Verification Procedure & Results

Test Procedure Document No.:	Test Procedure Rev.:
3166-70103	1-01

Test Case Name:	Test Plan Document #	Test Plan Rev.:	Test End Date:
MFM Error Handling and Recovery Test	3166-70000	1-01	

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DOORS Verification Procedure ID Ver-CG-263	**DOORS Verification Event ID** CG-VE-3023	**Test Results Reviewed**	**QA:**	Date
			Test Dir.	Date

Test Description

This test will be performed to check the mooring controller's capability for error handling and recovery. This test will be performed by periodically disconnecting the primary and secondary controllers from the inductive loop and hard wired instrument connections prior to and during ongoing communication sessions.

Requirements Addressed

L4-CG-PC-RQ-624 Platform Controllers shall be fault tolerant to communication failures of instruments.

Test Environment

- Main controller is located in load cage at burn-in site.
- Secondary controller is located in 64" sphere cage insert assembly at burn-in site.
- DOSTA, PHSEN, and FLORT are connected to secondary controller in 64" sphere cage insert, located at burn-in site.
- Inductive bypass cables are connected through cages and inductive instruments, all located at burn-in site.

Test Setup

Pre-Conditions:

- TC-002 has been completed and passed

- 64" sphere assembled with cage insert and secondary controller
- Load cage assembled: main controller, remote acoustic modem
- Instruments and controllers are ready to be setup for test deployment mode
- All inductive bypass cables at the MFM are connected
- Secondary controller, CTDMO instruments, ADCPS instrument and main controller are connected through inductive loop

Hardware Preparations:

- Test PC with serial RS232 port
- Local acoustic modem with transducer, RS-232-interface to test-PC
- Serial communication cables for main and secondary controller

Software Preparation:

- Controller serial port configuration: 9600,8n1,none
- Controller terminal software: HyperTerm, RealTerm, TeraTerm

Test Artifacts

Test Artifacts consist of the Pass/Fail results for steps contained within this procedure as well as various log files.

Test Procedure 3166-70103 Rev 1-01				Test Results		
Step#	**Instructions**	**Expected Results**	**Requirement ID**	**Observed Results**	**Pass/Fail**	**Notes**
1	Connect serial communications cable from PC to main controller communications port. Start a terminal program and save the log file as follows: ***sn*_controller_*yyyymmdd*_tc003.log**					
2	Press the **<space>** key to show ">" prompt. If you do not see a ">" command prompt, then press **<ctrl>+x** to exit sleep mode. The controller will now show a ">" command prompt					
3	Follow the menu and set all instruments in deployment mode.					
4	At least an hour after instruments have been deployed, disconnect and reconnect the inductive loop in the following sequence: 00:55 Disconnect inductive loop 01:05 Reconnect inductive loop 02:05 Press the <space> key to show ">" prompt. Type getdata<enter> at the prompt to display all data in buffer.	-The impacted controller resumes its programmed schedule -Data will be resent during the next scheduled connection if communications are successfully reestablished.	L4-CG-PC-RQ-624			
5	At least an hour after instruments have been deployed, disconnect and reconnect the cable to the DOSTA in the following sequence: 00:55 Disconnect 01:05 Reconnect 02:05 Press the <space> key to show ">" prompt. Type getdata<enter> at the prompt to display all data in buffer.	-The secondary controller resumes its programmed schedule after an acceptable timeframe. -Data will be acquired during the next scheduled connection if communications are successfully reestablished.	L4-CG-PC-RQ-624			
6	At least an hour after instruments have been deployed, disconnect and reconnect the cable to the PHSEN in the following sequence: 00:55 Disconnect 01:05 Reconnect 02:05 Press the <space> key to show ">" prompt. Type getdata<enter> at the prompt to display all data in buffer.	-The secondary controller resumes its programmed schedule after an acceptable timeframe. -Data will be acquired during the next scheduled connection if communications are successfully reestablished.	L4-CG-PC-RQ-624			

Test Procedure 3166-70103 Rev 1-01				Test Results		
Step#	Instructions	Expected Results	Requirement ID	Observed Results	Pass/Fail	Notes
7	At least an hour after instruments have been deployed, disconnect and reconnect the cable to the FLORT in the following sequence: 00:55 Disconnect 01:05 Reconnect 02:05 Press the <space> key to show ">" prompt. Type getdata<enter> at the prompt to display all data in buffer.	-The secondary controller resumes its programmed schedule after an acceptable timeframe. -Data will be acquired during the next scheduled connection if communications are successfully reestablished.	L4-CG-PC-RQ-624			
8	At least an hour after instruments have been deployed, disconnect and reconnect the cable to the local acoustic modem in the following sequence: 00:55 Disconnect 01:05 Reconnect 02:05 Acoustically download data from the acoustic modem buffer. Verify that data are missing from 01:00, but data exist for 02:00.	-Data will be acquired during the next scheduled connection if communications are successfully reestablished.	L4-CG-PC-RQ-624			
9	Save and stop the log file.					