

**EMWoG Telephone Conference Call
Tuesday September 12, 2006, 3.00-4.30 pm EDT
Minutes and Action Items**

Present: Phil Wannamaker (Chair), Gary Egbert, , Shane Ingate, Dean Livelybrooks, , Adam Schultz (quorum not achieved).

Apologies: Rob Evans, Kevin Mickus, Steve Park, Martyn Unsworth.

Minutes from June 15 and August 8 were not approved, due to a lack of a quorum, and will be presented to Group for approval at the next telecon.

Backbone Update

Schultz reports that his Independent Research Plan (IPR) has been approved by NSF, and that work on the Backbone can continue. New schedule is:

- Oct 1-9 Soap Creek installation
- Oct 21-31 Socorro installation
- Dec 24-Jan 7 Ohio permitting
- Jan 27-Feb 11 Wisconsin permitting
- Feb 24 - Mar 14 Ohio installation
- Mar 24 - Apr 15 Wisconsin installation
- Apr 16 - Apr 22 Maine permitting
- June 9 - June 24 Maine installation
- July 14 - July 22 Reserved for other visits, alternate sites, etc.

(Note – subsequently on Sept. 14th the Soap Creek Installation was rescheduled for one week later to accommodate NSF scheduling changes.) Schultz reported on discussions on the redesign of the Backbone equipment. Narod does not have the access to machining equipment to implement Schultz' design, and so a compromise design will involve long tools to reach the redesigned leveling screws on the magnetometer at the bottom of the 2 m hole and extending the length of the magnetometer housing to approximately 1 meter. Narod will also use Pelican cases for the data logger (Minerva board) and a similar cylindrical housing for the NIMS electronics as is used for the fluxgate sensor. Narod now has all the information to complete the order. Schultz is not confident that Narod will make the hardware delivery date of Oct 2006.

Oregon Pilot Project

Completed Action Item: A password protected web page has been built at <http://www.iris.iris.edu/ESMT/>.

Livelybrooks and Egbert gave a summary of experiment progress, and the lessons that we are learning.

- Data appear to be very good; poor at periods below 10 sec, and good to 10,000 seconds. This is even apparent after the service run after 10 days. Group discussed whether it was reasonable to pull the systems after 10 days (rather than the 21 days mandated in the contract), but the contractor has already laid out a

schedule, and the logistics of travel would not give us many more sites if the occupation was reduced to 10 days. Group agreed that the high-quality of data was unusual, and contributes it to a high in solar activity, and general dryness. At these periods, inversion to 300 km depth should be good.

- The sample rate of 8 Hz is superfluous, and reduces considerably the amount of data that can be stored on the FLASH card. EMWoG agreed April 11 2006 that 1 Hz should be used for EarthScope mobile NIMS as well as for Backbone.

Outstanding Action (From 4/11/06) Schultz to contact Narod if NIMS could be toggled between 1 and 8 Hz, enabling interchangeability of systems.

- Chain of command is confusing, and has not given the contractor confidence and has lead to delays, but in most cases we have been lucky and the decisions made in the field have been correct. For future experiments, Group agrees that a lead PI should be appointed for a set time during an experiment and should be available 24/7 by cell-phone during that period.
- Group also identified a need to establish field procedures and policies, as well as a useful cache of spares and tools, that will enable the contractor more autonomy.
- GSY have been working extremely hard. Thor Bochenko has been working 7 days/week, leaving the hotel at 7.30 am and returning at 8 pm. Driving has been the largest time sink, especially so when the station to be serviced is 2 hops away.
- Group agreed that telemetry would have alleviated many of these problems; problematic channels could be identified in near-real time rather than waiting for the service trips to be identified.
- GSY are also very concerned about the NIMS programming interface, which is unreliable and poor at best.
- Schultz is concerned that the opening for the FLASH card is exposed allowing ingress of foreign materials, which could be easily remedied by the use of a rubber flap.
- Group agreed that the NIMS is unqualified to use anything other than soon-to-be unobtainable 256 Mb CF FLASH cards is a large risk and introduces a large O&M expense for Backbone operations that should not be necessary.

Action Item Narod to be contacted to get firm assurance that 1 GB cards will work.

- Group agreed that a debriefing with GSY is necessary, say a 1-day fly-in face-to-face. Schultz' travel schedule is extremely tight. In the near future, he can travel only to Oregon (Oct 1-9) and Socorro (Oct 21-21). AGU is an alternative. (Note – subsequently Schultz discussed with Ingate and now the 1-7 Oct period is unavailable.)

Action Item: Ingate to set up a debriefing meeting.

Data

- Group discussed that MT data needs to be more visible at the top of the IRIS web

pages. E.g., in describing the DMC, only seismic data are referenced as being distributed, not all the other geophysical data in the archive.

Action Item: Ingate to contact IRIS DMC and implement changes.

- Egbert also suggested that the group needs to start thinking about data products. This is woefully lacking in the community, and something that needs to be done soon, especially within the context of the EarthScope Project. Because data products are a requirement of EarthScope, the question is then whether data products should be PI-driven or institutionally implemented.

Action Item: Should data products be developed by PIs, or should it be more of a task for MT data processing staff?

Equipment

Group again discussed the fact that the NIMS is difficult to use, and has a very antiquated programming interface and a need for NLA FLASH cards. Furthermore, future NIMS development is unlikely.

Outstanding Action Item: Ingate will request that the data from recent Quantec testing of the Billingsly cores at Battle Mountain, NV, will be made available to EMWoG for analysis.

Narod has requested final specifications for the mobile instrument form factors; either Pelican or ECS cases. Narod's preference is for the ECS case that for a small amount of money, the manufacturer will proof the case and gaskets to 1 m of submersion.

Group discussed the fact that the thick walls of the cheaper Pelican case does not permit Narod to use standard plugs in the case walls, and that additional holes need to be drilled. The extra holes entail greater risk of failure due to water inflow.

Group points out that Booker has replaced his ECS cases with Pelicans.

Action Item: Ingate to ask Booker (in Argentina) if he would continue to use Pelican cases, and to seek Group preference on case design by Fri 15 Sep and forward to Narod.

Future Experiments:

Ingate is preparing the month-by-month baseline for 2006, and had included a schedule and funding for 2 experiments, one of 30 systems and another of 45 systems.

Group agreed that the small spatial extend of the Oregon project (5x6 stations) is too small, and that the Oregon work should be a part of a larger experiment that covers Cascadia from N. Calif to Washington.

USAAC Telecon Sep 15

Wannamaker has been invited to represent EMWoG at the USAAC telecon. Key items to discuss in the short 10 min information précis are Backbone schedule and Oregon Pilot Project progress.

Upcoming meetings

- USAAC telecon, Sep 15
- IAGA 18th Electromagnetic Induction Workshop, Sep 17-23, Catalonia, Spain.
- IRIS CoCom/BoD, 16-18 Oct, San Diego, CA.
- IAGA International Workshop on Electromagnetic Studies related to Earthquakes and Volcanoes. 20-22 Nov, Agra, India.
- Fall AGU, 11-15 Dec, San Francisco, CA.

Next telecon

Group agreed Jul 13 to a regular monthly schedule of meetings, occurring on **the second Tuesday of each month**. Each meeting will take place 2-3pm eastern time. The future schedule is:

- 10 Oct (Mickus advance apologies)
- 14 Nov
- 12 Dec (morning/afternoon face-to-face meeting at AGU?)