

# **Animation Exporter (AE9)**

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

***User's Guide***

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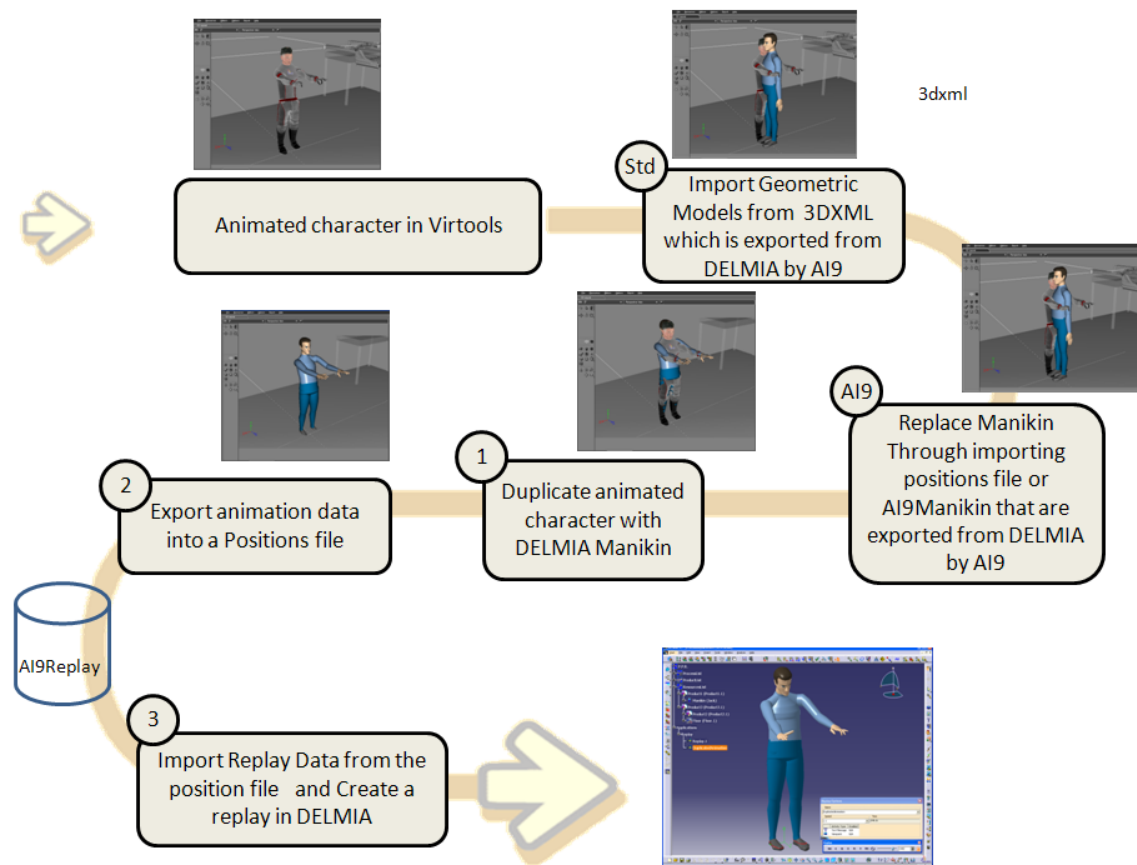
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# Animation Exporter deliverables



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

1. Duplicate animated character with DELMIA Manikin

A building block named "CloneAnim" to duplicate animated character with DELMIA Manikin

2. Export the new animation to the positions file

Export the new animation to the positions file

3. Import positions file into DELMIA



Function to import the positions file into DELMAIN and create a replay in DELMIA



4. Place the manikin on right position after anthropometry changes

Function to change the origin of the manikin & to set it to the required position

1 and 2 capabilities can be accessed through the use of a Virtools Toolbar and 3 and 4 can be accessed through DELMIA V5.

# ***Preparation to run AE9***

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## 1. Installation of AI9

- It is needed to install AI9 before running AE9

## 2. License of DELMIA

- In order to run AE9 command in DELMIA side, the following licenses are needed:
  - DELMIA Basic license + MHB+MHT

## 3. Prepare mapping table

- If you are using your own character in a animated character, you need a specific mapping table to duplicate the animated character with DELMIA manikin. As how to get the mapping table and how to install the mapping table, please refer to AE9 installation guide

