## Session 4B Notes: Programmatic Activities

**Notetaker:** Serenity Montaño **Date:** Tuesday, March 29

**Room #:** 104

**Teleconference Line:** DC #37924 (202-633-7924)

**Participants:** Jess Parker, Serenity Montaño, Todd Wilson, Mike Kuhlman, Syndonia Bret-Harte, Anne Maglia, Gene Kelly, Tim Kratz, Toral Patel-Weynand, Jonathan Thompson, Krista Anderson-Teixeira, Matt Sanderson, Lindsay Boring, Ross Hinkle, Scott Taylor, Scott

Johnson, John Briggs, Alan Knapp, Michael Cramer, General James Abrahamson

Open to discussion; the gap between the LTR community and NEON has been growing. It is noted that Domain Committees and Education/Outreach Committees had originally existed, and even a few meeting were had, but lately that communication stream has dried up.

Participant asks to see representation in the room:

Battelle and NEONINC each have one representative in the room. It is noted that we are here to discuss ways of moving forwards, and pathfinding to develop new and simple routes of communication.

Chair notes that the current pathways for site owners to address communication needs involves individual, disaggregate points of contact, often with little or no authoritative power to directly address concerns or answer questions without referring to a higher power.

Participant notes that we want to make a way forwards, rather than a list of complaints.

>Participant notes THREE KEY POINTS:

Communication

>Data sharing policies (some sites want to have a shared data stream, some sites are expected to resist publication)

>Additional burdens associated with the sites (eg. costs associated with site visits)

Clarification regarding site owners - domain manager communication is generally pleasant but not always useful or productive of resolutions.

NEONINC notes that providing guidance from a higher authority would be useful, and proposes training to authorize the domain managers to feel and be empowered to make decisions during communication opportunities. Further calls for site owners to please utilize the presence in this room of NSF while we work forwards.

It is noted that users have different agreements, policies, and approaches to financial costs associated with NEON presence on sites.

Discussion regarding mechanism for additional funds for various costs associated with NEON, such as safety training, site fees, visitation protocols, education and outreach support, administrative support.

Questions about site liabilities...

Discussion begins to develop further the "few key ideas" that SITE OWNERS might benefit from transparency of approaches and standardization across sites. Some sites (Konza Prairie and Harvard Forest) have charges to NEON built into their agreements, whereas other sites are entirely, independently responsible for these types of costs. Discussion contemplates the notion that eventually sites may choose to leave the network, because of the many small scope associated programs.

Chair: we believe there ought to be a process for identifying and dealing with these associated programs and their costs in time and funding.

Chair introduces next topic: data sharing, and the associated costs of value-added data, human-intelligence tasks...

Battelle puts forth the notion of hosting a link to the associated data while pointing out their inability to provide the data directly, because it is of "unknown provenance".

Participant points out that this is not an ideal perspective, to take this hands-off approach, especially since the first few years of NEON data will be without their greater context, if it is not associated back to the LTR site data.

The next workshop will be explicitly about developing the new cyber infrastructure, and that we DO want these supportive data cross-streams.

Once NEON is operational there will be opportunity to expand the scope; for now, it is important to complete the network and get the towers outfitted with sensors and activated.

Because NSF has funded so much of the research at many sites, the data ARE vetted, published, transparent, and should be considered by NEON as having known provenance and data quality standards, furthering the argument that it behoves the partnership to resolve the data integration.

Participant points out that NEON is not the end user, and that in order to determine what data should be harvested and hosted, there must be a call to the data user community to determine what should be collected, integrated, hosted... Compelling Question design is suggested with

the goal to integrate LTER-LTAR data into NEON product hosting, because site data is valuable already, without any additional data collection.

NSF has an integrated team that is able to interact and move forward on action themes. Chair asks: "what about the issue of harmonizing the LTR site data..." with the NEON collections.

Discussion finds this a good idea, and suggestions for cross-calibration between systems, sensors, and historic site towers with the NEON infrastructure.

Discussion reveals that again there is disparity between site models and their relationships with their "tower guy". It is also noted that NEON techs historically follow not-useful protocols that have been rolled out at a higher level and which make it difficult to gather meaningful data from site-specific features (eg. of ephemeral, underground streams) or attempt to collect research data using protocols that site owners know will not work. Discussion turns into agreement between participants and NEONINC that standards can become too standardized and thereby lose its usefulness. It is identified that the lack of discussion, during the application of standards to protocol development, could be a key impediment. (eg. put forth for "why dig the soil pit there?" ..."it came from high-up...")

Chair points out that "data have flavor and personality", and that we need to identify the harmony between standards and nuance, between compatibility and comparability. If a protocol must be followed to the letter, and there is an additional, effective protocol, collect the data a second time, and calibrate the results.

Further discussion about parallel measurements and a mechanism to support this, but to put this on the tower technicians. It becomes apparent that site owner experts, as well, feel that NEON data, although standardized to NEON satisfaction, is often collected in non-useful ways that then make the data suspect; and when researchers have attempted to advise, suggest, or inquire, the NEON response has been persistent. This is noted as counterproductive, and discussion continues to seek flexibility and discussion in data collection (and hosting) protocols and collaboration, so that all data is verifiable and useful.

NEON needs to join the site communities. NEON has NEON sites, but those are ALREADY SITES. It would be great to design a system where NEON functions within the CONTEXT of the research community, and to work together in a collaborative and cooperative way.

## 1. DATA

- a. STANDARDS and FLEXIBLE STANDARDS for data collection
- b. CALIBRATION-VERIFICATION between sites and NEON data and protocols
- c. INTEGRATION, verification, hosting, and publication

## 2. COMMUNICATION

- a. NEON COMMUNICATION
  - i. DOMAIN MANAGER should be authorized and empowered
  - ii. INTERNAL (offline) NEON communication can be expedited
- b. TIMELY REPRESENTATION of community concerns
  - i. NEON representative (DOMAIN MGR.?) on local board
  - ii. REGULARLY-SCHEDULED (monthly, field-season strategy meetings)
  - iii. SPECIAL CIRCUMSTANCES (wasps!)
  - iv. PERIODIC community-building opportunities (quarterly dinner)

## 3. ADDITIONAL BURDENS

- a. ADMINISTRATIVE issues, costs, staff, time
- b. EDUCATION/OUTREACH
  - i. PERIODIC SCIENTIFIC PUBLICATIONS posters, fact-sheets, signage
  - ii. EDUCATION PUBLICATIONS curriculum development AND presentation
  - iii. PERIODIC PUBLIC EVENTS tours, site visits, general population
  - iv. ANNUAL PUBLIC EVENTS open house for collaborations
  - v. SPECIAL EVENTS tours for VIPs, press events
- c. SAFETY training
  - i. NEON training per site safety protocols
  - ii. SITE training per NEON safety protocols
  - iii. VISITOR training per site and NEON safety protocols