

COSMOS

Consortium of Organizations for Strong-Motion Observation Systems

BOARD MEETING

Minutes

4 February 2004

The agenda for the meeting is attached.

Persons present: Jerry Wright, Carl Stepp, Jim Davis, Bill Iwan, Farzad Naeim, Mindy Squibb, Woody Savage, Maury Power, John Anderson, Claire Johnson (left early)

1. President Davis called the meeting to order at 8:01 PM.

2. President's Report an introduction to the February 4 Board Discussion:

President Jim Davis requested to change the agenda and put his report first in order to provide a context for subsequent Board discussion. Davis noted that COSMOS is very successful organization in many ways, but doesn't clearly have a sustainable future without additional successful efforts to have a permanent base level of funding and to expand its influence through increases in visibility and participating membership.

Sustainability is necessary for COSMOS to accomplish its mission. Briefly stated, the COSMOS mission is to facilitate expanded collection of strong motion data, to improve strong motion data processing and management and to expand the understanding and application of strong motion data to engineering design .

The November Board meeting considered how COSMOS's mission can be achieved. Davis reviewed the important COSMOS "business activities" that were identified at that meeting. They include undertaking strong motion issue advocacy, providing strong motion forums to identify improvements in collection, processing and use and providing strong motion services such as the Virtual Data Center (VDC). To be effective, most of the strong motion community needs to join COSMOS and participate in carrying out its business activities. In November the Board developed an ad-hoc committee to develop proposals for expanding COSMOS business activities in such ways that greater sustainability can result. These were to be considered in February Board meeting as background for planning for a major effort to increase sustainability. Farzad Naeim, Norm Abrahamson, Eduardo Miranda, Carl Stepp and Jim Davis were appointed to the group.

1. Approval of Minutes from the 14 November 2003 Meeting

Moved (Iwan), seconded (Naeim), and unanimously approved that the minutes of the Nov 14 Board of Directors meeting be approved.¹

2. Remarks of Vice President

Woody Savage stated would make no remarks in order to provide maximum time for the Board discussion of issues.

3. Remarks of Secretary John Anderson

John Anderson mentioned the upcoming meeting in Ismit, Turkey. The meeting is supported by NATO Science Program under project SFP 977484, and is titled "*Workshop on Future Directions in Instrumentation for Strong Motion and Engineering Seismology*". It is scheduled for May 17-21, 2004. The Seismological Society of America in 2005 will meet near Reno. John Anderson is the general chairman. He invited COSMOS participation.

4. Remarks of Treasurer Maury Power

- Cash flow projection for 2004

. The Treasurers Report was in the package distributed to the Board during the week prior to the meeting. Assets are currently \$116,488. The profit and loss statement has not changed much since the November meeting. Power presented a forecast of the cash flow for 2004. Annual income and expenditures are about in balance: income may be about \$5000 more than expenditures according to this sheet, but the contribution from the Puerto Rico network is not included yet, so this year's income is forecast to be about \$7000 more than recurring expenditures. COSMOS will spend about 19,700 for the record-processing project. The geotechnical data project may result in a net positive cash flow of about \$31,000. Considering recurring and project income and expenditures, Power forecasts a net income of about \$19,000 including the Puerto Rico project. Power also considered when the various income and expenditures will occur. Through May his calculations predict that our expenses will be \$52468 more than income, but then the reimbursements will catch up. Since we have about \$116,000 in the bank, we can manage.

Stepp added that NSF workshop funds can be requested in advance. USGS funds also might be transferred in advance as soon as the contract is signed. So he thinks we might have little or no negative transient cash flow.

Discussion:

Davis thanked Power for his clear presentation and careful work.

Stepp noted that COSMOS gets overhead from NSF. Iwan asked what the rate is currently. Stepp said he estimated it at 13% based on experience – he estimated a low rate to be prudent. Stepp expects NSF will audit eventually, at which time he considers it more likely to be increased than decreased. We have an accountant who would be able to present our case. Iwan mentioned that CUREE went through this phase.

Iwan moved, Savage seconded that the Board accept the treasurer report. The motion was unanimously approved.

