Synspective

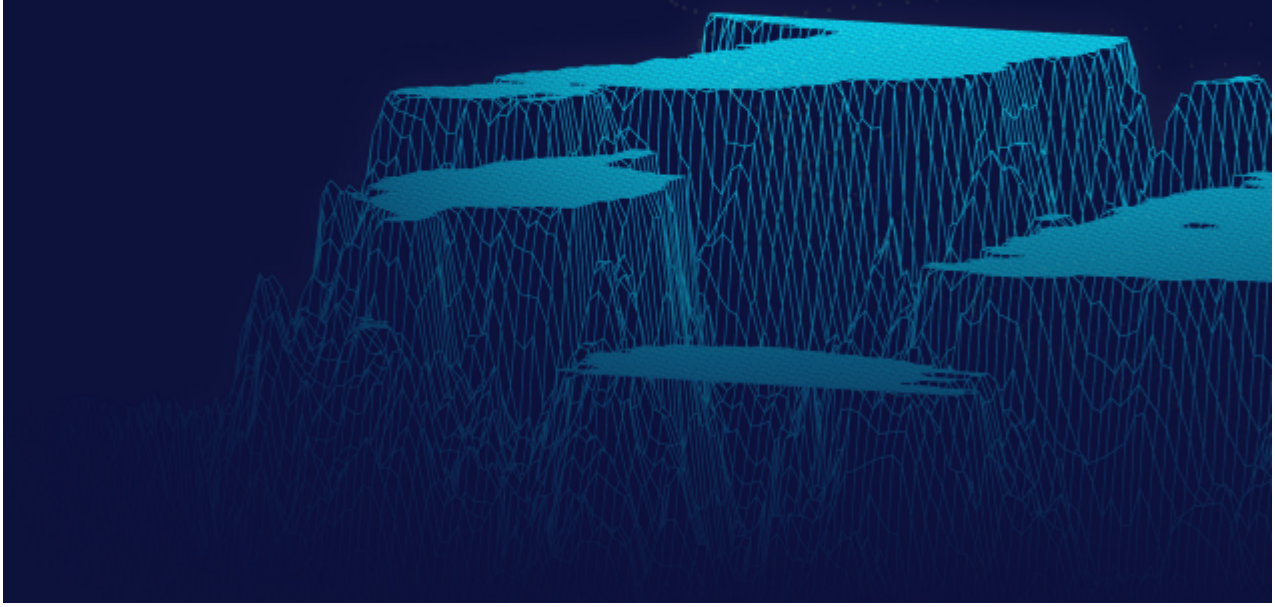
LDM (Land Displacement Monitoring)

A service that detects millimeter-level changes in the earth's surface over a wide area using our unique InSAR analysis technology

Synspective

SOLUTIONS

LAND DISPLACEMENT MONITORING



Hazard

Earthquake Land Slide Cyclone Storm Surge Flood Volcano Tornado

Solution Purpose

Prevention & Mitigation Preparedness Response Recovery

Solution Theme

Risk Assessment Disaster Prevention Plan Infrastructure Technology Building Technology Eco Infrastructure Information & Communication Technology Evaluation

