



Altair

HyperWorks

Altair HyperWorks Collaboration Tools

HWCT-1400: Managed Libraries

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HWCT-1400: Managed Libraries

In this tutorial, you will learn to:

- Add an existing library to the personal repository.
- Work with contents in a managed library.
- Become familiar with versioning and life cycle operations.

Step 1: Retrieve library

1. Create locations to store the library and workspaces:
C:\MyLibraries
C:\MyLibraries\Workspaces
2. Unzip `SimulationProjects.zip` from the Altair HyperWorks Enterprise `hwe.zip` directory to your library directory, `C:\MyLibraries`.

Step 2: Add a managed library

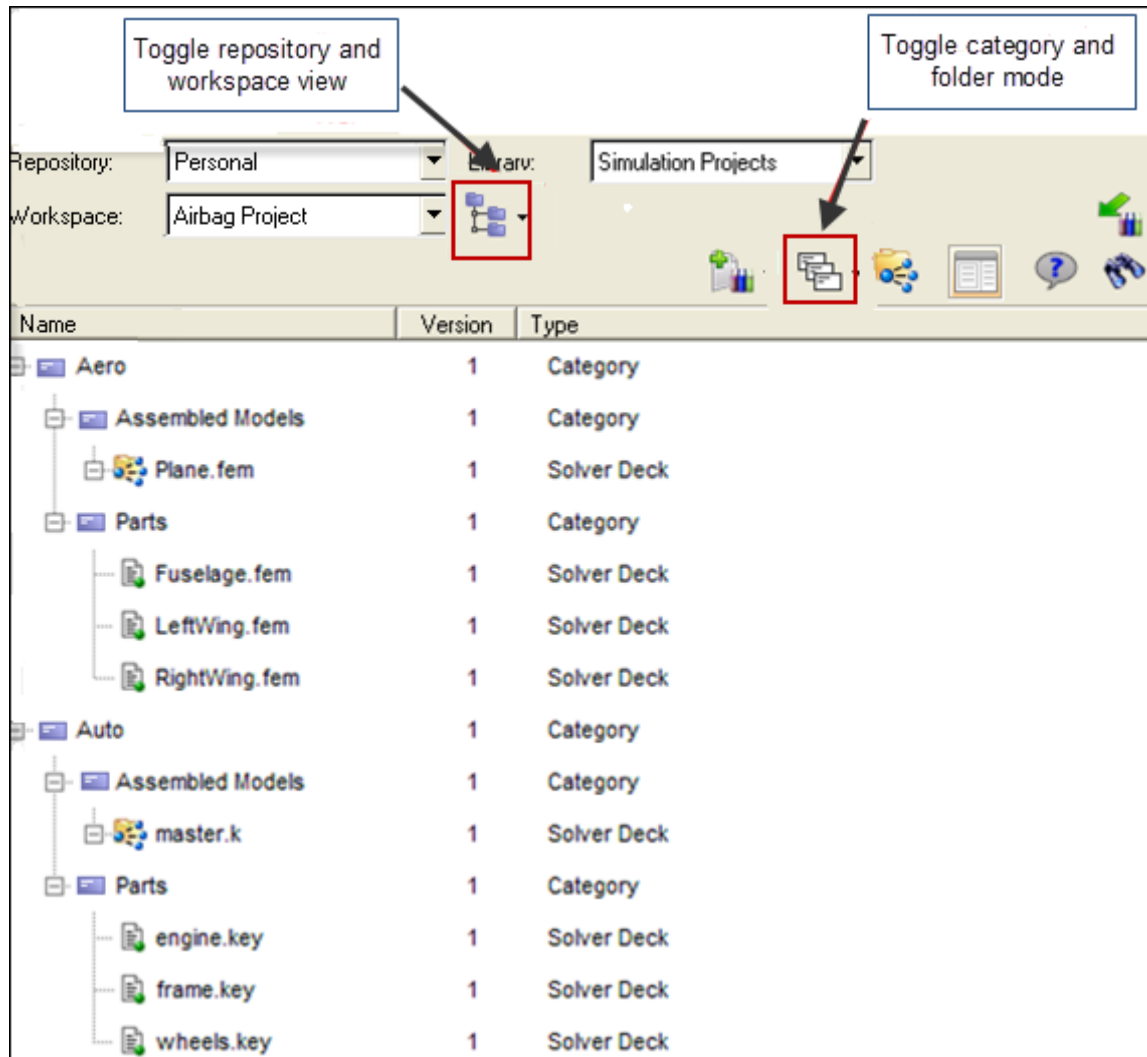
1. Launch Altair HyperMesh.
2. Click **View > Organize** to open the **Organize** browser.
3. Select **Personal** from the **Repository** list.
4. Select the **Library** drop-down and click **Add**.
5. Click the **Folder** browser next to **File Name**, browse to, and select `C:\MyLibraries\Simulation Projects\Simulation Projects.ldb`.
6. Click **Open**.
7. Click **OK**. The **Simulation Projects** is added to the **Personal** repository.


