

Blast, Shock and Vibratory Effects Committee Meeting Minutes
Renaissance Nashville Hotel, Nashville, TN
Sunday May 23, 2004

Meeting called to order at 6:00 p.m.

1. Committee members and visitors in attendance

Members

James Baylot [*] , Chair	US Army ERDC
Barry Rosson, Associate Editor	University of Nebraska
Gary Consolazio, Control Group Member	University of Florida
Ted Krauthammer [*] , Control group Member	Pennsylvania State University
Darrell Barker	ABS Consulting
Keith Landry	US Military Academy
James O'Daniel	US Army ERDC
Farid Alfawakhiri	AISC
Robert Smilowitz	Weidlinger Associates
Joel Leifer	SAVIAC
Kirk Marchand	Walter P. Moore
Bill Zehrt [*]	US Army Support Center

Visitors

Joseph Tedesco ^{*+}	University of Florida
Abhinav Gupta, Associate Editor	North Carolina State University
Paul Mlakar [*]	US Army ERDC
Hani Salim	University of Missouri–Columbia
Mike Mota	PCA
Scott Campbell	Kinetics Noise Control
John Weathersby	US Army Res. & Dev. Center
Sherif El-Tawil	University of Michigan
L. Roy Xu	Vanderbilt University
Joe Magallanes	Karagozian & Case
Tom Slawson	US Army ERDC
James Ray	US Army ERDC
Don Dusenberry	Simpson Gumpertz & Heger

^{*}Member Design for Physical Security Sub-Committee

⁺Chair, Dynamic Effects Technical Administrative Committee

2. Approval of Minutes

2003 Structures Congress meeting minutes were approved with minor corrections. Gary Consolazio will make the modifications to the minutes posted on the committee's website.

3. Committee Membership

Baylot reminded those visiting who were interested in joining the committee that the commitment was for six years and that it was mandatory that they rotate off the committee for two years after that. Visitors were asked to let him know if they were interested in joining the committee or subcommittee. Members may only be added to committees by going through the application process. The application is located on the web site at <http://www.seinstitute.org/tadform.cfm>.

A form that can be filled out to be mailed or faxed in can also be found on the committee web site. The web site is discussed below.

Gupta will be a new Associate Editor for the committee. Although he is not currently an official member of the committee due to the mandatory six year limit, he can still serve as an Associate Editor for the committee but without reimbursement to committee meetings. Due to the large number of journal papers being processed by our committee, two Associate Editors will be utilized in the future.

4. Report by Associate Editor Barry Rosson

Barry presented his report on the papers submitted to the *Journal of Structural Engineering*. His report is attached. The summary results for the twelve month period from June 1, 2003 through May 23, 2004 are as follows:

Papers received for review	36
Reviews completed	29
Approved	7
Require Full Re-review	10
Declined	12

Of the 36 submitted journal papers, 12 were for the *Special Issue on Blast, Shock and Vibratory Effects*. To date, 6 papers have been approved for publication in the *Special Issue* with 5 more currently under revision by the authors.

5. Review of Technical Sessions

2004 Structures Congress

“Simplified Methods for Blast Mitigation Problems” organized by Baylot and Ettouney
“Progressive Collapse of Buildings” organized by Ettouney and Baylot
“Innovations in Blast Resistant Design” Organized outside BS&V by Congress Steering Committee from papers that were submitted. Huest and Hutchinson are listed as chairs.

Members of the committee expressed their displeasure at not being aware of sessions related to blast that are organized by others outside of the committee. All future sessions should be coordinated with the committee chair and the Structures Congress Steering Committee. Joe Tedesco, Chair of the Dynamic Effects Technical Administrative Committee, indicated that it has been recommended to ExCom that in the future the on-line submission form will require the user to specify the committee with which the proposed session is most closely affiliated. The committee chair would then be notified shortly thereafter of the proposed session.

2005 Structures Congress

Three sessions were submitted, but only the first two have been accepted so far. The proposed sessions and organizers are:

“Design Guidance for Physical Security and Blast I” organized by Baylot

“Design Guidance for Physical Security and Blast II” organized by Smilowitz

“Effects of Impact Loading on infrastructure Systems” organized by El-Tawil and Gupta

The third session by El-Tawil and Gupta appears to have been lost. Gupta will follow-up to see that it's approved.

6. Session Topics for 2006 Structures Congress

It was proposed that a track on Extreme Event Loading be considered for development. Krauthammer suggested another session on Progressive Collapse. Salim proposed a session on Blast Effects on Walls and Roofs. Gupta suggested a tutorial on Blast Loading, but an organizer was not identified; Krauthammer suggested that the tutorial should be longer than the usual 1 to 1 ½ hours. Consolazio mentioned a session on vessel impact that he is organizing for an upcoming TRB conference. He may want to organize a similar session for the Structures Congress. The possibility of having a panel discussion on progressive collapse was discussed. GSA has a requirement for designing structure for the removal of critical elements. Smilowitz mentioned that this is an important issue to structural engineers in New York City and they are in the process of deciding if the city should have a similar requirement. A discussion at the 2006 Congress would be after this decision has been made. Leifer, Krauthammer and Smilowitz discussed the possibility of having a panel discussion at the 75th Shock and Vibration to be held October 2004. A follow on session could be held at the 2006 Structures Congress. The deadline for submitting session proposals is March 14, 2005.