## 4. Prepare DELMIA model with following data

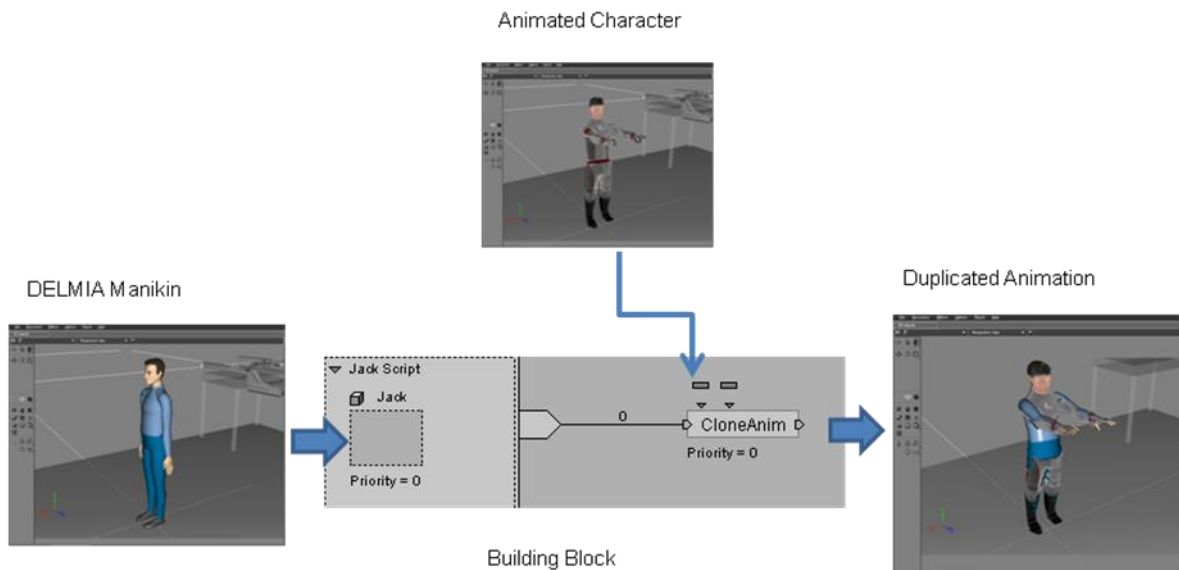
- Prepare a reply that contains a manikin animation if you want to import animation from an animated character
- Prepare all geometric model used in AE9

## 5. Prepare the Virtools data

- Prepare an animated character
- Use AI9 to export all geometric model into 3DXML from DELMIA
- Use AI9 to export all the positions data with Manikin from DELMIA

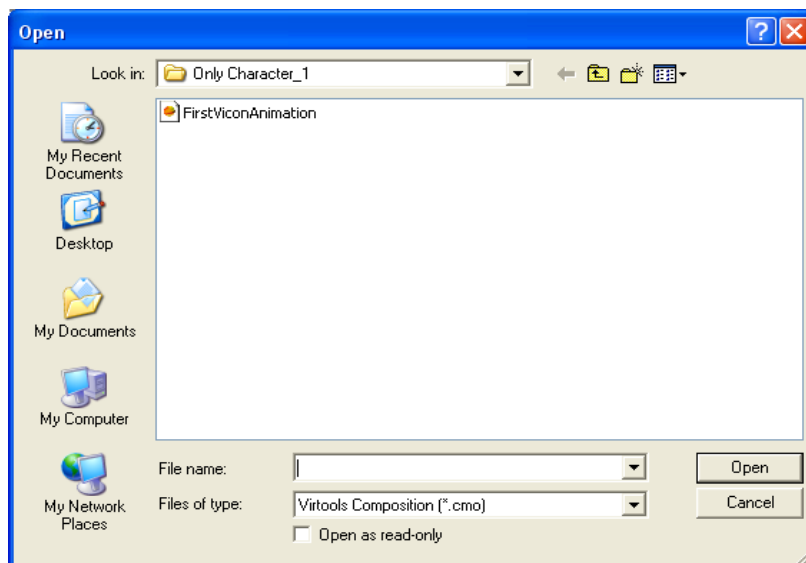
# Duplicate animated character with DELMIA Manikin

