

## PFR-132 Title: IDPU Simulator Low Rate Telemetry Issue

Assembly : IDPU Simulator		SubAssembly : DCB			
Component :		Units Affected:	Units fixed:		
Originator: Ellen Taylor					
			<b>IDPU Simulator</b>		
Organization: Swales/UCB		Date: 1/4/06			
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Failure Occurred During (Check one $\sqrt{)}$					
$\Box$ Functional test $\Box$ Qualification test $\Box$ S/C Integration $\Box$ Launch operations $\Box$ Other (Flight Assy)					
Environment when failure occurred:					
√ Ambient	□ Vibration		□ Shock	□ Acoustic	
□ Thermal	□ Vacuum		Thermal-Vacuum	□ EMI/EMC	
Problem Description					

The following issue #326 was entered into the Hammers Issue Tracking System.

Title: FSW 2.505 reboots unexpectedly (/cbuidputlena)

Description: The THEMIS /cbuidptlena command causes FSW 2.505 to perform a cold restart; this is very repeatable.

It has been observed that, occasionally the IDPU simulator will enter a state where it either repeatedly sends invalid packets, or, floods the serial port with data, which causes a BAU reboot.

## **Analyses Performed to Determine Cause**

The BAU reboot happens because of the need to service each byte received from the IDPU LR interface (non-buffered fashion).

## **Corrective Action/ Resolution**

One solution is for the FSW to disable the port when it detects more than the expected quantity of data. This solution is acceptable assuming there is a way to override the disable if needed. The FSW will be changed in the next released version of FSW.

It has been verified that FSW Build 3 incorporates a low speed disable link if more data than expected is produced from the IDPU. The fact that the IDPU simulator sometimes produces invalid packets can be attributed to the memory corruption problem (PFR 127) fixed on the flight units.

Acceptance:	
MAM: Ron Jackson; M	SE: Ellen Taylor
PM: Peter Harvey; Co	gnizant Engineer

Date of Closure\_\_\_\_\_