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HyperWorks

Altair HyperWorks Desktop 2019 Tutorials

HWD-0040: Presenting Results

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In this tutorial, you will learn how to:

- Capture screen contents to files.
- Capture animations to files.
- Export CAE data in Altair's Hyper3D format and view it with HyperView Player.
- Create HTML and PowerPoint (XML) report files from HyperView.

Tools

From the **View** menu, select **Toolbars > HyperWorks > Image Capture**.



- **Capture Graphics Area** : HyperWorks Desktop allows you to capture the screen (the windows in a session page) to a BMP, JPEG, PNG, or TIFF file to use in a report. You can open the file in an image editor and in HyperView's video window.
- **Capture Graphics Area Video** : HyperWorks Desktop allows you to capture animation data to an AVI, AMF (Altair Movie File), BMP, JPEG, TIFF, PNG, or GIF file. You can view the AVI file in a movie player application and in HyperView's video window.
- **Capture Dynamic Rectangular Video** : This works the same as the **Capture Animation Video** function, but after entering the file name, you must graphically select a rectangular area where the video will be recorded. Use the left mouse button to draw the window and then click the right mouse button to accept the area.

From the **File** menu, select **Export > H3D Model**.

- Altair's Hyper3D (H3D) file is a compact, binary 3D movie file. This format allows you to store model and results data in a single, compact file, rather than in multiple, large solver results files. You can create an H3D file containing only the data you want someone to access and easily distribute information using H3D files with HyperView Player.

From the **File** menu, select **Publish > HTML, PowerPoint 2003, or PowerPoint 2007**.

- You can capture multiple pages and windows to various file formats (H3D, AVI, JPEG, etc.) and organizes them into an HTML or PowerPoint (XML or HML) file. The PowerPoint file will be in XML format. You can read XML files into Microsoft PowerPoint 2003 and HML files into Microsoft PowerPoint 2007.

HyperView Player

HyperView Player is an Internet browser plug-in and standalone application for visualizing 3D computer aided engineering models and results in H3D file format created from HyperView.

The HyperView Player window is embedded in the HTML or XML reports generated so as to view the 3D data using the plug ins.

In HTML files, you can also display H3D data in a 2D preview image as shown in the image of the sample HTML report below. This image is stored in the H3D file. Click the image to open HyperView Player's standalone application with the H3D file loaded. Windows and UNIX support 2D preview images.


Exercise: Creating HTML and PowerPoint Report File

This exercise uses the file `presenting_result.mvw`.

Step 1: Create the H3D file for page 1, window 1.

1. Open the session file `../tutorials/mv_hv_hg/animation/presenting_result.mvw`.
2. Activate page 1, window 1.

On the window's legend, **Displacement (Mag)** is the active contour result type. This allows the creation of the maximum displacement results to be saved to the H3D file.

3. From the **Display Control** icon, , uncheck the option for **Contour**.
4. Also, in the **Display Control**, uncheck the option for **Section Cuts**.


When the H3D file to be created is opened, the default display will not have a contour or section cuts. However, the contour and section cut(s) are saved to the H3D file and can be turned on.

5. From the **Animation Controls** panel, set **Animate start** to `0.022` and **Animate end** to `0.042`. Be sure to press ENTER after typing in the new values.


Only displacement results in this range will be saved to the H3D file.

6. From the **Preferences** menu, select **Export Settings > H3D**.
7. Activate the option **Compression Maximum % loss**.
8. Review the other options and then select **OK** to close the window.
9. From the **File** menu, select **Export > Model** and save the file as `taurus_new.h3d`


Step 2: Open the H3D file in HyperView Player.

1. Open **HyperView Player** from the desktop's **Start** menu.
2. Click the **Open file** button, open the file `taurus_new.h3d`.
3. Animate the model by clicking the **Play** button, .
4. Use the horizontal slider under the **Current Time** slider to control the speed of the animation (see below).



5. Rotate, zoom in, and translate the model using the CTRL + mouse buttons just as you do in HyperView.
6. From the **Display Control** icon, , turn on the **Contour** and the **Section Cut**.
7. Close HyperView Player.






Step 3: AVI capture of screen/animation with box selection.

1. Return to the HyperView session.
2. Activate page 1, window 1.
3. From the **Standard Image Capture** toolbar select **Capture Dynamic Rectangular Video**, .
4. Enter a name for the AVI file in the **Save Dynamic Rectangle Video As** window that is displayed and click **Save**.
5. Left-click in the graphics area and draw a window around the area to be captured.
The window can be moved on the screen (by placing the mouse inside the window and moving it) or resized (by placing the mouse over the window's edge and resizing it).
6. Right-click anywhere in the graphics area to start the AVI capture of the selected area.

