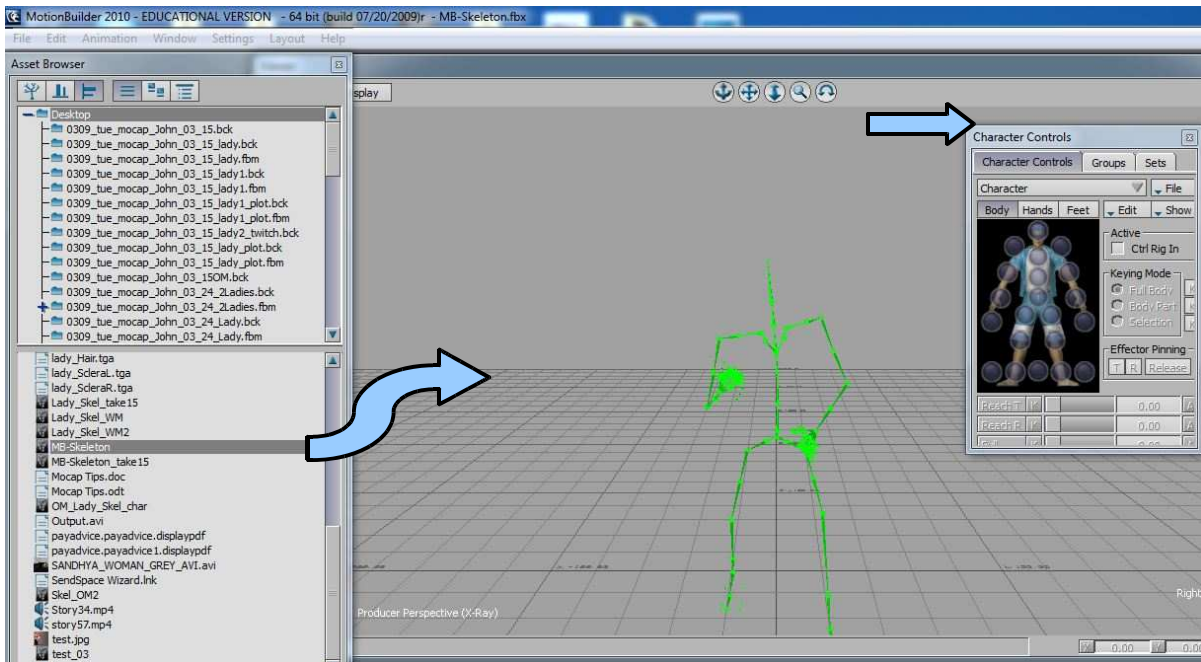


# Tutorial How to re-create a fight scene between characters

JMG 2010

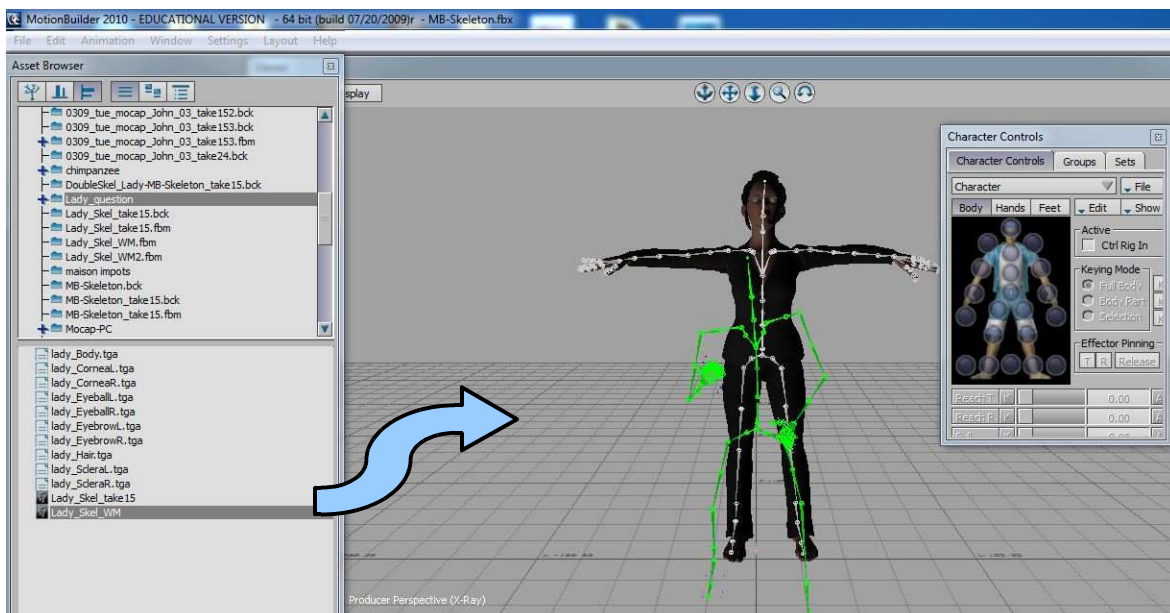
This tutorial shows how to use the STORY section of Motion Builder in order to reconstruct a fight scene between several characters. In the case of the stuntman, the fight has been recorded with one persons at a time fighting against an opponent in the background. The opponent was not recorded so we need to create his or her character on the virtual stage. This tutorial covers

