

IDEA to IIGoR Transition Plan

1. Preparation for transition

In preparation for transition the following tasks will need to be completed:

1. Create an IIGoR ORR presentation. This ORR presentation will discuss the following topics:
 - a. IIGoR Network Testing
 - b. IDEA Transition Step
 - c. Test Procedures for IDEA Transition
 - d. IDEA Transition Back-Out Steps
 - e. Schedule to get to IDEA decommission. The targeted schedule is:
 - i. 5/2/2012 – ORR Presentation
 - ii. 5/10/2012 – WSC, MCC and POIC Transition
 - iii. 5/12/2012 – Contingency date for WSC, MCC and POIC Transition
 - iv. 5/14/2012 – BCC Transition
 - v. 5/31/2012 – IDEA Decommission
2. Create the test procedures for testing during transition
 - a. MCC Test procedures
 - b. POIC Test procedures
 - c. BCC Test procedures
3. Schedule MCC resources to perform the transition
4. What else needs to be done?

2. WSC Transition

Steps:

1. Confirm that all WSC eFDPs (at WSGT and STGT) are configured to multicast legacy data on the transition multicast addresses.

3. MCC Transition

1. Phase 1

During the first phase of transition one string of Ku-Band processing equipment will be moved to IIGoR from IDEA. After the equipment has been moved System test will perform a full regression of the Ku-Band system running in legacy mode with the transition addresses.

Steps:

2. Confirm that all WSC eFDPs (at WSGT and STGT) are configured to multicast legacy data on the transition multicast addresses.

3. During the scheduled LOS: Transition the Ku-Band processing equipment. The following equipment will be moved from IDEA to IIGoR:
 - a. OPS ITC2
 - b. OPS VPS2
 - c. A string of SCDs
 - i. 1 SCD at JSC
 - ii. 1 SCD at WSC WSGT
 - iii. 1 SCD at WSC STGT
4. Verify that the equipment that was moved to IIGoR is listening on the IIGoR addressing:
 - a. Verify that the ITC is running a desktop listening for the transition multicast addresses
 - b. Verify that the VPS is listening for the transition multicast addresses
 - c. Verify that the SCDs are configured to the transition addresses
5. Engineer performs an engineer test to verify that the equipment was successfully moved from IDEA to IIGoR.
6. System test performs a full regression of the Ku-Band system. Test the following data flows:
 - a. OCA (This is going to cause an OCA outage to the mission because mission data will need to be used for testing unless there is a way we can figure out to test OCA without impacting mission).
 - i. Perform OCA Test procedures. These procedures will require the OCA Office to confirm they are able to send and receive JSL data.
 - ii. Various OCA data types will be tested, including:
 1. SWRDFISH
 2. Admin PC
 3. What other application need to be tested considering that this is going to use crew time.
 - b. MPC
 - i. Test procedures will have Johnson TV confirm that MPC data is being received.
 - ii. Confirm that a real mission MPC is not scheduled during the testing time.
 - iii. Confirm that the crew has left the G1 Camera and the MPC are powered ON.
 - iv. Confirm that DMC has the MPC downlink configured.
 - c. Video
 - i. Confirm that VPS processed video, from the string that has been switched over to IIGoR is displayed on the WFCR left screen.
 - ii. Confirm that VPS processed video, from the string that is still on IDEA is displayed on the WFCR right screen.
 - d. ZOE
 - i. Confirm that ZOE data is correct forwarded to the SKB FEP.

- e. SpaceX
 - i. If Dragon is docked to ISS: System test performs a full regression with SpaceX.
 - ii. If Dragon is not docked to ISS: System performs a quick regression with SpaceX.
- 7. System test performs eFDP failover testing.
- 8. After system test has successfully completed the regression testing of the equipment moved during this phase, the string of Ku-Band equipment on IIGoR will become the string that supports Mission. The string on IIGoR will be promoted to the string supporting Mission during an LOS. The following changes will need to be made:
 - a. Configure the Mission OCA link to point to the set of SCDs on IIGoR **(This is only done if we can test OCA without impacting mission)**
 - b. Ensure that the ITC on IIGoR is configured to send out the MPC multicast and that the ITC on IDEA is not configured to send out the MPC multicast.
- 9. **Backout plan: If the testing is not successful the string of Ku-Band equipment will be returned to IDEA and Mission will not be swung over to the IIGoR network.**

2. Phase 2

After System test has successfully completed the regression testing of the equipment moved during phase 1, phase 2 will commence. During phase two of the transition another string of Ku-Band processing equipment will be moved to IIGoR from IDEA. After the equipment has been moved System test will perform a quick regression of the Ku-Band system running in legacy mode with the transition addresses.

