPT procedures. Action Item (AI# 2) is assigned to Greg Rogers to provide Tracking

SPT procedures by Friday, January 10, 2003.

T. Pham commented that a Y-Factor detector should be configured in the system as part of the Acceptance Testing (AT) and System Performance Testing (SPT) procedures. J. Berner asked if an assessment should be performed to determine the level of SPT regression testing that would be required for validating NSP software version v3.2.x. G. Rogers said that his group is currently working this assessment.

A. Landon discussed the demonstration pass testing criteria. Most of the projects planned for demonstration passes at DSS-43 have already tested at DSS-24, with the exception of Voyager 2 and Galileo. Candidates for testing at DSS-43 include Voyager 2, Mars Odyssey, Cluster, Ulysses, and Stardust. NSP demonstration passes are not planned for Galileo because it utilizes unique DSN telemetry processing equipment and not NSP. Post NSP implementation demonstration passes are planned for Galileo, but the NSP demonstration pass schedule can be revised to include Galileo, if deemed necessary for verification of Galileo downlink tracking in the NSP environment. Action Item (AI#3) is assigned to A. Landon to determine the status of the demonstration pass schedule for DSS-43, by Friday, January 17, 2003.

K. Kimball asked about the status and progress of 70m Servo Drive Upgrade with a concern of meeting the planned January 27<sup>th</sup> date for moving the antenna to support planned demonstration tracks. A. Robinson responded that the Servo Drive upgrade task appears to be on schedule and should not impact the NSP implementation task, however, the task project chart shows Antenna Pointing Verification testing up to February, and the impact on demonstration passes is not clear and may require negotiations with the antenna group. Action Item (IA#4) is assigned to J. Osman to provide a detailed Integration and Acceptance Testing Schedule for DSS-43 by Friday, January 10, 2003.

***NSP Status and Training*** - NSP v3.2.1 test readiness review was held September 12, 2002, software update assessment meeting was held on October 30, 2002 and the DDR for NSP v3.2.1 was held on December 19, 2002. NSP Engineering demonstration tracks were conducted with all three complexes on November 16, 2002, and Shadow passes with MDSCC and CDSCC are ongoing. Three 2-hour sessions of Uplink and Downlink training are to be provided to Madrid and Australia. The goal is to complete operations and maintenance training before the start of planned Demonstration tracks.

***CDSCC Status and Readiness*** – A. Robinson commented that there are no major concerns and his group is ready to begin SPT testing, but stressed the he would like to have all required test procedures as soon as possible.

### **Board Summary:**

The Board reviewed each of the success criteria following the presentation and recommended that DSS-43 begin its downtime as planned. Comments provided by each of the Board members are listed.

Ken Kimball recommended that implementation of NSP should proceed as scheduled, but expressed a concern that SPT procedures and the software (Green Disk) are not on site. In addition, he commented on the need to confirm the status and schedule of the Servo Drive task, as a slippage of this task may impact planned NSP demonstration tracks.

Greg Rogers had no major concerns and recommended that NSP implementation should proceed as planned.

Alan Robinson requested that SPT procedures be provided as soon as possible and recommended that NSP implementation should proceed as planned.

Jim Buckley commented that the date on the OMM documentation lien, and the status of the Green Disk and CAD should to be determined. An assessment to determine the level of regression testing needed for v.3.2.5 needs to be performed.

Allen Berman recommended that the NSP implementation proceed as planned and stressed that the delivery strategy of next NSP software version (V3.2.X) is under review.

Gene Burke commented that the NSP implementation task team is working on a very tight schedule. DSS-43 is scheduled to return to service February 9, followed by DSS-34 NSP downtime scheduled to begin February 10. Antenna downtime at DSS-34 can only proceed after DSS-43 successfully returns to operations. Gene reminded the Review Board members of the upcoming Downtime Readiness Reviews for DSS-34 NSP/20kW transmitter task, and DSS-63 NSP/Servo Drive tasks. The scheduling of the Downtime Readiness Reviews is being worked.

#### **Action Items (AI):**

1. Sherrill Hampton is to determine the status of the DFL shipment of software package *NSP v3.2.1* "Green Disk" and the Uplink and Downlink hardware spares by Friday, January 10, 2003.
2. Greg Rogers is to provide the status of the CAD for setting up NRF and CRF files to DSS-43 and Tracking and Command SPT procedures by Friday, January 10.
3. Art Landon is to determine the status of the NSP demonstration pass schedule for DSS-43 by Friday, January 17.
4. Jeff Osman is to provide a detailed Integration and Acceptance Testing Schedule for DSS -43 by Friday, January 10.