

**Notes from TIC WG E Conference Call #3
Monday, January 10, 2005 (1:00–2:05 pm EST)**

Participants

Walter Arabasz, Chair/Recorder
Glenn Biasi
Ray Buland
Art Lerner-Lam
Phil Maechling
David Oppenheimer
Rick Schult

Absent: Tom Murray, Tony Shakal, Mitch Withers

Agenda

1. Introductory remarks (Walt Arabasz)
2. Status of IPS strawman (David Oppenheimer)
3. Group comments on developments following our last meeting in San Francisco
4. Group discussion about how to proceed (options include: (1) recognizing constraints and obstacles, come to closure in the next month or so with some recommendations (our "best shot"), as tasked in our charge, and pass them on to the TIC as input to a process of community comment and deliberation; (2) commit to more effort to better approach community consensus by aiming for our original mid-2005 deadline; (3) other?)
5. Review and revise as appropriate the action list compiled at the end of our Nov 17-18 meeting (see http://www.seis.utah.edu/anss/wge/notes_SFmtg.pdf).
6. Adjourn

Conference-Call Discussion

Walter Arabasz began with brief introductory comments, chiefly relating to the agenda. Noting that some members weren't able to join the teleconference, he signaled that final decisions would not be made without informing and involving those members.

Status of IPS Strawman

David Oppenheimer. —David reported on mixed feedback he had received regarding recommendations of our TIC Working Group E ("wge") for an Integrated Processing Service (IPS). He first described feedback from the CISN Program Management Committee (Lind Gee, Doug Given, Egill Hauksson, David Oppenheimer, Tony Shakal), who reacted with concerns that an IPS would jeopardize network funding and with mistrust of outsourcing data processing. Egill Hauksson apparently wrote a CISN position paper to describe these concerns, but David asked him not to distribute it—saying it was premature, given that he had simply given the Program Management Committee the preliminary information as a

courtesy and because “wge” still hadn’t written a final report. Among other reactions David received, there was positive feedback from the ANSS National Steering Committee, including enthusiastic support from Dave Simpson, Rich Eisner, and Craig Weaver. David got an initially negative reaction from Steve Malone, but after he gave Steve more explanation, Steve agreed that an IPS “made a lot of sense.”

David then rhetorically asked, Who should we listen to? He suggested ways “to soften discussion” and remove politics from the debate. As he wrote in an e-mail to “wge” on December 21, 2004:

“Because the concept of an IPS is a flash point for some people, perhaps making making this concept the focal point of our report is counter-productive. A productive approach might be to recommend for improvements in ANSS computational capabilities through the integration of CISN, Hydra, Antelope, and other seismological software packages into the next generation of monitoring software. I suggest we discuss whether we should put the emphasis on having the ANSS fund an effort to actively and professionally manage a software development project, implement a formal oversight structure, and ensure ample input from the ANSS community. The result would address the original software goals as expressed in OFR 02-92 for standardized software, which should be non-controversial. It would re-focus efforts to create official ANSS software for use in all regional/global monitoring centers that enables all operators to meet the proposed WG-A standards.”

In David’s view, recommending that ANSS invest resources into developing software for common processing should facilitate an IPS—but not necessarily require it.

David next reported an “FYI” item from a meeting last week of the USGS Integrated Products Team, a group formed in response to OMB requirements. The group reviews and proactively promotes the development of ANSS products such as earthquake notification schemes, CISN Display, ShakeMap, ShakeCast, etc. It was aware of our “wge” recommendation for software development—but also aware that it couldn’t act on it because the recommendation had not yet been endorsed by either the TIC or NIC. David thinks that the USGS might be willing to invest funds at least in modest software development, especially as the NEIC rehab comes to completion.

Walter Arabasz used David’s FYI about the USGS Integrated Products Team as an example of time pressure for “wge” to produce recommendations sooner than later. If we want to take till mid-2005 to complete our work, we may have to reach some understanding with the USGS—perhaps producing some early recommendations with an understanding that we need more time to complete our full work.

Comments on Developments Since San Francisco Meeting

Under Agenda Item #2, other comments were solicited regarding developments since our meeting in San Francisco on November 17–18.

Glenn Biasi. —Glenn remarked that there were some key issues that we should address. One related to the issue of efficiency and the assumption that centralized processing was cheaper. He believes that “rumors” of cost savings are anecdotal and haven’t been critically examined. A second issue related to earthquake reporting. Seismic networks are perfectly capable, in his view, of handling 90% of the earthquakes recorded. Shipping all data channels to a centralized location for backup of the largest events may not be sensible.

There is no national mission for locating earthquakes at the smallest end. If software is competent, all networks are OK up to about magnitude 5. In our San Francisco meeting, we didn't reach any consensus about review requirements as a function of size. The extent of change to the status quo that's being considered isn't consistent with the strength of current requirements for seismic monitoring.

David Oppenheimer told Glenn he made a good point about the requirement for funneling all waveforms to a central location, given the implications for high-broadband communication links. Would he object to centralizing earthquake pick information instead of waveforms? Would that address his concern for cost efficiency?

Glenn replied that it was a constricted view that the processing of all waveforms or picks had to be done in one place. If each network archived data to a common location, this would be an example of a distributed system, and anyone could query the archive to get data. Glenn expressed concern that costs also include people, and centralized processing would involve moving jobs—which would be an aggravating issue for networks already performing capably.