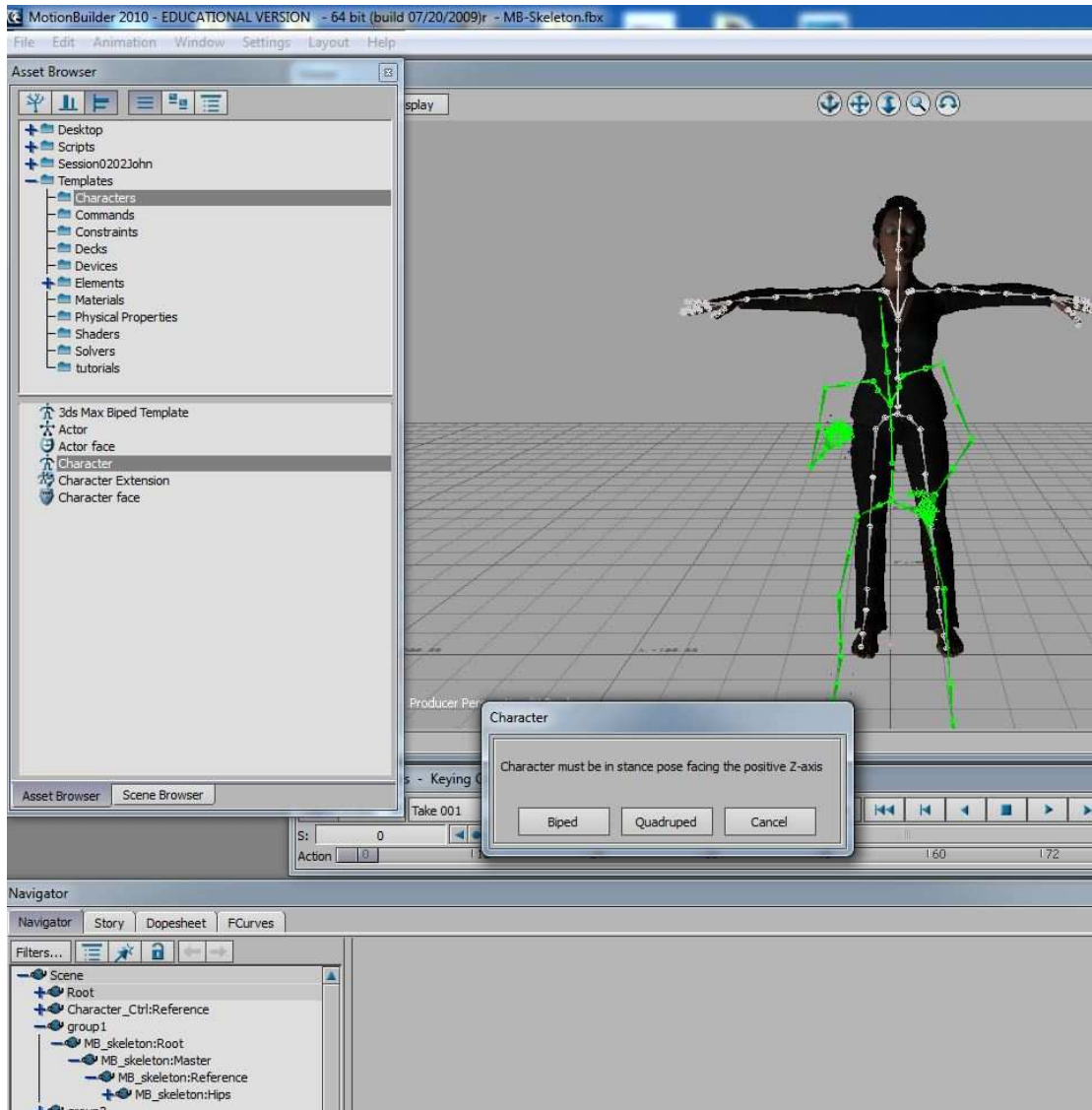
- mapping several animations from Organic Motion on one character or more
- how to take care of possible bugs with distortions around the hands
- how to lay out a multi-track story in order to edit and sync the protagonists of the fight
- editing several characters in STORY
- cleaning up the motion data curves



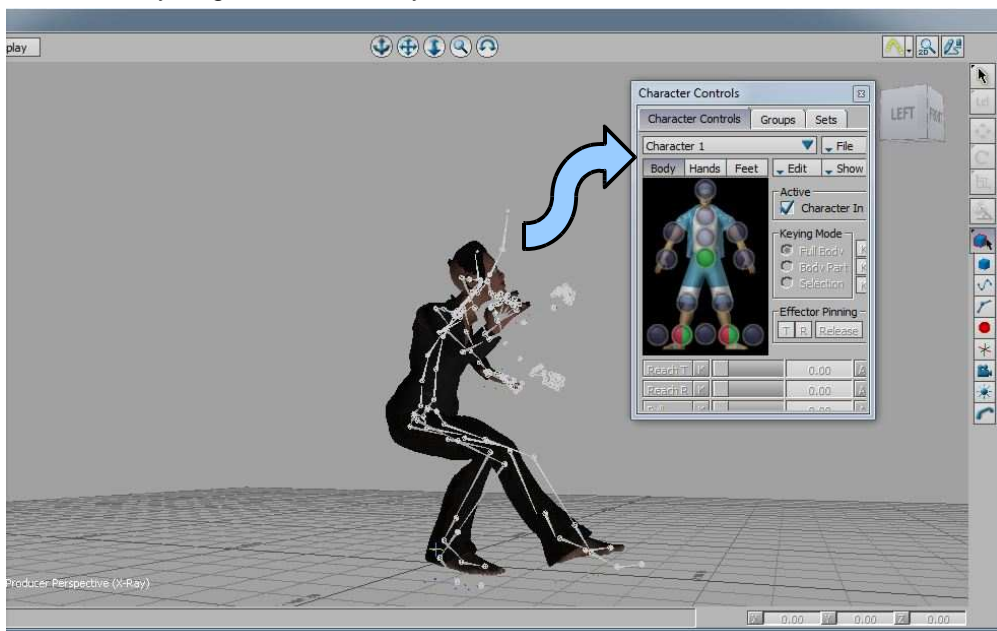
## 1- SETTING UP THE FIRST CHARACTER in SKELETON MODE

We are using the Motion Builder (MB) skeleton as an interface between the 3D character and “the take” from Organic Motion. [The file can be downloaded at http://www.tinkering.net/mocap2010/MB-Skeleton.fbx](http://www.tinkering.net/mocap2010/MB-Skeleton.fbx) This intermediary step will take care of situations where the mesh tears and breaks around the hands. Open the Motion Builder skeleton, > No animation. The MB character is characterized > the character is called “character” Select Lady in Asset Browser > Drag from Asset Browser and Merge with the 3D scene > No Animation. Select the skeleton of the 3D character > Hips > characterized > biped > the character is called “character1”.