Step 3: Create workspaces

1. Click the drop-down arrow next to **Workspace** and select **New**.
2. Provide the following information:
Name: Workspace 1
Working Directory: Browse to and select `C:\MyLibraries\Workspaces`
3. Click **OK** in the **Browse for Folder** dialog.
4. Click **OK** in the **New Workspace** dialog.
5. Repeat Steps 1-4 to create a second workspace called Workspace 2 in `C:\MyLibraries\Workspaces`.


Step 4: Browse, search and retrieve contents





Now you will look at the contents of the **Simulation Projects** library.



1. Begin by viewing the contents in the **Repository View, Category Mode** (above). The library contains two different master solver deck files, `Plane.fem` and `master.k`, each of which has three include solver deck files. The contents are organized by different categories: **Aero**, **Parts**, **Assembled Models**, and so on.
2. Switch the **Category/Folder Mode** toggle to **Folder Mode**, . Now you can see the folder organization of the same contents. The contents are organized both within virtual categories, as well as physical folders.


Note: The contents may belong to multiple categories, however, files may exist in only a single folder.

3. Click the **Show/Hide References** icon  to view the references. Now you can see, for example, that **Plane.fem** refers to its include files.




| | | |
|---|---|-------------|
|  Plane.fem | 1 | Solver Deck |
|  RightWing.fem | 1 | Solver Deck |
|  Fuselage.fem | 1 | Solver Deck |
|  LightWing.fem | 1 | Solver Deck |

With the references defined, all life cycle operations (**Get**, **Check Out**, **Check In**) will be handled for the set of referenced contents.

4. Click the drop-down arrow next to **Workspace** and select **Workspace 1**.
5. Click **OK**. **Workspace 1** is now the active workspace.
6. Click **Plane.fem**. You can view the content's properties in the **Property** panel.

Note: The Property panel can be toggled on or off by clicking the  icon.

Notice that the document `Plane.fem` is not retrieved. You can select any of the referenced files and notice that they are also not retrieved. Because this is a managed repository, the files are stored in the managed vault. To view or edit files associated with contents, the files must be retrieved to your workspace.

7. Right-click **Plane.fem** and select **Get** from the context menu. Notice that `Plane.fem`, along with its referenced include files, has been retrieved to Workspace 1.
8. Select **Repository/Workspace**,  , and switch between Repository view,  , and Workspace view,  , to view contents in both locations.



Repository view

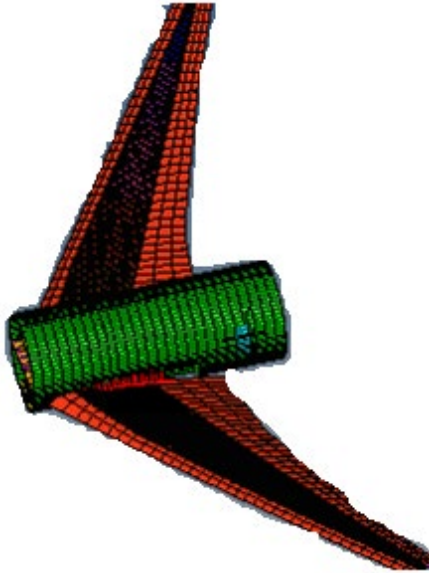
Workspace view

Note: The above views are shown in **Folder Mode**. They can be viewed in **Category Mode** as well.

- Right-click **Plane.fem** and select **Import FE Model**. The **HyperMesh Import** tab displays, with the path to `Plane.fem` loaded.

