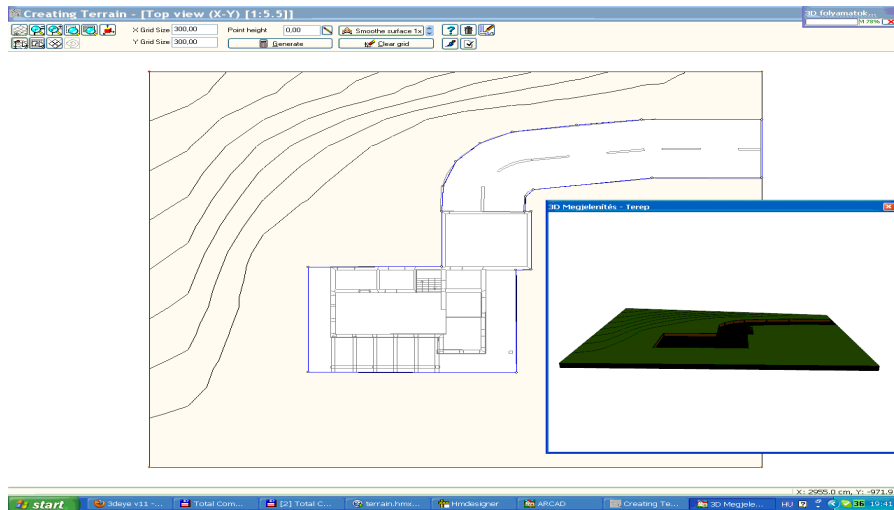


# Terrain Designer



## User's Guide

**DesignSoft**

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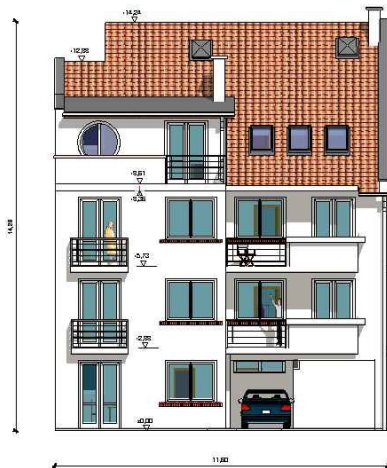
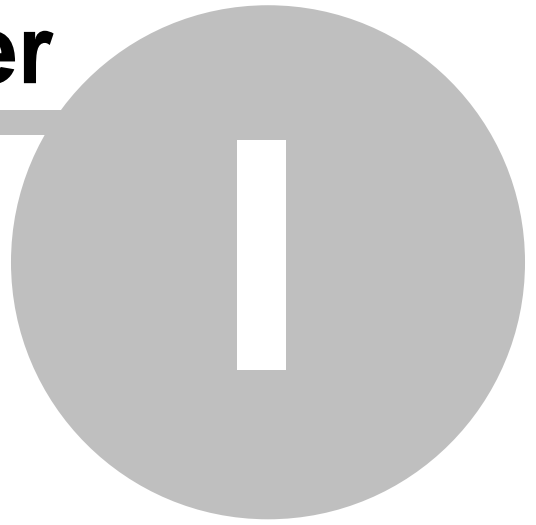
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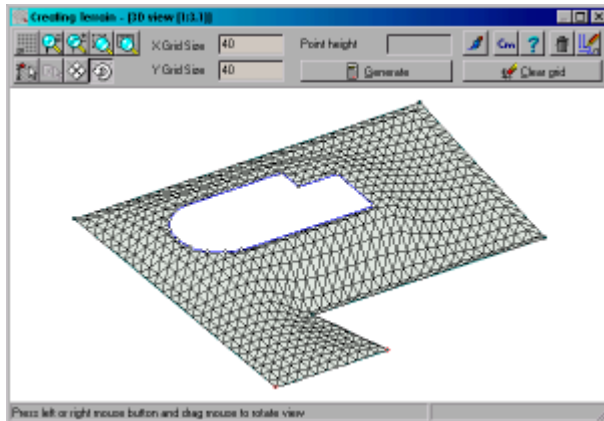
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# Chapter






# 1 Terrain Editor

By clicking on the  icon the terrain editor window appears.




## Elements of the editor window:

  Switching between 2D top view and 3D axonometrical view.


    Buttons for zooming.


 **Surface properties** of the terrain.

 Changing the settings of the program.

 Return to the floorplan editor after erasing the terrain.

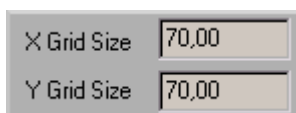
 Return to the floorplan editor with saving.

 This button selects the mode for **altering dot altitudes**


 This button selects the mode for **creating holes in the terrain**


 **Moving the view**

 **Rotating the 3D view**



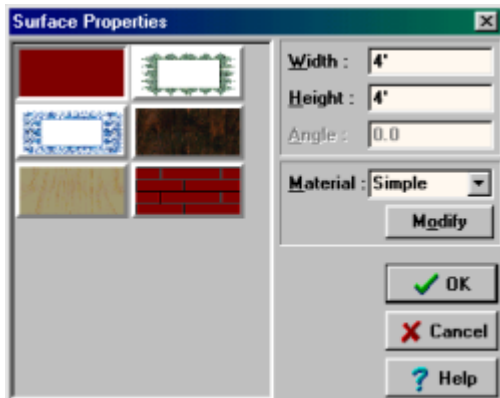
These fields are for entering the grid sizes of the terrain. Smaller values result in a smoother curving surface but cause more memory use and require more calculation time.

