

Animation Importer (AI9)

**BPA Delivery 8 for V5R20 &
Virtools 4.0, 4.1, 5SP1 & 5SP3
(V5.8)**

Implementation Guide

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About Animation Importer

What is Animation Importer

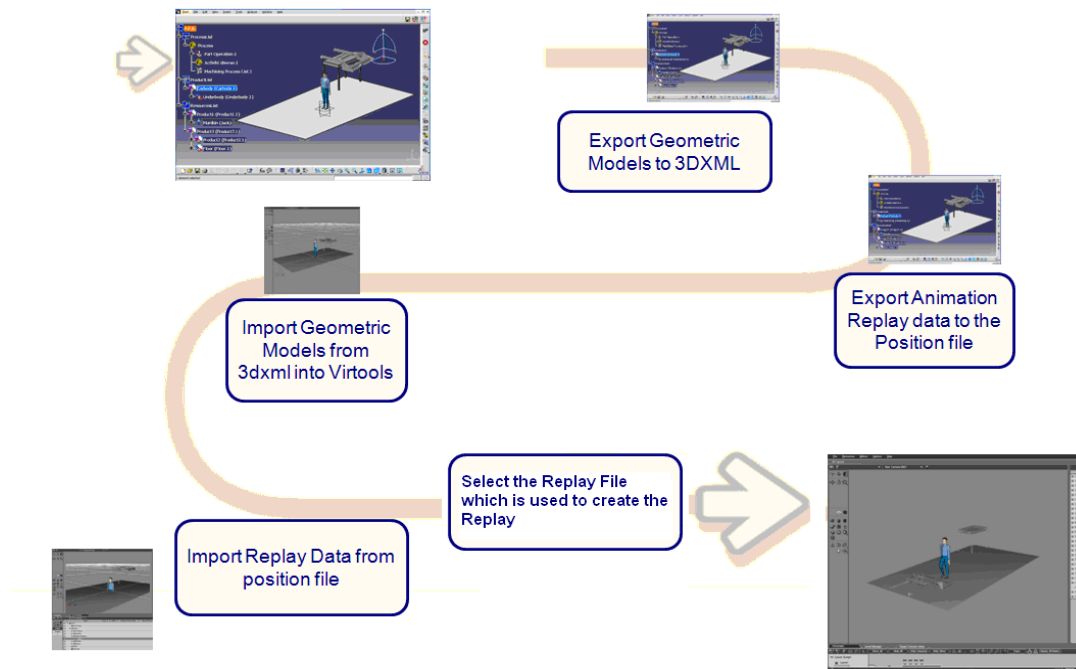
Animation Importer is a translator that imports the animation which is created in CATIA or DELMIA to Virtools, with this tool we can:

- Avoid Work Duplication
 - No need to re-design the movements in Virtools, although it has been already designed in the CAD system.
 - Time and money optimization
- Ensure Exact Moves in Virtools
 - The moves in Virtools will look exactly like the original moves defined in the CAD system with kinematics constraints and definitions
- Optimized Virtools Animation
 - Virtools is using a highly optimized class of objects for animation: the Virtools Animation
 - The moves in Virtools will always looks smooth thank the key-frame mechanism implemented by Virtools Animation class

WORKFLOW Reminder

1. Start from a V5R20SP4 Replay Object (CATIA or DELMIA)
2. Export Geometric Models to 3DXML
3. Export Replay Data to the Positions File
4. Import Geometric Models with 3DXML into Virtools
5. Import Replay Data from the Positions File to Virtools
6. Save animation with the Manikins
7. Load animation with the Manikins

Animation Importer deliverables



The Animation Importer deliverables are provided as an executable package including the following functions:

1. Export Geometric Models to 3DXML



Function to export the geometric models to 3DXML that can be imported in Virtools

2. Export Animation Replay data to the Positions file



Function to export the current animation replay data into the positions file which can be imported in Virtools, also all the animation replay data is exported with Visibility information of entities.

