3D EyeWitness

Crime, Fire and Traffic Accident Scene
Reconstruction Software

DesignSoft

3D EyeWitness

Crime, Fire and Traffic Accident Scene Reconstruction Software

COPYRIGHT DesignSoft, 2012

3D EyeWitness is a registered trademark of DesignSoft and Designware, Inc.

IMPORTANT-READ CAREFULLY: This DesignSoft End-User License Agreement ("Agreement") is a legal agreement between you (either an individual or a single entity) and DesignSoft Corporation for the DesignSoft software accompanying this Agreement, which includes computer software and associated media and printed materials, and may include "online" or electronic documentation ("SOFTWARE PRODUCT" or "SOFTWARE"). By opening the sealed packet or by downloading or installing the SOFTWARE PRODUCT or exercising your rights to make and use copies of the SOFTWARE PRODUCT, you agree to be bound by the terms of this Agreement. If you do not agree to the terms of this Agreement, promptly return this package to the place from which you obtained it, or in case of a download, delete the downloaded file(s) and uninstall the product from your computer(s).

SOFTWARE PRODUCT LICENSE
The SOFTWARE PRODUCT is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The SOFTWARE PRODUCT is licensed, not sold.

1. GRANT OF LICENSE. DesignSoft grants to you a nonexclusive right to use the SOFTWARE PRODUCT on a single computer unless otherwise indicated on the invoice accompanying this product. You must pay for additional copies of the software if more than one copy will or may be running at the same time on one or more computers. You may not rent, sell, lease, sub-license, time-share or loan the software to others.

2. COPYRIGHT. All title and copyrights in and to the SOFTWARE PRODUCT (including but not limited to any images, photographs, animations, video, audio, music, text, and "applets," incorporated into the SOFTWARE PRODUCT), the accompanying printed materials, and any copies of the SOFTWARE PRODUCT, are owned by DesignSoft or its suppliers. The SOFTWARE PRODUCT is protected by copyright laws and international treaty provisions. Therefore, you must treat the SOFTWARE PRODUCT like any other copyrighted material except that you may either (a) make one copy of the SOFTWARE PRODUCT solely for backup or archival purposes, or (b) install the SOFTWARE PRODUCT on a single computer (except as described in section 1) provided you keep the original solely for backup or archival purposes,.

3. OTHER RESTRICTIONS. This Agreement is your proof of license to exercise the rights granted herein and must be retained by you. You may not reverse engineer, decompile, or disassemble the SOFTWARE PRODUCT, except and only to the extent that such activity is expressly permitted by applicable law notwithstanding this limitation.

LIMITED WARRANTY NO WARRANTIES. DesignSoft expressly disclaims any warranty for the SOFTWARE PRODUCT. The SOFTWARE PRODUCT and any related documentation is provided

"as is" without warranty of any kind, either express or implied, including, without limitation, the implied warranties or merchantability, fitness for a particular purpose, or non-infringement. The entire risk arising out of use or performance of the SOFTWARE PRODUCT remains with you.

NO LIABILITY FOR CONSEQUENTIAL DAMAGES. In no event shall DesignSoft or its suppliers be liable for any damages whatsoever (including, without limitation, damages for loss of business profits, business interruption, loss of business information, or any other pecuniary loss) arising out of the use of or inability to use this DesignSoft product, even if DesignSoft has been advised of the possibility of such damages. Because some states/jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damages, the above limitation may not apply to you.