***This function is to duplicate an animated character with a DELMIA Manikin***



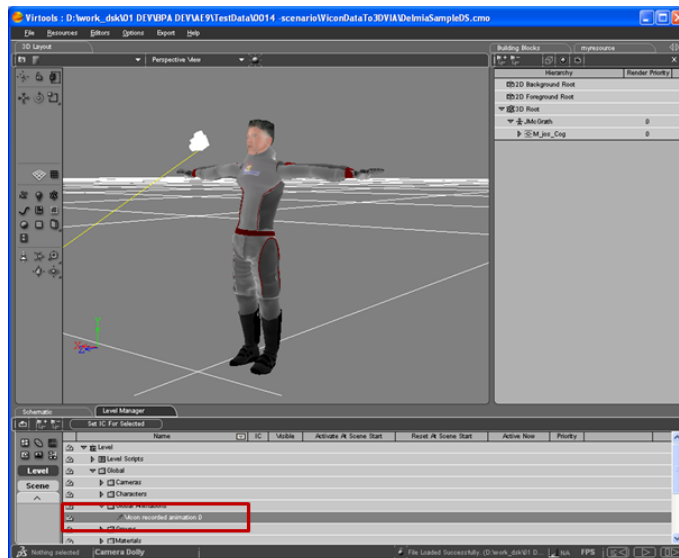
## 1. Import animated character

- In Virtools launch menu “File->Load Composition” to launch a panel



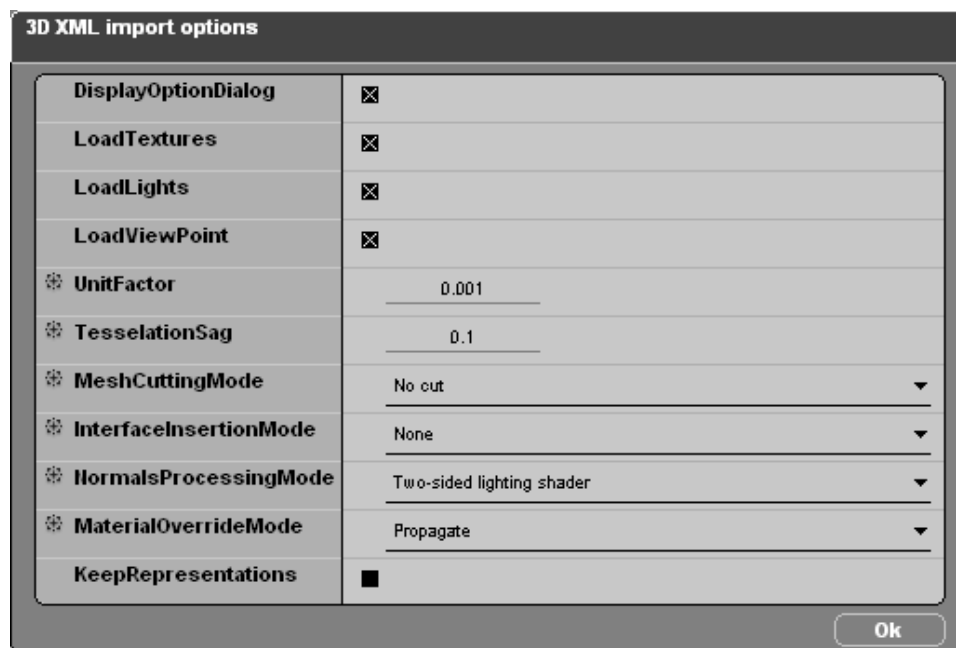
- Select the path and input a file name in “File name” field to load the composition that includes animated character

- Press “Open” to load animated character
- ① A global animation contains an animated character



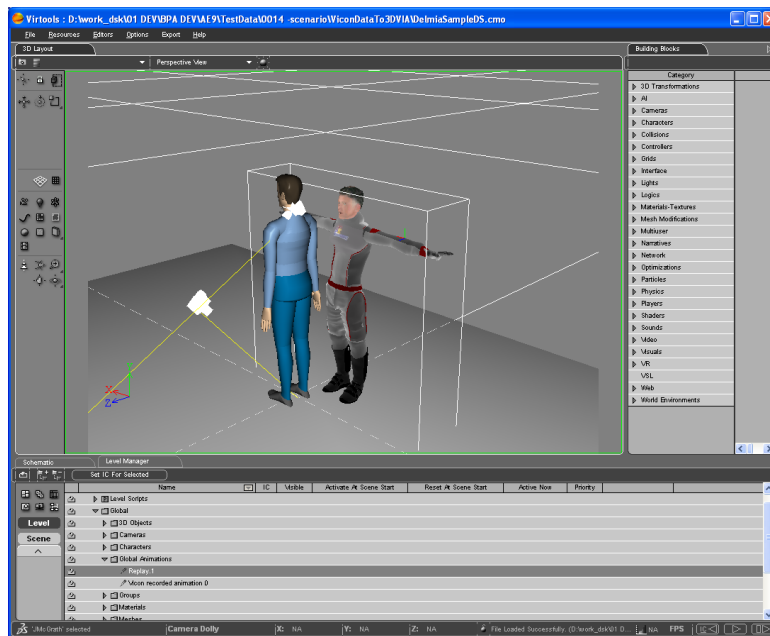
## 2. Import Geometric model and DELMIA Manikin

- Go to Resources/Import file to import geometric model from the 3dxml that is exported from DELMIA
- ① using options as following panel to import 3dxml:



- Go to Resources/Import file to import positions file with Manikin from AI9Replay and AI9Manikin that are exported from DELMIA

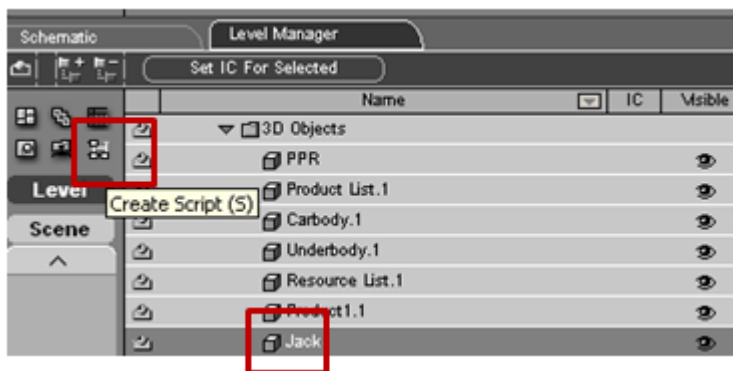




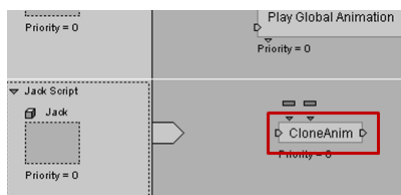
① A global animation is created

### 3. Duplicate animated character with DELMIA Manikin

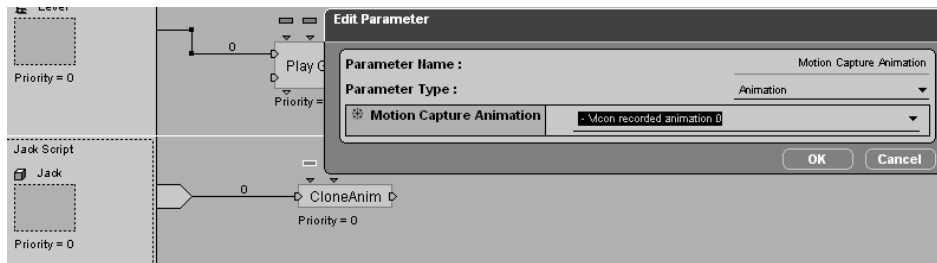
- Select a Manikin that you want to use to in duplicating animated character and create a Script on the selected Manikin