3. Import Geometric Models from 3dxml (Virtools Functionality)

Function to import the Geometric Models into Virtools from 3dxml which is exported from CATIA or DELMIA.

4. Import Replay data from the positions file

Function to import replay data from the positions file.

5. Save Animation with Manikins

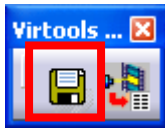
Function to save animation with the imported manikin.

6. Load Animation with Manikins

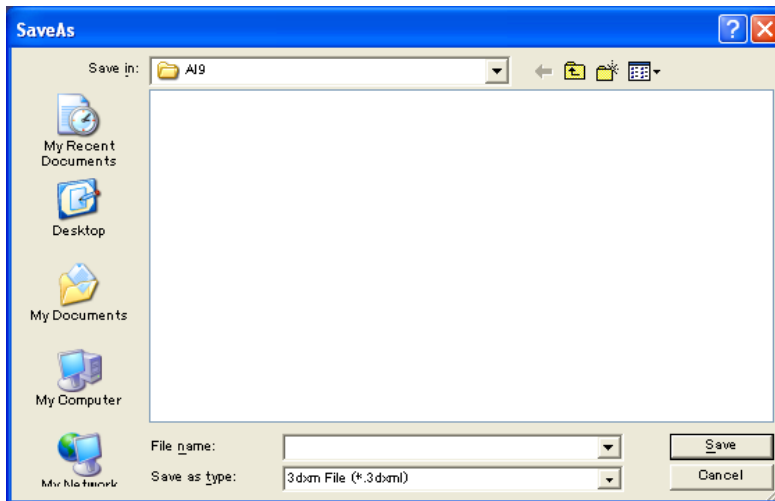
Function to load the animation with Manikins

1 and 2 capabilities can be accessed through the use of a CATIA V5 or DELMIA Toolbar and 3, 4, 5 and 6 can be accessed in Virtools.

