

# Computational Infrastructure for Geodynamics (CIG)

## Minutes of the Executive Committee Meeting

May 2, 2005, Berkeley, CA

In Attendance: M. Richards (Chair), M. Spiegelman (Vice-Chair), C. Gable, and B. Appelbe. *Ex-officio*: M. Gurnis (Director). *Guest*: M. Knepley (CIG Software Engineer).

Joining us via skype.com: *Ex-officio*: M. Aivazis (Chief Software Architect)

Start: 9:30 am

1. Staff: Leif Strand and Luis Armendariz have now joined the CIG software development team or will do so shortly, respectively. A Senior Software Engineer has been identified and would be interviewed tomorrow in Pasadena. He was identified through an advertisement in HPCWire. There is a possibility that CIG could afford a fourth software engineer; it was suggested that we might consider doing this as a six-month contract employee. If tomorrow's interview goes well, then the EC will have a conference call next week to discuss hiring. Instead of a system administration as a staff member, Caltech ITS will be contracted for systems and web support; this is currently under negotiation.

2. The Present CIG budget was discussed. CIG was presently somewhat behind budget based on projections and this was entirely a function of the recruitment of the software development team. The budget for the CIG workshops were discussed and are essentially on budget.

3. The forthcoming budget request and the timetable for formulating it was considered. We need a draft Strategic Plan by July 7, 2005, the date when Gurnis and Spiegelman would be visiting NSF Headquarters on behalf of CIG. We need the sub-communities to weight in on the next strategic plan. The EC thought that we must insist on a half-day strategic planning session at the Mantle Convection workshop, preferably in the middle of workshop.

4. The Guidelines for CIG Software Development prepared by Bill Appelbe was considered. Generally the rest of the EC viewed the plan for agile software development positively. The plan consists of a development procedure with achievable sets of tasks, built in verification (benchmarks), documentation, and frequent release of the software. The Guidelines would be cleaned up and posted on the CIG web site. In light of these software development guidelines, we need to get one or two codes up to CIG software design standards as soon as possible. CitcomS could be ready in by Sept. 05, with Leif and Luis working with Gurnis; this could be rolled out either at Fall AGU meeting or the joint SSC/EC in the fall. PyLith, a merging of Tecton and eqsim, could be rolled out by Jan. 06; Matt Knepley is working closely with Brad Aagaard and Charles Williams. We had a freewheeling discussion on the version control that should be used by CIG. Matt

suggested that we shouldn't use CVS, but instead recommended either "Subversion" – SVN, open source system, or "Bitkeeper", which unfortunately had become closed source, but free to academic users.

5. The status of SSC formation was considered. The Nominating Committee for the SSC consists of Marc Spiegelman, Carl Gable, Barry Smith (Argonne) and Michael Wyssession. The committee would attempt to form slate by May 9, solicit a vote on May 16, and then close the vote 10 days later

6. For the CIG workshops being supported this summer, we need a stump speech "What is CIG" that would be presented at each workshop. Also, we need to remind workshop organizers that they need to submit a report to CIG. The mantle convection workshop would have tutorials.

7. We reviewed CIG interactions with other groups, including IRIS and the EarthScope world. Should we work with other groups for standard data format(s) that could be used for a) visualization, b) archiving, c) bench marking? This can be a subject for discussion at each workshop, but ultimately, we need a cost/benefit analysis inside of a project to do this. Should we develop a mark up language? The committee also thought that this was a "project" and needed to be proposed as such. A Web portal for computational seismology was discussed.

8. We reviewed the requests that have been made to CIG for "Letters of Support". We need to be more judicious in the future about giving "letters of support". Apparently, this now violates NSF policy in some cases. Should only write such letters when there is a substantial collaboration and/or a commitment of CIG resources involved. CI-Team collaboration: We will support this.

9. How should CIG work with the TeraGrid? For big applications using more than one super computing center at a time with substantial band width. CIG already has a starter grant (30,000 hours) that will likely get burned up at the Mantle Convection Workshop and this was viewed as a good thing for our user community and we could use the CIG allocation to generate more proposals from the community to TeraGrid. CIG could start preparing a major proposal to TeraGrid this Fall that could include "grand challenge" level problems defined during the upcoming workshops. This should be picked up by the SSC.

10. Status for Office Space for CIG: Everything looks OK and CIG could be ready to move in by about Sept. 1, 2005.

11. We considered the process of Nominating the Next EC Member that would replace Carl Gable who's term is due to end in November. Nominating committee will be Bill Applebe and Louise Kellogg (if she agrees). Marc Spiegelman will talk to Louise regarding the nominating committee. The nominations should open for 90 days on May 23<sup>rd</sup>. Bill Applebe will be responsible for this.

12. We will need to set a date for next EC Meeting. The EC viewed that this should be done jointly with SSC. We could meet in Pasadena when Robin Reichlin would visit for a CIG site visit. We should probably schedule EC meeting in October. Day 1: SSC, EC meet together. Day 2: SSC, EC meet separately.

5:00 PM, meeting adjourns.