- Go to Schematic and create a “CloneAnim” Building Block on the selected Manikin



- Give the first inputs to “CloneAnim” Building Block is a global animation containing animated character



- Give the second input to “CloneAnim” Building Block is the name of the new clone animation you want to create.



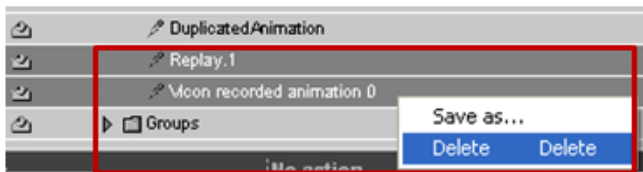
- Run the Building Block
  - ① A Clone animation is created in Virtools under “Level Manager->Global Animation”.



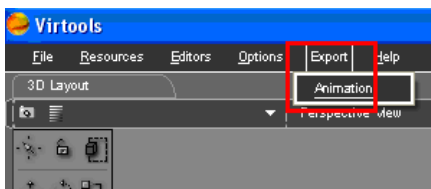
# Export the new animation to positions file

*To export the position data of the animation from Virtools.*

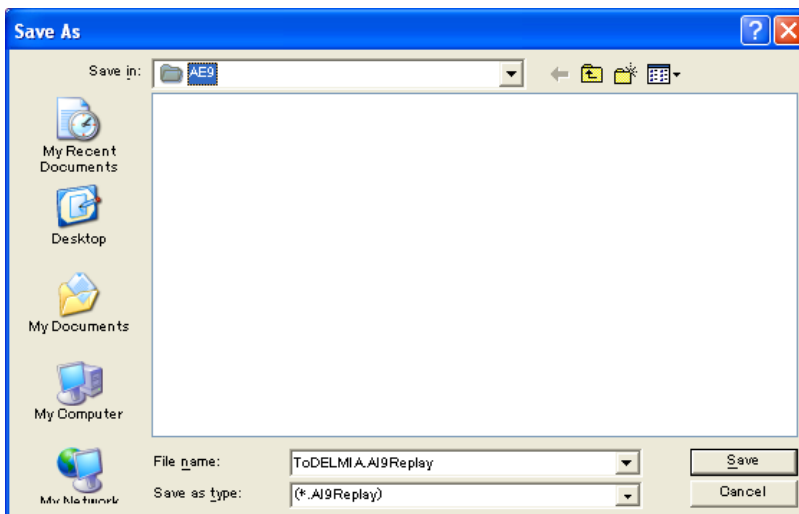
1. Keep the animations that you want to export to DELMIA and delete all other animation in the "Level Manager->Global Animations"