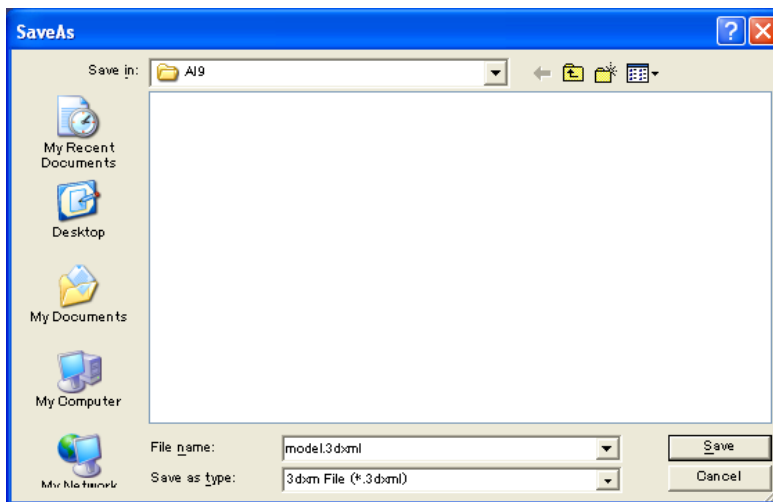
Export Geometric Models to 3DXML



1. Select Function "Export Geometric Model as 3dxml" to launch a panel



2. Select the path and input a file name in "File name" field to save the models.



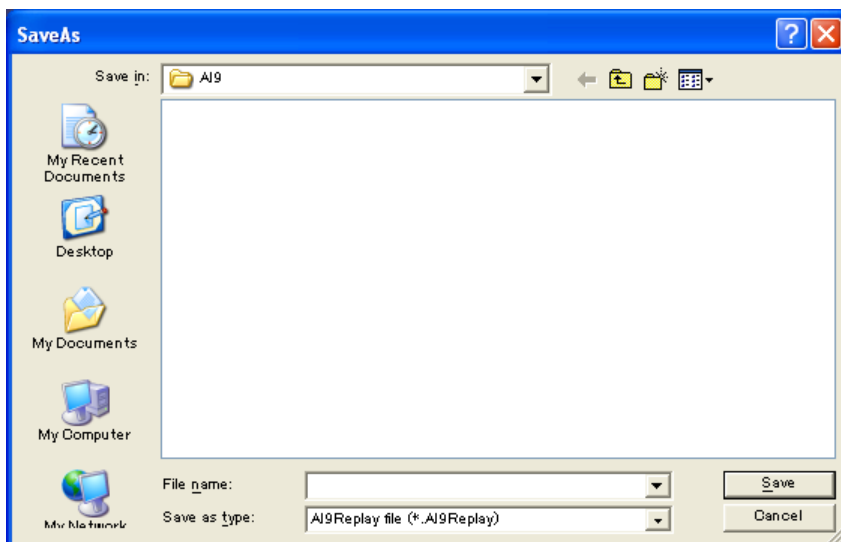
3. Press "Save" to save models

The current geometric models are saved to a 3DXML file.

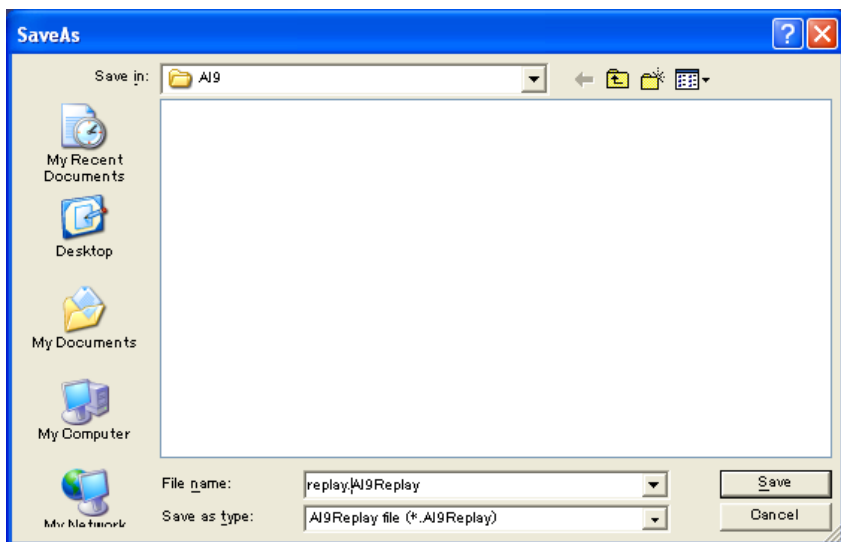
Export Replay data into the Positions file.



