

Detailed functional tests for DAS/CCD3 software

External command interface (over Ivy bus)

Date: 15/10 - 2009
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 Version: 15/10 - 2009, Initial version.
 16/11 – 2009, Comments by AiC.
 20/4 – 2010, Updates to reflect actual implemented functionality.

Test number	6
Test name	External command interface (over Ivy bus)
Test document	06-test-cmd-if
Depends on test	None.
Requirements	<ol style="list-style-type: none"> 1) The external commands (i.e. the NOT sequencer commands) described in ref. 2 of the ODF-TEST document shall produce the same result as the same command, internal to the CCD3 programme, will produce. (Addendum 20/4-2010: This is not a requirement, as there is no need for a one-to-one relationship between internal CCD3 commands and external NOT sequencer commands in order to achieve the required functionality). 2) The external commands shall log information, warning and error messages in a way similar to the existing NOT sequencer commands. 3) The difference in the time it takes to execute the a command, using the version internal to the CCD3 programme and the external version shall only depend on load factors that affects the Ivy bus.
Circumstances	<ul style="list-style-type: none"> – The CCD3 system shall be running, connected to a detector controller, controlling a CCD or reading out a dummy test pattern. – A terminal window shall be opened on the same computer on which the CCD3 programme is running. – A terminal window shall be opened on a different computer bu tconnected to the same local network than the one on which the CCD3 programme is running. This computer shall be connected via network to the computer on which the CCD3 programme is running.
Test descriptions	<p><u>Subtest 6.1 (command presence and function) :</u> The commands listed in ref. 2 of the ODF-TEST document shall be executed one by one in the terminal window on the same computer as the CCD3 programme is running on.</p> <p><u>Subtest 6.2 (command presence and function):</u> The commands listed in ref 2 of the ODF-TEST document shall be executed one by one in the terminal window on different computer connected to the same local network.</p>

	<p><u>Subtest 6.3 (execution time):</u> The commands listed in ref. 2 of the ODF-TEST document shall be executed one by one in the terminal window on the same computer as the CCD3 programme is running on. The execution time of each command shall be timed, using the command "time". As the action the internal and external version of a command performs are the same this makes it possible to determine the difference in the time it takes to execute the command itself, but the action it performs.</p> <p><u>Subtest 6.4 (execution time):</u> The commands listed in ref. 2 of the ODF-TEST document shall be executed one by one in the terminal window on another computer. The execution time of each command shall be timed, using the command "time".</p>
<p>Criteria</p>	<p>The result is acceptable and thus the test is PASSED when</p> <ul style="list-style-type: none"> - Each of the external commands listed in ref. 2 of the ODF-TEST document leads to the same result as the corresponding internal CCD3 command. (Addendum 20/4-2010: again, this is not required as it is only the external NOT sequencer commands that will implement the required functionality to the outside). - The commands mentioned in "requirements, 2." in this document implements syntax check to assure that their arguments are within allowed range and type (TBD). - Each of the external commands listed in ref. 2 of the ODF-TEST document can be executed in a arbitrary shell in a terminal window on any computer connected via a network to the computer on which the CCD3 programme runs. - The difference between the time it takes to execute a given external command and it's equivalent internal to the CCD3 programme is smaller than 0.25 second (the external command taking the longest to execute). This being so under 50% CPU load and during network transfer of a full size CCD image between the computer on which the CCD3 programme is running and another computer on the local network. - Each of the external commands logs the following (as in the current BIAS+sequencer system) <ul style="list-style-type: none"> - Description of the action that will be taken (logged as [info]) - Description of vital information during the action (logged as [info]) - Warnings (logged as [warning]) - Errors (logged as [error]) using the UNIX syslog facility "local0" and priority "debug".
<p>Result</p>	<p><input type="checkbox"/> Subtest 6.1 PASSED. Tested by _____ on ____ / ____ 20____</p> <p>Signed _____</p>

Subtest 6.2 PASSED. Tested by _____ on ____ / ____ 20 ____

Signed _____

Subtest 6.3 PASSED. Tested by _____ on ____ / ____ 20 ____

Signed _____

Subtest 6.4 PASSED. Tested by _____ on ____ / ____ 20 ____

Signed _____

Notes

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