

Press Release
Avon, France – October 5, 2010

Isatis new Multiple-point Statistics simulations, a step forward in facies modelling

Geovariances (<http://www.geovariances.com/>), the global leader of geostatistical solutions, announces the integration of Ephesia Consult Multiple-point Statistics software **Impala** (acronym for Improved Multiple-point Parallel Algorithm using a List Approach) into its geostatistics-dedicated software **Isatis**.

Multiple-point Statistics (MPS) is an innovative facies modelling technique based on multiple-point statistics instead of the conventional variogram-based techniques founded on statistics between two points. It offers another way to model complex geological environments through the use of a training image which describes the geometrical characteristics of the facies to model. The method allows capturing depositional elements like channels, reefs, bars, dikes or differently oriented facies, while honouring data information. Its ease of use, thanks to its intuitive side, has brought the MPS facies modelling technique to quickly spread in the Oil & Gas industry over the last years.

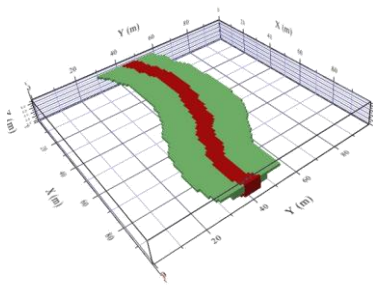


Fig 1. Training image depicting a channel

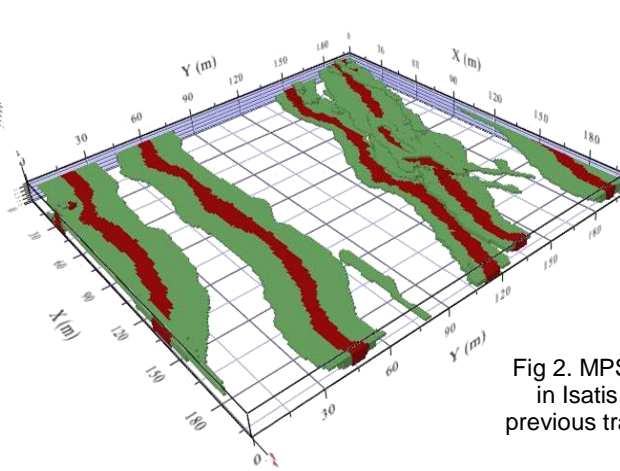


Fig 2. MPS simulation in Isatis using the previous training image

Isatis, with Impala, powers MPS technique implementation as it allows generating complex yet realistic geological patterns in an easy and efficient way. Impala algorithm has been optimized in many ways:

- It offers a new and efficient strategy for recording matching configuration. Multi-point statistics are stored in lists rather than search trees, thus resulting in a substantial reduction in memory requirements.
- Being fully parallelized, it benefits from multi-processors, which dramatically improves the calculation performances.
- It uses a multi-grid approach to capture structures within the training image that are defined at different scales which avoids considering a huge pattern.
- It may take into account facies proportions and possible external conditioning data (i.e. diagraphy, seismic or well information) thus refining and enhancing the realistic aspect of the simulations.

Besides, Isatis provides functionalities to create 2D training images from imported images and considers object-based or plurigaussian non conditional simulations as potential 3D training images.



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This improved MPS functionality judiciously complements **Isatis Plurigaussian Simulations (PGS)** already used to model complex geology geometries.

It will be part of **Isatis** next release 11.0 and will enrich the exclusive range of facies modelling techniques **Isatis** already offers (including *object based simulations* like Boolean, Dead Leaves or Dilution techniques, *variogram-based simulations* like SIS, TGS, PGS or *training image-based simulations* like the Annealing Simulations).

About Geovariances:

Geovariances is the world leader in Geostatistics software.

Geovariances aims to provide customers in the Mining, Oil & Gas and Environmental industries and others involved in mapping, resource estimation and risk analysis, with the most complete solution in geostatistics - innovative methodologies, software packages, consulting and training services.

Created in 1986, Geovariances has sold more than 1000 licenses of its flagship software package Isatis to 300 leading multinational companies including Petrobras, Shell, Total, Areva, BHP Billiton, Rio Tinto, CEA and Ifremer.

Geovariances is committed to technology innovation and high-quality long-term relationships with its customers and proposes different research programs.

For more information, visit www.geovariances.com.

About Ephesia Consult SA

Ephesia Consult SA (<http://www.ephesia-consult.com>) is a consulting firm specialized in research and development for the evaluation of natural resources and risk assessment.

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