1. Select Function "Export the Replay Data" to launch "SaveAs" dialog



2. In the dialog, input a path and file name in the "File name" field.

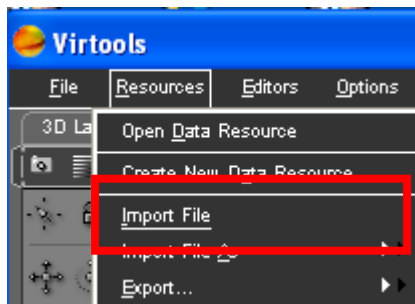


3. Press "Save" to save the Replay data to the positions file

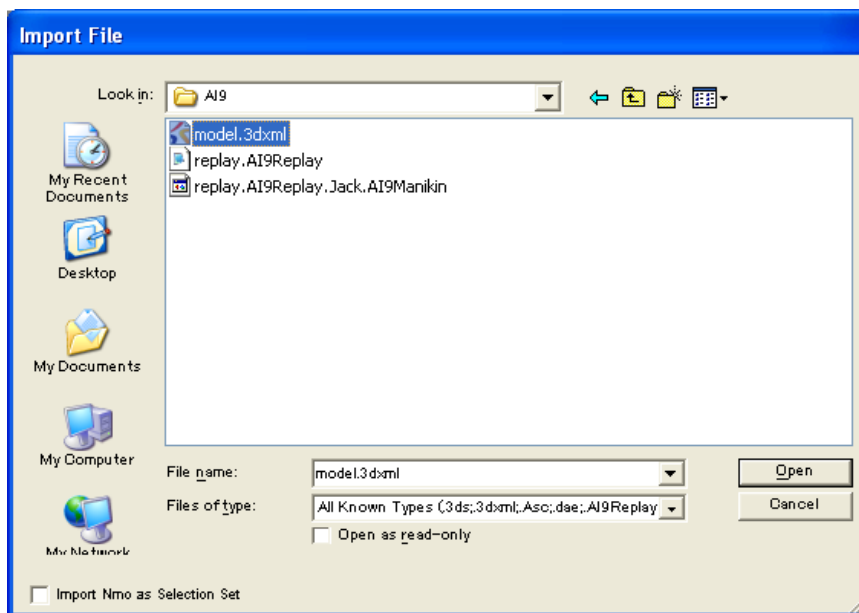
The Replay data is saved to a file with suffix ".AI9Replay".

All the manikins are saved to files with suffix ".AI9Manikin"

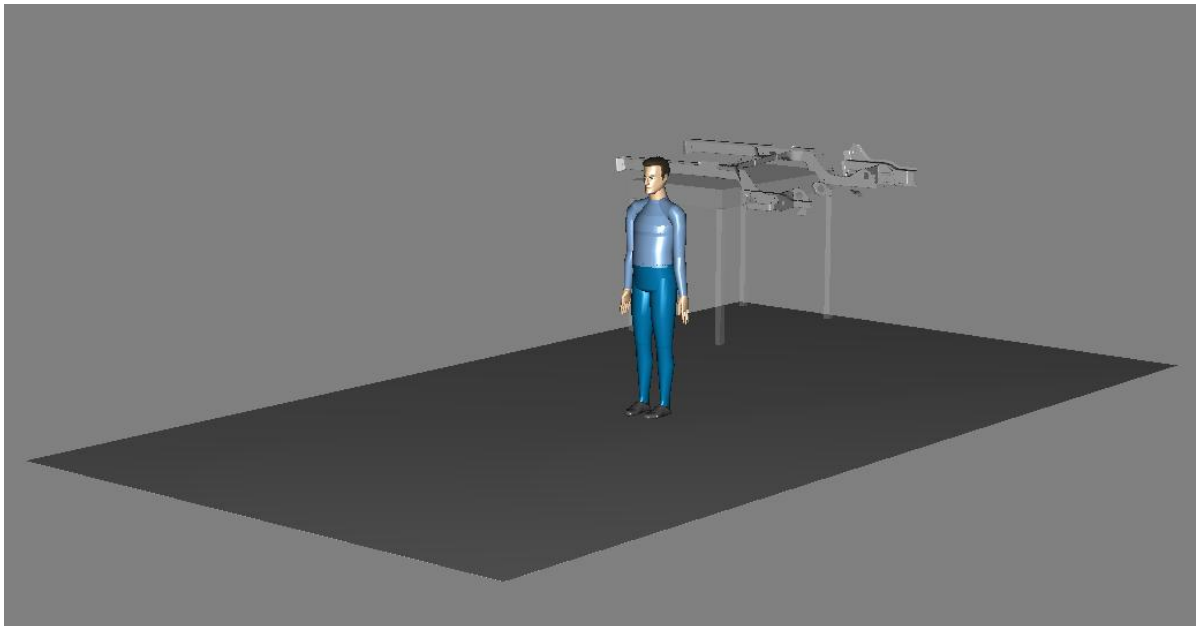
Import Geometric Models from 3dxml into Virtools (Virtools functionality)



