

**COSMOS International Strong Motion Forum  
15WCEE Lisbon Portugal, 9/25/2012**

**Executive Summary**

The Consortium of Organizations for Strong Motion Observations Systems was established in 1999 under the guidance of the Committee for the Advancement of Strong Motion Programs (CASMP), and with support from the U.S. National Science Foundation and its core program members, the California Geological Survey, the U.S. Geological Survey, the U.S. Bureau of Reclamation, and the U.S. Army Corp of Engineers. Each of these core program members has a significant interest in strong-motion monitoring and the practical use of strong motion data for reducing earthquake hazards and improving life safety through improvements in design of the built environment. In its first decade, COSMOS managed a Virtual Data Center (VDC) that provided access to strong motion data from network operators worldwide. COSMOS also began to engage the practicing engineering community through annual technical sessions that focused on the use of strong-motion data in engineering practice.

Towards the end of the first decade of COSMOS, the vision, mission and objectives of the organization were reviewed and revised. The new vision statement for COSMOS ([www.cosmos-eq.org](http://www.cosmos-eq.org)) is to “become a global focal point of international leadership” for the strong motion community. Its mission is to advocate for and promote strong-motion monitoring, with the ultimate goal being the application of strong-motion measurements toward improved earthquake resistance of the built environment through research and engineering practice. It is with this vision in mind that COSMOS is now focused on bringing together the international community of strong-motion data providers and users through regular forums at conferences, and through the activities of an international committee of the COSMOS organization.

The COSMOS International Strong Motion Forum held at the 15<sup>th</sup> World Conference on Earthquake Engineering (15WCEE) in Lisbon, Portugal, was the second of such meetings, and the first to be open to the community-at-large (Appendix A). At the 15WCEE, COSMOS hosted a booth advertising the Forum to the public and soliciting participation of the community at the Forum. The Forum opened with some background information on COSMOS provided to the participants, and a brief discussion of the formation of an international committee of COSMOS. Approximately 50 participants attended the Forum, at which representatives from 12 countries around the world gave presentations on the status of their strong-motion networks. This was followed by a lively group discussion on how COSMOS could help facilitate open data dissemination. Each participant was also given the opportunity to provide feedback to COSMOS via a distributed handout/questionnaire (Appendix B). Of the 38 individuals who completed the questionnaire, 20 responded that they would be interested in serving on an international committee of COSMOS that conducted its business in between these larger forums.

The goal of the International Committee is to increase international participation and collaboration in COSMOS activities, such as:

- Input on the development of standards and tools
- Increased cooperation on data dissemination through new data portals being developed worldwide and through the VDC search engine
- Facilitating the exchange of information on the use of strong-motion data by practicing engineers.
- Bringing together worldwide strong motion network operators to:
  - Increase data awareness
  - Discuss common issues
  - Learn from each other

An important outcome of this forum was the unanimous support by all participants of a resolution aimed at increasing the awareness and use of strong-motion data in engineering practice and seismology. The following resolution was put to a vote:

*We support the following resolution:*

*“Timely dissemination of worldwide ground and structural strong motion data to the earthquake engineering and seismological community is critical to improving our resiliency to earthquakes and to improving life safety of the built environment.”*

After the unanimous approval of this resolution, a discussion on how to remove barriers to global data dissemination took place. An important issue was the proper acknowledgment of the network organizations that are responsible for collecting the data when data is disseminated through a third party such as the COSMOS VDC. As a result of this discussion, data attribution policies have already begun to be developed. Another critical issue was the importance of metadata associated with each ground motion record in order to make the data useful in both future ground motion prediction equations, as well as in engineering practice. Data and metadata standards have already been under development within COSMOS as well as in other countries, but coordination of these efforts is now needed.

In order to address and attempt to solve some of the issues and barriers to global data dissemination, a discussion of how COSMOS could help increase communication and interactions between networks followed. Some ideas included COSMOS hosting wiki pages and/or bulletin board discussion threads to help facilitate collaboration between the many network operators.

The establishment of an international committee of COSMOS was seen as a step forward in addressing the issues and needs discussed above, but additional comments were brought up, including the idea that COSMOS might grow into a formal international organization, perhaps under the auspices of the IAEE. This might include the expansion of the COSMOS core institutions, and the inclusion of international participants in the COSMOS governance. It was noted that this expansion would require an increase in the funding base to support COSMOS activities at the international level.

## Appendix A

### The COSMOS Strong Motion Forum

15<sup>th</sup> World Conference on Earthquake Engineering

September 25<sup>th</sup>, 2012

5:15pm – 8:15pm

Lisbon Congress Center, Room 1.08

Lisbon, Portugal

#### Strong Motion Forum Objectives:

- Update: Worldwide strong motion providers will give a short update on current network status and data dissemination protocols being used.
- Forum Open Discussion Topic: How can COSMOS help facilitate access (virtual or hosted) to all international strong-motion data in one search engine, while still preserving network affiliation and giving each network the recognition they need and deserve for providing the data?

#### Final Agenda

5:15 pm Welcome and Introduction

- COSMOS

J. Steidl

5:30 pm Data Providers Updates and Data Dissemination Protocols

- CESMD Update H. Haddadi
- COSMOS VDC Update C. Stephens
- Portugal F. Carrilho/S.Vilanova
- Greece C. Karakostas
- Spain/Catalonia X. Goula
- China R. Wen
- Italy F. Pacor
- Japan W. Suzuki
- Turkey C. Zülfikar
- France P. Gueguen
- EU/NERA S. Akkar
- Mexico L. Alcantara
- Taiwan K. Wen
- India A. Kumar

6:45 pm Open Discussion on Data Search and Dissemination

7:15 pm Continued Discussion/Networking & Champagne

8:15 pm Adjourn

## Appendix B



**The COSMOS Strong Motion Forum**  
15<sup>th</sup> World Conference on Earthquake Engineering  
September 25<sup>th</sup>, 2012  
5:15pm – 7:15pm  
Lisbon Congress Center, Room 1.08  
Lisbon, Portugal

Participant Name:

Email:

Organization:

Address/Phone:

What was your primary reason for attending the strong motion forum?

Would you be interested in serving on the COSMOS International Committee?

Comments/Feedback?