

Development of software for conducting ground motion simulations

The software used to conduct the ground motion simulations are a rather comprehensive compilation of different programs written in FORTRAN™ and MatLab™, known as BBSIM version 1.2 (Broad-Band SIMulations), developed by Nelson Pulido, National Research Institute for Earth Science and Disaster Prevention (NIED), Japan. For future work on ground motions simulations, both in the area around Izmir and in other parts in the world, we wish to develop this program package in order to become easier to work with, as well as we wish to obtain shorter calculation duration.

This work was initiated by a workshop at GFZ Potsdam, Germany in September 2007. Here there was produced two flowcharts describing the program package, one which shows the input-output flow of the different sub-programs and one which gives how the programs and subroutines, as well as input and output files are related.

In order to develop the software properly we have contacted a person from outside the project in order to take care of the technical programming part of this project. There was held a workshop in Bergen, Norway in December 2007 with participants both working with the ground motion simulations and the programmer. The aim of this gathering was to thoroughly discuss the wishes for the future ground motion simulation program package, and to ensure that the programmer got all questions related to the calculation methods answered.

The further development of the program package is currently on hold. We wish to continue this work in future projects, but funding is necessary in order to hire an external programmer. The hope is to continue this work in an extension of this current project (EPIWA II).