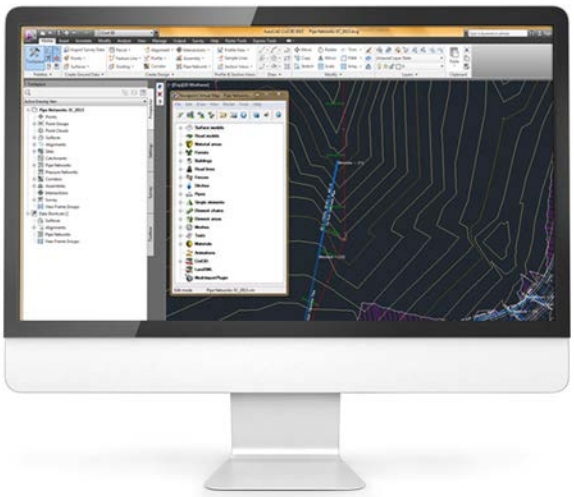
TOPCON

MAGNET MODELER

PARAMETRIC MODELING ENGINE



MAGNET® Modeler is a parametric modeling engine that produces combined multi-disciplinary models from various input sources.

You keep all input data and geometry throughout the whole process. The use of parametric modeling rules make traditionally time consuming tasks automatic which allows cost efficient, professional quality design modeling, visualization, simulation and analysis.

Integration and Data Import

MAGNET Modeler integrates smoothly to your existing tools such as Autodesk® AutoCAD®,Civil 3D® and Map3D®. You can also import data in various standard formats such as open data model formats (LandXML, IFC) and generic 3D model formats.

Autodesk® AutoCAD®, Civil 3D® and Map3D® integration

MAGNET Modeler reads Civil 3D surfaces, corridor models and pipe networks, AutoCAD 2D and 3D geometry and Map 3D GIS object data directly into the model. Engineers are able to see the effects of design updates in relation to other data immediately by just pressing a button.

Support for open data model formats (LandXML, IFC)

MAGNET Modeler supports open data model formats such as LandXML and IFC. By using open data model formats MAGNET Modeler is compatible with almost any design system e.g. Autodesk®, Bentley®, Tekla® and others.

Import generic 3D model formats

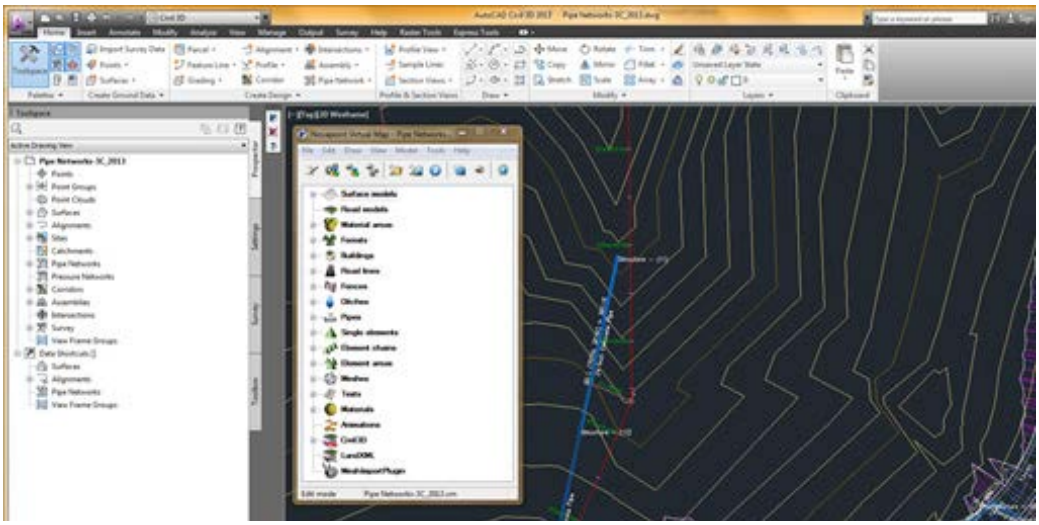
MAGNET Modeler can also import generic 3D model formats like fbx, 3ds, obj, dae (Collada) and others. This means models from almost any 3D modeling package can be integrated into a combined collaboration model. Models can be added to real world design coordinates without loss of accuracy or manual conversions.

Parametric Modeling and Visualization

MAGNET Modeler handles 2D to 3D as well as GIS data to 3D conversions. You can convert digital maps into 3D city models, utility network data into volumetric 3D objects and traditionally engineered 2D disciplines such as landscaping, pavement markings, lighting and sign plans into 3D automatically.

2D to 3D conversions

Any 2D area, line or point data can be defined to be a parametric 3D object in the final model.



Many design disciplines still work in 2D but in MAGNET Modeler they can be raised automatically to the correct 3D elevation and shape. For example, pavement markings are automatically raised to road elevation and landscaping areas can be filled with trees or bushes and raised to the terrain.

GIS data into 3D

Typical GIS data is vector data and to be useful in MAGNET Modeler it needs to be converted into 3D models. MAGNET Modeler makes this automatic using parametric modeling rules. For example, digital maps can be raised into 3D city models and utility networks can be given the correct 3D shape without the need for any manual modeling. This is very cost effective, especially for large datasets. MAGNET Modeler also saves the GIS element attributes into the model so the models contain not only geometry but also the necessary GIS information.

CAD symbols to 3D objects

Many design disciplines like lighting, landscaping and signs use CAD symbols to define the position of elements.

You can automatically replace symbols with 3D objects and raise them to their correct elevation. In this way planning can still be done in 2D, but can automatically produce and keep a 3D MAGNET Modeler of 2D plans.

Automatic visualization

Modeling rules have the option to automatically attach materials and textures to the model geometry. This helps your models to look visually correct and makes them easier to recognize.

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For more information:
topconpositioning.com/magnet-modeler

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