



DARK ENERGY
SURVEY

MONSOON Supervisor Layer Testing UIUC



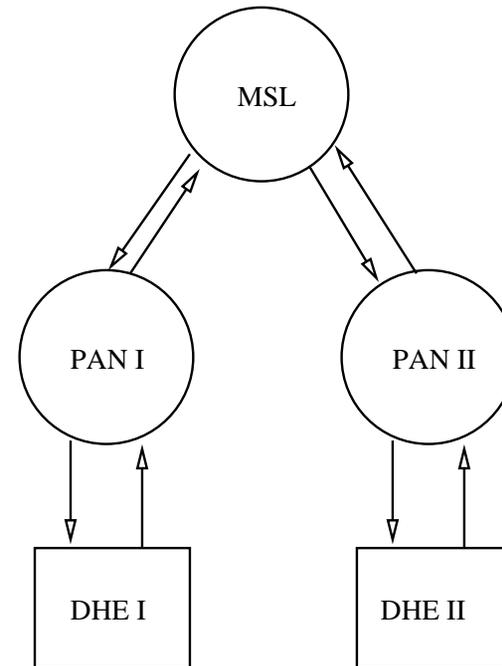
- The MSL successfully controlled two real PAN-DHE pairs, sent commands to PAN-DHE, and took images.
- LabVIEW based GUI controlling system is under designing.



Schematic View

The MSL testing setup at UIUC:

- Master PAN-DHE I
Connected to four-slot backplane DHE
- Slave PAN-DHE II
Connected to six-slot backplane DHE
- MSL on PAN I or a third machine
- Load configurations, sequencer file through MSL, and send start-exposure command



```

mslSent
tartExp
+2454133,3916797013953328: mslDumpPpxRecord client 0L > ->attr:
+2454133,3916797018609941: mslDumpPpxRecord client 0L > ->par:
+2454133,3916797023266554: mslDumpPpxRecord client 0L > ->cmds: 11
+2454133,3916797023266554: mslDumpPpxRecord client 0L > ->attrsz: 0
+2454133,3916797027923167: mslDumpPpxRecord client 0L > ->parsz: 0
+2454133,3916797032579780: mslDumpPpxRecord client 0L > ->filedat: +245
4133,3910418096929789
+2454133,3916797037236392: mslDumpPpxRecord client 0L > ->sentdat: +245
4133,3910423377528787
+2454133,3916797037236392: mslDumpPpxRecord client 0L > ->recvd: +245
4133,3916796976700425
+2454133,3916797041893005: mslDumpPpxRecord client 0L > ->rbytes: 64
+2454133,3916797046549618: mslDumpPpxRecord client 0L > ->sbytes: 12
+2454133,3916797051206231: mslDumpPpxRecord client 0L > ->mtype: 16

mslSuper
+2454133,3943522372283041: mslSuperBlock client 0L > mslMemP->gpx.status[iwa]: 1052688
0
+2454133,3943552458658814: mslSuperBlock client 0L > mslMemP->gpx.aflag[iwa]: 1
+2454133,3943552463315427: mslSuperBlock client 0L > mslMemP->gpx.status[iwa]: 1052688
0
+2454133,3943582545034587: mslSuperBlock client 0L > mslMemP->gpx.aflag[iwa]: 1
+2454133,3943582549691200: mslSuperBlock client 0L > mslMemP->gpx.status[iwa]: 1052688
0
+2454133,3943612636066973: mslSuperBlock client 0L > mslMemP->gpx.aflag[iwa]: 1
+2454133,3943612645380199: mslSuperBlock client 0L > mslMemP->gpx.status[iwa]: 1052688
0
+2454133,3943642722442746: mslSuperBlock client 0L > mslMemP->gpx.aflag[iwa]: 1
+2454133,3943642731755972: mslSuperBlock client 0L > mslMemP->gpx.status[iwa]: 1052688
0
+2454133,3943672808818519: mslSuperBlock client 0L > mslMemP->gpx.aflag[iwa]: 1

```

GPX Graphical User Interface

File Options Help

gpxAbortExp	gpxArmExpTrigger	gpxAsyncMsg	gpxAsyncResp	gpxDump	gpxExit	gpxExtra	gpxGetAVP	gpxGetState	gpxHelp
gpxPass	gpxPauseExp	gpxPower	gpxReset	gpxResumeExp	gpxSetAVP	gpxSetArrCfg	gpxSetExpCfg	gpxSetIdpCfg	gpxSetMemCfg
gpxSetMode	gpxShiftImage	gpxShutdown	gpxShutter	gpxSimulate	gpxStartExp	gpxStopExp	gpxTestMode	gpxWaitForTrigger	exitApplication

Parameter(s): MSD

<alt>
 <chkaccess>
 <chkrange>
 <create>
 <event>
 <gpx>
 <gui>
 <immd>
 <info>
 <names>
 <override>
 <resp>
 <remove>
 <save>
 <urgent>

```

Connected to 192.168.205.21 via port 9999
Sent> gpxReset
Sent> gpxAsyncResp
Sent> gpxSetMode monsoon.ini
Sent> gpxSetAVP imageFile=testFeb01
Sent> gpxSetMemCfg ReadTypeid.ucd
Sent> gpxSetAVP mcbSeqEnable=1
Sent> gpxStartExp

OK: gpxReset: Success.
OK: gpxAsyncResp: Success.
OK: gpxSetMode: Completed successfully.
OK: gpxSetAVP: Success. \\ imageFile set to "testFeb01"
OK: gpxSetMemCfg: Downloaded File /home/tqian/cfg/_fna1/ReadTypeid.ucd.
OK: gpxSetAVP: Success. \\ mcbSeqEnable set to 0x00000001<1.000000>
OK: gpxStartExp: Exposure start signal given.

```



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Monsoon Supervisor Layer

- The MSL contains two components:
 - mslSuper
 - It is the main entry point into MSL from SISPI
 - It receives GPX commands and returns message to SISPI
 - mslSent
 - It connects to PANs with IP-address and port number
 - It sends PPX commands to the PANs through sockets
- Current GPX GUI is in Tcl/tk as shown in previous slide.
- All the testing is based on MSL written by Phil Daly and Nick Buchholz at NOAO.
- We will start our real work soon.