Press the  **Generate** button to calculate the terrain. The generated terrain lies between the contour and contains the created inner points as well as the holes. Its resolution is determined by the grid sizes "X" and "Y".

The  **Clear Grid** button erases the current surface allowing the editing of the base points and holes of the terrain more easily. The contour, the inner dots and the hole contours will not be deleted by this function.

## 1.1 Surface Properties

Using **Surface properties**, you can assign a characteristic texture to your terrain. When visualizing the 3D rendering, your terrain would be covered with the pattern of this surface property. To define a texture, adjust the settings per below in the dialog box which will appear.



The settings of the dialog box are as follows:

**Color button** : press this to assign a homogenous color to the terrain surface.

**Textures:** Textures are stored in **BMP** format files that may augment with additional textures. To do so, place the new **BMP** file in the **LIB** directory and then note the new file name in the **Terrain** information section of the **Texture.ini** text file;


**Width/Length:** These parameters set the size to which you wish to stretch the pattern shown on the display swatch before it repeats;

**Rotation:** adjusts the rotational angle of the texture.

**Material** : You can change the material used for photorealistic rendering (ray-tracing).

These surface properties apply to the whole terrain surface.

## 1.2 Altering Point Heights

After pressing the  button, you can set the heights of the dots defining the surface grid. You may also create, move and delete points in this mode.

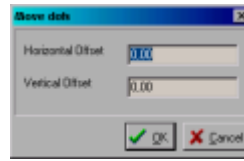
**Setting dot altitudes:** Select the dots using the mouse (click on a dot or use frame selection). Then enter the desired value in the "Point height" field and press Enter. The selected dots will be positioned at that altitude.

Note: You may also set the altitudes of the hole contour dots.

The altitudes of the points of the generated terrain surface can not be changed directly. You have to create new inner dots (and press "Generate") to make a different surface which contains the new dots.

**Creating inner points:** In top view, position the cross-hairs at the desired position and choose "New dot here..." in the right-click popup menu. You may also call this function by pressing Insert. The created dot will have an altitude shown in the "Point Height" field. You may alter dot altitude with the method described before.


Press “X” or “Y” to create dots by entering offset values to the current crosshairs position. No dots must be selected to access this function. Enter the offset values in the appearing dialog.



**Moving inner points:** In top view you can move dots by dragging with the mouse or pressing “X” or “Y” or pressing the cursor movement keys (with Shift held down optionally). Press F3 to switch between “small” and “large” amount of moving with the cursor keys.

**Use the right-click popup menu** to access Undo and Redo functions (Alt-BackSpace / Shift-Alt-BackSpace).

## 1.3 Creating Holes in the Terrain

Press the  button to select hole creation mode. With this feature you can create holes in the terrain for buildings and other objects.


**Drawing the hole contour:** Create a continuous line in top view (see **Creating inner points** for dot creation methods). You may draw an arc too. For this, switch on arc drawing by selecting “Create Arc” in the right-click popup menu. When you create another dot (press Insert) a dialog appears to set the parameters of the arc which will lie between the new dot and the previous dot. Select the menu item again to switch off arc drawing. Close the hole contour by pressing Insert on its first point or choose “Close Polyline” from the right-click popup menu.





**Use the right-click popup menu** to access Undo and Redo functions (Alt-BackSpace / Shift-Alt-BackSpace).

Note: You may create several hole contours, but they can not overlap each other.





You may also alter the altitudes of the hole contour points.


## 1.4 Moving the View

After selecting this  icon, you can move the whole plan in the active window. While holding the left mouse button down, you can dynamically position the whole roof together with its contour lines. This movement does not really move the plan, only the visible area changes.

You may also position the plan by using one of the     icons or **Ctrl+**, **Ctrl-** or **Ctrl E**, **Ctrl Shift E** hot keys. (See **Zooming**)

### 1.4.1 Zooming

You can adjust the viewed size of your plan by using one of the     icons or the equivalent **Ctrl** and a character hot-key combination. Let's see the effects of the icons and the hot-keys.

 **Ctrl** - Zoom in on the image in the active window. If the image becomes too small to zoom in again, then further execution of the function will be suspended.





**Ctrl +** Zoom out the image in the actual window. If the image becomes too large to zoom out again, then further execution of the function will be suspended.




**Ctrl W** Zoom out to an area defined by frame. You select an area with a frame which you want to zoom out to fit to window.



**Ctrl E** Zoom to plan size. You may zoom the whole plan extents to fit to the active window.

## 1.5 Rotating the 3D view



To rotate the roof, click on the  icon and *while pressing down the left or right mouse button* (depending on your desired rotation direction) simply move the mouse.

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