2. Launch the menu "Export->Animation" command from Virtools UI.

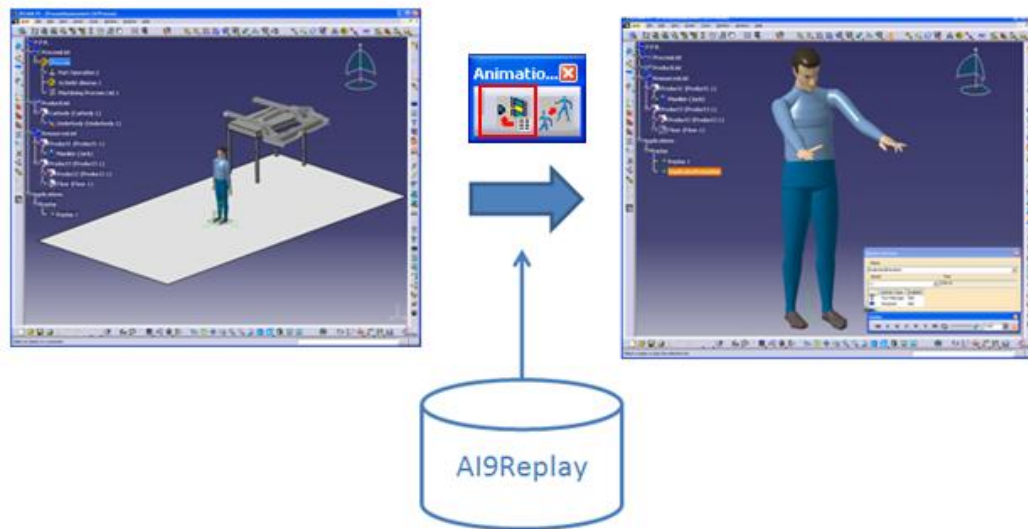


3. Give the name of the .AI9Replay file in the dialog box.

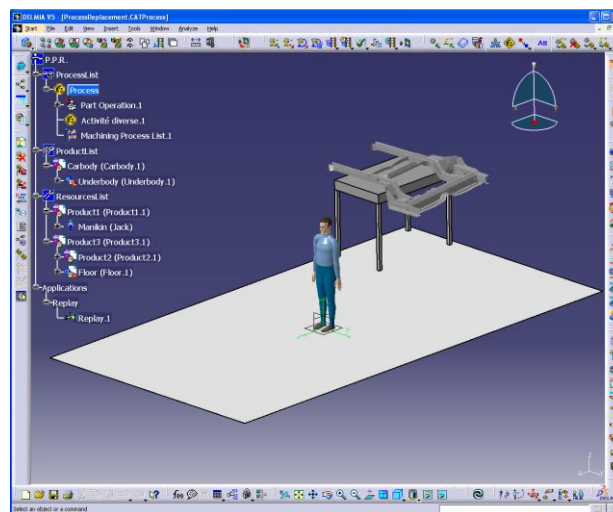


4. Export animation to a positions file with a suffix "AI9Replay"

# Import the positions file and create a replay in DELMIA



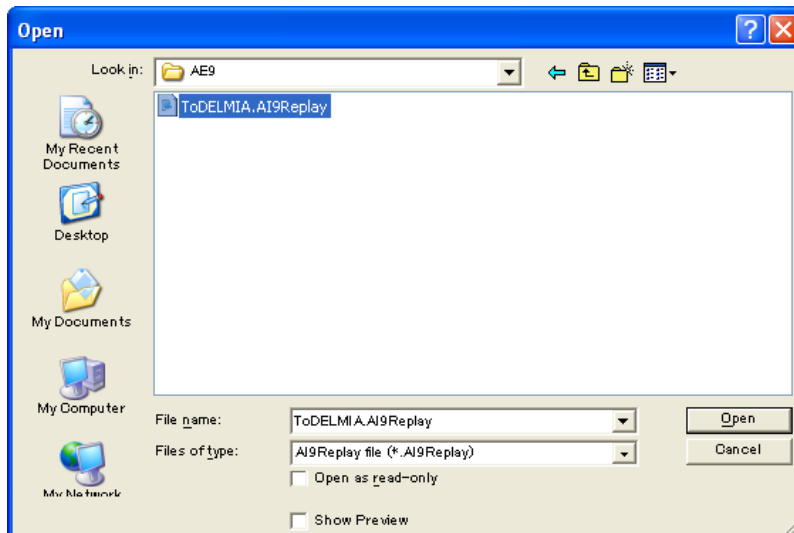
1. Launch DELMIA.
2. Open the model which is used to create 3dxml.
  - a. The model needs a replay that contains animation of one Manikin



3. Launch the command "Animation Exporter" or in prompt.



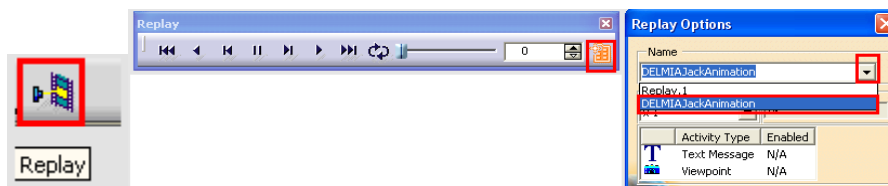
4. Select the positions file which is exported from Virtools to create a replay in DELMIA