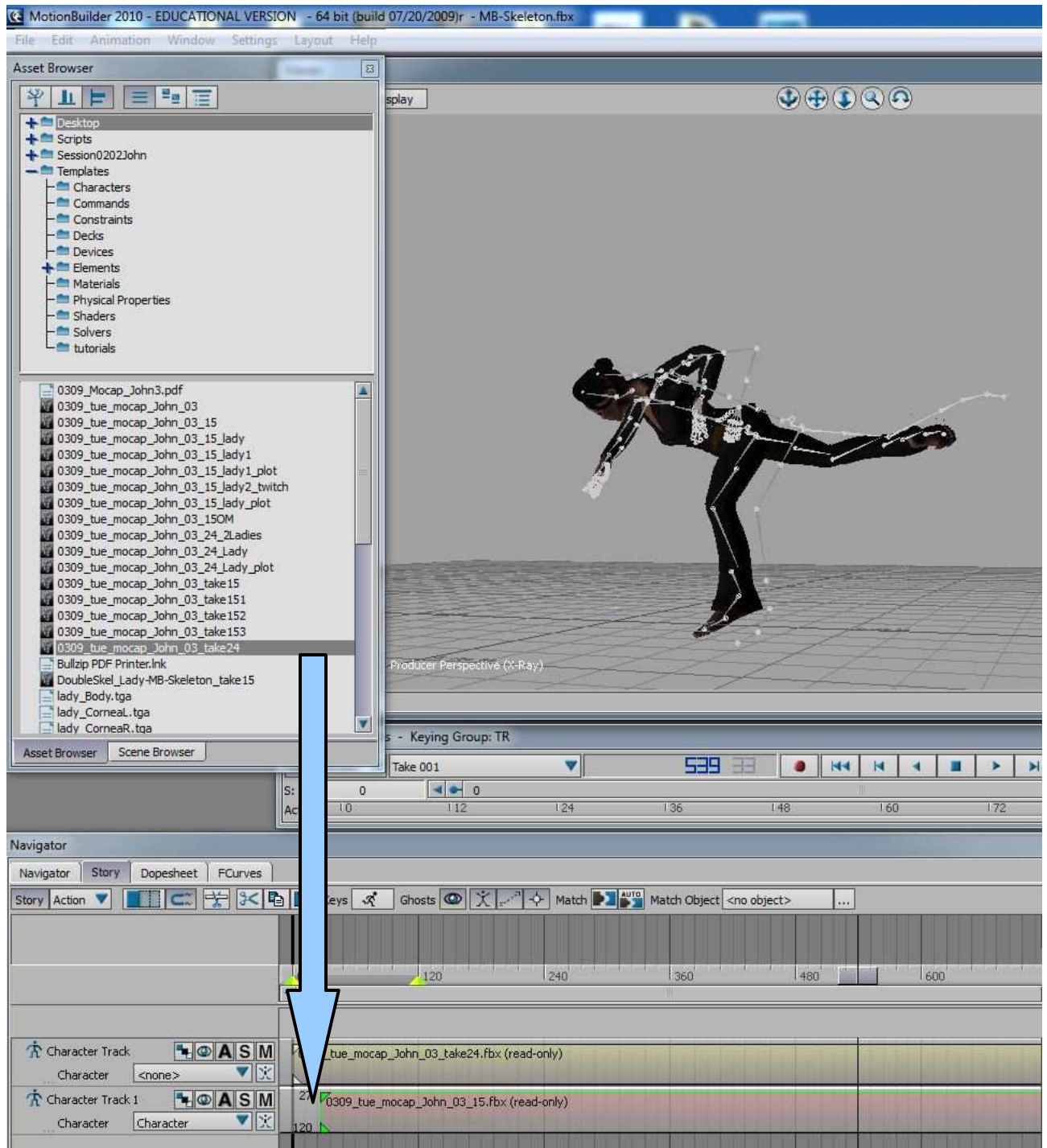


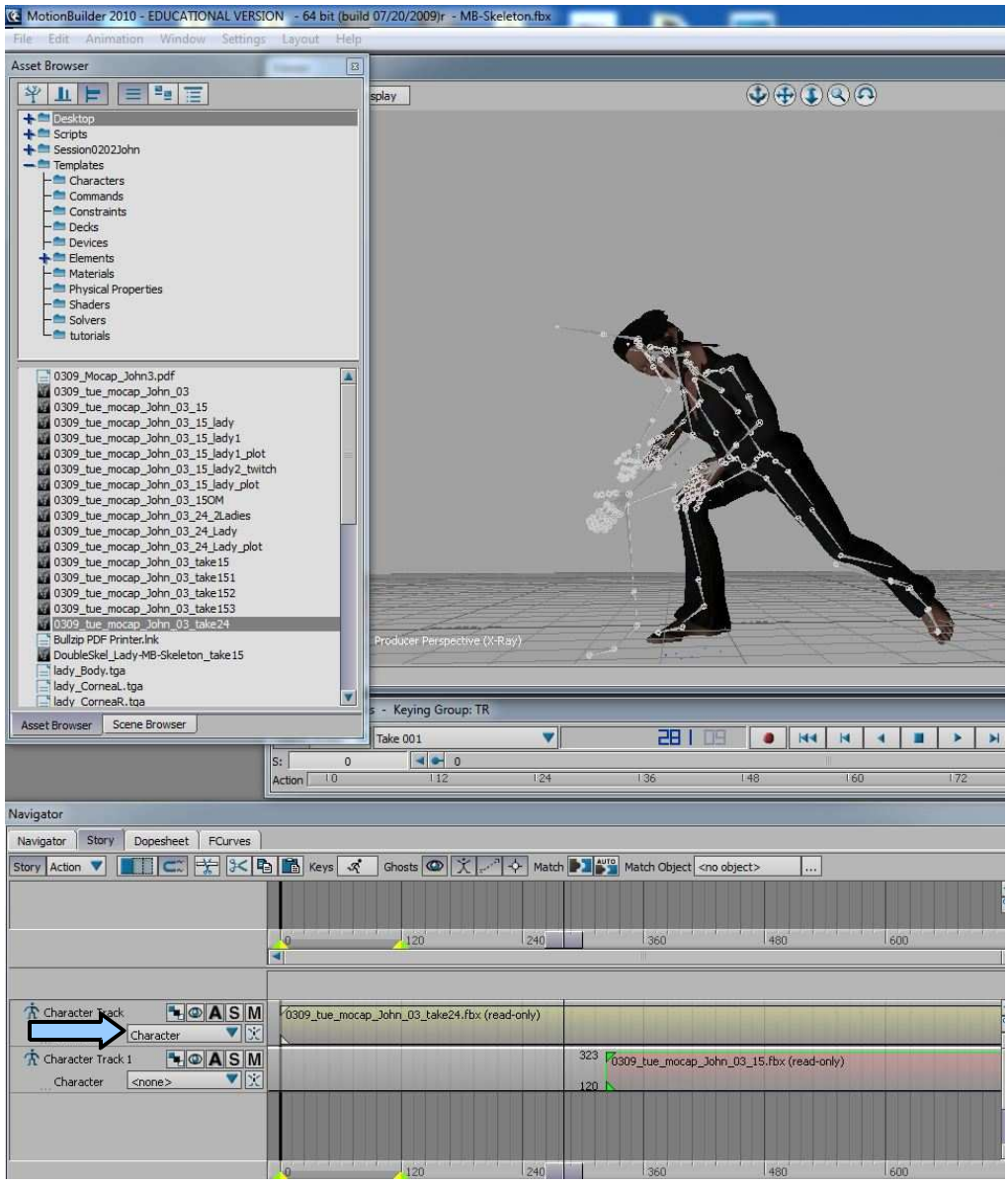


Go to the Character Controls window > select character1 > go to the inout menu > select