

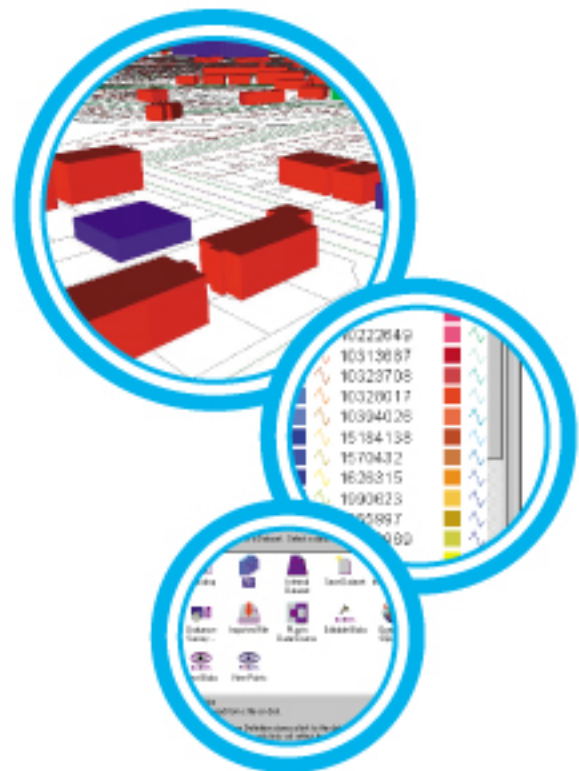
Ultimate GIS development plus 3D modelling and analysis

Cadcorp SIS – Spatial Information System V5 is a family of end-user and developer Windows based GIS products. Map Modeller provides the advanced GIS user a comprehensive set of symbolization, editing and modelling capabilities. In addition to all the functionality of Cadcorp Map Manager and Editor, it has the added capability of 3D modelling, terrain analysis and several additional thematic and analytic mapping tools.

3 Dimensional Design and Analysis

Advanced data modelling takes advantage of the third dimension. Map Modeller uses 3 dimensional data as the source for the creation of triangulated irregular networks (TIN) and digital terrain models (DTM). From these basic models, surface draping of raster images and vector data over these structures can produce effective 3D representations. Draping can include satellite images, aerial photographs, raster images and user created vector map layers.

Even without full 3D data, Map Modeller can extrude 2D geometry, such as building outlines, to show simple images of the 'real world'. In this way 'flat' 2D maps can come to life to present your data in more effective way. 3D modelling allows additional features to be generated and placed within the 3D



scene to explore 'what if' scenarios. Further analysis might include extruding the building shapes using related database data. For example, to show building age or square footage you might use the "age" value or the "area" value to drive the height of the extrusion.

Once the scene has been created, the whole picture can be dynamically rotated and scaled for exploration from different vantage points. Underground infrastructure such as cable routes and pipe networks can be viewed from 'below ground' providing a new window in facilities management records.

3D views operate within a '3D Window'. No less than 5 modes of view-point movement can be used in a 3D Window, these include Cruise - which is equivalent to flying a helicopter over the model, Eye - where you stay

stationary but look left, right, up and down, Model - which is equivalent to orbiting the centre of the model on any axis, Pan - where the actual eye position is moved left or right up or down and finally Zoom - where the eye moves in closer to the view or conversely, further away.

Relief shading and enhancements to the ambient and diffuse light levels ensure all terrain is shown realistically

Spatial Analysis and Thematic Mapping

In addition to the basic thematic and analysis tools of Map Manager and Editor, Cadcorp Map Modeller adds Thiessen polygons, grid analysis, contour mapping and flow-line generation.

Thiessen polygons represent areas of influence and can be generated around specific points. For example, they might be used to explore the optimal store location set against population levels.

Grid analysis assigns a value to each 'grid cell' of a map. This type of analysis can be effective for continuous data such as temperature, soil moisture levels or soil PH - where values change gradually. It can also be used with Boolean arithmetic to query, add and subtract grid data layers to find sites meeting specific criteria.

Contour mapping creates height lines of a defined height increment from the data stored within a map of spot-height data.

Flow-lines representing drainage run-off can be generated and superimposed on a con-

tour map. This can be very useful in 'what if' scenarios when comparing the drainage implications of landform changes.

OpenGL

Map Modeller uses OpenGL, an industry standard 3D software library to draw 3D data and because OpenGL is available in the Microsoft NT and Microsoft Windows 95/98 operating systems users do not need a special graphics card.

Summary

Cadcorp Map Modeller is the most comprehensive 'off-the-shelf' GIS offering from Cadcorp. It can stand alone or work as part of a departmental or enterprise-wide solution. Sporting all of the capability of its siblings, Map Modeller includes 3D modelling and analysis capability as well as other tools which make it both powerful and cost effective.

computer aided development corporation



cadcorp

Sterling Court, Norton Road
Stevenage, Herts, SG1 2JY

Tel: +44 (0) 1438 747996

Fax: +44 (0) 1438 747997

www.cadcorp.com