Steps:

1. Transition the Ku-Band processing equipment. The following equipment will be moved from IDEA to IIGoR:
 - a. OPS ITC2
 - b. OPS VPS2
 - c. The other string of SCDs
 - i. 1 SCD at JSC
 - ii. 1 SCD at WSC WSGT
 - iii. 1 SCD at WSC STGT
2. Verify that the equipment that was moved to IIGoR is listening on the IIGoR addressing:
 - a. Verify that the ITC is running a desktop listening for the transition multicast addresses
 - b. Verify that the VPS is listening for the transition multicast addresses
 - c. Verify that the SCDs are configured to the transition addresses
3. Engineer will perform an engineer test to verify that the equipment was successfully moved from IDEA to IIGoR.
4. System test performs a full regression of the Ku-Band system, the following data flows will be tested:

- a. OCA (Need to figure out how we are going to test OCA and see if this can be tested without impacting mission)
 - i. Test procedure will have the OCA Office confirm they are able to send and receive JSL data.
 - ii. Various OCA data types will need to be tested, including:
 - 1. SWRDFISH
 - 2. Admin PC
 - b. MPC
 - i. Test procedures will have Johnson TV confirm that MPC data is being received.
 - ii. Confirm that a real mission MPC is not scheduled during the testing time.
 - iii. Confirm that the crew has left the G1 Camera and the MPC are powered ON.
 - iv. Confirm that DMC has the MPC downlink configured.
 - c. Video
 - i. Confirm that VPS processed video, from the string that has been switched over to IIGoR is displayed on the WFCR left screen.
 - ii. Confirm that VPS processed video, from the string that was first moved over to IIGoR is displayed on the WFCR right screen.
 - d. ZOE
 - i. Confirm that ZOE data is correct forwarded to the SKB FEP.
 - e. SpaceX
 - iii. If Dragon is docked to ISS: System test performs a full regression with SpaceX.
 - iv. If Dragon is not docked to ISS: System performs a quick regression with SpaceX.
5. After system test has successfully completed the quick regression testing of the equipment moved during this phase, both the string of Ku-Band equipment on IIGoR start supporting Mission. The two Ku-Band strings on IIGoR will be configured to prime/backup supporting Mission during an LOS. The following changes will need to be made:
- a. Configure the Mission OCA link to point to the set of SCDs on IIGoR (This is only done if we can test OCA without impacting mission)
 - b. Ensure that the Prime ITC on IIGoR is configured to send out the MPC multicast and that the backup ITC on IIGoR is not configured to send out the MPC multicast.
6. **Backout plan: If the testing is not successful the two strings of Ku-Band equipment will be returned to IDEA and Mission will not be swung over to the IIGoR network.**

4. POIC Transition

Steps:

1. PDSS server moves....

5. BCC Transition

Steps:

1. Add steps for what need to occur to transition the BCC from IDEA to IIGoR.

6. Disabling IDEA network

Once the above transition steps have been completed and verified the last part of the transition is to disable the IDEA network. The IIGoR network will support mission for two weeks with IDEA disabled. After the two weeks if no issues have been experienced on IIGoR the IDEA network will be decommissioned.

Steps:

1. Disable the IDEA router ports on the following routers:
 - a. WSC Routers (input names)
 - b. JSC Routers (input names)
 - c. MSFC Router (input names)

7. Decommissioning the IDEA network

The IIGoR network will support mission for two weeks with IDEA disabled. After the two weeks if no issues have been experienced on IIGoR the IDEA network will be decommissioned.

Steps:

1. Disable the IDEA router ports on the following routers:
 - a. WSC Routers (input names)
 - b. JSC Routers (input names)
 - c. MSFC Router (input names)