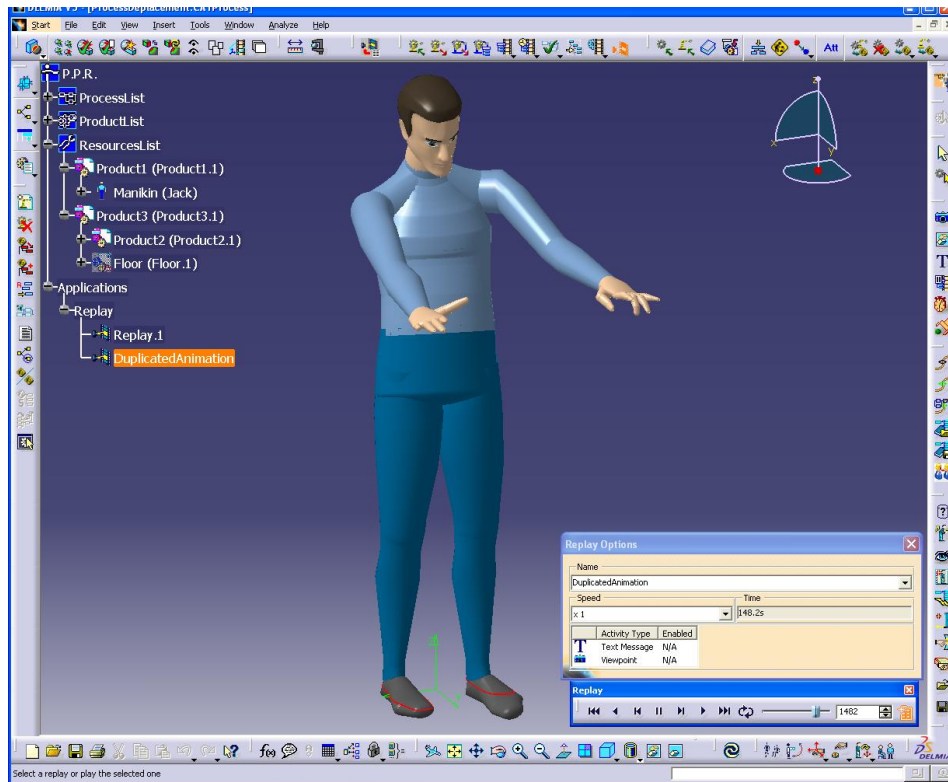
5. A new replay is created



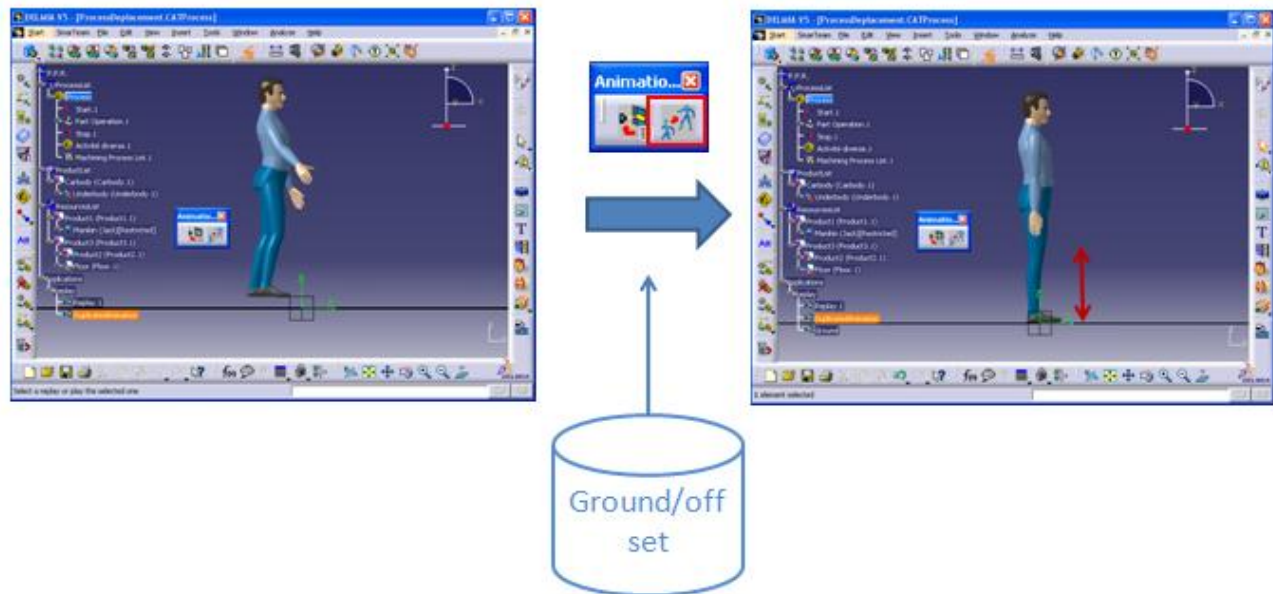
6. Play the imported animation
  - a. Click on the “simulation” toolbar
  - b. Click “Replay” button
  - c. Open “Replay Options” to select the newly created animation.



- d. Now use the “play” button.



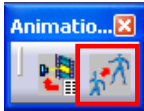
# Place the manikin on right position after anthropometry changes



1. If you change the anthropometry of manikin in DELMIA, it will not stand properly on the floor. Or you may need to give some offset to manikin with respect to floor
2. So to place the manikin according to your needs along the Z-direction "AnimationExporterOrigin" function is used