David elaborated on his own thoughts. We could advocate development of an improved system, which would require agreement on spec's. Standard software could run at regional seismic networks. If everybody had software to come up with the same answer in a distributed sense, that could in effect function as an IPS.

Glenn remarked that California is shaping the quest for "one answer" for earthquake reporting, and he said he's not sure that's a good idea. He alluded to private investment in broadband stations in Nevada, suggesting that information relevant to "one answer" may not necessarily be available to ANSS.

Walter commented on the recent Sumatran earthquake, musing that worldwide attention to the perceived failure to communicate a tsunami warning—and its consequences—was a cautionary tale for the kind of criticism ANSS would face if it failed to deliver rapid reliable information for some future large U.S. earthquake. "One answer" allows for refinement of information as more data become available. Glenn questioned again whether "one answer" was necessary for all events.

Phil Maechling.—Phil asked for more information about the aftermath of our last meeting in San Francisco, notably regarding the report to the ANSS National Steering Committee. What was the impact of our recommendations? Walter responded that the report to the NSC was basically an FYI and reminded the group that the PowerPoint presentation was on the "wge" Web site (<http://www.seis.utah.edu/anss/wge/intsum.shtml>) (see also report on "wge" to the NSC posted on our "wge" Internal Web Page).

Phil remarked that it was very difficult to get a large community to reach consensus. Whatever plans are made won't meet the needs of some groups. It's unrealistic to have no dissension. Our charge is, What is a good system that meets ANSS needs?

Phil went on to report on feedback from discussions with colleagues in California regarding our "wge" IPS concept. Two key objections relate to funding and the identification of which network responder is primary. There is a belief that in order to fund software development, the USGS would reduce support for regional networks.

David Oppenheimer responded that the USGS does not want to cause stress on network operations but rather is looking for a robust national system. According to David, the USGS wouldn't cut funding that would adversely affect the ability to report earthquakes. Regional networks can count on support from the USGS—but not necessarily funding for inefficient operations. Any reduction in network funding wouldn't be because of what “wge” recommends. Nevertheless, Phil restated his belief that ANSS funding for IPS software development would impact funding to networks.

Ray Buland.—Ray remarked that there's always a tension between development and operations when there's inadequate funding for both. In his view, it's hard to believe that money for software development wouldn't impact operational funding. In order to improve integration under ANSS, new software is required—whether for a centralized or a decentralized model. There's no viable model that doesn't require new development. The ANSS design goals outlined in the original TIC plan have to be met. The same arguments for cost evaluation of a centralized model have to be applied to any viable distributed model.

Discussion About Short-Term Closure vs. Aiming for a Mid-2005 Deadline

Walter polled the remaining participants (Phil Maechling had apparently dropped out of the teleconference at this point) to get a sense of the group whether to aim for short-term closure of our working group charges or to extend efforts through mid-2005.

Glenn Biasi opted for “doing it right” over a longer period—willing to invest more effort as needed and noting that we're just starting to outline a strategy.

Ray Buland's preference was for short-term closure—believing that we're not likely to be any more successful by extending our work over a longer time.

Art Lerner-Lam voted for wrapping our work up more quickly if we can deal with the major elements. Art voiced a concern that delay may mean missing out on the funding cycle for one whole year, an undesirable outcome.

David Oppenheimer preferred short-term closure. David believes it's important to reach recommendations by the end of February. The TIC needs to review our recommendations together with those of other working groups in order to go forward. If we want to motivate USGS funding this year for software development, we've got to push forward.

Rick Schult is comfortable in supporting the choice of either early closure or longer-term effort.

Walter voiced a preference for short-term closure.

Given the apparent tilt towards short-term closure, Glenn was asked again how he felt about that option. He replied that it was OK with him—particularly recognizing the implication for the next funding cycle—and that he felt it was do-able. Again, he wants us to “do it right.”

Walter promised to contact absent “wge” members before making a final decision on an action plan. This will be done as part of a broadcast to all group members in which Walter will outline a hypothetical plan for reaching short-term closure. All members can then vote on their preference for the duration of our group efforts and make suggestions for revising Walter's proposal as appropriate.

Review/Revise Action List From Nov. 17–18 Meeting in San Francisco

After reading through the action items listed in the report of our San Francisco working meeting (http://www.seis.utah.edu/anss/wge/notes_SFmtg.pdf), the following items are still relevant:

- Mitch Withers — Amplify *Introduction* to draft report on Evolutionary Architecture regarding key system goals relevant to system design [may depend on group decision of how to shape our final report]
- Walter Arabasz — In order to balance the interviews for the Road Map for Partnership, interview USGS managers/network seismologists: Bill Leith, Harley Benz, David Oppenheimer, and Ray Buland
- Walter Arabasz (with help from Rick Schult and Glenn Biasi) — Finalize a stand-alone document on the Baldrige National Quality Program explaining BNQP, why it should be adopted by ANSS for long-term guidance, and giving specific examples of implementing BNQP
- Ray Buland — Distribute copies of the Booze-Allen report (an earlier consulting review of OFR 02-92) to members of “wge”

ACTION [from today's conference call]:

- Walter Arabasz — Send e-mail broadcast to all “wge” members asking for vote on whether we should aim for short-term closure (by end of February) or extend our efforts through mid-2005. Broadcast will include Walter's hypothetical plan for short-term closure.