

MIT Haystack - e-VLBI Status

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Projects Underway

- EGAE deployment
 - (*Experiment Guided Adaptive Endpoint*)
- DRAGON
 - (*Dynamic Resource Allocation for GMPLS Optical Networks*)
 - with the University of Maryland
- Automated e-transfers
 - Data rates typically 100 Mbps
 - *Tsukuba*
 - *Syowa*
 - *Kashima*
 - *In progress: Ny Alesund*
 - *Next: Fortaleza*

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Ongoing

- EGAE (Experiment Guided Adaptive Endpoint)
 - Verifying & merging so that it is used in all e-transfers
 - Integrating Wettzell e-transfer software
 - Testing & Debugging GUI front end
 - Deploy software to BONN Correlator
- Transport Protocol Research
 - Proposed follow on to EGAE – NSF, rejected
 - Evaluating and working on other transport protocols in trials with Ny Alesund – VFER, UDT

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Ongoing (continued)

- VSI-E
 - Testing phase
 - Trial with Japan Jan. 07 JGNII Demo.
- BOSSNET Upgrade
 - Completion scheduled for Jan 07 ????
- International Collaboration
 - University of Manchester
 - Onsala
 - Sunet
 - Uninett
 - Creat-net (Italy – initial discussions, collaborations)

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Next Steps

- E-transfers
 - Intensives from Ny-Alesund (December 2006)
- 1Gbps real time trial – 2007
 - Based on completion of BOSSNET
- GLOWNET Upgrade – 10Gbps ~ 2007
- Continue search for funding opportunities
 - Support of 8Gbps - 2010

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Conclusions

- e-VLBI has huge potential for new science and significantly improved operational efficiency
- International in nature and requires
 - Cooperation from all interested parties
 - Standardization
- US last-mile connectivity continues to be a challenge

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Next Steps

- Continue ramp up of actual e-VLBI experiments
 - Real-time transfers at 2 Gbps and higher (Mark5B++?)
 - Support of both real-time and non-real-time efforts
 - Help transition telescopes to e-VLBI capabilities:
 - Recent requests from: China, South America, etc.
- Pursue work on transport protocols
 - Take advantage of dedicated light path characteristics
- Initiate development of coherent US plan in collaboration with other VLBI stake holders.

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