VEGA SURFACE DEFORMATION ESTIMATION TECHNOLOGY

Vega Surface Deformation Estimation Tools - SDET is a technology that integrates powerful data processing tools and methods to **calculate and analyze displacement points on the surface of the earth with accuracy up to mm/year** from Ultra-high frequency remote sensing data.

SDET is performed using a proprietary method developed by remote sensing engineers at Vegastar Technology Co., Ltd., capable of automatically processing data, calculating and analyzing earth surface displacement points on a large area over decades.

PRODUCT CODE: SDET

VEGASTAR

ADVANTAGES OF SDET:

✔ **PROPRIETARY TECHNOLOGY:** SDET applies the stable scattering point interference method of ultra-high frequency remote sensing images to identify and measure land surface displacement. This technology overcomes the limitations of traditional methods such as fieldwork or simple calculations.

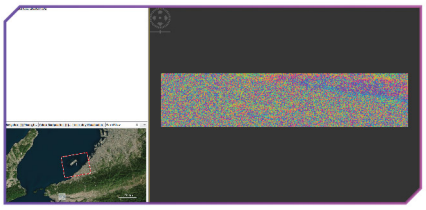
✔ **HIGH PRECISION:** SDET ensures high precision up to the millimeter scale with the ability to track detailed variations and process large amounts of satellite image data over many years. SDET is a perfect replacement for manual measurement and visual observation methods, which depend on humans and have low accuracy.

✔ **AUTOMATED BIG DATA PROCESSING:** SDET uses programming languages such as Python and Matlab combined with Vegastar's specialized toolkit to automate the process and optimize big data processing from ultra-high frequency remote sensing images for decades across Vietnam.

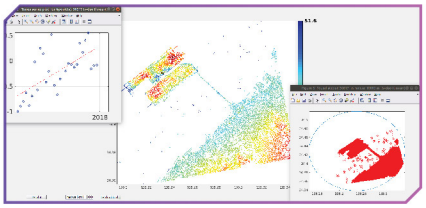
✔ **OUTSTANDING EFFICIENCY:** SDET is an effective technology in automatic monitoring of surface displacement that saves time, manpower, money and creates a reliable source of big data to predict points and displacements transfer in the future.

✔ **HIGH APPLICABILITY:** SDET is suitable in many sectors: monitoring and managing the quality of work and infrastructure (bridges, roads, dikes, embankments, river/sea banks...) to detect risks of accidents and subsidence; integrated into environmental monitoring and smart city systems.

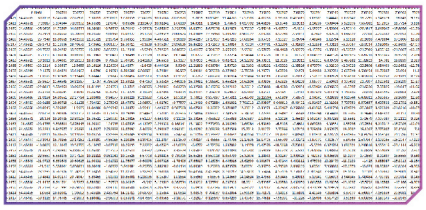
SDET **OPERATING** PROCEDURES:



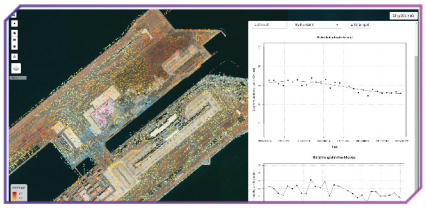
1. CREATE AUTOMATIC **ULTRA-HIGH-FREQUENCY REMOTE SENSING** INTERFEROMETRY IMAGES



2. DETERMINE **THE STABLE SCATTERING POINT**



3. EXPORT DATA OF **DISPLACEMENT POINTS**



4. DISPLAY AND ANALYSIS

APPLICATION IN VARIOUS SECTORS

- **AGRICULTURE** (Agriculture, Forestry, Fishery, Aquaculture, Irrigation)
- **NATIONAL SECURITY - DEFENSE**
- **URBAN & SMART CITY MANAGEMENT**
- **FOREST RESOURCE MANAGEMENT**
- **MARITIME SECURITY**
- **BUSINESS INTELLIGENCE**
- **NATURAL DISASTER MANAGEMENT, AND SEARCH & RESCUE**
- **RESEARCH AND TRAINING**
- **ENERGY AND INFRASTRUCTURE MANAGEMENT**
- **MAPPING**
- **ENVIRONMENTAL RESOURCES**
- **FINANCE AND INSURANCE**

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