FiberSense VID+R® Provides World's First "Building-By-Building" Impact Measurements After Recent NZ Earthquake.

Sydney, Australia 27 September – FiberSense, a leading infrastructure sensing and monitoring company, has shared remarkable high-resolution results in its detection of the magnitude 5.8 Cook Strait earthquake that occurred 70 km NW of Wellington, NZ on 22 September.

Founder and CEO of FiberSense, Mark Englund said "Our DigitalSeismic sensing service that we have operating on fiber optic telecoms cables in Wellington detected a range of activity from the earthquake centred on the Cook Strait last week. We cross-referenced our measurements with the records of the official earthquake sensors and the results were remarkable – for the first time ever we've calibrated the impact of quakes down to a building-by-building analysis level."

"Immediately after the earthquake last week we first confirmed that the main data points from the official readings like magnitude and wave movement across ground closely matched with our readings. This established that our fiber optic based quake detection is as reliable as current methods that depend on monitoring stations scattered across New Zealand. The most compelling finding is that because the fiber-based method constantly records the activity as the event wave moves across the earth, our DigitalSeismic service captured the peak ground acceleration with around 1000x greater fidelity compared to what conventional seismic networks achieved." Englund said.

FiberSense VP of Research & Development, Dr Nate Lindsey, said "Fiber optic telecoms cables are the hidden web of communication within a city. FiberSense's DigitalSeismic service uses this web to take the pulse of a city, block-by-block, building-by-building. When an earthquake strikes, we use advances in distributed sensing to make measurements of how much the ground shook at positions every few meters along the optical fiber, improving on the traditional seismometers which are separated by kilometres, at best. A further key benefit from our approach is that DigitalSeismic concentrates ground shaking information where it matters most – in and around the populated areas where the fiber is commonly located. This contrasts with conventional seismic networks which have traditionally been located far from noisy city activity. Targeting populated areas adds important data-driven insight right where people are most impacted, making DigitalSeismic technology a real game changer for how we respond to seismic hazards."

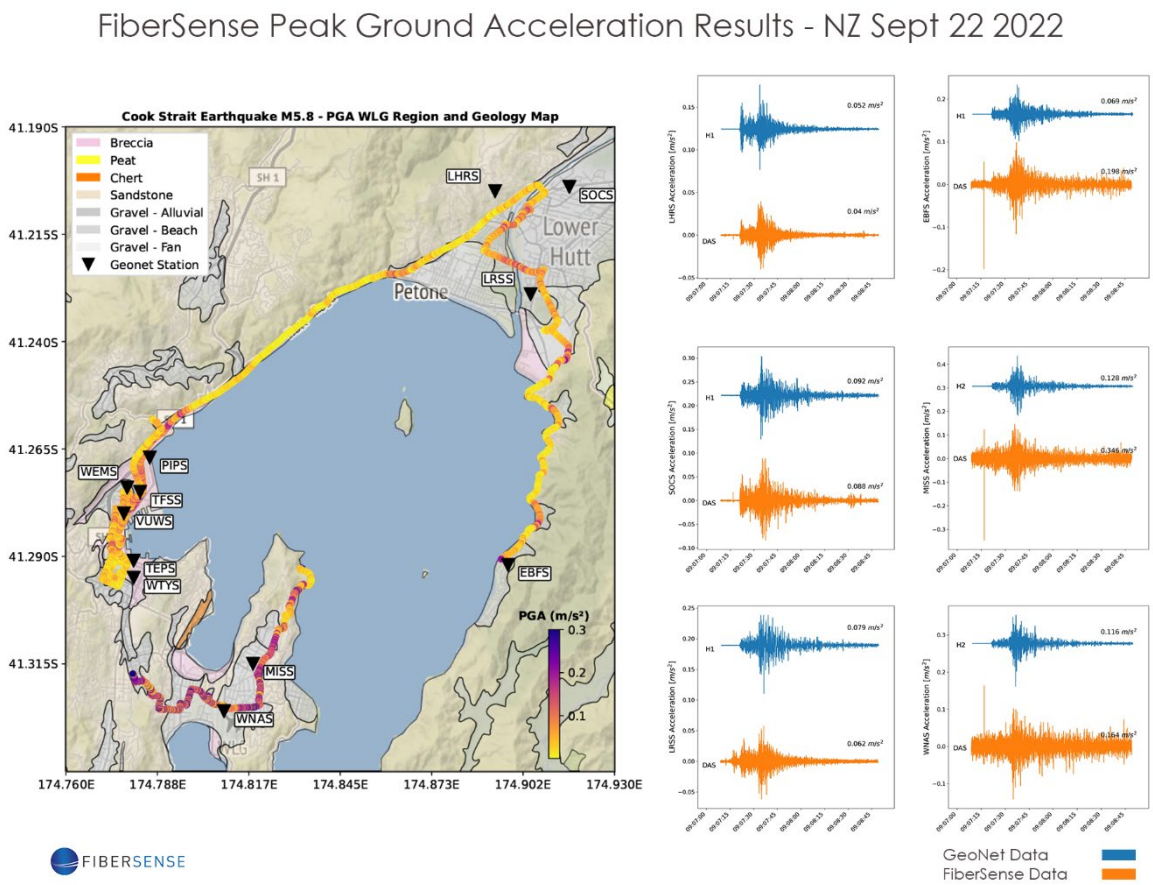
"We believe this capability will be an invaluable tool for first responders, utilities, critical infrastructure owners and seismologists, as well as government authorities in assessing the damage from earthquakes. Whilst we can't prevent natural disasters occurring, we can inform the way we plan for and respond to these inevitable events. It is critical that the quality of the data we base our recovery plans on should be as complete and well informed as possible. At FiberSense, we are pleased to be able to contribute to meeting that challenge and help make the world around us safer and more secure for all." Englund said.

