ARATOS Pipeline Surveillance System

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Presentation of the system

Aratos Pipeline Surveillance System

It includes:

Image operation in different spectral bands

Real-Time Monitoring of the pipeline system

GIS system for the visualization of the pipeline system

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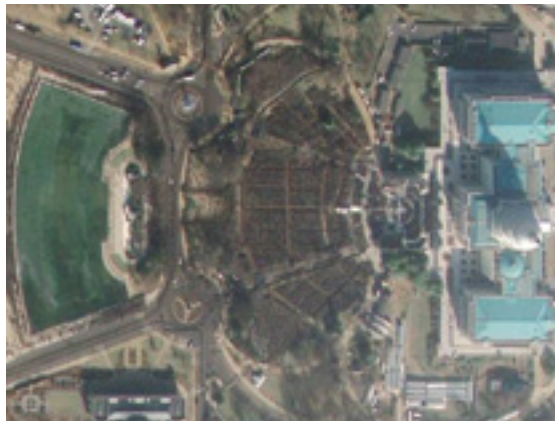
Characteristics

Aratos Pipeline Surveillance System uses:

High-Resolution Satellite data and processing of satellite images

UAS Unmanned Aircraft Systems for real time monitoring
of the pipeline system at close range



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Services

Aratos Pipeline Surveillance System offers:

GIS system for the visualization of the pipeline systems
UAS Unmanned Aircraft Systems for real-time monitoring
Near real-time satellite images
Software for the processing of satellite images
Alerts
Detection of damages
Monitoring of earthquake activity

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GIS System

Aratos Technologies S.A. has developed a unique GIS System which depicts the current state of the pipeline system.

The GIS system consists of:

Digital maps of the area of interest
Visualization of the pipeline system
Depicts the point where a damage has taken place
Depicts alerts and warnings 
Sends alerts via SMS or e-mail

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Satellite Data

Aratos Pipeline Surveillance System monitors the area of interest by using near real time satellite images and data of high resolution.

Specifically:

Receives satellite images of high resolution (1-2 m)

Monitors environmental changes

Monitors current weather conditions

Creates land cover maps

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Processing of satellite images

Aratos Technologies S.A. has also developed software for the processing of the satellite images which have been received.

Specifically:

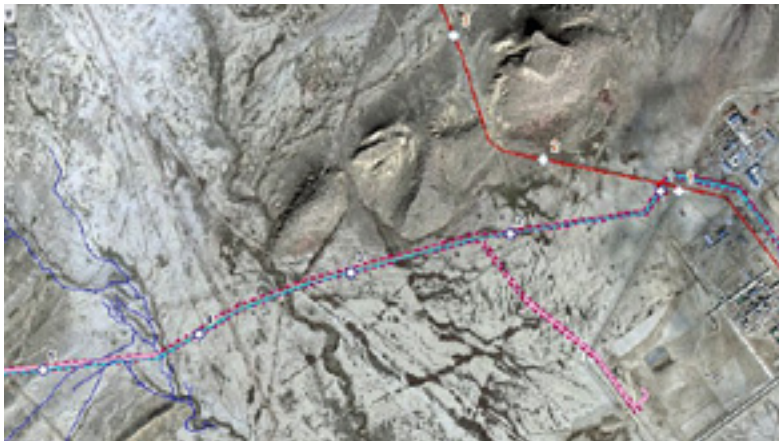
Processing in different spectral bands
(visible, infrared, thermal, etc.)

Image operation in different bands is essential in pipeline monitoring

Every band can give different kind of information

The combination of this information is the key for a reliable monitoring of the pipeline system

Our software uses this information in order to predict a possible damage or detect anything goes wrong



UAS Unmanned Aircraft Systems

Aratos Pipeline Surveillance System monitors the area of interest by using UAS in future cooperation with Rainbow Services

UAS are easily controlled and can fly in low altitude

Specifically:

UAS carry a special camera which detects areas of high temperature (e.g in case of a leakage)

The operator can use the camera in order to monitor the area from his office

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UAS Unmanned Aircraft Systems

UAS are today emerging as highly effective tools for confronting pipeline monitoring

Moreover:

Oil and gas leaks show up well in infrared because of the temperature differences between the fluid and the soil

The special camera reveals the presence of thieves

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Alerts and Warnings

Aratos Pipeline System is an intelligent system. It gathers the satellite and UAS data and takes decisions about the severity of a situation

Moreover:

Depicts the points of damage on the digital maps of the GIS System

Uses different colors depending on the severity

Gives possible causes and solutions

Sends alerts via sms or e-mail

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Advantages

Development based on remote sensing techniques and satellite technologies
Increased probability of detection
Environmental benefits
Cost savings
GIS applications
Automated tracking of changes
Automatic alerts and warnings
Intelligent decision-taking system
Integrated Monitoring System
Combination of various technologies →Reliable results
Easy to use by non-experts

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