## “AnimationExporterOrigin”

1. Launch the “AnimationExporterOrigin” function

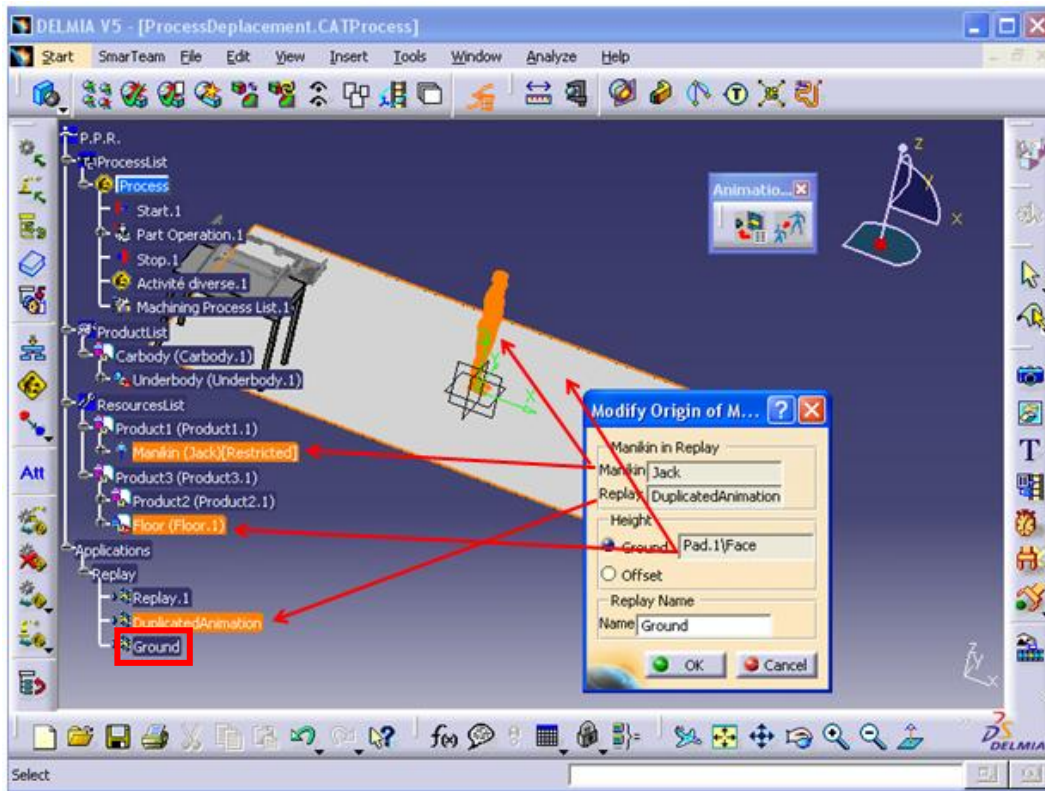


2. Select the following

- a. Scenario 1

- i. Manikin (directly or from the spec tree)
    - ii. The imported .AI9Replay (from the spec tree)
    - iii. Check the ground check box & give the reference surface (directly or from the spec tree)
    - iv. Enter a name and click OK
    - v. New Replay is seen in the spec tree

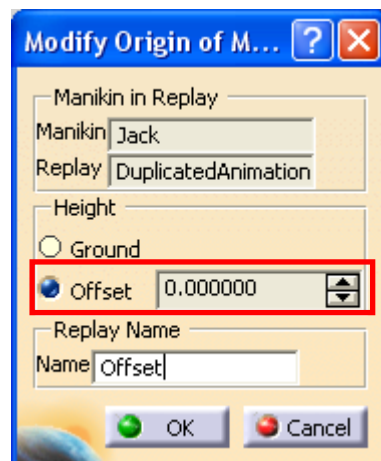




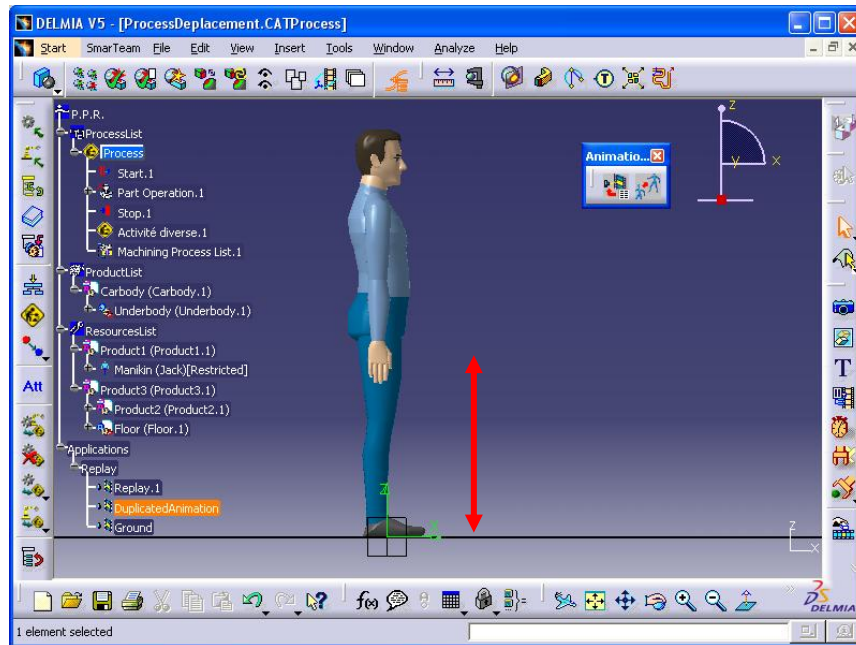
*The manikin is repositioned to the reference selected i: e: Ground*

b. Scenario 2

- i. Manikin (directly or from the spec tree)
- ii. The imported .AI9Replay (from the spec tree)
- iii. Check the offset check box and give a positive or a negative offset