FiberSense is engaged with seismologists at University of Victoria, Wellington and University of Auckland through a grant from EQC to study the earthquake recordings which FiberSense is availing to the community. Through this science partnership, FiberSense hopes to build a bridge to new opportunities in earthquake early warning and seismic hazard analysis.

Further background to the DigitalSeismic results from the NZ earthquake

Researchers working to understand the impact, scale and dangers that earthquakes have on communities, have to date been informed by the data collected by individual seismic readers scattered around the globe. In the quake prone islands of New Zealand, this can mean just a few dozen seismic meters, often 100's kilometers apart, are relied upon to capture data for the whole country. They measure not just the onset and duration of ground motion, but also critically important information like the maximum ground acceleration and directionality of shaking. Taken together, this data informs the public sectors' responses to natural disasters and underpins our preparations for proceed with a plan of action when the inevitable next event occurs.

However, the current quality of earthquake data is about to be turbo charged by using information detected across the ubiquitous fiber optic cables that link-up cities, connect communities and traverse the globe. The team at FiberSense has invented and patented a new class of sensor system over optical fiber cable infrastructure called Vibration Detection and Ranging (VID+R®). This technology acts as a series of "virtual seismic sensors" set every few meters along a fiber cable. These distributed sensors can then detect the force and speed of the earthquake as the damaging waves move through city blocks and even individual buildings. This detailed information about the event is available in the moments immediately after the earthquake strikes as the data is aggregated automatically in the cloud.



About FiberSense

Fiber Sense Ltd (“FiberSense”) was formed to dramatically improve everyone’s experience in public spaces by adding a new level of real time and historical awareness of anonymised objects and events in public spaces. The team at FiberSense invented and patented a new class of sensor system over optical fiber cable infrastructure called Vibration Detection and Ranging (VID+R®). FiberSense technology sits at the intersection of optical fiber sensing, integrated photonics, machine learning and optical fiber telecoms networks. They bring these capabilities together in a digital platform that can be sampled at www.fibersense.com

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