3D-ANIMATOR

Virtual reality project presentation

Function

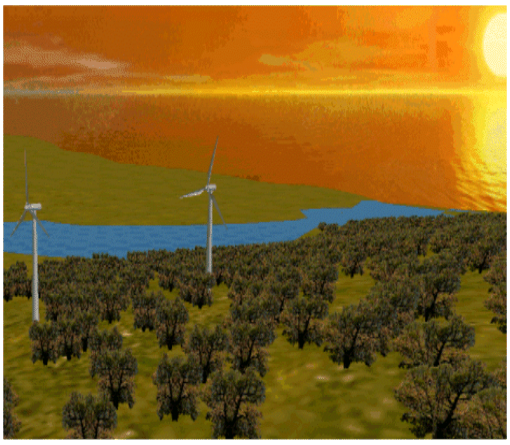
The module opens for a virtual reality (VR) modeling of any given WTG project and any 3D objects (e.g. power masts, houses, forest). The artificial landscape is rendered based on the height contour lines. This surface is then draped with a texture surface, i.e. a map, an aerial photo or any texture, that might give a realistic presentation of the region. After rendering, you can freely move through the model with rotating turbines controlled from keypad, mouse or Joystick. A movie sequence (video) can be recorded and a free flight 3D animation can be exported and operated outside WindPRO.

Calculation model

The technique behind a 3D-animation is that all elements in the landscape are build as polygons with surface textures. A texture is nothing but a standard bitmap picture, so you are able to create and use your own unique picture database in the VR. All polygon coordinates are calculated in WindPRO and finally added to a rendering engine that processes the VR-data and makes the actual viewing including the light settings.

Necessary input data (objects)

Please note that the objects are entered in the WindPRO module BASIS. Please read the description of the WindPRO module BASIS for further details.



Wind turbines:
One or more WTGs are entered (position and type). The WTG can usually be found in the WTG Catalogue, which contains more than 700 different WTG types. In the WTG Catalogue, the WTG is described 3-dimensionally with dimensions and colors. Company logos may also be added on the nacelle.

VR Object:
The VR (Virtual reality) object contains all relevant information as e.g. size of area, texture on landscape, sky background and set up of WTG render properties.

Other objects for generating landscape elements:
The area object is used for VR-modeling of forest, lakes, animal fields, villages etc. The area data is any data that may be processed as either 'surface areas' or 'number of items per square area'. Each VR-area is build from polygons, either by specifying a box with sides, bottom and top or in combination with a mix of individual elements, e.g. trees, animals, houses etc. Other available objects are: WAsP obstacles and 3D-objects. These are used for modeling of individual objects such as high voltage masts, transformer stations. The Meteo object may be used for showing the position of the meteorological mast. The line object can be used for modeling of e.g. artificial roads or streams/rivers.

Description

The WindPRO module 3D-Animator is used for creating an artificial landscape model with WTGs for giving a realistic presentation and landscape analyze in relation to a proposed WTG project. Animations may be used for evaluating different project alternatives, in discussions with planning authorities, neighbors, etc. and to adjust a project to fit into the landscape in the best possible way. In addition, for project marketing a 3D-Animated presentation is a valuable tool. Furthermore, a flight trough the landscape often can show critical errors in the background data for energy calculations. The minimum Requirements: Minimum Windows XP/Vista/7 and a fast 3D-graphics card.

Sample movie sequences
We have prepared some movies sequence to introduce you to this new module. Click one of the links to view:
Video 1: French site. High Resolution. Low Resolution.
Video 2: Greek mountainous site. High Resolution. Low Resolution.
Video 3: Site Cronalaght in Eireland with 100 turbines.
High Resolution. Low Resolution.

NO additional software is required

To distribute your 3D animation, the 3D world and data files you have created can be burned directly on a CD from the program. The burning will automatically include the shareware program 3DAlone. With 3DAlone and the background data also people without WindPRO license can explore your site.