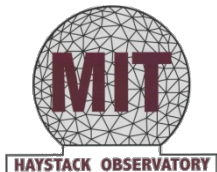


Mark5/Mark6 Software Status

Chet Ruszczyk
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MIT Haystack Observatory, Westford, MA



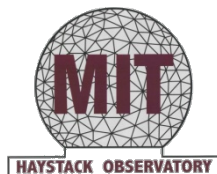
Recording Software

- SDK9.X
 - Recommendations
- Mark5 A/B/B+
- Mark5C
- Mark6



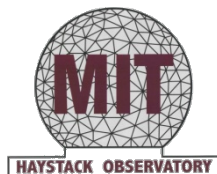
SDK9.X

- Latest released version 9.2
- Under test 9.3
- Version compatibility
 - SDK9 systems can read recordings made with earlier versions of SDK, e.g. SDK8, 7, 6
 - SDK9 recorded disks are not backward compatible.
 - SDK8 or earlier systems **CANNOT** read SDK9 recorded disks



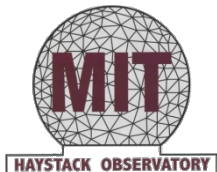
SDK9.X

- Modules can be conditioned on any version of SDK and system (Mark5A/5B/5C)
 - Haystack has a general rule when working with SDK9 and being unsure where the disk modules come from
 - EV2E
 - Erase, VSN, Erase, Erase
 - This will guarantee a seamless transition between systems and SDK version
 - Removes any problems



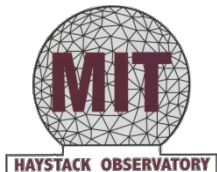
Mark5A/B/B+

- Mark5A/5B/5B+ software supports SDK9.2
 - Application names
 - Mark5A
 - DIMino (note name change)
 - Works with Etch / Lenny / Squeeze
- Debian packaging:
 - One version of sw for Mark5A/5B/5B+ systems
 - Dependency on OS version installed
 - mark5_2.2.0-i386.deb
 - based on data code: 2012y234d11h
 - mark5bio_2.0.1-i386.deb



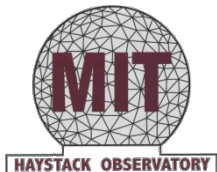
Mark5 A/B/B+

- New Features
 - Ability to support non-real time mode for transfers from the disk module
 - disk2net
 - Implication is that no fill pattern will be used
 - if the system requires to wait
 - Network congestion
 - Slow disks
 - Receiving client not ready
 - Settable via commands
 - disk2net, net2disk, net2in



Mark5A/B/B+

- New command set version
 - Mark5 software documentation
 - <http://www.haystack.edu/tech/vlbi/mark5/software.html>
 - Mark5A version 2.74
 - Mark5B version 1.13
- Next release
 - Fix bug for > 1024 scans
 - scan_set based upon time settings
 - Cascade mode support re-enabled for 5B+



Mark5A/B/B+

- Utilities - A new version of SSErase is being deployed with SDK9

```
cruszczyk@grizzly:$ SSErase -h
```

USAGE:

```
SSErase -h -v -m <m> -c <c> -u <u> -b <b> -w <w>
```

where:

-h This message

-v Version of SSErase

<m> is the debug msglev (range -1 to 3, DEFAULT => "1"),

<c> sets conditioning (0 for FALSE, 1 TRUE, DEFAULT => "0"),

<u> is the user directory format: Default "c"

a = Mark5A formatted disks

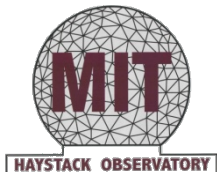
b = Mark5B standard formatted disks < 1024 scans

l = Mark5B extended formatted disks > 1024 scans, and

c = Mark5C formatted disks

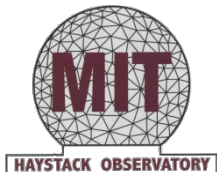
 bank to condition A/B: DEFAULT => "A"

<w> Write only condition 0/1 : DEFAULT => "0"



Mark5C

- Latest available version is 0.9.9-1
- Version 0.9.16-1 is under development
 - This version will be tested / released with FS
 - Correctly handles full disk modules when bank_set is used
 - Corrects output formatting for consistencies (spaces)
 - scan_check
 - correctly verifies scan after record=off is issued
 - time format to meet time standard on zero length scans
 - Start up with no disk modules in system



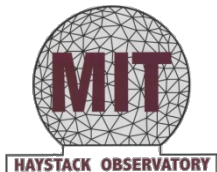
Mark6

- Software under test
 - C-plane (control plane)
 - Developed by Chet Ruszczyk
 - Written in Python
 - VSI-S interface to outside world, e.g. FS
 - Disk management and configuration
 - Version 0.5
 - Supports command set 3.03
 - Two disk modes
 - Raid0
 - SG mode (scatter gather)



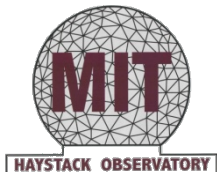
Mark6

- D-plane (data plane) Version 0.2
 - Developed by Roger Cappallo
 - Written in “C”
 - Manages
 - Start and stop of data flow via packet inspection
 - Organization of data into files
 - Addition of metadata to files
 - Receive data via network and writes to disks
 - Raid
 - Fault tolerant scatter mode



Mark6 Additional Features

- Capture data to ring buffers to separate from file writing
 - facilitates eVLBI
- FIFO design decouples writing from capturing (e.g. keep writing during slew)
- mk5b format packets converted “on the fly” into vdif packets
- All Mark6 software is open source for the community
- Mark6 hardware is also non proprietary & openly published
 - Conduant hardware has components known to work
 - Conduant modules are community standard for data transport
 - Custom hardware reasonable for dedicated eVLBI site?



Thank you / Questions?