character. You can see that the Lady's rig is now driven by the Motion Builder skeleton.

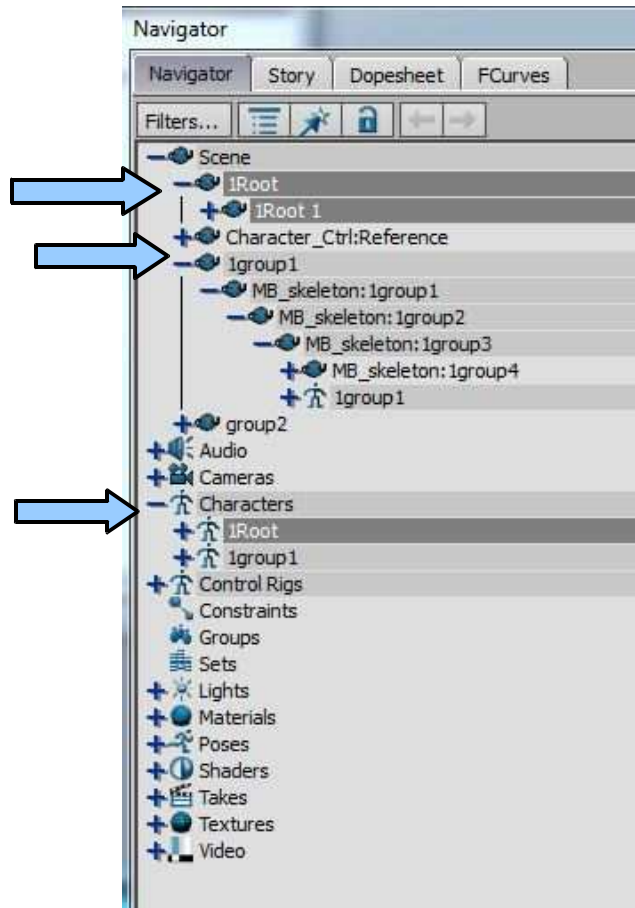
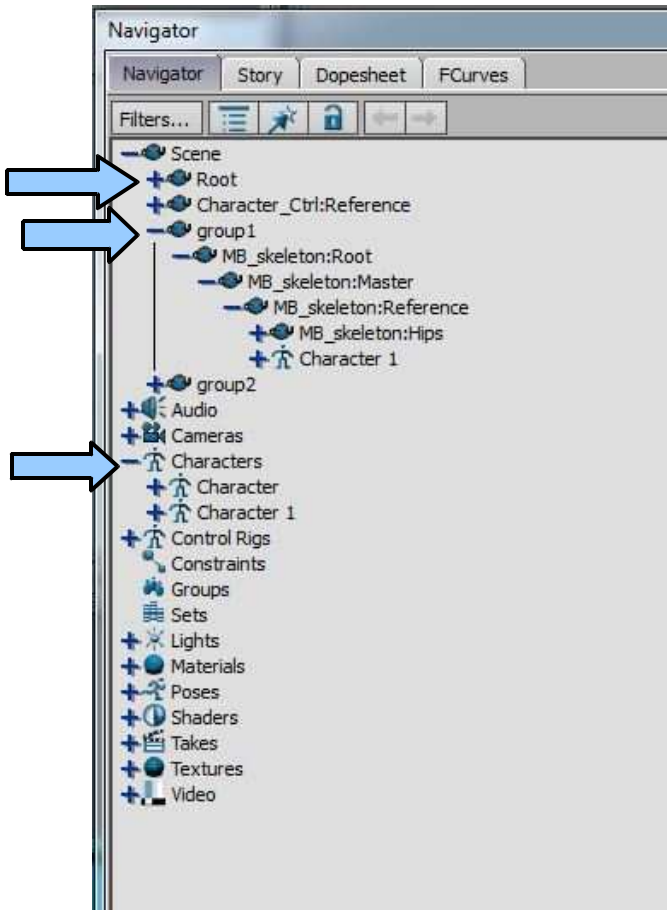