1. launch "Import File" dialog with "Resources->Import file"
2. Select the 3dxml file that includes geometric models exported from CATIA



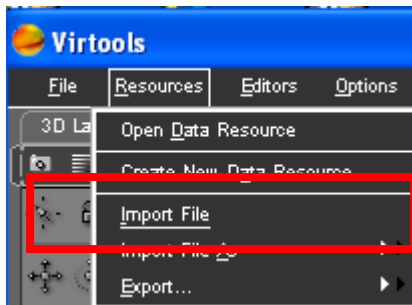
3. Press "Open" to import the 3dxml.
4. The 3dxml is imported



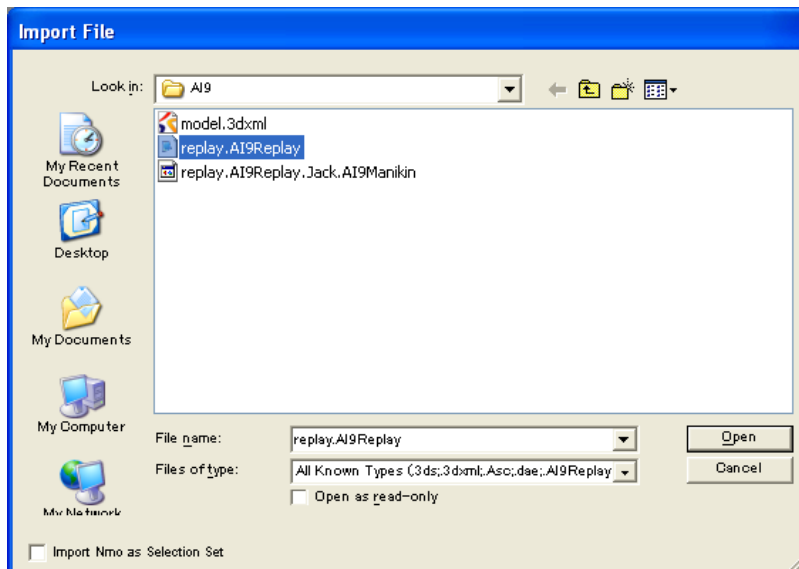
Note: In order to have Virtools to work with AI9 in multiple languages, it is needed to set "Language for non-Unicode programs" in Regional and Language Options to the language you select to export 3dxml in CATIA or DELMIA





























Import Replay data from position file



1. In Virtools, launch "Import File" dialog with "Resources->Import file"
2. In the dialog, input the name of the positions file in "File name" field.



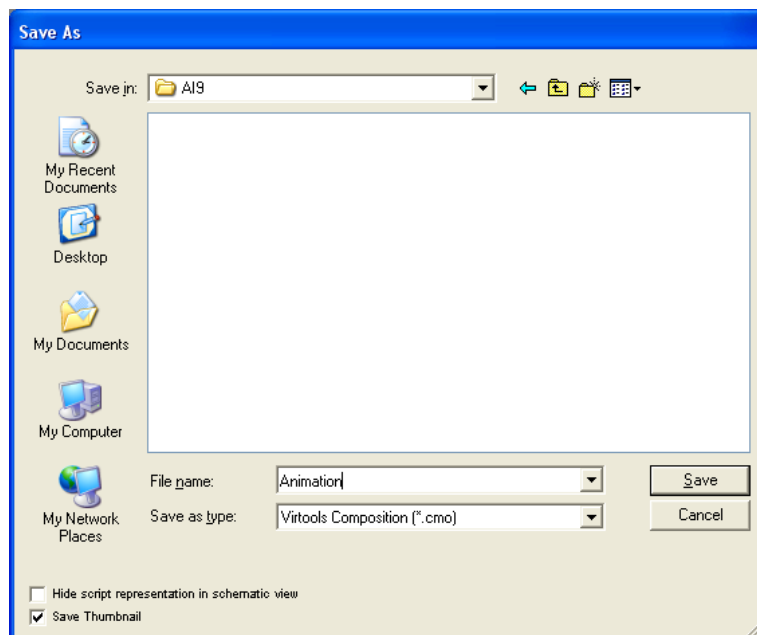
3. Press "Open" to import the positions file
 - a. If there are Manikins in the 3dxml exported by CATIA or DELMIA, the Manikins are replaced with AI9Manikin
4. After importing the positions file data, a Replay is created in Virtools.

