

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

HAYSTACK OBSERVATORY

WESTFORD, MASSACHUSETTS 01886

Telephone: 978-692-4764

Fax: 781-981-0590

5 January 2005

TO: Distribution
FROM: Alan Whitney
SUBJECT: 13 Dec 2004 e-VLBI telecon summary

Attendees:

Bill Fink, Pat Gary, Lee Foster, Paul Lang, Mary Shugrue – GSFC

Tom Lehman – ISI-E

Charles Yun – Internet2

Jerry Sobieski - MAX

Kevin Dudevoir, Alan Whitney – Haystack Observatory

This telecon is one of an ongoing series of telecons to prepare for 10 gigabit/sec e-VLBI demonstrations between NASA GSFC and MIT Haystack Observatory using a combination of network facilities including all or part of Glownet, Bossnet, ISI-E, SuperNet, Max and GSFC/HECN.

ACTION ITEMS ARE HIGHLIGHTED IN RED.

Glownet/Bossnet

Tom: No significant changes that he is aware of.

Kevin: Working with Russ Roberge to configure a control channel for the Ray Express units that is accessible externally. Expects to have it completed soon (this week?). This is important as it will allow, among other things, the integration of the Ray Express units into the DRAGON control plane.

Jerry: NRL folks have 10GigE wave operating between NRL and LL. Proves that Bossnet can support 10GigE link. Linden Mercer of NRL is considering breaking Bossnet link in NY and doing some tricks to do some 40Gig transfer; if that happened, might be possible for DRAGON to drop a 10Gig wave in NY, which would open interesting possibilities for connection to Europe.

Alan: In order for 10GigE link to come to Haystack, would have to bypass Cisco 1500 router at LL. If LL were willing to toss Cisco 1500 and use Ray Expresses, might be possible to save money.

GSFC

Pat: Looking to buy the right XFP and SFPs to best function with the Movaz gear. Interested in extension to McLean for connecting with NLR. Possibility of putting another Ray Express at McLean.

Paul/Bill: Expect to get sample of 80-km DWDM XFP's in late January 05. 10GigE now in place

from McLean to StarLite in Chicago, and then to UCSD.

MAX

Jerry: Agreements in place for connection of 10 Gige link of MAX to NLR at McLean. DRAGON will have a rack at McLean (along with NASA, HOPI). Should be operational in about late Feb 2005.

Jerry: Would like to get dedicated links to Onsala and Kashima in 2005. If could get in place, might be good ammo to go to NSF for supplemental funds.

Jerry: 10Gig link from Japan comes in to Portland, then goes to Seattle, which connects to Starlite. Might be possible to set up 10Gig link all the way from Japan to Haystack.

DRAGON

Jerry: Need to discuss how to integrate DRAGON capabilities into e-VLBI applications.

JIVE

Alan: Tentative plan for cooperative program with JIVE for 2-way transfers; Onsala and Westerbork to Haystack; Westford and GGAO to JIVE. Tentatively scheduled for first correlation tests on 10 Jan 05.

Kevin: Will contact with Lars Fisher at Nordunet to make arrangements.

Bill: Optiputer has 10Gig link to Amsterdam.

Jerry: Anything that goes to Netherlands goes through NY first, even though end points are provisioned to Chicago.

Correlators

Alan: Haystack is interested in investigating possibility of distributed correlation; Haystack plans to do internal study in next few months. Will talk with Guy Almes at NSF about possibilities of NSF funding for this purpose.

Motherboard testing

Kevin: Using two systems with high-end motherboards with bonded dual Gige links on each, and with independent PCI buses, can get about 1900 Mbps in back-to-back (memory-to-memory) transfer. Started tests with Mark 5's; have been able to achieve about 1050Mbps transfer rate, but that is pretty low margin over the necessary 1024 Mbps speed.

SC2005

Alan: JIVE has suggested joint e-VLBI demo at SC2005.

Jerry: Not sure how DRAGON will present its work at SC2005. e-VLBI does not require many resources on show floor.

Performance/testing

Alan: We are planning to expand performance/monitoring into Europe. Looking into possibility to incorporate MonaLisa into this work.

Pat: Very interested in participating in some of the new-protocol testing (FAST, etc). Have new guy

at GSFC to help with this work. Quite willing to work with Haystack and others.

Next telecon is scheduled for Wednesday, 5 Jan 2005 at 2 pm EST.

cc: Steve Bernstein, LL
Jim Calvin, LL
Rick Larkin, LL
Lorraine Prior, LL
Peter Schulz, LL
Leslie Weiner, LL
Herbert Durbeck, GSFC
Bill Fink, GSFC
Lee Foster, GSFC
Pat Gary, GSFC
Andy Germain, GSFC
Chuck Kodak, GSFC
Kevin Kranacs, GSFC
Paul Lang, GSFC
Aruna Muppalla, GSFC
Mary Shugrue, GSFC/ADNET
Bill Wildes, GSFC
Dan Magorian, UMCP
Tom Lehman, ISI-E
Jerry Sobieski, MAX
Guy Almes, Internet2
Charles Yun, Internet2
Richard Crowley, Haystack
Kevin Dudevoir, Haystack
Hans Hinteregger, Haystack
Arthur Niell, Haystack
Joe Salah, Haystack