MISCELLANEOUS
Should you have any questions concerning this Agreement, or if you desire to contact DesignSoft for any reason, submit your question at wwww.designsoftware.com under Technical Support or please write to:
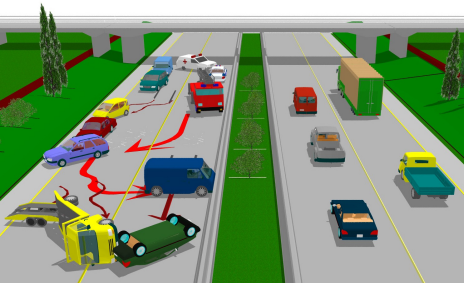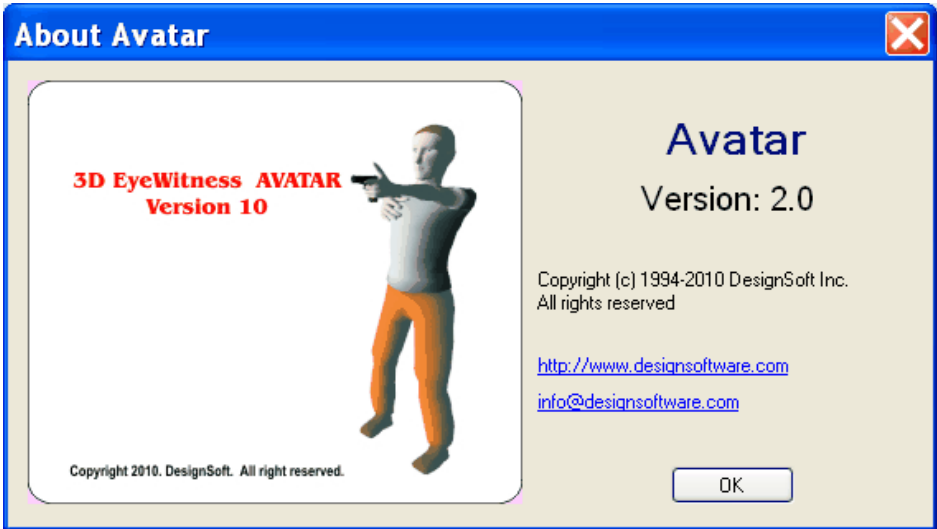
DesignSoft

http://www.designsoft.biz/techsup.php

Contents

Part

I

1 AVATAR

AVATAR

Part
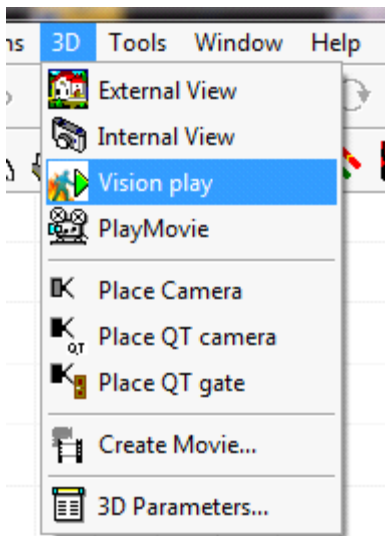
II

2 HOW TO START THE PROGRAM

● In 3D Eye Witness 2D editor: in the menubar click the Avatar icon.

● In 3D Eye Witness 3D editor: in the menubar click the Avatar icon.

● In 3D Eye Witness 2D editor: in the main menu click the 3D menu item, and in the submenu click the Avatar play item.

● You can start 3D Eye Witness Avatar directly: open My Computer and navigate to the directory where you installed 3D Eye Witness. Navigate to the sub directory Vision, then exe, then Release and start VisionEditorClassic.exe.

[!] If you start Avatar directly it won't load any scene automatically, but you can load a previously saved scene by clicking File main menu then Load sub menu item. If you start Avatar from the 3D or 2D editor it will automatically load the scene presented in the 2D / 3D editor.

2.1   Loader screen (window)

When a scene starts loading the Loader screen appears and presents the scene (under loading)'s location in the hard drive. After it processes the scene's structure it starts to load and build the objects in the scene and the Loader screen will present the processed object's ID.

[!] The loading can take some time especially when the scene is complex.

Part

III
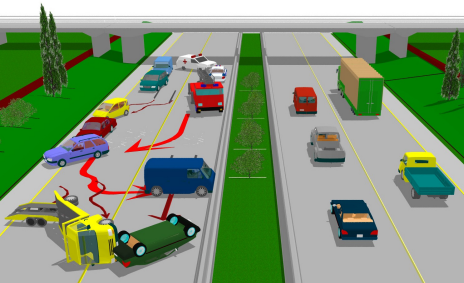
3 USER INTERFACE

Enter topic text here.

3.1   Window headline / top border.

The window's title is the loaded scene's location in the hard drive (if a scene is loaded).

The buttons in the top-right of the window (from left to rigth):

- Minimize the window to the task bar.
- Maximize the window's size.
- Close the window.