	Name
	▼  Level
	 Level Scripts
	▼  Global
	▶  3D Frames
	▶  3D Objects
	▶  Cameras
	▼  Global Animations
	 Replay.1
	▶  Lights
	▶  Materials
	▶  Meshes
	 Places
	 Worksets

Save animation with Manikins



1. In Virtools, launch “Save As” dialog with “File->Save...”

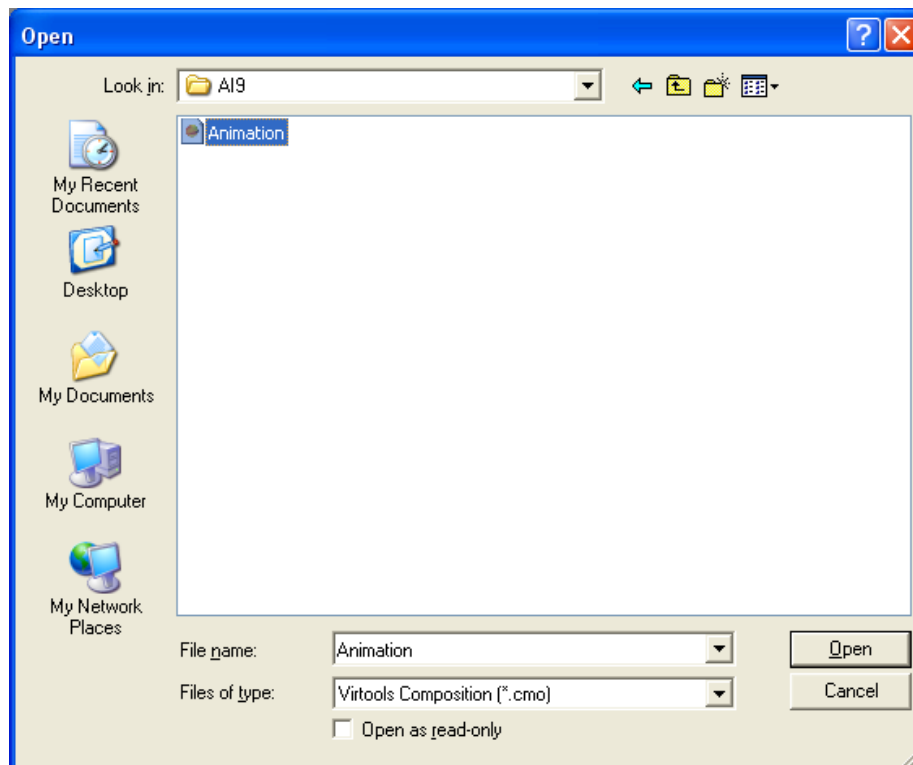


2. In “Save As” dialog, input the path and file name in the field “File name”
3. Press “Save” to save the model and animation
 - a. A cmo file and a file with suffix “.AI9Object” are created.