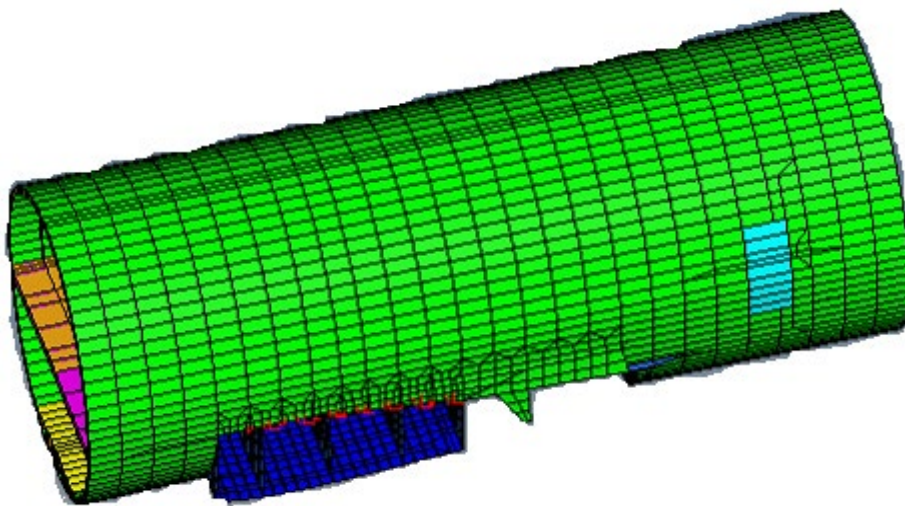
Note: The list of Altair HyperWorks integration options will change based on the type of file selected and the active client (Altair HyperMesh or Altair HyperWorks Desktop active client.) Because `plane.fem` is a solver deck, you will see the **Import FE Model** option.

- Click **Import**. The plane model, master and includes, are loaded into Altair HyperMesh.



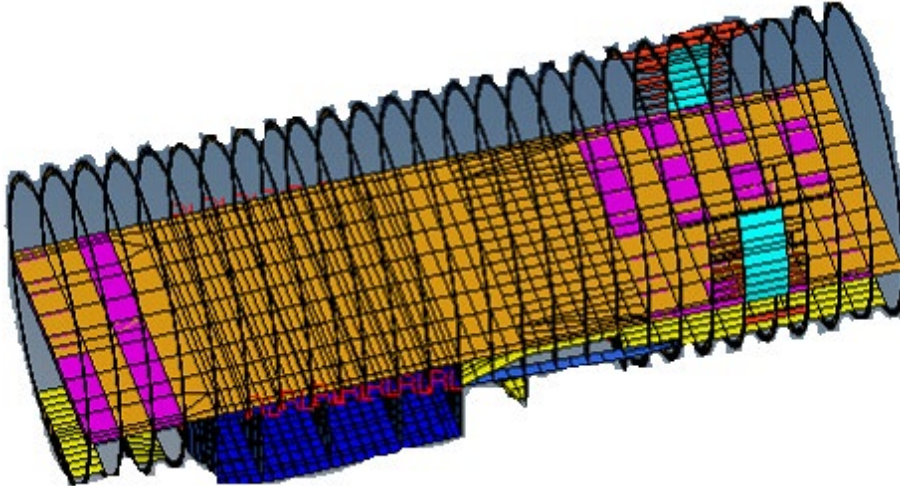
Step 5: Version contents

1. Click **Mesh > Delete > Elements > Delete Model** to delete the model in Altair HyperMesh so there is nothing in the current Altair HyperMesh session.
2. In the **Organize** tab, select the drop-down next to Workspace and select **Workspace 2** to set it as the active workspace. There are no contents in the Workspace view because nothing has been retrieved to this workspace.
3. From the **Repository View**, right-click **Fuselage.fem** and select **Check-Out**. The file is retrieved to Workspace 2, and the content is marked as checked out.
4. Right-click **Fuselage.fem** and select **Import FE Model**.
5. Click **Import**. The model is imported into Altair HyperMesh.



Now, you will make a change to the model and check it back in. The change will be simple, but obvious, so that the changes will be easily seen.


