

IN THE PIPELINE – SATELLITES WILL CHECK GAS TRANSMISSION INFRASTRUCTURE FROM SPACE

DEFINIENS IMAGING'S eCOGNITION WAS SELECTED FOR PROJECT FEATURE RECOGNITION

Munich, Loughborough (UK). Definiens Imaging GmbH, leading supplier of object oriented Image Analysis Technologies announces, that its innovative eCognition technology was selected for feature recognition within the European Commission PRESENSE project.

A 4 million Euro, remote sensing, pipeline monitoring project, headed by Advantica Technologies Ltd and the European Gas Research Group GERG with 17 collaborating partners, has gained approval for funding from the European Commission 5th Framework Research and Technology Development programme, FP5.

PRESENSE - Pipeline REmote SENSing for Safety and the Environment - aims to further improve the safe and secure transmission of gas in Europe's extensive high pressure gas mains transmission systems, by assessing the potential benefits of remote monitoring techniques and processes.

The project will involve the development of mathematical modelling software, image processing software and the evaluation of detector instrumentation. A satellite remote monitoring system will beam images to earth from satellites in space, mapping the route of a pipeline and identifying key threats to pipeline safety and security.

Definiens Imaging will coordinate the "feature recognition" workpackage in this project and will use its innovative object oriented eCognition technology to automatically find potential targets, which might compromise pipeline security.

eCognition has been selected due to its unparalleled capabilities to fuse vector and raster information, to identify objects and to put these objects into a spatial context.

"We are excited to provide eCognition to the PRESENSE Consortium and being selected as a key technology provider in this project" says Gunter Schreier, Definiens' Vice President. "Beyond the standard environmental applications of earth observation, the new series of high resolution satellites open new opportunities for monitoring facilities; and eCognition is ready to support this" he adds.

Russ Pride, project manager, at Advantica, says: "Current pipeline monitoring is undertaken routinely using a number of techniques, the most common being "flying-the-line" in helicopters or fixed wing aircraft with trained observers on board. This happens with regular frequency but is expensive and has the inherent safety concerns of all helicopter flights."

PRESENSE brings together several of the major European gas utilities and expertise from a number of the European space research agencies, together with organisations with specialist capabilities in information computing technologies such as image analysis, data management and dissemination. This provides a unique forum where new approaches to pipeline monitoring and the resulting benefits can be fully explored.

The two and a half year programme will commence on the 1st January 2002. Several of the partners will provide state-of-the-art monitoring equipment that will be flown over pipeline test sites to assess the performance of new techniques and the processing of multi-sensor data sets.

Results will be compared with imagery collected from current satellite instrumentation to enable the technology limits of the various approaches to be compared. The pipeline operator companies will provide access to their pipeline right-of-ways and will develop models for the risk and cost benefits of the various approaches considered.

"By the end of the project, we are confident that we'll be able to demonstrate the capabilities of remote monitoring from space and the huge benefits of the system for the European gas utilities as compared to current methods of network monitoring," concludes Russ Pride.

About eCognition:

eCognition software provides object oriented multi-scale satellite image analysis capabilities, and classifies an image based on attributes of the image objects rather than on the attributes of individual pixels. This classification process allows users to collect a large range of statistical parameters and detailed information from any Earth-observation data and any raster or vector based information tailored specifically to their information needs. Definiens just released its new eCognition 2.0.

About Definiens Imaging GmbH: www.definiens-imaging.com

Definiens Imaging GmbH was established in 2001 and incorporates all Geomatics and Imaging technologies and products of Definiens AG (www.definiens.com). Definiens AG evolved in September 2000 from Delphi2 Creative Technologies GmbH. The company was founded in 1994 by Nobel Laureate Professor Gerd Binnig and science journalist Dieter Herold. Definiens AG develops decentralized communication platforms as well as software for knowledge management and image analysis. Definiens AG's solutions are based on the "Cognition Network" model invented by Prof. Dr. Gerd Binnig and his team. The "Cognition Network"

uses technology that closely emulates human thought patterns. Scientific activities are coordinated by Prof. Dr. Gerd Binnig. Business activities are run by Thomas D. Grevel. Definiens AG and Definiens Imaging GmbH are based in Munich, Germany.

eCognition was awarded the European Information Society Technology prize in 2001.

About Advantica: www.advanticatech.com

Advantica is part of the Lattice Group – the infrastructure technology group which also includes Transco.

With origins in British Gas, Advantica is a leading provider of technology and engineering services to customers in gas, pipelines and associated industries internationally. Advantica recently made two acquisitions: RISX – the Aberdeen-based risk management consultancy; and US-headquartered Stoner Associates – the number one network simulation software company in the US.

Stoner specialises in providing off-the-shelf products for the gas, oil, petroleum and water industries primarily in the US where two thirds of its approximate 550 clients are located. Stoner software is also used by clients in 48 countries outside North America.

With Stoner's excellent products and extensive client base, the acquisition will make a significant contribution to Advantica's future success in the US.

Advantica now employs 1,000 people worldwide – predominantly in the UK and North America. The company's largest office is located in Loughborough, UK.

Advantica's turnover is predicted to be £94million this year.

Caption:

The consortium, managed by Advantica Technologies Ltd, on behalf of Transco – operator of the gas network in Great Britain - comprises the following partners:-

Seven further European gas & oil pipeline operators, including BP (UK), Distrigas -Now Fluxys NV-(BE) Gasunie (NL), Gaz de France (F), Ruhrgas and VNG (D), all of which manage extensive pipeline infrastructures within Europe and beyond.

Four "Remote Sensing Technology Developers", mainly from the aerospace and remote monitoring industries of Europe, comprising NERC (BGS) from the UK, CS from France, DLR from Germany and TNO from the Netherlands, that will provide expertise in the areas of surveillance platforms & equipment to provide primary data on recognition and analysis of known features on the pipeline.

The University of Nottingham which will provide vegetation stress analysis activities.

Two further providers of remote sensing technologies and services, AES from Germany and NPA from the UK.

A further grouping of three technology infrastructure providers, bringing further IT support for the project, comprising Definiens Imaging from Germany, ISS from the UK and NLR from the Netherlands.

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