3.2   Main menu

Menu items (from left to right):

- File
  - 0 Load: loads a previously saved scene.
  - 0 Save as: saves the current scene (if any).
  - 0 Reload: reloads the current scene (if any).
  - 0 Recent files: recently used scenes. To load one of them click the scene's location in the list.
  - 0 Exit: closes Avatar.
- Edit
  - 0 Change background color: shows a dialog window in which you can set the scene's background color.
- Camera
  - 0 To start position: moves the camera back to the start position (start position: the camera's position when the scene started).
  - 0 Attach to object: the camera will be attached to the currently selected object.
  - 0 Detach from object: detaches the camera from the previously attached object.

- Options
    - 0 Settings: with this you can customize the program's behaviour / settings.
    - 0 About: informations about the program and about the developers.

3.3 **Other elements of the User interface**
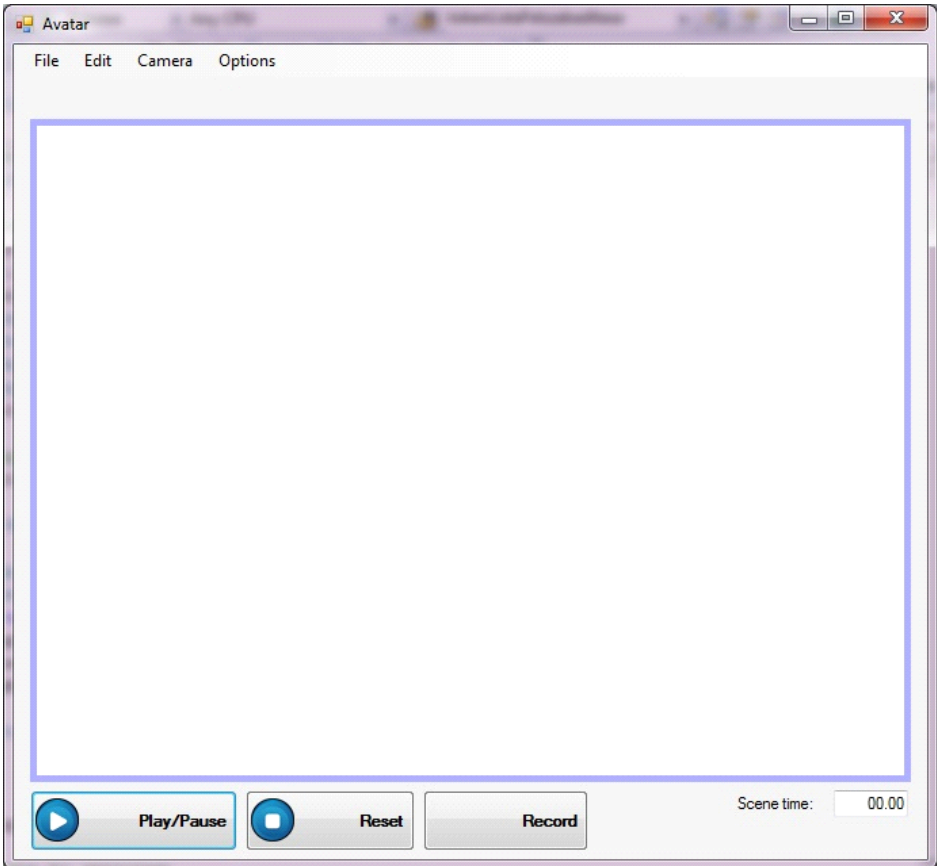
The center (and the biggest) part of the User interface is the rendering area (where the loaded scene is presented).

[!] Many function will be unavailable if there's no loaded / active scene, for example Play/Pause, Reset, Record, Save as, … If there's no

loaded scene and you try to activate a function which depends on a loaded scene it will present a warning message indicates you have to load a scene before you can use the function.

The buttons in bottom part of the User interface

- Play/Pause: will play the current scene (if any) or if it is already playing it will pause it (you can resume after you paused if you click again the Play/Pause button).
- Reset: will reset the current scene's animation.
- Record: starts a record session. It will present some settings of the recording and after you set them it will reset the current scene's animation and starts to record it until you click the Record button again (actually when you starts a recording the Record button's title will change to Stop).

