



Verification Procedure & Results

Test Procedure Document No.: 3167-00103		Test Procedure Rev.: 1-01	
Test Case Name: HYPM Error Handling and Recovery Test	Test Plan Document # 3167-00000	Test Plan Rev.: 1-01	Test End Date:
Test Conductor (Print Name) Signature	Design Engineer (Print Name) Taylor Semingson	Approval Signature <i>Taylor Semingson</i>	Date 2013-07-01
Test Director (Print Name) Signature	System Engineer (Print Name) Sheri N. White	Approval Signature <i>Sheri N. White</i>	Date 2013-06-28
Witnessed by (Print name) Signature	QA/QC Engineer (Print Name) Gary Cook	Approval Signature <i>Gary Cook</i>	Date 2013-06-28
DOORS Verification Procedure ID Ver-CG-151	DOORS Verification Event ID CG-VE-3092	Test Results Reviewed	QA: Date
			Test Dir. Date

Test Description
This test will be performed to the error handling and recovery of the capability of the mooring controllers. This test will be performed by periodically disconnecting the controllers from the inductive loop 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.
- GSPP and WFP are located at the burn-in site.
- Inductive bypass cables are connected through cages and inductive instruments, all located at burn-in site.

Test Setup

Pre-Conditions:

- SPP assembled: Mechanism Float, Instrument Float, Communications Float
- WFP(s) assembled
- Lower load cage assembled: HYPM Controller, acoustic modem
- Instruments and controllers are ready to be setup for test deployment mode
- All inductive bypass cables at the HYPM are connected
- SPP, WFP, HYPM Controller are connected through inductive loop

Hardware Preparations:

- Test PC with serial RS232 port

- FreeWave modem with antenna, interface to test PC
- Local acoustic modem with transducer, RS232 interface to test-PC
- Comm-Cables for SPP, WFP, HYPM Controller
- Internet connection to server

Software Preparation:

- SPP serial port configuration: 19200,8n1,no handshaking
- SPP FreeWave configuration: 19200,8n1,no handshaking
- WFP serial port configuration: 9600,8n1,no handshaking
- WFP terminal software: CrossCut
- HYPM Controller serial port configuration: 9600,8n1,no handshaking
- HYPM Controller terminal software: HyperTerm, RealTerm, TerraTerm
- Local acoustic modem serial port configuration: 9600,8n1,no handshaking
- Shore side setup: Rudics connection to server & SPP communication software will be running on server

Test Artifacts

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

Test Procedure 3167-00103 Rev 1-01				Test Results		
Step#	Instructions	Expected Results	Requirement ID	Observed Results	Pass/Fail	Notes
1	Connect serial communications cable from PC to HYPM 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 GSPP and WFPs 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			