5. Report of Executive Director

- Status of workshops and grants

Carl Stepp:

A. Archiving and dissemination of geotechnical data This project is in phase 2 of the NSF funded project undertaken with PEER. A workshop in October 2001 defined what is needed. Since then, the project has been implementing the workshop recommendations. Currently they are about 90% complete in having a proposed pilot system operational. A workshop is scheduled for June 8-10. There is interest in workshop from the Federal Highway Administration (FHA); Stepp expects FHA to both participate and co-fund the workshop (by supporting personnel to attend, so those costs would be off the COSMOS operating budget). Stepp submitted a 23K amendment (asked from PEER lifelines) to make the database more useable than current funding will permit. Stepp expects to have the project completed by end of June and he plans to prepare the workshop proceedings afterwards. He is optimistic that this will support a broad range of geotechnical needs.

B. Record processing guidelines. This project has been delayed quite a bit. Originally the workshop was scheduled for a year ago. However, he asked for NSF funding for international participation. That is now in place. Stepp has identified a list of 11 international participants. Unfortunately his scheduled time for the workshop is close to the NATO workshop in Turkey, so he is seeing if they can meet May 26-27 instead of May 24-25 as originally planned. USGS provides 20K including 15K for subcontract to evaluate effects on nonlinear analysis and 5K for general processing standards.

A year ago, Stepp submitted an NSF proposal to support two workshops on geotechnical strong motion site instrumentation. The first is to review the status and assess needs for long-term instrumentation. The second is to develop long term strategic plan for NSF to use to fund geotechnical instrumentation sites. He has learned that it will be approved with a 20% budget reduction. Carl reduced the number of participants and other costs across board. The expected funding level is \$173K for the two workshops. The funding should cover the two events for about 20 participants.

6. Report of Senior Advisory Committee Recommendations Based on ad hoc Committee Discussion:

Earlier on February 4, the Senior Advisory Committee considered recommendations from the ad hoc committee established by the Board in November to propose means of advancing COSMOS sustainability. The Board was asked to consider actions on the following issues:

- proposed website changes;
- proposed short course proposals for COSMOS to sponsor;
- proposed COSMOS membership increase efforts;
- Ideas for the technical session at the 2004 COSMOS Annual Meeting;

Farzad Naeim outlined the report of the ad hoc committee recommendations of strategies for increasing COSMOS sustainability and the discussion with the SAC:

Naeim stated that the *ad-hoc* committee has been thinking of ways to expose COSMOS to the engineering community and increase participation:

A. Membership

- The ad hoc proposes to ask active members to send letters on their own letterheads, mentioning COSMOS benefits and its very effective advocacy role, and asking them to join. The idea is that people are more likely to join when they have a personal endorsement from a respected colleague. The ad hoc committee feels that we need to identify the benefits currently available from COSMOS membership that will attract a lot of people to join. Among these we should bolster membership by describing the benefits as advocacy. The COSMOS letterhead will attract less attention and response than a letter from a friend. Members need regular invoices on email until they pay their annual dues, while outreach of this type can send an application form instead.
- COSMOS needs consider how it can provide benefits for membership. The ad hoc committee thought is to have COSMOS offer short courses, which can teach basic elements of using strong motion and to provide a membership discount for COSMOS participants.

B. Proposed Short Courses on the Use of Strong Motion Time Histories in Engineering

- The ad hoc committee has developed two tentative courses. One course provides information on strong motion time histories and some of the technical issues associated with their use. The other course addresses the geotechnical applications of strong motion data. The Senior Advisory Council (SAC) earlier in the afternoon of February 4 suggested that the proposed courses are a little too advanced to attract the greatest number of new and practicing engineers that are able to benefit them, so the ad hoc committee plans to explore development a somewhat less advanced initial course. The ad hoc committee plans to work on it.
- The ad hoc committee believes that the combination of the letters and short courses will help attract more individual members to COSMOS.

Over the next few weeks, the ad hoc committee anticipates continuing discussions, refining the ideas, and considering new revised ideas on contents. The SAC thought that the existing proposed courses are valuable, but that larger numbers of the practicing engineering community would wish to participate in a more elementary introductory course and recommend that such a course be introduced first by COSMOS. The newly proposed introductory course would require fewer instructors than the more advanced courses that have been proposed.

Farzad announced that he needs someone else to take over leading the group, due to time pressures in his schedule in part due to assuming new responsibilities in EERI.