In the bottom right corner of the User interface you can see the current scene's animation time.

3.4   Compact mode

This is the default mode when Avatar starts.

If a scene has a background image as background the window will resize itself and will try to mach the image's size as much as it can (but it will give attention to stay totally in the screen).

3.5   Maximized mode

You can switch to maximized mode (and then back to compact mode) by clicking the Maximize button at the window header. For more information see the Window header section of the User manual.
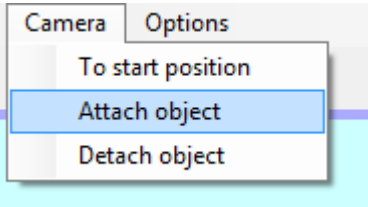
Part

IV
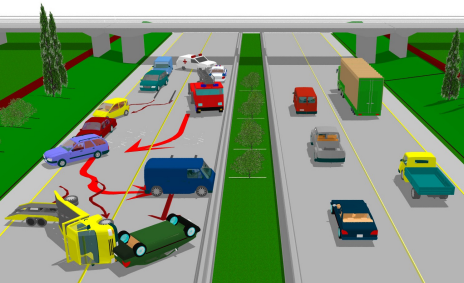
4 ATTACHING CAMERA TO AN OBJECT
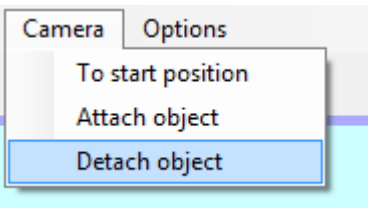
Enter topic text here.

4.1 Attach

Select (left click with the mouse) an object in the scene (it will indicate you selected it), then click main menu item Camera and click Attach to object menu item in the submenu.

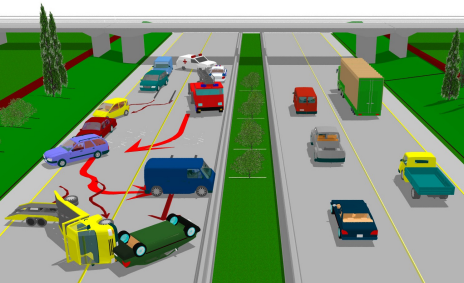[!] The camera stays attached to the object until you detaches it.

4.2 Detach

Click Camera main menu item then click Detach from object sub menu item.

Part

V

5 CAMERA HANDLING

Basic camera handling methods:

- Left click in the scene: it will select the object under the mouse – or if there's no object under the mouse it will deselect the previously selected object.
- Hold pressed the left mouse button + move the mouse: it will rotate the camera around the selected object (or around the center of the scene if no object selected).
- Mouse scroll or hold pressed the right button of the mouse + move the mouse up/down: it will move the camera forward/backward.
- Hold pressed the middle mouse button or hold pressed the left and right mouse buttons + move the mouse: it will move the camera in the direction you move the mouse (left, right, up, down).

[!] The rotation will be preformed around the selected object or around the scene's center if there's no object selected.

[!] If you attach the camera to an object the rotation will be performed relative to the object until you detach the camera.

Part

VI
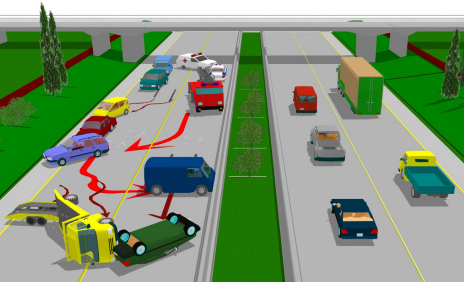
6 SETTINGS

Click Options in the main menu then Settings sub menu item.

[!] Settings will be saved automatically when you change a setting.

[!] Many settings can be changed only when a scene is already loaded.

With the tabs in the Settings scene you can change categories of the settings.