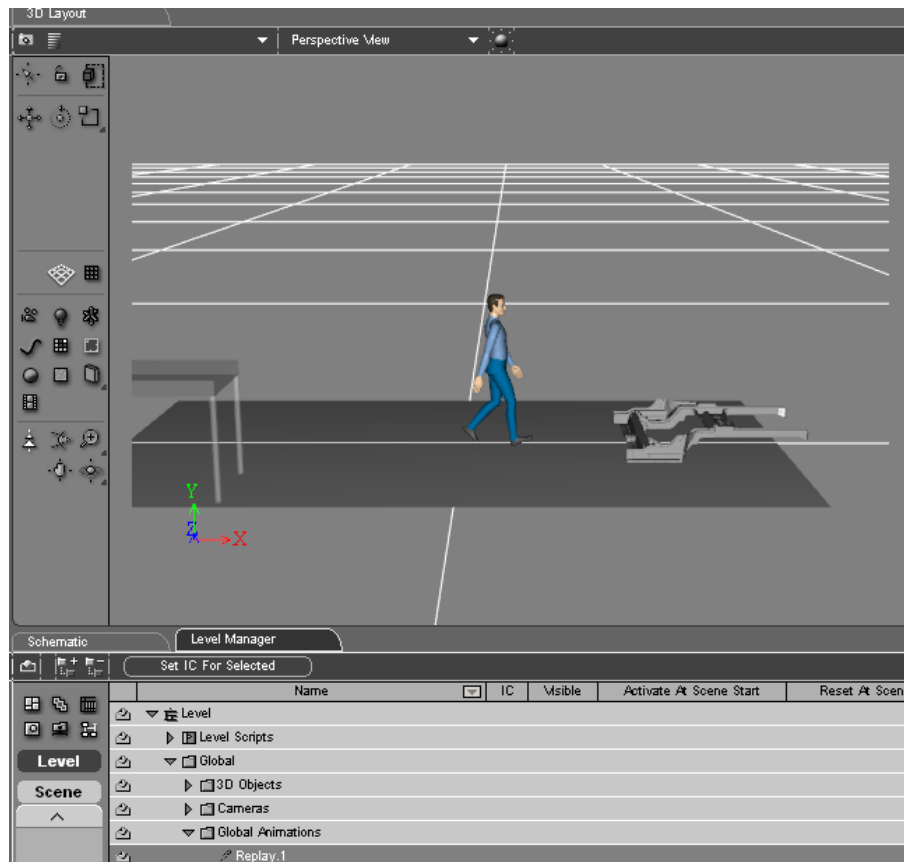
Load animation with Manikins



1. In Vrttools, launch “Open” dialog with “File->Load Composition...”

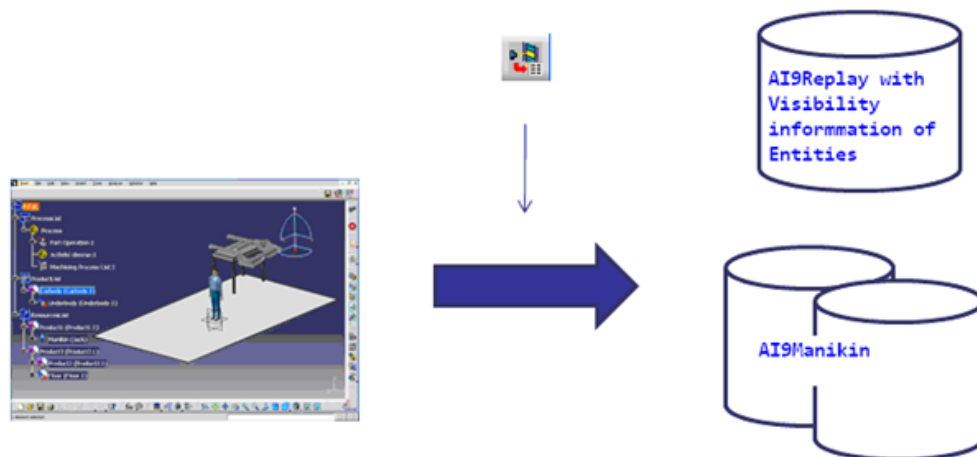


2. In “Open” dialog, select a cmo file that includes animation
3. Press “Open” to open the file
4. The Animation is loaded