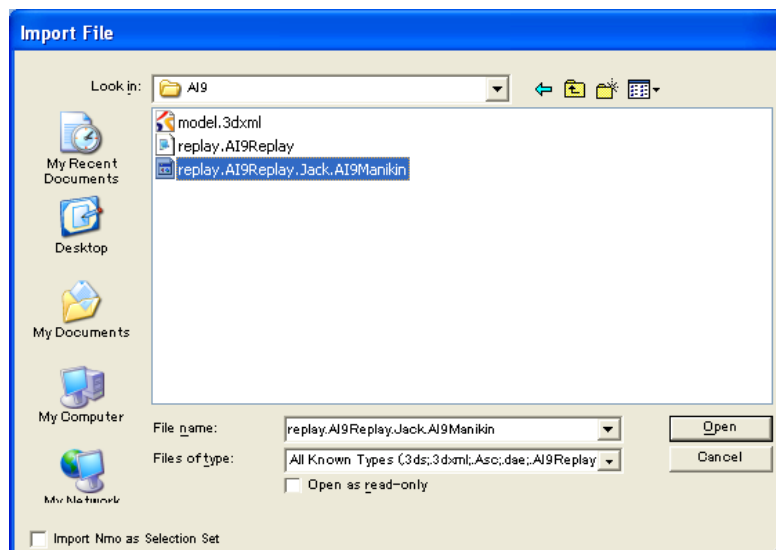
- iv. Enter a name and click OK
- v. New Replay is seen in the spec tree



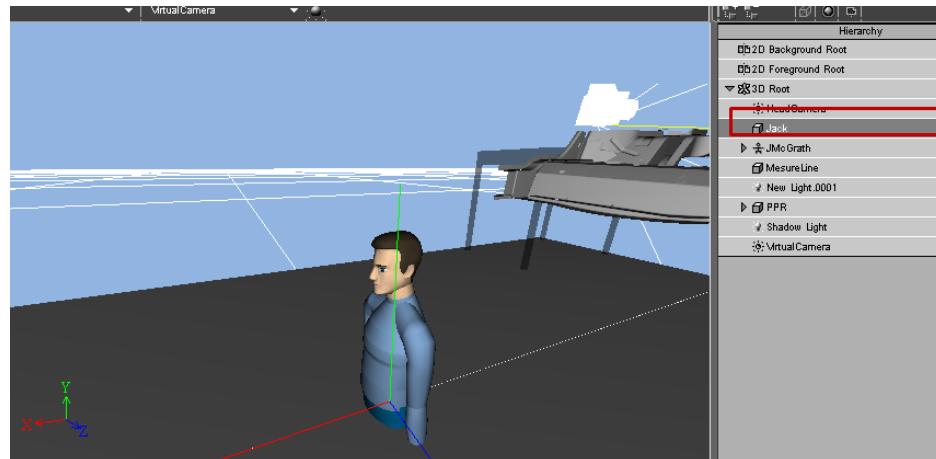
*The origin of human in the replay is modified by the offset you set in the function*

# Duplicate Animated Character with moving parts

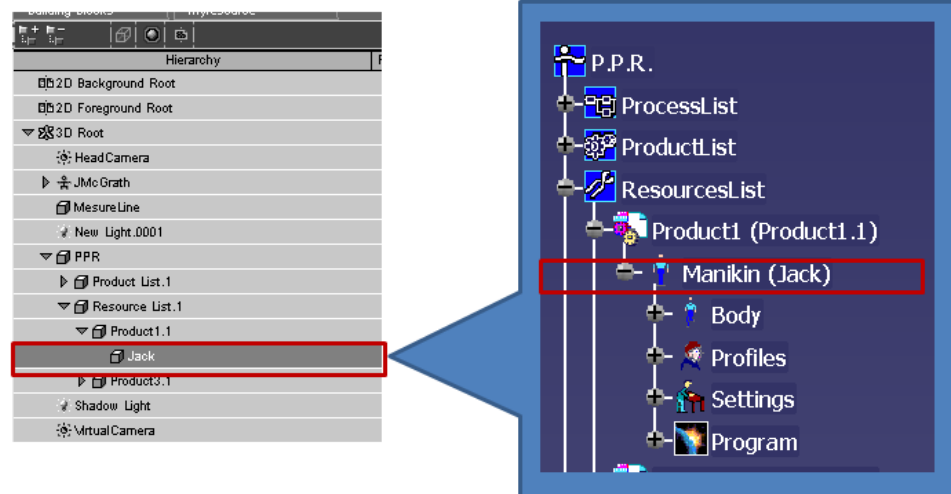
1. Prepare animated Character with moving parts
  - a. Export Geometric Model into 3DXML in DELMIA by using AI9 function
  - b. Export animation data into positions file with Manikin by using AI9 function
    - i. All the manikins are exported into AI9Manikin
  - c. Import geometric model from 3dxml into Virtools
  - d. Import animation data with Manikin into Virtools and create a global animation
    - i. Delete the global animation
  - e. Create an animated character with
    - i. You can use motion capture system to create a global animation for animated character
  - f. Create other animation for part
    - i. You can also use motion capture system to create a global animation from moving parts
2. Duplicate animated character with DELMIA Manikin by using AE9 function
  - a. If manikins are deleted in creating animated character with moving parts, you can import Manikin from AI9Manikin that is exported from DELMIA.
    - i. Resources/Import Files
    - ii. Select a AI9Manikin



iii. A Manikin is imported



iv. Move the Manikin in the right position in Hierarchy manager according to the position of Manikin in DELMIA



b. Duplicate animated character with imported Manikin

3. Keep all the global animations you want to export to DELMIA and delete other animations
4. Export all the global animation into a AI9Replay file
5. Import the AI9Replay file into DELMIA

# Help About – Animation Exporter

1. Click on Help in the Menu bar.



2. Now click on About Animation Exporter.