The next step is to bring several motion capture takes in STORY. RMB in the Story window > select Insert > character AnimationTrack  
From Asset Browser > Drag and Drop a take in the new track.  
Make sure that Character is selected in the track pull down menu.  
Add several tracks and start editing.

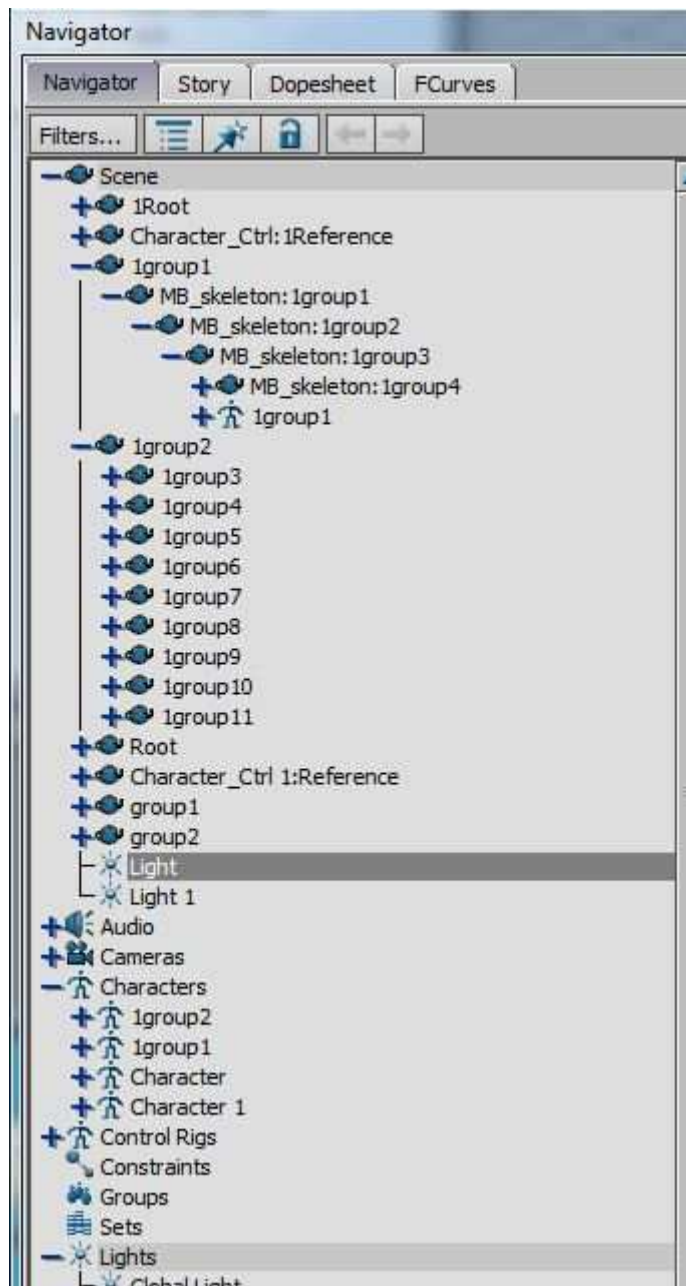




Let's add a second character. In this case we will add the same character again. First step is to rename the current character. The renaming will prevent elements of the first character to be lost in the process of Merging files. We will rename the skeleton and the character's body parts or 3D mesh. In Navigator, RMB on the group of the skeleton > Select Branches > Rename. We will rename the character by adding a 1 before the name.

