

Minutes of WG3 Meeting Copenhagen, 4/5 October 2010

Attendance:

Sara Casciati
Dimitris Diamantidis
Vanessa Diamantidis
Dimos Charmpis
Niels Peter Hoj
Gerard Canisius
Marios Chryssanthopoulos
Jitendra Agarwal
Boulent Imam
Luis Canhoto Neves
Eduardo Cavaco
Selcuk Toprak
Mehmet Inel
Daniel Honfi
Ivar Bjornsson
Sven Therlanderson
Victoria Janssens
Harikrishna Narasimhan
Kiril Gramatikov, DC Rapporteur

Activities in progress:

As reminded by the Action Chair, we are now well within the final year of the action. It is now imperative to complete existing activities, and be focused and specific with respect to the deliverables from this working group, which should ready for the report made at the Prague Final Conference. In accordance with the MoU, the activities in progress encompass the following:

Activity 6: Robustness measures
Activity 7: Consequence analysis
Activity 8: Case studies

Short Presentations:

In relation to the above activities, the following presentations were made in the course of the WG meetings:

- Janssens – Failure consequences (Buildings)
- Inel – Consequence modelling based on earthquake damage data analysis
- Diamantidis V – Robustness of Class 3 Buildings
- Agarwal – Implementation of robustness measures: good vs. bad practice
- Charmpis – Robustness optimisation
- Cavaco – Robustness and reliability of corroded RC structures
- Bjornsson – Robustness considerations in relation to derailment accidents

In addition, Imam made a presentation in the panel session on Failure Consequences (Bridges). All the above were the subject of extensive discussion and feedback.

Agreed Actions:

The main output of the work from this WG will be in the form of factsheets, building on those presented at the Ljubljana Conference. Substantial work has taken place in a number of areas, and the following list was provisionally agreed (primary WG member responsible in brackets):

- Modelling of Failure Consequences in Buildings (Janssens)
- Modelling of Failure Consequences in Bridges (Imam)

- Utilisation of Earthquake Damage Observations in Robustness Studies (Inel)
- Robustness-based Optimisation Framework (Charmpis)
- Robustness of Class 3 Buildings (Diamantidis)
- SHM and Smart Materials for Robustness Improvement (Casciati)

Possible factsheets in the following areas were also discussed:

- Lessons learned from implementing robustness measures (Agarwal)
- Risk based robustness framework for rail derailments (Svensson)

Those members who have already contributed factsheets were invited to consider their update in the light of recent work and new information.

In relation to the two factsheets providing the framework for evaluating failure consequences, the possibility of creating a small number of datasheets was discussed. The purpose of these datasheets is to demonstrate how data referring to past failures can be collected and utilised. Based on work that is already in progress, the following cases were offered as potential candidates:

- Malahide viaduct (Janssens)
- I35-W bridge (Chryssanthopoulos)
- Tore Windsor building (Neves)
- One Meridian Plaza building (Diamantidis)

It is appreciated that extracting relevant data is often problematical, and this will influence the ability to produce a useful datasheet in the time available.

The material for the Summer School, which will be included in the Action's Final Report, should be available by the 16th of May 2011. WG contributions to focus on:

- Survey of Failure Causes and Consequences
- Failure Consequences and Risk Criteria
- Safety Format for Code Implementation
- Robustness Increasing Measures

Final decisions will be made at the next meeting.

WG3 members are kindly asked to send their deliverables to the working group leader (Chryssanthopoulos) at least one week before the next meeting.