GeoWatch

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Foreword

During the past months we have carried out strategic alliance meetings in Asia with our representatives Earth Products China Ltd. (EPC), China, EJtech Co. Ltd., South Korea, Ryobi Geotechnique International Pte. Ltd., Singapore and San Lien Technology Corp., Ltd, Taiwan. These meetings enhanced our bonds with our representatives and our overview of the respective area from the industrial point of view.

We foresee a lot of improvement and expansion for GeoSIG in the near future and are already planning an additional 1'000 m^2 of office and production space, available within the next 6 to 9 months.

Our answer to the worldwide crisis is with investment to growth and agility. As cities and their infrastructure grow stronger after devastating earthquakes, our business will enhance against the negative effects of the overall recession; keep following us!

Christoph Kündig, CEO

GeoSIG Exhibits in TIEMS Workshop, South Korea

EJtech Co. Ltd., one of the GeoSIG representatives in South Korea, exhibits our solutions in the 3rd TIEMS (The International Emergency Management Society) Workshop in Seoul, Korea.

EJtech presents our measuring solutions including sample units such as modules from our state of the art CR-5P Seismic, Earthquake and Structural Monitoring System as well as the AC-63, AC-23 and downhole versions of our sensors.

Wireless GMS Used to Identify Building Sway Frequency

Our new line of instruments, GMS (GeoSIG Measuring System) has been utilised to measure the sway Frequency of the European Business Centre (EBC) building, where GeoSIG is also located.

A simplified model of the EBC building was created in the ARTeMIS software based on the actual structure and the measuring setup is configured as actually performed as shown in Figure 1. GeoDAS was used for data acquisition and system configuration, as well as preliminary data analysis.

The measurements were taken several times, to be sure that the correct building sway frequency was measured. Three GMS-18 instruments with biaxial AC-63 sensors were used to perform this measurement.

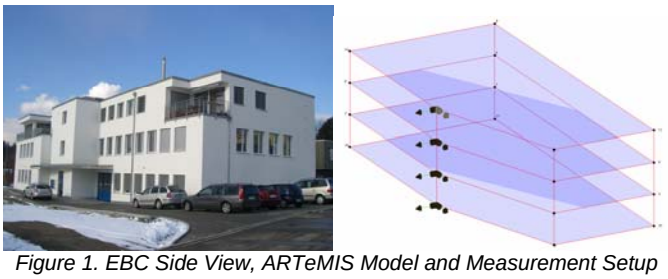

Figure 1. EBC Side View, ARTeMIS Model and Measurement Setup

Each instrument was configured to generate 15 minutes ring buffer files. For data evaluation, a two step procedure was employed. The first step was to take the ringbuffer files corresponding to the same time and pre-analyse with GeoDAS to see the dominant frequencies as well as to judge whether the collected data was reasonable.

The data evaluation in this step was as follow:

1. Baseline correction (using the whole data record)
2. Low pass filter (15 Hz cut off, 6 pole)
3. High pass filter (0.7 Hz cut off, 12 pole)
4. FFT Magnitude (8192 points, ½ overlapping of data chunks, Hanning window function)

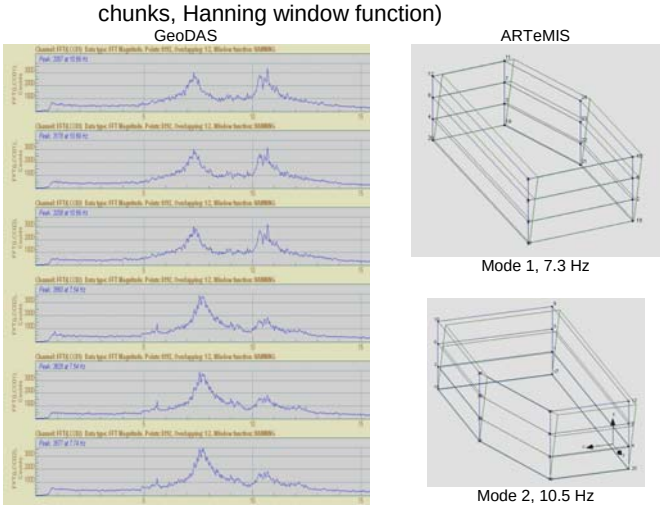

Figure 2. EBC Modes

The second step was to configure the model and run a simple modal analysis to verify the established frequencies and see the modal shapes.

Consequently preliminary and full data analysis relieved the first and second modes identically at 7.3 and 10.5 Hz as expected due to different stiffness at orthogonal directions.

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