GeoWatch

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GeoSIG's newest instrument: GiX

The GiX was developed out of years of experience in seismic instrumentation as well as monitoring of civil engineered structures such as dams, nuclear power plants, pipelines, tunnels, bridges, tall buildings and unique structures all over the world.

GiX provides scientists with a state of the art high dynamic seismic recorder and engineers with a valuable tool to fully understand and analyse the dynamics of structures in the operating environment. With GiX the seismic activity at a region or the dynamics affecting a structure including but not limited to acceleration, velocity, displacement, temperature, current, wind speed, wind direction, stress and pressure may be monitored and recorded.

Dynamic channel sample rates of 50, 100 and 200 SPS, optionally 8, 20, 125, 250 SPS can be provided. The system bases on synchronised 3- or 6- channel A/D converters. The signals are digitised using the over-sampling and decimation technique resulting in superior data quality.

The heart of the GiX software is GeoDAS, a proven data logger and data analysis package developed by GeoSIG Ltd. GeoDAS, integrated into the GiX recording system, provides a richly configured set of user-friendly capabilities, displays and analytical tools.

In addition to the near real-time display of the dynamic channels the system provides static data like mean, max, min, and peak values. The GiX monitors the real-time data generated by each of the sensors attached to the system and compares the measured data to three fully independent alarm trigger criteria. The ring buffer size, the post event time, trigger thresholds and relay alarm on/off times may be selected by the customer.

A comprehensive surveillance, diagnostics and reporting system through alarm relays, SMS and E-mail can be optionally provided.

Enhanced connectivity via hi-speed USB, Ethernet, and Serial (RS-232) ports plus a VGA port for an external monitor makes the GiX compatible for today's and tomorrows needs.

Figure 1. GiX, 6-channel version, front (left) and back view

Visit our booth at the AGU Fall Meeting 2009

In our GeoWatch Issue 43 we mentioned GeoSIG's participation in this year's AGU Fall Meeting, which is taking place from 14 to 18 December in San Francisco CA, USA. The largest annual scientific conference in the world is expected to draw over 16'000 visitors to the Moscone Center this year.

Mr. Christoph Kuendig, our CEO, and Dr. Oleg Razinkov, our head of software engineering, are looking forward to welcome you at our booth no. 438 in the exhibition hall where we have our latest state-of-the-art instruments on display, the GMS-24 and the GiX.

More information about the AGU Fall Meeting, a detailed floorplan and all other required information are available on the official homepage of the AGU Fall Meeting 2009 under http://www.agu.org/meetings/fm09.

More than 200 GMS-18 (GSR-IA-18) in production

After the first successful shipment of about 120 state-of-the-art instrument GMS-18 (GSR-IA-18) with an internal accelerometer AC-63 in 2008, the United States Geological Survey (USGS) installed them as first part of the NetQuakes project (find out more about NetQuakes on our website).

Over the past year, GeoSIG worked hard to bring the GMS to the next level, always keeping in mind that USGS sooner or later will order the next lot of instruments. This order was sent to GeoSIG this autumn and consists of more than 180 GMS-18 (GSR-IA-18), each with an internal accelerometer AC-63.

Figure 2. GMS-18 (GSR-IA-18) in production

Figure 3. GMS-18 in full configuration

The production of the instruments is ongoing in our plant in Othmarsingen. Our experienced production team is working hard to keep up with the tight schedules.

Once the housings are checked and prepared, the batteries are inserted and the in-house manufactured and pre-tested accelerometers are installed. Then the main boards with the digitisers, the connector boards and further options are mounted. At the end the entire unit runs through a sophisticated test procedure to ensure error free running after installation at our customer's site.

By the beginning of 2010, USGS will have over 180 new GMS-18 (GSR-IA-18) available for installation and integration into their NetQuakes project.

GeoSIG attended the DETAILS workshop in Lucca, Italy

GeoSIG took part in the DETAILS (DEsign for opTimal performance of high-speed rAILway bridges by enhanced monitoring systems) workshop held in Lucca, Italy, from 9th to 11th December 2009.

As a leading manufacturer of monitoring equipment, GeoSIG has presented its view on the current and future market in a paper which will soon be available on our website.

Following is an abstract and illustration from the presented paper:

Monitoring of infrastructures in modern urban areas is centrally important to achieve, enhance and sustain human civilisation. The paper discusses the available and future possibilities and solutions for such monitoring purposes. Basic components and typical requirements of such systems, including generic hardware and software specifications are described.

Different projects are presented to illustrate how a modern monitoring system can be realised with the help of latest measurement methods and technologies. An overview of the future expectations in the industry is given. Monitoring systems are unique. The utilised products must be flexible to serve the requirements. With the help of the modern technology and the latest developments in the industry as well as the increased understanding of systems and applications almost any project is possible. Efficient monitoring systems will contribute to reduced failure risk, timely operational and safety response, extended lifetime and better maintenance of infrastructures which are the building blocks of further growth, development and sustainability of our modern civilisation.

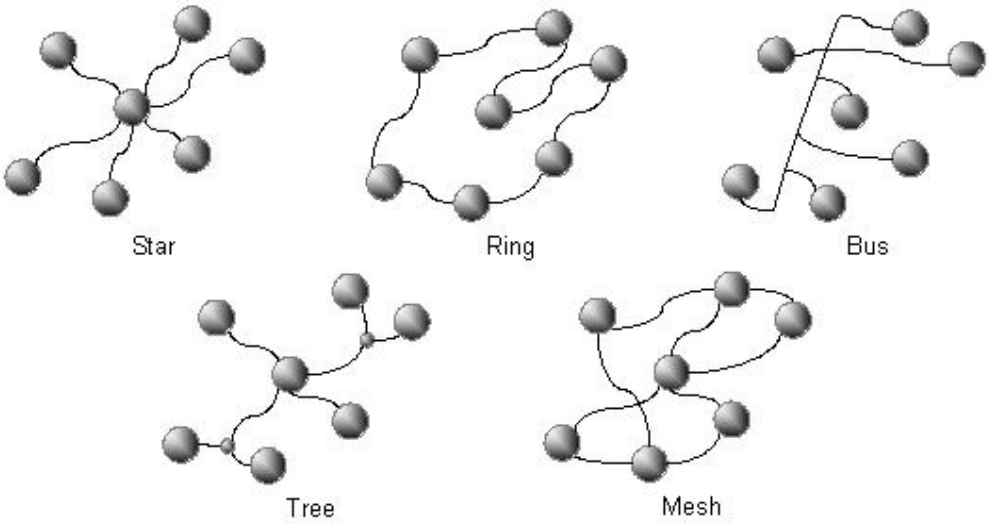

Figure 4. Different possible Network topologies

GeoSIG wishes a Merry Christmas and Happy New Year

The year 2009 is coming to an end, which was dominated by the global financial crisis. GeoSIG is proud to announce that the growth of the company continued nonetheless these hard times. The staff increased to just more than 30 people and the development of new products resulted in two state-of-the-art recorders as well as upgrades for the existing product range, software and hardware wise.

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GeoSIG would like to take the opportunity to thank our customers and affiliates for their trust and support. We hope to continue the much valued cooperation and wherever possible build on it in the upcoming year of 2010.

GeoSIG will be closed for Christmas break from 24th December 2009 until 3rd January 2010. We are looking forward to welcome you again next year and are wishing you a Merry Christmas and a Prosperous and Happy New Year.

Figure 5. GeoSIG staff

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