

# MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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### Release notes for Debian “Etch” distribution for Mark5 Systems

This document introduces the new Mark5 OS Linux distribution, which is a minimal Debian Etch distribution with a 2.6.18 kernel, and identifies the major differences from previous Mark5 systems, reasons for upgrading your Mark5 systems, and known peculiarities observed on some systems.

#### What it is

The Mark5 OS distribution is a 2 iso CD images set available on the MIT Haystack website. The first iso image is a standard Debian GNU/Linux 4.0r4 “netinst” image. The second iso image contains the additional minimum software packages required to create an operational Mark5A, 5B or 5B+ system. The details for the installation can be found on the appropriate 2<sup>nd</sup> iso image or on the MIT Haystack Observatory Website, [http://www.haystack.edu/tech/vlbi/mark5/downloads/Upgrade\\_notes\\_etch.pdf](http://www.haystack.edu/tech/vlbi/mark5/downloads/Upgrade_notes_etch.pdf) for Mark5A, and [http://www.haystack.edu/tech/vlbi/mark5/downloads/Upgrade\\_notes\\_etch\\_5B.pdf](http://www.haystack.edu/tech/vlbi/mark5/downloads/Upgrade_notes_etch_5B.pdf) for Mark5B and 5B+.

#### Changes

There are some major differences from earlier releases of the Mark5 OS distribution and Mark5 application. These differences specifically focus on the Mark5A and Conduant Streamstor driver software.

1. The previous “Sarge” release of the OS distribution did not contain the Mark5A application. This new distribution is a complete self-contained distribution, all software for a functional Mark5 system are on the 2 CD set.
2. The version numbering of the Mark5 OS distribution is officially version 2.0
3. The new version of the Mark5 application separates the Conduant Streamstor driver, from the Mark5 application. This new packaging approach uses standard Debian packaging instead of a tar ball.
4. Future releases of the Mark5 application’s or Conduants’ Streamstor software will no longer be through running the Mark5Update script but handled through a standard Debian packaging manager.
5. The Mark5 application code is based upon the day 225 year 2007 Mark5A tar ball.
6. This code release is now separated by the type of Mark5 I/O card:
  - a. There is a official releases for Mark5A, Mark5A\_1.0.3.deb
  - b. Another release specifically for Mark5B, and 5B+, Mark5B\_1.0.5.deb
7. To start the Mark5A application and command line interface use “MarkA” and “tstMark5A”, respectively.
8. To start the Mark5B and 5B+ application and command line interface use “dimino” and “tstdimino”.
  - a. This is to match the Mark5B documentation for the command set, revision 1.12
  - b. Use EndDim to terminate dimino.
9. The Conduant driver is also available as a Debian package and released in this distribution. The Conduant Streamstor driver is SDK 8.1 and supports Linux kernels 2.6.18 – 2.6.23.
10. The /home/jball and the /home/streamstor directories no longer exist. All of the executables are located under /usr/local/bin directories and the source code under /usr/local/src.
11. The DTS\_id? query will result in the proper day/year response in this version, but in later version will be referred to by its package version number.

#### Known Issues

The new Mark5 application software, with SDK 8.1, resolves all but one known issues with the playback of modules with bad disks. In particular, if one of the disks in the modules is bad and playback is initiated, scan\_check, and track\_check will fail until a bank\_set=inc is performed. After returning to the original bank the checks will pass until play is initiated again. This problem has not been isolated to either the Mark5 application or the Conduant SDK8.1 software.

Operating system hangs when switching between PATA and SATA Mark5 disk modules. The observed problem is that with the Mark5A application running with PATA, and when both banks have SATA drives swapped in and keyed in the lock position will cause the OS to hang. To work around the problem, when switching from PATA to

SATA, simply EndM5, swap the modules, change the key to locked position and start the Mark5A program again.

**Contact for questions**

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