



We are VENG

A HIGH VALUE-ADDED
TECHNOLOGY AND SERVICES
COMPANY SPECIALIZED IN THE
SPACE INDUSTRY.

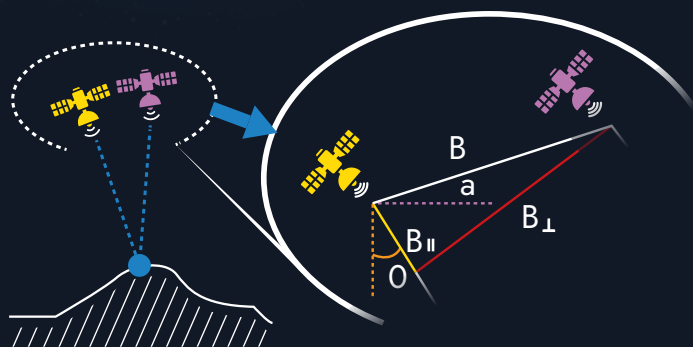
18+
YEARS OF EXPERIENCE

375+
EMPLOYEES INCLUDING
PROFESSIONALS
AND TECHNICIANS

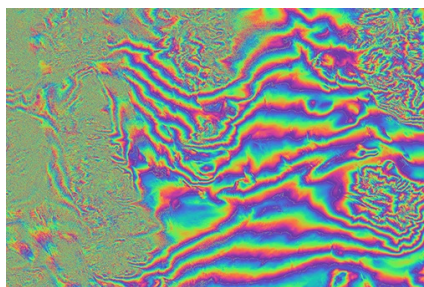
Interferometry and change detection

Interferometry is a technique that, from two or more SAR (Synthetic Aperture Radar) satellite images, makes it possible to obtain highly accurate ground displacement measurements.

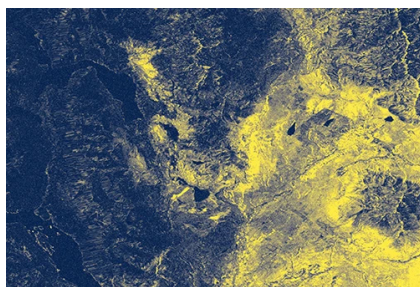
We offer quantification and qualification service of ground displacement services for monitoring and early warning. The study is carried out within a certain period of time and the differential interferometry technique is used for this purpose.



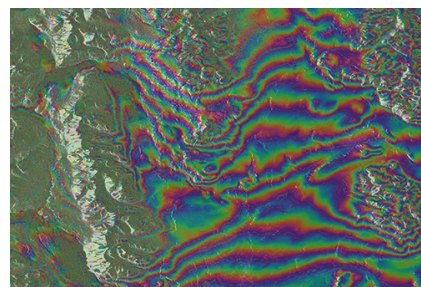
INTERFEROMETRIC PHASE



INTERFEROMETRIC COHERENCE

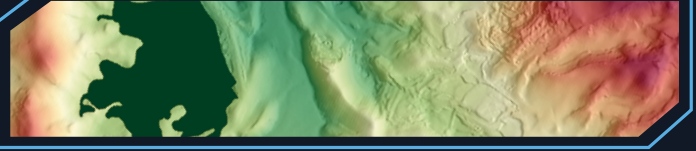


PHASE ON COHERENCE



Digital Elevation Model (DEM)

SAOCOM Constellation digital elevation models provide high quality and highly representative terrain height data due to their capacity to penetrate clouds and vegetation.



PROSPECTING
AND EXPLORATION



WATERSHED
MODELING



INFRASTRUCTURE
PROJECTS



WATER AND
GEOLOGICAL RISK
IDENTIFICATION

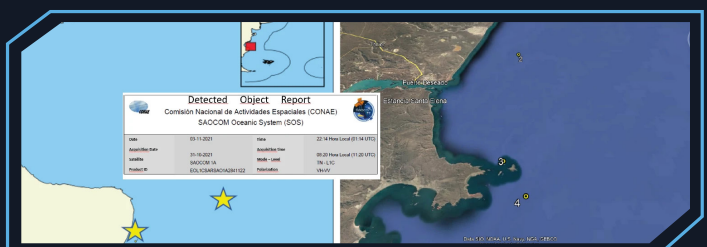
Pipeline Monitoring

Pipelines, used to transport oil, gas, and water, are works of great linear extension that reach thousands of kilometers. Along this path, they pass through different type of soils such as sand, mud, clay or different types of sedimentary, metamorphic or igneous rocks. In addition to that, changes in aquifers and reservoirs produce movements on ground over which pipelines are laid down.



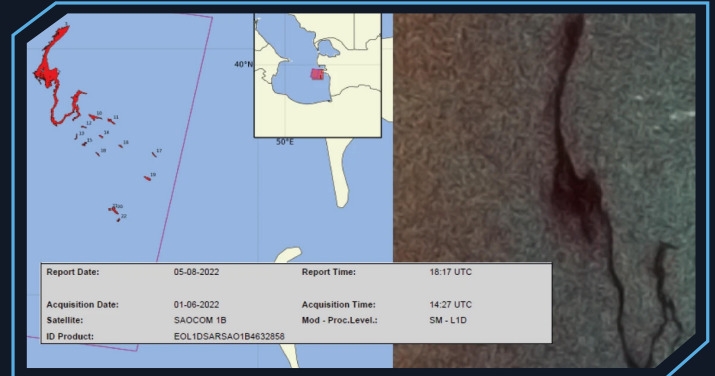
Ship Detection

We provide, in an area chosen by the client, a report that shows all detected vessels with their respective geo reference (lat / long). In addition, this report includes a thumbnail image of the detected vessel's profile that assists in the identification of the type of vessel.



Oil Spill Detection

The oil spill detection service provides, in an area chosen by the client, a report that shows all the oil spills detected with their respective geo-reference (lat/long). In addition, this report includes a thumbnail image of the oil slick profile, assisting in the evaluation of the potential environmental impact.



Monitoring of Potential Landslide Areas

andslides represent a major risk for human settlements. It is important to consider that landslides increase their probability of occurrence due to rainfall and earthquakes. Therefore, it is essential to monitor critical areas where geological and environmental risk factors are combined to generate early warnings.



Slope Stability Monitoring

Mining operations are subject to various geophysical and anthropogenic phenomena that tend to affect soil stability. Displacement measured through interferometric techniques provides centimeter- and sub-centimeter-level values over large areas observed remotely. Using differential interferometry, it is possible to perform continuous temporal analyses of ground movements and the structures built upon them, allowing risks of structural damage to be anticipated.



Subsidence in Civil Works Analysis

High-rise buildings, bridges, tunnels, dams, routes, among others, are construction works that are settled on the ground. Extraction of fluids or solids in sub ground layers produces settlements which eventually lead to changes in upper layers of the land cover where the aforementioned construction works are located. Therefore, even foreseeing all the construction factors, it is necessary to analyze sudden or high-value changes to safeguard infrastructure avoiding both human and economic losses.



Oil&Gas Basin Monitoring

Fluid injection/extraction operations generate volumetric variations in the basins and, therefore, changes in the height of the surface cover. These changes can be difficult to measure due to the large surface area of the basins in which the operations take place. However, differential interferometric techniques (DInSAR) makes possible to measure surface height variations with centimetre and sub-centimetre precision.



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