

## MIT Haystack - e-VLBI Status

Dan Smythe  
Chester Ruszczyk

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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
  - Integrating and working on other transport protocols in trials with VSI-E

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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 (continued)

- VSI-E
  - Testing phase
  - Trial with Japan Jan. 07 JGNII Demo.
- BOSSNET Upgrade to 10 Gbps
  - Completion scheduled for 19 January 2007
- 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 (continued)

- 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
- Developing a coherent US plan in collaboration with other VLBI stake holders.
- Pie Town VLBA e-VLBI Scheduled for Mid-2007

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