

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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18 June 2003

TO: Distribution
FROM: Alan R. Whitney
SUBJECT: 16 June 2003 e-VLBI telecon summary

Attendees:

Lee Foster, Pat Gary, Chuck Kodak, Kevin Kranacs, Paul Lang – GSFC

Tom Lehman – ISI-E

Steve Bernstein, Peter Schulz – MIT Lincoln Lab

Guy Almes – Internet2

Kevin Dudevoir, Hans Hinteregger, David Lapsley, Arthur Niell, Mike Titus, Alan Whitney – Haystack Observatory

This telecon is one of an ongoing series of telecons to prepare for 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

Steve reported Bossnet funding is assured with a probability ~0.9 for a 4-year period. This is good news! Of course, we must still make agreements and arrangements for using e-VLBI on Bossnet. Given the high probability the Bossnet will remain alive, Tom is seeking the necessary additional funding from DARPA to maintain the necessary local-loop funding in the D.C. area.

Peter reported that the OC-48 status is still the same as last report. **Peter and Tom plan to do tests soon.**

GigE has been stable on Bossnet.

Connection of Haystack to 230 Congress St. or 300 Bent St.

Steve reported he is investigating possibilities of connecting Haystack through LL to either 230 Congress St. or 300 Bent St. Pat suggested that if either of these come to pass, there will be multiple paths and we will need to carefully figure out the routing configurations.

GigE switch testing

Steve reported Russ Roberge (now on vacation) is continuing his investigation of the Dell 5224 (~\$2200) switches, finding ‘good’ results on the copper ports and ‘squirrelly’ results on the GBIC’s. **Russ and team will write report when testing is complete.**

Paul has been testing a similar (identical?) SMC 8624T switch (~\$2500) with mixed results; can only link 2 GigE ports together. Some strange things. Under multi-task testing, initial task sometimes seemed to dominate. **Paul will write report as well.**

Hans reported that a manageable 12-port Dell switch is available for \$1200; will also support jumbo frames.

NASA/GSFC

Pat report people at GSFC are continuing to experiment with link aggregation onto wavelengths, so far with good success. Looks promising to bring up 10Gig link from GSFC to ISI-E; agreement of MAX will be needed; lot more work to do, however.

Upgraded Mark 5A system should now be at GGAO. **Will begin testing again soon.**

Germany, Japanese and Hawaii Connections

Kevin D. reported lots of problems in making these connections. He is concentrating in Hawaii; best so far is ~5 Mbps; believe bottleneck is in 3xDS3 microwave link from Kokee to PMRF; apparently some non-congestive source of loss in the path. People at PMRF suspect problem in microwave link, but won't be able to look at it for a couple of weeks. Biggest problem is identifying and contacting admin people who can help. **Kevin will work with Tom to create a detailed path diagram to Hawaii.**

To Hawaii, path is now symmetric through DREN. Tom and Guy suggest that we try to move to Abilene path since DREN path is much more difficult for us to control; **Kevin will work with Tom and Guy on this.**

Regarding Japan, Haystack has set up server for Japan testing, and Japanese have done some testing from their end. Round trip times are ~200-300 msec. Awaiting further results. **Kevin will document.**

Performance Monitoring

Pat reported that Andy Germain has agreed to deploy his performance-monitoring scripts on several key test workstations at various points in the e-VLBI links. Pat will coordinate with Tom and Andy. Findings will be sent back to central machine at GSFC and made available on the web.

VSI-E and EGAE

David reported on progress on VSI-E draft specification. Detailed RTP draft specification is being developed by David and Alan. REU summer student Amanda Morrow is working to implement a prototype network for testing.

David is working to implement and test the Experiment-Guided Adaptive Endpoint (EGAE) architecture. First results are promising.

Next telecon

Next telecon is scheduled for Mon, 7 July 2003 at 2 pm EDT.

xc: 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
Chuck Kodak, GSFC
Kevin Kranacs, GSFC
Paul Lang, GSFC
Aruna Muppalla, GSFC
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
David Lapsley, Haystack
Arthur Niell, Haystack
Joe Salah, Haystack