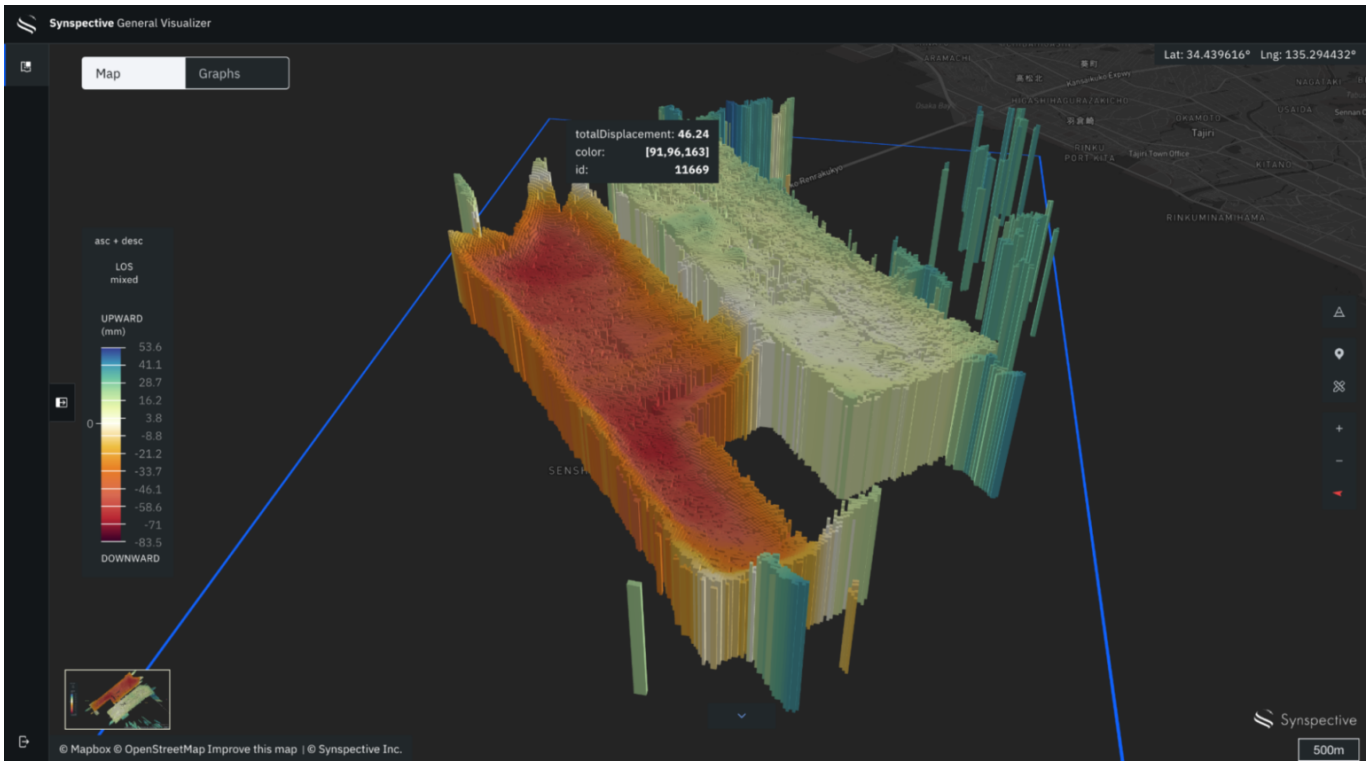
Technology Subject

Hazard Identification Risk Monitoring Mitigation Plan Business Continuity Plan River & Basin Dam & Reservoir Coast Sabo Road Railways Airport Port Essential Utilities Urban Design & Construction of Resilient Building Resilience Improvement on Existing Building Mitigation Measures for Interior & Facility Ecosystem-based Infrastructure Information Gathering Information Analysis & Judgement Post Disaster Evaluation

Advantages

InSAR analysis technology uses continuous monitoring to detect ground movements in cities, roads, tunnels, bridges, and other social infrastructure down to the millimeter.

Solution Illustrated



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Background

It is expected to be effective in the following situations:

- Excessive time and personal expenses needed to evaluate land displacement across a wide area.
- Despite some mobility restrictions, this service can be used in areas that are difficult to physically

enter during a disaster or where a remote site survey is necessary.

The benefits to users include:
- Cost reduction compared to existing methods.
- Greatly reduce the lead time for surveys.
- Improve the frequency of maintenance and management.

Exposition of the Solution

Land Displacement Monitoring Solution originated from InSAR*2 analysis and is capable of detecting timely vertical land displacement, in millimeters, over a wide area. In addition, this service enables periodical observation and understanding of land subsidence and deformation.

*InSAR：Interferometric SAR. The technology to detect land displacement with mm accuracy.

Achievements of Examples

- Road, tunnel and railway construction: land subsidence/uplift, landslide
- Construction management: landfill, cutting, land elevation, soil improvement
- Public facility management: ports, airports
- Disaster prevention facility management: dike, breakwater, seawall
- Energy and resource development: dam, electricity, oil, gas, mineral

Other References

https://synspective.com/solutions/land-displacement/

Corporate Profile

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