Board Discussion following the SAC report on the ad hoc committee recommendations:

Davis stated that the ad hoc committee anticipated a need to spend about \$50-\$60K to develop the originally proposed short courses. There have been encouraging discussions with potential NEHRP funders, although it is preliminary to present these parties with a curriculum proposal until it has been more formally developed. SAC advice is to go for a broader market by development of a more introductory course as the first step.

Iwan thinks the ad hoc committee did excellent job with their charge. He asked why do we want more members? Financial? Exposure? Why not give membership away free? This question generated vigorous discussion.

- Stepp: fundamental reason for forming COSMOS is to create a forum for communication among strong motion programs and users. It was not an economic incentive. The benefit of large membership for advocacy.
- Davis: if membership is free, people will discount its importance.
- Anderson asked if anyone, especially core COSMOS members, would object.
- Naeim pointed out that a membership fee raises expectations.
- Davis suggested we are looking for more than a long list of COSMOS members, as we are also seeking more people willing to participate in achieving the COSMOS mission through committee activities, etc.
- Stepp raised other issues. We are now giving the published proceedings to all members free. Each copy costs \$60. One possibility is COSMOS would have to provide free copies only to members and add this to the membership benefits. One proceeding makes up costs of one membership.
- Davis pointed out that adopting this policy requires a continuing commitment. We need to think about the problems that could arise if we restart making publications free after collecting \$50 from a lot of people who were not members.
- Anderson asked why not both: we could offer a free opportunity to lend your name to COSMOS if you support the advocacy and everything COSMOS is doing, but still allow one to join for \$50 for full benefits.
- Davis suggested that the Board wants to investigate this possible strategy carefully, and requested a new group to work with the ad-hoc committee. He asked several additional people to participate? Woody Savage, Bob Nigbor, Jerry Wright and John Anderson will sit in on a meeting. Their participation will not be a long term commitment. Davis hopes it can be evaluated in 1 or 2 conversations, and then get back to the Board.
- Savage responded to Anderson's question about COSMOS core member's views regarding the question of Iwan regarding membership dues. At the SAC meeting, he had suggested discounted first year. A logical extension is to make it free. USGS perspective is that it needs advocates for strong motion. USGS needs COSMOS to be able to speak with great advocacy authority. Last year, there were a lot of individual efforts. The advocacy mainly drew on a few dozen people. He likes Anderson's suggestion to let everyone click on web to say if they support COSMOS. It gives us all more authority and influence. Mindy Squibb says the Virtual Data Center has 1300-1500 users. Those are all potential "members" under this approach. It would broaden membership but not with the purpose to raise revenue.

C. Website Design

- Davis brought up the issue that the web page needs to be changed, to provide better acknowledgement of associates. Asked board advice. The Board likes same proposed new design as the senior advisory council recommended in the afternoon.

D. Technical Session at the November 2004 COSMOS Annual Meeting

- Davis asked for comments from the Board on a proposal for a technical session at the next annual meeting that was developed by Norm Abrahamson. Maury Power suggested that the draft may be too narrow, not very exciting. The meeting needs to be constructed as more of a discussion, than presented as a finished product. Power suggested that a meeting on characteristics of time histories that are damaging to structures would be broader and more interesting to the full COSMOS membership. Savage, noted that when considering the people who have show up at recent annual meetings, this may be the case. The general sense was that the proposal is interesting but perhaps should be broader. Power suggested that there may additionally be interest to demonstrate what can be done with the Virtual Data Center. Another idea is to provide examples of how nonlinear analysis has actually been used, and some problems that require it to be considered. Naeim would add something on these applications.

Wright suggested some more topics suggested by colleagues in his agency: How do you develop risk conclusions that are consistent probabilistic based time histories when the hazard being considered is from aggregated hazard sources? What is the possible spatial variation of ground motion when considering the large footprint of certain structures?

7. Other Issues

None were brought up.

Davis thanked the ad hoc committee for its recommendations and the Board for a valuable discussion that will provide the context for further progress in COSMOS business activities that will lead to increased sustainability for the organization.