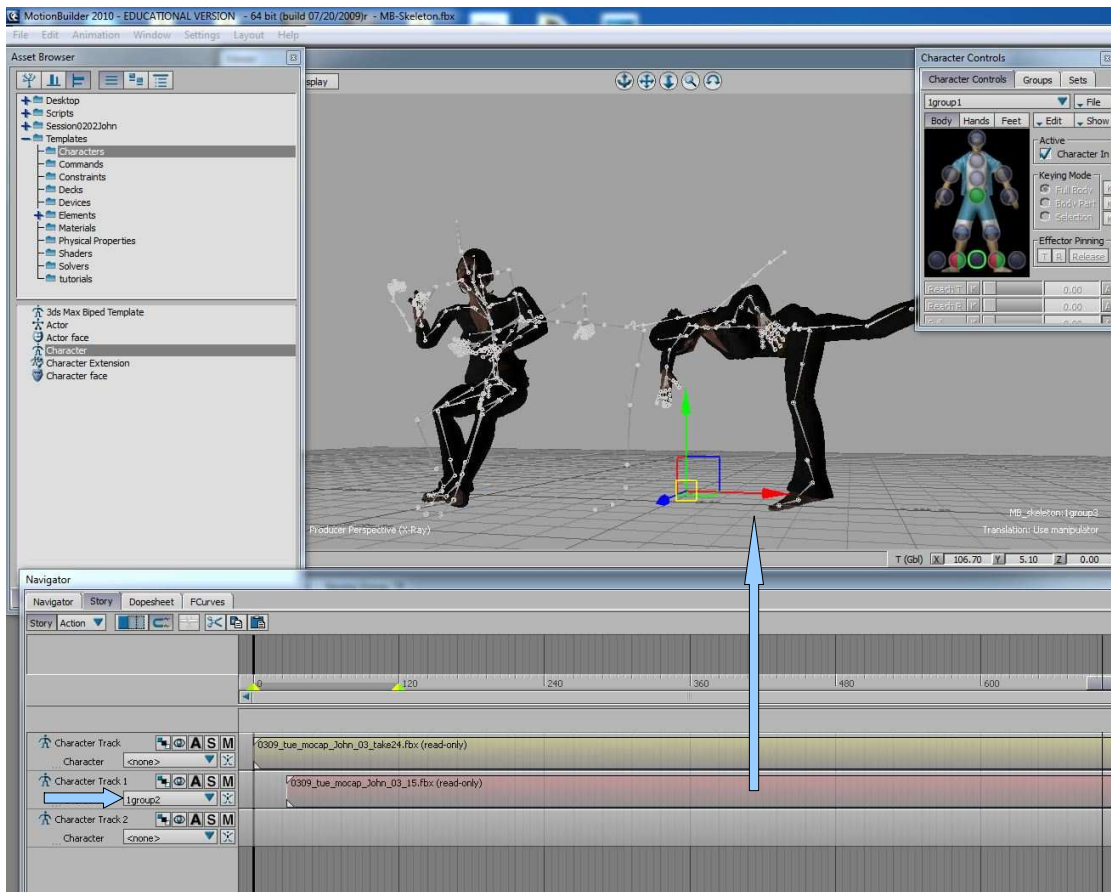


Groups before and after being renamed. "1" was added on the left of the name. Note that the renaming took care of 'character' and 'character1' which are now called now '1Root' and '1group'.

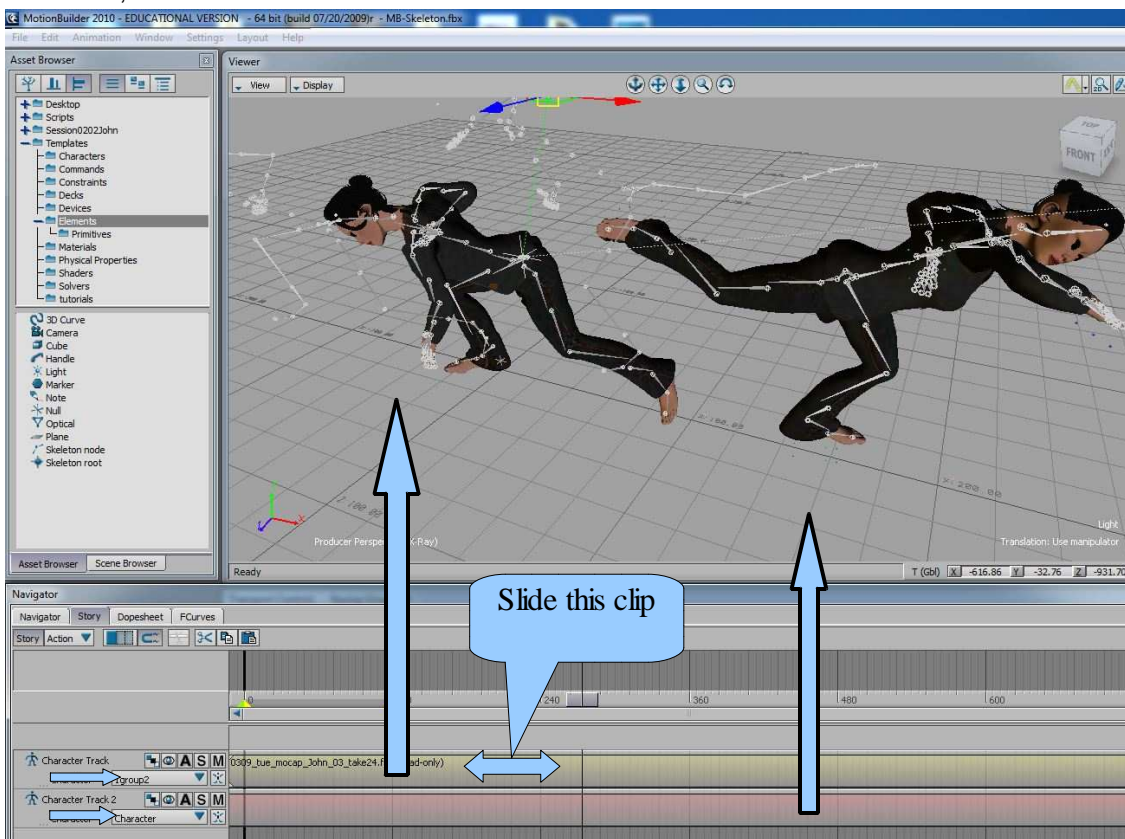


## 2- SETTING UP THE SECOND CHARACTER in SKELETON MODE

Let's repeat the same steps as in section 1. (Note that in this case, we merge with the same character, you may also want to bring in a different character.)