6. Select **Mesh>Delete>Elements** to open the **Delete** panel.
7. From the drop-down switch from **elems** to **comps**.
8. Click **comps**, check component **FISK**, click **select**, click **delete entity**, click **return**. The component is deleted.



9. Select **File>Export>Solver Deck**.
 - **File type:** OptiStruct
 - **Template:** Standard format
10. Click the **File** browser and browse to **Fuselage.fem** in the Workspace 2 location where the checked out solver deck resides:
 C:\MyLibraries\Workspaces\Workspace2\Simulation_Projects\AeroProject\includes. Note the full path, including sub folders. You should see the checked out solver deck file, the one being modified, already in this location. You will overwrite that file with your modified file.
11. Click **Save**.
12. Click **Yes** to replace the old `Fuselage.fem` file.
13. Click **Export**.
14. Click **Yes** to overwrite.
15. In the **Organize** tab, right-click the checked out **Fuselage.fem** and select **Check-in**.
16. Enter some comments in the **Check-In Dialog**.
17. Click **OK**. Version 2 of `Fuselage.fem` is checked in.


Step 6: View version history and synchronize

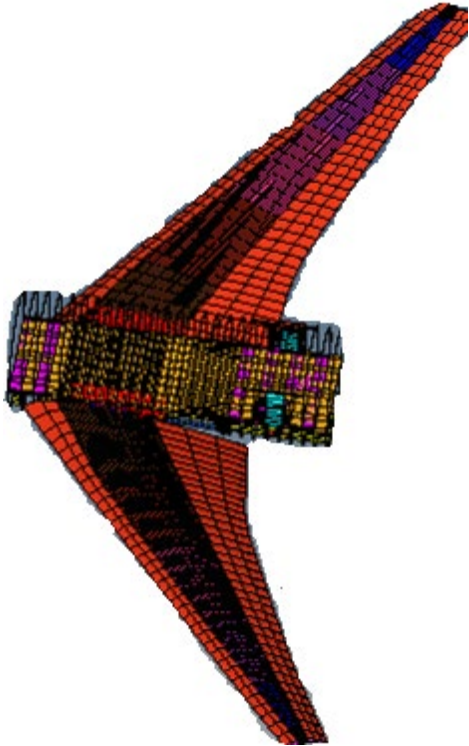
1. Set Workspace 1 as the active workspace. Notice that `Plane.fem` is flagged to indicate that it is out of sync. This is because `Plane.fem` in Workspace 1 is referring to `Fuselage.fem` version 1, which is no longer the up to date version. This is also indicated on the `Fuselage.fem` content being referenced by `Plane.fem`.

Note: Click the  icon to view references in the browser.

2. Right-click **Fuselage.fem** and select **Version History**. The **Version History** panel displays.
3. Click either version of `Fuselage.fem` to view its properties in the Properties panel.
4. Click either version of `Fuselage.fem`, hold the CONTROL key, and click the other version so that both versions are selected.
5. Right-click and select **Compare Properties**. The two versions' properties are displayed side by side with differences highlighted in red.

Note: It is also possible to compare the file contents themselves. Try setting a default diff program in the **Collaboration Tools Preferences** (right-click and select **Set Preferences** from the Organize browser context menu). Next, select the two versions of `Fuselage.fem`, right-click, and select **Compare Docs Versions**.

6. Click the **Back to Standard View** icon  to return to the Organize tab standard view.
7. Right-click **Plane.fem**, and select **Synchronize**. Version 2 of `Plane.fem` is created, using the up to date version 2 of `Fuselage.fem`.
8. Click **Yes to All** to retrieve the updated plane and references to Workspace 1.
9. Right-click **Plane.fem** and select **Import FE Model**. The **HyperMesh Import** tab displays, with the path to `Plane.fem` loaded.
10. Click **Import**. The plane model, master and includes, are loaded into Altair HyperMesh. Notice that version 2 of the plane contains the latest version of the fuselage, with the skin component deleted.



Summary

In this tutorial you worked with the Organize browser to add an existing managed library to your Personal repository. You explored the contents of the library, and retrieved contents which were then loaded in Altair HyperMesh via the Collaboration Tools – Altair HyperMesh integration. You became familiar with life cycle operations by checking out, modifying, and checking in a content and creating a new version. You used the Version History panel to compare versions. And, finally, you synchronized contents to work with the latest up-to-date information from the repository.