7. Update on Committee Related Reports (Paul Mlakar)

Paul reported on the sales of *Structural Design for Physical Security - State of the Practice Report* and the *Pentagon Building Performance Report*. To date, of the 1,470 *Physical Security* reports printed, 1,368 have been sold, and of the 2,500 *Pentagon Performance* reports printed, 988 have been sold.

8. Special Issue of the *Journal of Structural Engineering*

The report on the *Special Issue* was included in the Associate Editor's report (Agenda Item 4).

9. Committee web site (Gary Consolazio)

Gary presented a handout of the Blast, Shock and Vibratory Effects Committee web page. The web site is on a server at the University of Florida and can be accessed at <http://www.ce.ufl.edu/bsveweb>. The web site serves as a repository for information related to past, present and future activities of the committee and associated subcommittees. The web site has been on-line and maintained since April 2002. Information currently provided on the web site was provided in the handout. Gary reported that 110 unique domain names from 15 countries have accessed the site over the last year. The implementation and use of a FAQ page was discussed. It was proposed that if Gary could develop the site to accept questions, then a FAQ page could be created easily from these questions. The site could also have "call for paper" announcements such that anyone could submit an abstract directly to a session chair in the future. It was agreed that both of these things should be done.

10. Physical Security for Bridges

James Ray gave a PowerPoint presentation on the issues surrounding the need to create a Bridge Security Committee. Tedesco indicated that the SEI ExComm had not approved of the committee yet. It was suggested that a joint committee be formed from the Bridge Committee and the Blast, Shock and Vibratory Effects Committee since this involves issues and expertise from both committees. Baylot will coordinate this with the Bridge Committee Member, Atorod Azizinamini, that is promoting this committee. Krauthammer, Consolazio, and Mota expressed interest in being on this new committee. Smilowitz indicated that someone from Weidlinger Associates should be on this committee.

11. Proposals for Future Committee Activities

Krauthammer indicated that since Protective Design is not a traditional field of study at most universities that this committee should take an active role in training the faculty to effectively teach this subject. Students need to have at least an introduction to this in their engineering design courses, even at the undergraduate level. Ted asked the committee to come up with ideas on how we can start training the academic community. The ideas were to: teach a one-week Protective Design course at the FEMA Multi-Protection Design Summer Institute at Emmitsburg, Maryland; write a position paper from the committee to be forwarded to ASCE; develop a continuing education course for ASCE; and have ASCE survey the membership on the need for this type of instruction (one survey for those in industry and one slightly different survey for civil engineering department heads). It was recommended that the development of the surveys be explored further with ASCE's staff. Meeting participants that have questions that

they believe should be asked on either survey should forward those questions to Krauthammer (tedk@psu.edu). Barker pointed out that in many cases, protective design will not be as expensive as many people may think. It may be a good idea to let people know relative costs of blast resistant design.

12. Other Business and Open Discussions

Leifer asked for volunteers to help write and edit a monograph on simplified solutions and methods for modeling such things as vibrations, seismic events, blast and shock loads. The monograph could be used for checking if more sophisticated methods yield results that make sense. Other ideas include chapters on best practices and failures in modeling and why.

13. Meeting adjourned 8:30 p.m.

14. Subcommittee on Physical Security

Meeting called to order at 8:45 p.m.

Subcommittee Chair, Krauthammer described the planned process for re-writing the *Structural Design for Physical Security - State of the Practice Report* to become a guideline for design for physical security. The plan was to use Special Project funding during 2004 to coordinate the guideline with the re-writing of Tri-service manual (Army Designation TM5-1300). A three year effort to re-write TM5-1300 is currently under way. The guidelines would also be coordinated with efforts at the Corps of Engineers Protective Design Center (PDC). During the special project, an expanded table of contents would be developed. A task committee would be formed starting in 2005 and would be active for 2 years writing the guideline. At the time of the committee meeting, it had been learned that the special project would not be funded.

Since the project was not funded, the expanded table of contents will have to be developed by the subcommittee without funding. Krauthammer suggested that sub-committee members should look at the outline of the existing document and make recommendations on what should be in the new table of contents. They should also indicate what parts of the report they are interested in contributing to. We will need a large number of people and will need someone from PDC. Inputs on the updated table of contents should be provided to Krauthammer by the end of July. Krauthammer will organize the inputs and send out by the end of August. There would then be a teleconference of interested participants.

The meeting adjourned at 9:25 p.m.