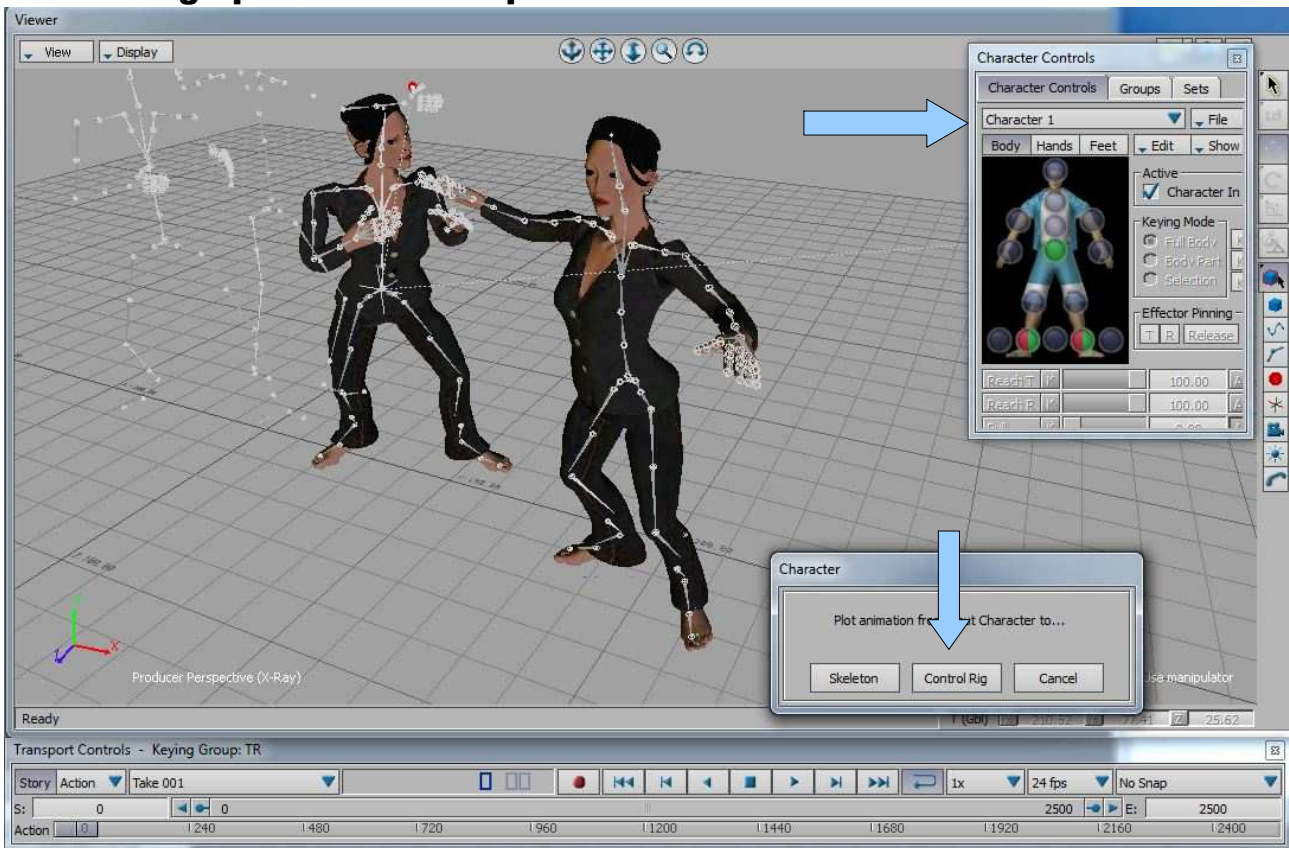


Let's connect the characterized second Lady with the second Motion Builder skeleton. In STORY, create new Character animation tracks for the second character.



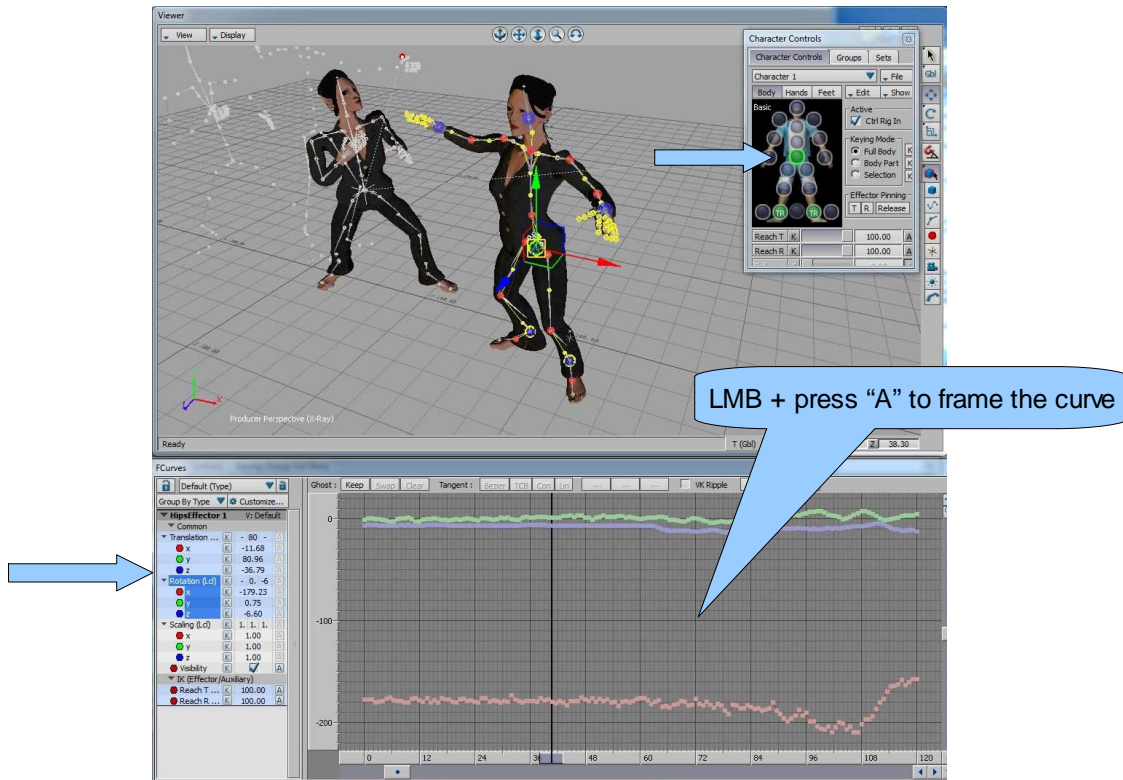
In order to synchronize the actions, you can slide the clips to adjust the timing of actions between the first and second characters. Once you have synchronized the action, you are now ready to do more editing of animations between the characters.

