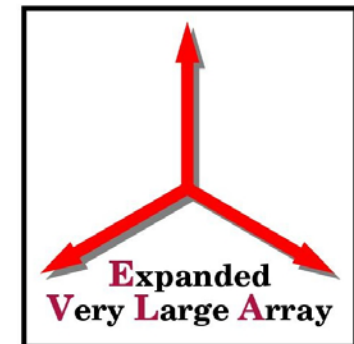




Test Builder & Test Executor



Sonja Vrcic



- Quick overview.
- When are these tools needed ?
- Requirements for the various stages of testing.

- Test Builder is a GUI based tool that will be used to create a configuration for a test or observation.
- Output of Test Builder is an XML file that contains:
 1. Test (Observation) ID
 2. System Time (optional)
 3. Observation Time (optional)
 4. Duration (optional)
 5. List of Boards and Baseline Boards, and configuration for each board.
 6. Backend configuration.
 7. Antenna table, which for each Station Board specifies the antenna which is source of input data. Antenna Table may also contain antenna parameters that are used by Backend.
 8. Directory where to save output files.
 9. Prefix for output files (i.e. files where output of the Station Board and Baseline Board is saved).
 10. A set of golden files to be used for Intelligent Diff.
- Test Builder allows user to open existing test configuration file, modify the configuration and save it; either in the same or in a new file.

WIDAR Correlator - Test Configuration Builder

Main

System Time: UT Local

Observation Time: Use system time of the target systems
 Fixed

Observation ID:

Duration:

Prefix for output file names:

Store output files in dir:

Perform Intelligent Diff

Type	Board ID	Dest. IP Address	File Name
StationBoard	1-0-0	192.139.1.1	myFirstObs/Stb2BB16Sb-0.xml
StationBoard	1-0-1	192.139.1.9	myFirstObs/Stb2BB16Sb-1.xml
StationBoard	1-0-2	192.139.1.17	myFirstObs/Stb2BB16Sb-2.xml
StationBoard	1-0-3	192.139.1.25	myFirstObs/Stb2BB16Sb-3.xml
BaselineBoard	1-0-4	192.139.1.34	myFirstObs/Blb2BB16Sb1prod64lags.xml
AntennaTable	n/a	192.139.200.4	corrProto/AntennaToStb-4Ant.xml
Backend	n/a	192.139.200.4	myFirstObs/Cbe4St2Bb16Sb1prod.xml
StationBoard			
BaselineBoard			
PhasingBoard			
STB FORM			
Backend			
AntennaTable			

Comment

- Test Executor is a GUI based tool that takes as input test Configuration file created by the Test Builder and executes the test.
- Execution of a test includes:
 - Sending configuration to subsystems (Station Boards, Baseline Boards, Backend, etc),
 - Setting system time on all the subsystems (that are part of the test),
 - Starting “listener” tasks to capture output data and create output files.
 - Sending “start” command when all the subsystems are ready (or at activation time). Exact functionality TBD.
 - Sending “end” command at the end of test (defined by duration).
 - Starting Intelligent Diff if required.
- Test Executor enables user to select a list of the previously created Test Configuration Files and execute them either immediately or at the specified time.

