

2003 SCEC Annual Report

Community Fault Model (CFM-A) Workshop

Principal Investigator:

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Proposal Categories:	Workshop
Primary Focus Area:	Structural Representation
Primary Discipline Group:	Geology
Task:	CFM-A

TECHNICAL REPORT

Summary

On March 27-28th, 2003, a group of SCEC scientists held a workshop to evaluate the fault representations and attributes contained in the beta-version of the SCEC Community Fault Model (CFM). The workshop was held at the Scripps Institute of Oceanography (SIO) Visualization Center (<http://www.siovizcenter.ucsd.edu/library.shtml>), with the assistance of Debbie Kilb and Graham Kent. The Center's facilities were used to display the CFM and its supporting data using Gocad.

The workshop attendees included the CFM Working Group, which is comprised of geoscientists helping to build the model as well as representatives from the model's planned users (e.g., RELM, Fault Systems Focus Area), from related database efforts (e.g., CGS, SCFAD), and SCEC's IT program. Workshop attendees examined each of the geometric fault representations, including the alternative fault descriptions, using Gocad and the advanced visualization capabilities of the Scripps Center. Based on this evaluation process, the Working Group made recommendations to expand the CFM inventory to include 53 new faults and alternative fault representations. In addition, the Working Group provided quality rankings and estimates of uncertainty for each of the fault representations. These rankings now reside in the CFM database, and can be used as search criteria to distinguish among alternative representations for a given fault.

Workshop Attendees

James Dolan (USC) – discussion leader
Ned Field (USGS)
Gary Fuis (USGS)
Eldon Gath (EarthConsultants)
Lisa Grant (UC Irvine) – discussion leader
Egill Hauksson (Caltech)
Mark Legg (Legg Geophysical) – discussion leader
Harold Magistrale (SDSU)
Craig Nicholson (UCSB) – discussion leader
Nathan Niemi (UCSB)
Mike Oskin (UCSB)
Sue Perry (USC)
George Planansky (Harvard)
Andreas Plesch (Harvard) – discussion leader
Tom Rockwell (SDSU) – discussion leader
John Shaw (Harvard)
Peter Shearer (Scripps)
Chris Sorlien (UCSB)
Jerry Trieman (CGS)
Robert Yates (Oregon State) – discussion leader

Appendix: SCEC Community Fault Model (CFM) Workshop Schedule

Dates: March 27 – 28, 2003

Location: Scripps Visualization Center
Institute for Geophysics and Planetary Physics
4301 IGPP, Revelle Lab, Bldg. 4000
8785 Biological Grade, La Jolla CA 92037
(<http://www.sio.ucsd.edu>)

This Workshop will serve to evaluate the current version of the Community Fault Model (CFM) and its web interface and database.

The main objectives of the Workshop are to:

- 1) Assess the quality of fault representations
- 2) Assign uncertainties to geometric fault attributes
- 3) Rank alternative fault representations
- 4) Compose CFM version 1.0 and alternative models (for use in RELM)
- 5) Establish priorities for further work on the model and web interface

Agenda

Thursday (3/27)

9:00 am: Status of the CFM Project & Workshop objectives (J. Shaw & A. Plesch)

9:30 am: Mapserver web interface and database (A. Plesch & G. Planansky)

10:15 am: break

10:30 am: Peninsular Ranges/southern San Andreas fault representations

11:30 am: central San Andreas/Garlock fault representations

12:00 noon: Lunch (provided)

1:00 pm: LA basin fault representations

2:30 pm: Mohave fault representations

3:30 pm: break

3:45 pm: central Transverse Ranges fault representations

5:00 pm: adjourn

Friday (3/28)

8:15 am: western Transverse Ranges & Santa Barbara Channel fault representations

10:15 am: break

10:30 am: Inner Borderlands fault representations

12:00 noon: Lunch (provided)

1:30 pm: Alternative fault models for RELM (N. Field) - discussion

3:00 pm: break

3:15 pm: CFM and related databases – discussion

4:30 pm: adjourn