

EXPreS Specifications

Connectivity

The 3 ATNF telescopes are connected to Sydney via 1 Gbps “lightpaths”. This is shared with production traffic to the observatories.

- Initial testing will be via standard AARNET route to Europe. This is via Singapore and uses 4×155 Mbps connections
- Routing will then be changed to use the SX Transport 10 Gbps line via the USA. Given the increased RTT this may not give better TCP throughput

Protocols

What protocol needs to be used for the transfers? TCP, UDP, VSI-e, something else? If anything other than TCP (or a similar reliable stream interface) is used then is a packet header format needed (so lost packets don't screw up the data stream).

Data Format

Mark5b data format

The Mark5B “file” format will be used. This consists of the raw baseband data with regular time headers and header CRC.

- Will Mark5A+ or Mark5B playback be used for these tests. Mark5B playback does not use the CRC in the header so this makes the implementation a little easier.
- Need to specify and agree on the “track assignment” and bit encoding used.

Control

A thin Mark5(B?) client will be written which emulates a real Mark5 and directly controls the LBADR recorder.

- Minimal Mark5 command set needs to be specified in sufficient detail for implementation.

Minimal Mark5 command set

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