WIDAR Correlator - Test Executor

Main

System Time: 2007-11-23T12:01:12 UT Local

Observation Time: 2007-11-23T12:01:12

Execute Selected Tests

Number of Executions: 1

Activation Delay: 10

Rack 001

Backend

Stop Test Execution

Remaining Time

Current Test: 00:12

All Selected Tests: 00:58

Open Test Bulder

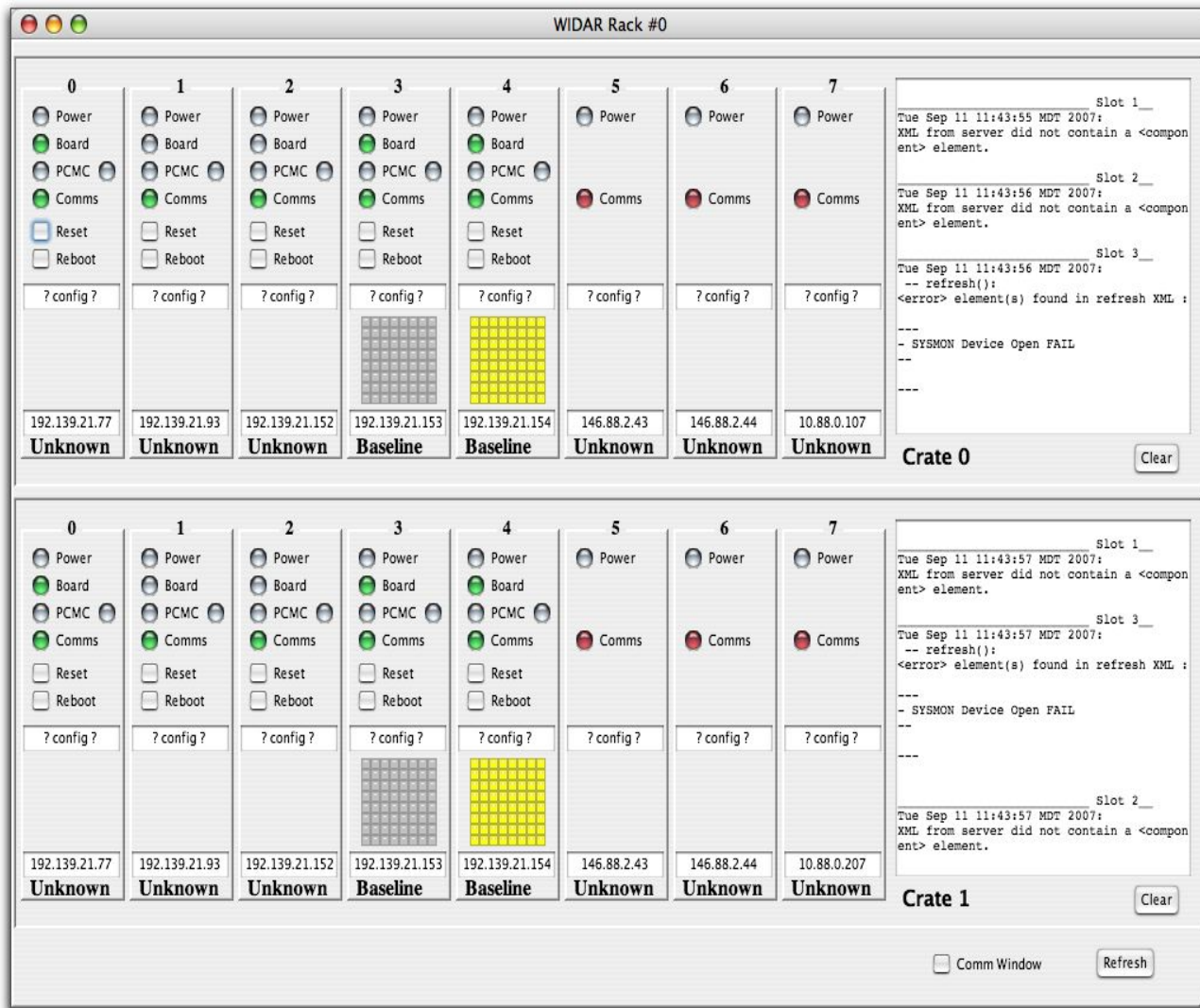
Observation ID	Test Configuration	Execute	Config Time	Duration	IntellDiff	Status
Test4-2St2Bb	Test4-2St2Bb.xml	<input checked="" type="checkbox"/>	2007-11-23T12:00:59	15	<input checked="" type="checkbox"/>	Running
Test4	Test4.xml	<input type="checkbox"/>	2007-11-23T10:53:30	5	<input checked="" type="checkbox"/>	Completed - Failed
Test4	Test4.xml.xml	<input type="checkbox"/>	2007-11-23T10:53:45	5	<input checked="" type="checkbox"/>	Completed - Failed
Test4	Test4.xml	<input type="checkbox"/>	2007-11-23T10:54:00	5	<input checked="" type="checkbox"/>	Completed - Failed
Test4-2St4Bb	Test4-2St4Bb.xml	<input checked="" type="checkbox"/>	2007-11-23T11:24:00	21	<input checked="" type="checkbox"/>	Completed - Success
Test2-2St2Bb	Test2-2St2Bb.xml	<input checked="" type="checkbox"/>	2007-11-23T11:26:34	10	<input type="checkbox"/>	Completed - Outcome Inconclusive
Test2-2St2Bb	Test2-2St2Bb_a.xml	<input checked="" type="checkbox"/>	2007-11-23T10:14:34	10	<input type="checkbox"/>	Completed - Outcome Inconclusive
Idle	CorrelatorIdle.xml	<input type="checkbox"/>		0	<input type="checkbox"/>	
Test5	Test5.xml	<input checked="" type="checkbox"/>		5	<input checked="" type="checkbox"/>	

Log Log to file in directory /widar/testLogFiles/ Browse

```

2007-11-23T11:26:34 Test2-2St2Bb - Started re-configuration
2007-11-23T11:26:45 Test2-2St2Bb - Sending start commands
2007-11-23T10:26:55 Test2-2St2Bb - Sending stop commands
2007-11-23T10:26:55 Test2-2St2Bb - Outcome inconclusive (Intelligent Diff not required)
2007-11-23T12:00:59 Test4-2St2Bb - Started re-configuration
2007-11-23T12:01:09 Test4-2St2Bb - Sending start commands
    
```

- GUI that monitors WIDAR status will be provided as a standalone tool, and may be integrated with Test Executor.
- System level GUI will display overall status for :
 - Station Racks,
 - Baseline Racks,
 - Backend,
 - MCCC,
 - CPCC, etc.



- As soon as possible (Q1 2008) Board GUIs and CMIB software should be upgraded to provide the following :
 - configure a board (or a subset of devices on the board) using previously created configuration file.
 - Start / stop test execution.
- Test Builder & Test Executor are required for the following phases:
 1. Stage 3 testing (14 Station Boards and 14 Baseline Boards). April 2008 .
Minimum requirements for Stage 3: ability to configure Station Boards, Baseline Boards, start “listener tasks” that create output files and execute Intelligent Diff at the end of the test. April 2008
 2. Critical On-The-Sky Testing. August 2008.
At that time Backend and SDM should be integrated into Test Builder & Test Executor. Integration with SDM may be required earlier, if hardware is delivered to VLA (possibly June 2008).
 3. Board testing at manufacturer's site. December 2008
A standard test suites will be created in DRAO that will be used for testing of boards after full production. Full automation will be needed at that time.

- Requirements have been described in the DRAO document “Software Requirements for the Testing of the Board Prototypes”.
- Test Builder & Test Executor will be implemented by Kevin Ryan.
- Need to refine the list of requirements taking in consideration schedule.
- Implementation to begin in January or February 2008, depending on the need to support Stage 2 testing.

The End