An AVI file of the animation of the selected area is saved.

Step 4: Publish session in HTML or XML format.

1. Return to the HyperView session.
2. Open the **Session Browser** by selecting **View > Browsers > HyperWorks > Session**.

Session	ID	Layout	Publish	Show Page Title	Client	Save Model File	Session Data Type
Session			<input checked="" type="checkbox"/>	<input type="checkbox"/>			
Frontal crash	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
HyperView	1		<input checked="" type="checkbox"/>				
HyperGraph 2D	2		<input checked="" type="checkbox"/>				
Air bag	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
HyperView	1		<input checked="" type="checkbox"/>				
MediaView	2		<input checked="" type="checkbox"/>				

Notice how there is a column for **Publish**. This allows you to select the individual pages to be published.

3. Verify that all pages are selected for publishing
4. Right click on **HyperView** under the **Frontal crash** and select **Publish Settings**.
5. In the **Window Description** text box, type `FE car model`.
6. From the **Format:** drop-down menu, select **H3D**.
7. Click **OK**.
8. In the **Session Browser**, right click on HyperGraph 2D under the **Frontal crash** and select **Publish Settings**.
9. In the **Window Description** field, type `compare forces`.
10. Change **Format:** to **JPG**.
11. Click **OK**.
12. Right click on HyperView under the **Air bag** and select **Publish Settings**.
13. In the **Window Description** field, type `madymo dummy` and set the **Format** to **JPG**.
14. Click **OK**.
15. Right click on **MediaView** under the **Air bag** and select **Publish Settings**.
16. Leave the **Window Description** field empty and set the **Format** to **AVI**.
17. From the menu bar select **File > Publish > HTML**.

18. Enter the filename `crash_report.html`.

The HTML file is saved in the specified folder along with a new folder named `crash_report_data_dir`. This folder contains all files linked to the HTML file. Proceed to Step 5.

Or

Repeat step 17 above, and select **File > Publish > PowerPoint 2003** or **File > Publish > PowerPoint 2007** and save the file as `crash_report.xml`.

The XML file is saved in the specified folder along with a new folder named `crash_report_xml_dir`. This folder contains all files linked to the XML file. In this case, proceed to Step 6.

19. Click **Save** to publish the files.

Step 5: View the HTML file in Internet Explorer.

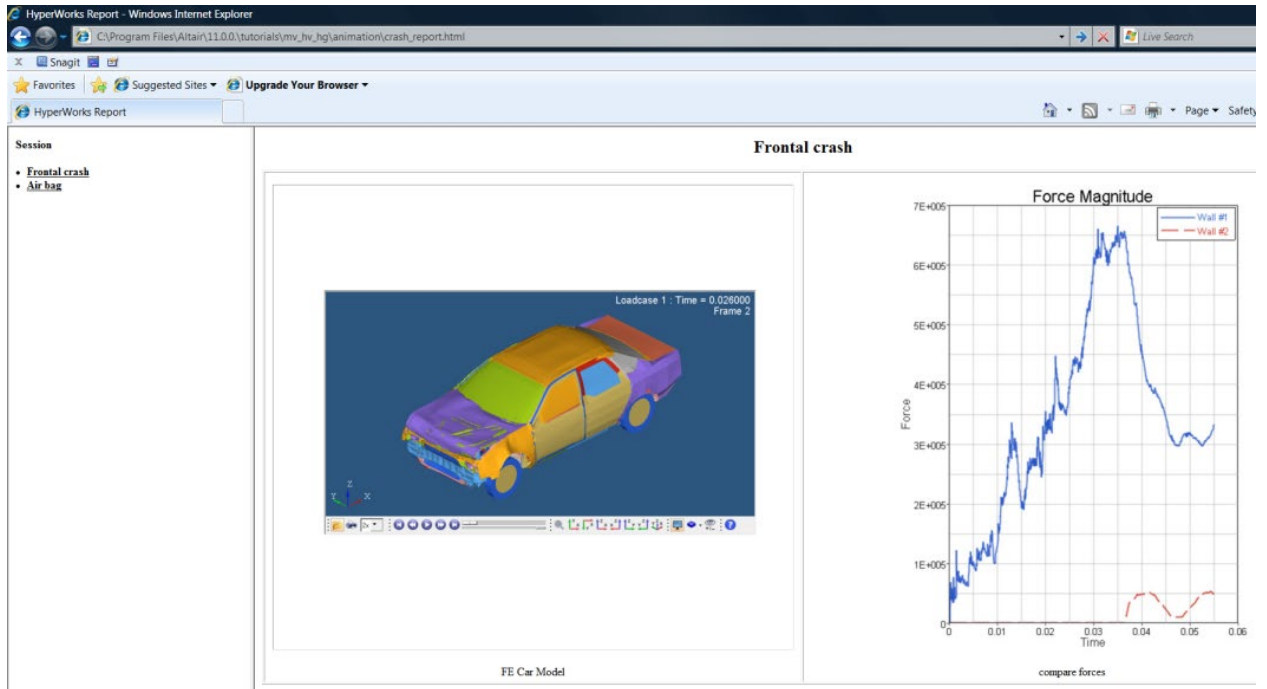
1. Open the file `crash_report.html` using Internet Explorer.

