CIG Software Releases

- Gale 1.2.1 Gale is a 2D/3D code that solves problems related to orogenesis, rifting, and subduction with coupling to surface erosion models. This latest release includes thermal problems (including a cookbook example) and normal stress boundaries which simulate the effect of a supporting material. Several bugs are also fixed. Gale is a joint effort between CIG, Victorian Partnership for Advanced Computing (VPAC), and Monash University. See Gale for binaries, source code, and manual. (Gale is also available on the TACC TeraGrid site; see Community Software Area on the TeraGrid for instructions.)
- **PyLith 1.0.1** PyLith is a finite element code for the solution of visco-elastic/plastic deformation that was designed for lithospheric modeling problems. This release allows the solution of both quasi-static and dynamic problems in one, two, or three dimensions, and runs in either serial or parallel mode. Designed to allow relatively easy scripting using the Python programming language, its material properties and parameters for boundary and fault conditions are specified using a spatial database, which permits easy prescription of complex spatial variations of properties and parameters. See PyLith for source code, binaries and manual.
- Cigma beta 0.9 The CIG Model Analyzer (Cigma) is a suite of tools that facilitates the comparison of numerical models, and performs error analysis, benchmarking, and code verification. See Cigma for source code and manual.

Software Bug Fixes

• CitcomS 2.2.2 - CitcomS is a finite element code designed to solve thermal convection problems relevant to Earth's mantle. This release contains an important fix on geoid calculation and some minor enhancements on the speed of generating random tracers and on postprocessing scripts. See CitcomS for source code and manual. You can also run CitcomS on the TeraGrid.

CIG Awarded Mid-Size TeraGrid Allocation

• CIG to support more community allocations on TeraGrid - On June 21, CIG's proposal to TeraGrid's Medium Resource Allocations Committee (MRAC) was accepted, which now expands CIG's ability to offer the geodynamics community allocations of time on TeraGrid machines. CIG plans to continue offering user training at workshops, and will now also support benchmarking and the nurturing of more new users who wish to try out CIG codes before applying for their own allocations. The new award period begins July 1. Users already set up to access CIG's allocation will continue to use their current logins and passwords. To apply for some of CIG's TeraGrid time, send in the application at Community Software Area on TeraGrid.

CIG Strategic Plan Submitted

• The Science Steering Committee (SSC) completed the strategic plan covering Sept. 1, 2007 to Aug. 31, 2012, and this final version was submitted to the National Science Foundation on July 12. Download the plan.

Past and Future Meetings

- CFEM 2007 Wrap-Up Visit the CFEM 2007 Workshop page and fill out our post-workshop survey, review/download PPT and PDF lectures and posters, and view photos taken during the June workshop. Thanks to everyone who helped organize and all those who attended -- you made this year's CFEM workshop a success!
- Joint CIG/SPICE/IRIS Computational Seismology Workshop A joint workshop between SPICE (Seismic wave Propagation and Imaging in Complex media: a European network), IRIS (Incorporated Research Institutions for Seismology), and the CIG Seismology Working Group is planned for October 9-11th, 2007, in Jackson, NH, at the Eagle Mountain House. It will be a joint meeting between European and American Seismologists to discuss current "hot topics": algorithm development, imaging developments, and the future goals of a united American-European scientific community. Funding will hopefully be available to support up to 100 participants who will examine the current and future possibilities for computational seismology. See CIG/SPICE/IRIS Computational Seismology for announcement and list of speakers.
- Adaptive Mesh Refinement (AMR) Tutorial Workshop In order to jump-start development on a new generation of AMR-enabled geodynamics codes, CIG is hosting a tutorial workshop on Oct 24-27 in Boulder, CO, devoted to the technical aspects of the AMR method. A discussion of the basics of AMR methods and tutorials using the deal.II library will be conducted by Dr. Wolfgang Bangerth (lead author of the deal.II library), followed by hands-on coding sessions, building codes that can solve simple models of interest to the geodynamics community, which can then serve as starting points for later extension to more complete models. We will have presentations on other AMR libraries and tool kits as well as discussion on the AMR and geodynamics software. Details will be posted as they become available.

Executive Committee (EC) Update

Nominations for New EC Seat Solicited - In December 2006 at the CIG Business Meeting, representatives of the member institutions voted to expand the membership of the Executive Committee from four to five. A detailed description of the duties of the EC can be found in the recently updated CIG By-laws (PDF). E-mail your nominations, suggestions, and other recommendations to the Nominating Committee, which consists of Brad Hager (chair; Massachusetts Institute of Technology), Laurent Montesi (Woods Hole Oceanographic Institution), and Magali Billen (University of California, Davis).

Committees, Staff, Etc.

CIG Administration, contracts, travel, etc.: Ariel Shoresh, (626) 395-1699,
Equation solvers (PETSc) and PyLith development: Matt Knepley, 😰
Gale and Magma development: Walter Landry, (626) 395-4621, 😰

Benchmarking, Cigma, and visualization: Luis Armendariz, (626) 395-1695, 😰

Build procedure and computational seismology: Leif Strand, (626) 395-1697, 🔳

- Citcom and Mantle convection benchmarks: Eh Tan, (626) 395-1693,
- Website and user manuals: Sue Kientz, (626) 395-1694,
- Geodynamo, SVN software repository, and systems administration: Wei Mi, (626) 395-1692, 🔳
- Software architecture and Pyre framework: Michael Aivazis, (626) 395-1696, 😰
- Administration: Mike Gurnis, (626) 395-1698,
- Science Steering Committee: contact Chairman Peter Olson (Johns Hopkins),
- Executive Committee: contact Chairman Mark Richards (Berkeley),