8. Adjournment at 9:53.

Submitted by John Anderson

COSMOS

Consortium of Organizations for Strong-Motion Observation Systems

BOARD MEETING

AGENDA

4 February 2004

7:00 PM– 9:15 PM

EERI Annual Meeting

Los Angeles, California

Dinner	7:00 to 7:30
Approval of Minutes Nov 14 Meeting	7:30 to 7:40
President’s Report	7:40 to 7:50
<ul style="list-style-type: none">• Follow up on “business activities” since 11/03 meeting• Update on COSMOS membership increase planning• Update on status of COSMOS membership	
Remarks of Vice President	7:50 to 8:00
Remarks of Secretary	8:00 to 8:05
Remarks of Treasurer	8:05 to 8:15
<ul style="list-style-type: none">• Cash flow projection for 2004	
Report of Executive Director	8:15 to 8:25
<ul style="list-style-type: none">• Status of Virtual Data Center• Status of workshops and grants	
Report of Senior Advisory Committee and Recommendations	8:25 to 9:10
<ul style="list-style-type: none">• Feedback on website changes• Feedback on short course proposal for COSMOS• Consideration of COSMOS membership increase efforts• Ideas for the technical session at the 2004 Annual Meeting	
Other Issues	9:10 to 9:15
Adjournment	

PROPOSED

Two one-day courses

**For Discussion by Senior Advisory Council and
Cosmos Board of Directors**

**NOTE PARTICIPANTS INCLUDED IN SHORT COURSE OUTLINE ARE FOR
DISCUSSION PURPOSES, THEY HAVE NOT BEEN CONTACTED**

A first course aimed primarily to practicing structural engineers

**A second course aimed at geotechnical engineers but would be of interest also for structural
engineers**

Note: None of the speakers have not been contacted yet.

A SHORT COURSE ON SELECTION AND USE OF GROUND MOTION TIME HISTORIES IN EARTHQUAKE ENGINEERING

Time	Subject	Instructor
7:00 – 8:00 AM	Continental Breakfast	--
8:00 – 8:10 AM	Welcome and Introduction to COSMOS	James F. Davis
8:10 – 9:00 AM	Effective use of the COSMOS Strong-Motion Virtual Data System to obtain ground motion time histories	Ralph Archuleta Melinda Squibb
9:00 – 10:30 AM	Selection and modification ground motions for seismic design	Norman Abrahamson
10:30 – 11:00 AM	Coffee break and discussion	--
11:00 AM - 12:30 PM	Data Resources and Use of Strong-Motion Information from Instrumented Buildings	Farzad Naeim
12:30 PM – 12:50 PM	Time for everyone to get their lunch	--
12:50 PM – 1:50 PM	Lunch presentation - Damage Assessment of Buildings Using Strong-Motion Data: The Millikan Library Monitoring System	Wilfred Iwan
1:50 PM – 2:40 PM	Use of ground motions time histories to obtain rapid estimates of peak building response	Eduardo Miranda
2:40 PM – 3:00 PM	Coffee break and discussion	--
3:30 PM – 5:00 PM	Use of ground motions time histories in performance based design	Allin Cornell
5:00 PM	Adjourn	--

**A SHORT COURSE ON EFFECTIVE USE OF GROUND MOTION TIME HISTORIES
IN GEOTECHNICAL EARTHQUAKE ENGINEERING**

Time	Subject	Instructor
7:00 – 8:00 AM	Registration & Continental Breakfast	--
8:00 – 8:10 AM	Welcome and Introduction to COSMOS	Carl Stepp
8:10 – 9:00 AM	Effective use of the COSMOS Strong-Motion Virtual Data System to obtain ground motion time histories	Ralph Archuleta Melinda Squibb
10:00 – 10:30 AM	Coffee break and discussion	--
10:30 – 12:00 AM	Issues in selecting ground motion time histories in seismic design - Selection and modification ground motions as representative of <i>future</i> ground motions at a site - Part 1	Norman Abrahamson
12:00 PM – 12:30 PM	Time for everyone to get their lunch	--
12:30 PM – 1:30 PM	Lunch presentation - Use of time histories in forensic engineering	Paul Sommerville
1:30 PM – 2:30 PM	Examples of selection/modification/generation and use of ground motion time histories in geotechnical engineering	Jonathan Stewart
2:30 PM – 3:00 PM	Coffee break and discussion	--
3:00 PM – 4:00 PM	Selection and modification of ground motion time histories for sites that are strongly influenced by basin effects or other local site effects	Jonathan Bray or Steve Kramer
4:00 PM – 5:00 PM	Geotechnical perspective on the use of ground motion time histories in performance-based design	Ahmed Elgamal
5:00 PM	Adjourn day one	--