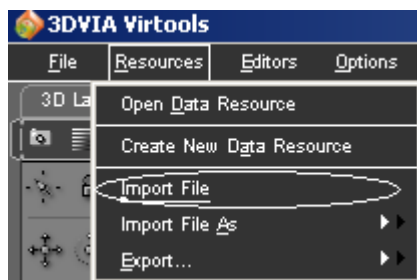


New in Drop8: Visibility of the Global Animation Entities in Virtools

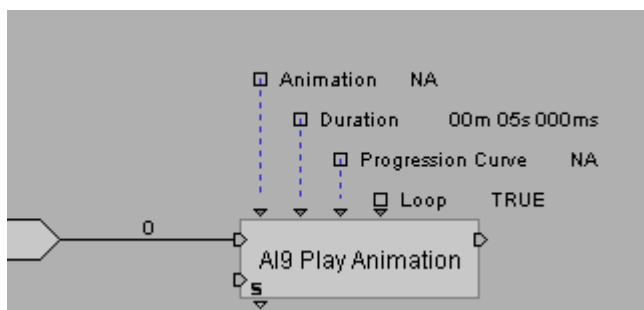
1. “Export the replay data” now exports all the animation replay data with Visibility information of entities.



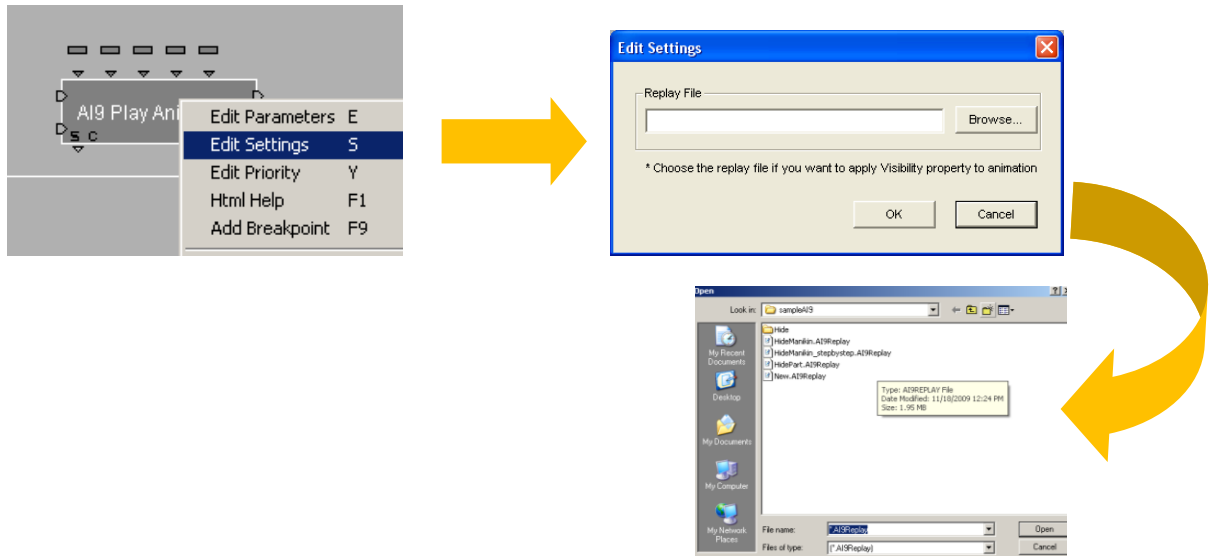
2. Import Animation Replay data with Visibility information and the 3dxml file using AI9 functionalities.



3. Instead of using the “Play Global Animation” BB attach the “AI9 Play Animation” BB to “Level script” and give the arguments.



4. Then after Clicking “OK”, right-click on the BB and select “Edit Settings” and browse to the Replay file, from which you have created the Global Animation.



5. Select the proper Replay file & Click “Open” and press “OK” on the Settings panel.
6. Play the Animation in Virtools UI.



7. Check the Visibility.