### 3- Cleaning up the motion capture data in CONTROL RIG MODE

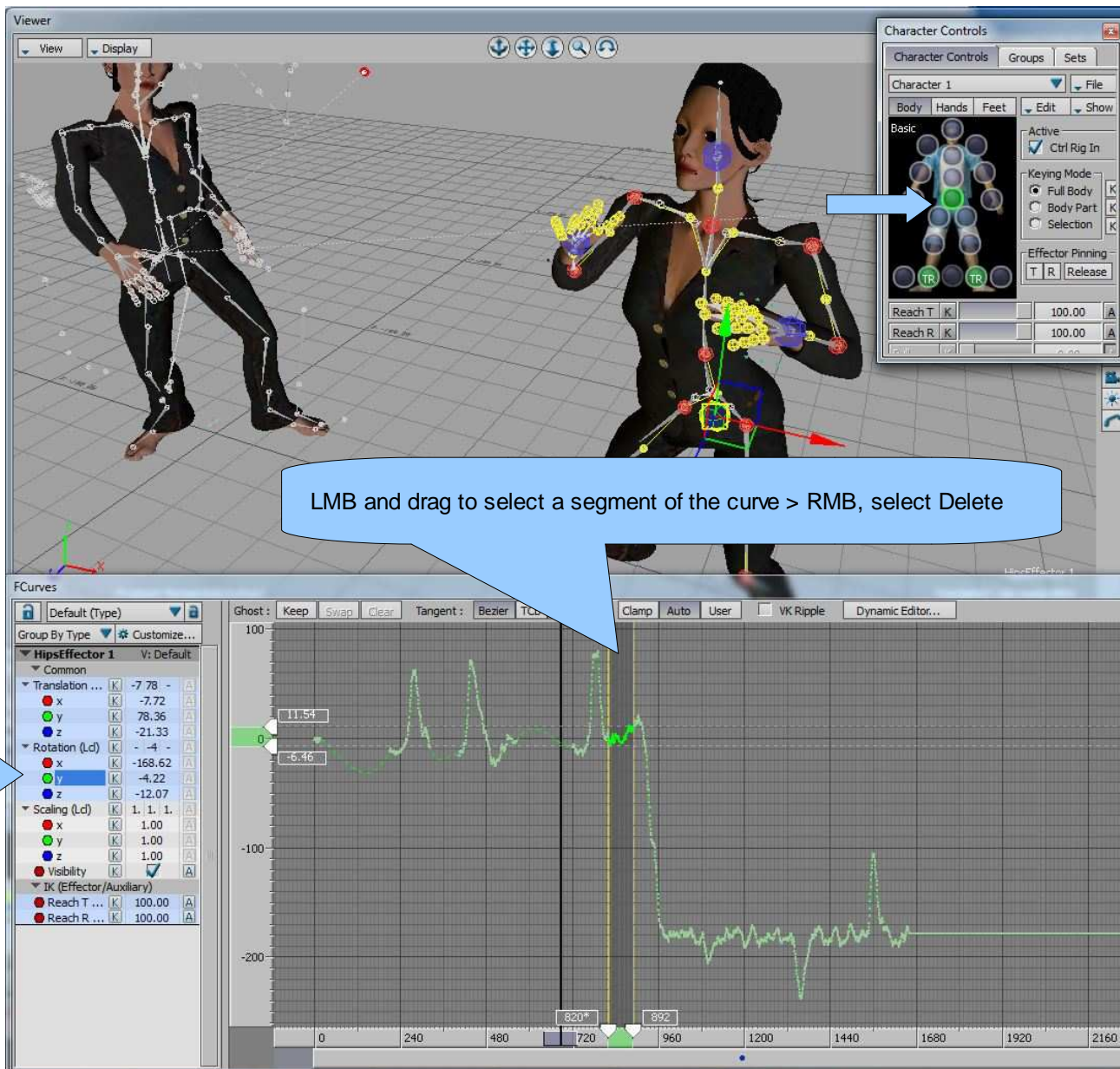


Make sure that the duration of the playback is the whole clip. You need to plot each character to the Control Rig mode. If you are not sure about the name of the character, press play, loop the animation > Go to Character Control > uncheck "character in". If the 3D character stops to play, this means that you selected the corresponding character.

In the Control Rig mode, select the Hip joint. Go to Windows > Fcurves Window > Select rotation XYZ  
Click in the field of the curve > press A for frame All



The curve that you need to clean up is Y. Select only the Rotation Y curve. Start deleting small groups of keyframes without changing the character of the curve. You can playback in a loop as you go to see your changes in realtime.



LMB and drag to select a segment of the curve > RMB, select Delete  
 Playback as you go - you will see that the unwanted vibrations of the Hip are removed.  
 This is how the curve looks after cleaning up manually.

