



## SnakeGrid: Local Coordinate Mapping

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

Category  
Software/SnakeGrid

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### 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](https://xip.uclb.com/product/SnakeGrid_PointWise)

SnakeGrid Projector for FME Server: [https://xip.uclb.com/product/SnakeGrid\\_Projector\\_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](https://xip.uclb.com/product/SnakeGrid_Local_FME_Desktop)

SnakeGrid Projector for FME Desktop: [https://xip.uclb.com/product/SnakeGrid\\_Projector\\_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