The settings, by tabs:
- General
  - 0 Scene debugger: if you turn it on it will present some visual debugging in the scene (will visually show the positions of the objects and their directions).
  - 0 Show debug overlay: presents some technical information about the scene, in the scene. Information: triangle count of the scene, etc.
  - 0 Y synchronization time: avatar up/down synchronization time (in seconds). The default will be fine mostly, if you want a more precise up/down synchronization decrement the setting.
  - 0 Application Path: the location of the program / application in the hard drive.
  - 0 Project Path: the location of the project directory in the hard drive.
  - 0 User Path: the location of the User directory in the hard drive.
- Graphics
  - 0 Object fill mode: defines how the objects will be filled. Options: Fill (default, totally filled), Point (only the points of the objects will be drawn), Wire (only the triangles build up the object will be drawn).
  - 0 Preferred renderer: OpenGL or DirectX. You can set the preferred renderer (almost every time the renderer will be used, except when some error happens), which will manage

the drawings of the scene. OpenGL is the default, in most PCs it looks better, but sometimes it has compatibility problems which case you can switch to DirectX.
[!] DirectX option is only available if you installed DirectX.

- User settings
  - 0 Help message about recording: if you turn it on will present a help message when you start a recording.
  - 0 Warning at close: if you turn it on it will warn you at close / exit whether you totally sure about or want to save the scene before.

Part

VII
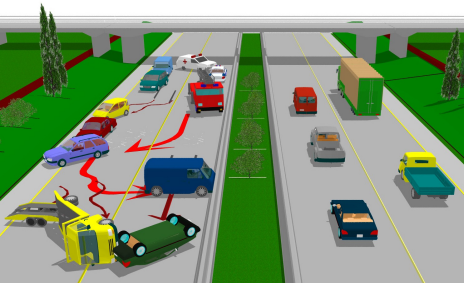
7 VIDEO RECORDING

To start a recording session click the Record button (in the bottom of the window).

[!] The recording will stop when you click the Record button again after you started a recording session (the button's text will change to Stop if you started a recording session). This way you can move the camera, select objects, etc. even after the scene animation is ended and these will be also recorded.

When you click the Record button it will present a recording settings window in which you can set some parameters to the recording:

- Frames per seconds: this will specify how many frames (pictures or snapshots) will be taken in one second. If you set it higher it will take more snapshots and the video will be smoother but it will take more time to record and convert the taken snapshots to a video. Additionally: most of the people can see only 25-30 frames per seconds so set this setting higher than 25 or 30 frames per seconds won't affect the video's smoothness for most of the people.
- Priority: options are speed and quality. Speed is the default. This case the program tries to take the snapshots as fast as it can. If you set quality as priority then the program will try to make a snapshot as detailed as it can. Speed is preferred because it's quality is also sufficient in most of the cases (the video conversion will degrade the image quality anyway) and it's much faster than the quality setting.

To accept the settings click the OK button. If you click the Cancel button the recording won't start.

After you clicked OK in the recording settings window it will optionally (you can turn it off in the settings or by uncheck the checkbox in the warning window) show a warning window about the recording won't stop until you press the Record button again (if you start a recording session the button's text will change to Stop).

To stop the recording click the Record button again (if you start a recording session the button's text will change to Stop). After you clicked the button it will show a video settings window in which you can set the final video's (which will be stored on your hard drive) settings, for example the format of the video (AVI – which means .avi file, Flash video – which means .flv file, …), the quality of the conversion (kBit/s – which means kilo bits per seconds) and some other options.

After you set these settings click OK to start the video conversion and to save the final video to your hard drive (the exact location will be asked when you click the OK button).

After the conversion you can freely copy, move or delete the video file.

Part

VIII
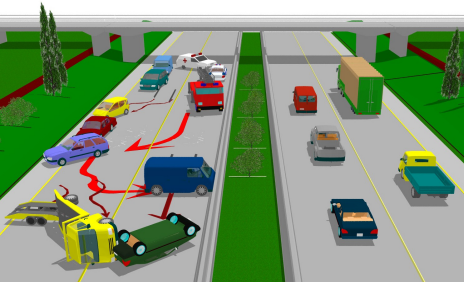
8 System Requirement

- Windows XP SP2, Windows Vista, Windows 7 or newer
- Microsoft .Net 3.5 or newer
- DirectX 9.0c 2010 June
- OpenGL
- vcredist
- + 500 MB RAM to the Avatar module
- video card: ShaderModel 2.0 support
- processor: 2 GHz or better