On the left side, the session page names **Frontal crash** and **Air bag** are displayed. Also, notice the description under the windows.

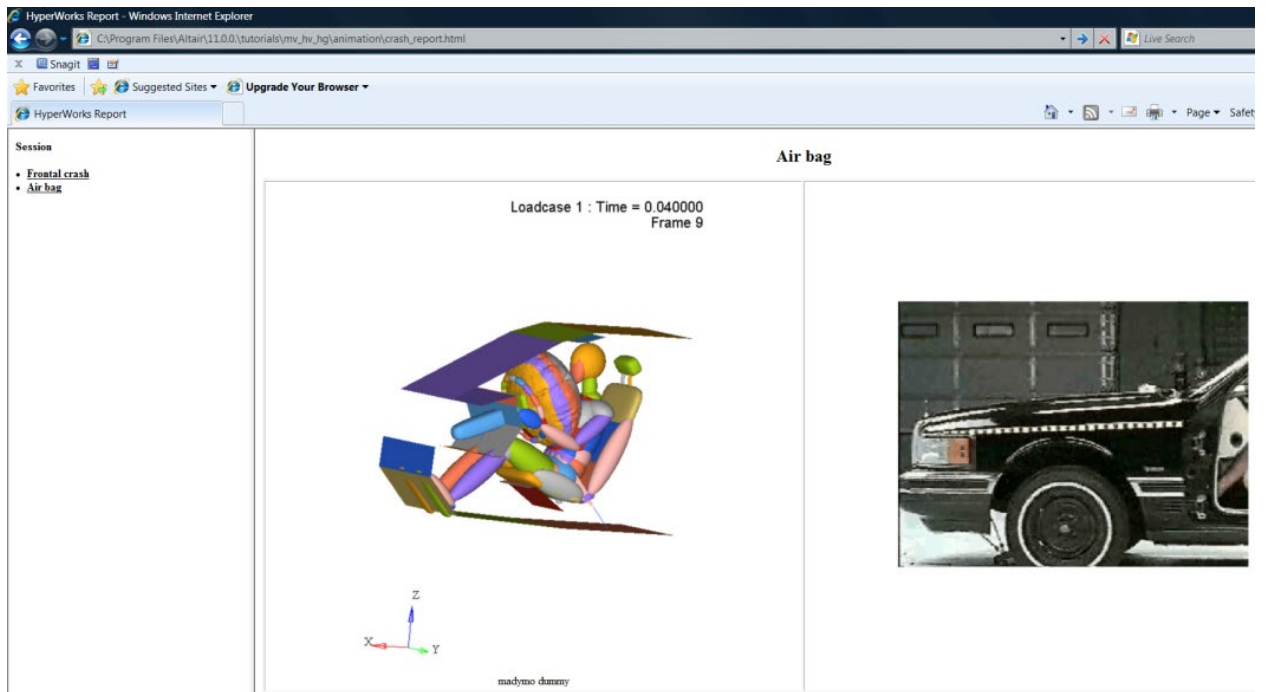
Note: If Internet Explorer blocks the content when the HTML page is opened, please allow the blocked content.

2. Click the page names to go to that page.
3. For the **Frontal crash** page, click on the animation window to launch HyperView Player and animate the model.
4. Double-click the plot window to expand it.
5. Click **Back** at the top of the web browser window to return to the original view of the report.
6. Click **Air bag** on the left side to go to the **Air bag** page in the HTML report.

7. On the **Air bag** page, click the video window to open a movie player and play the video.



Notice that the video window does not have a description.



Step 6: View the XML file in Microsoft PowerPoint.

1. Returning to **HyperWorks Desktop**, select **File > Publish > Legacy > PowerPoint 2003**.
2. From the **Publish Session File** dialog, browse to `crash_report.xml`. If prompted for reliability of source, click **Yes**.
3. Go to slideshow mode (**F5**).

The H3D file is available with HyperView Player embedded in PowerPoint. Also, the other images and movie files are available in the layout selected in the HyperView session.