XIP

SnakeGrid: Local Coordinate Mapping

SnakeGrid® products provide innovative solution to a significant problem in engineering surveying.

Image credit: I Stock (sorn340)

Background

When working on projects that extend a few kilometres, engineers and surveyors are accustomed to the concept of a local site grid that effectively makes a flat earth assumption. As projects grow beyond a few kilometres, however, it becomes necessary to introduce a projected coordinate system – and then all those working on the site have the problem of making scale factor corrections. If there is a significant height range across the project then there is the added problem of making reductions to sea level or any other standard reference height.

SnakeGrid®, a registered trademark of UCL Business PLC, includes a range of bespoke and over the counter surveying solutions based on technologies developed in UCL Civil, Environmental and Geomatic Engineering Department.

Technology Overview

The SnakeGrid® solution provides a coordinate grid system that maintains a unity scale factor along a trend line that follows the project in and height. In this way, projects such as railways, highways and pipelines can extend for hundreds of kilometres, can have a single seamless grid with a scale factor distortion less than a few parts per million along the whole project and for several kilometres on either side.

The SnakeGrid® family of products, a design service to produce the SnakeGrid®, software to transform between coordinate system and mapping of raster images and also provides the core SnakeGrid® functionality as a Dynamic Link Library (DLL) for integration into third party software and instrumentation.

SnakeGrid PointWise: https://xip.uclb.com/product/SnakeGrid_PointWise

SnakeGrid Projector for FME Server:
https://xip.uclb.com/product/SnakeGrid_Projector_FME_Server

SnakeGrid Local for FME Desktop: https://xip.uclb.com/product/SnakeGrid_Local_FME_Desktop

SnakeGrid Projector for FME Desktop:
https://xip.uclb.com/product/SnakeGrid_Projector_FME_Desktop

Benefits

SnakeGrid® products provide innovative solution to a significant problem in engineering surveying, namely the design of a coordinate system that has minimal scale factor and height distortion even when projects extend for many hundreds of kilometres.

Applications

Rail companies across Europe

Engineering infrastructure companies

Major pipeline projects

Civil Engineering surveying companies

Seeking

Licensing, Development partner