

Workflow for animating models in 2D in Maya

2D Maya animation workflow:

1. Throughout this workflow, maintain the stem filename, such as 20070612Sus01C01S0001 for all file names; hereafter referred to as (stem)
2. Digitize a single x-ray view using XrayProject with just one camera selected. Files named (stem)xypts.csv and (stem)xyzpts.csv will be created, but (stem)xyzpts.csv will be a nonsense file.
3. Create a new (stem)xyzpts.csv file from (stem)xypts.csv by adding a Z column of all zeros and scale to cm. Get scale from calibration cube. If subject is recorded close to the II, then the scale is approximately 33 pixels/cm.
4. Copy and paste column labels and first row from (stem)xyzpts.csv into a new spreadsheet and save as a new file named (stem)ctmarkercoords.csv. This file will substitute for marker coordinates normally derived from the CT scan.
5. Use 'smoothData' Matlab script to make bones from coordinates and compute rotations/translations.
 - a. Matlab asks for (stem)xyzpts.csv
 - b. Matlab asks for (stem)ctmarkercoords.csv
 - c. Note number of bones
 - d. Associate markers with bones
 - e. Creates (stem)bones.csv file.
6. In Maya, create and name bone shapes or import them.
7. In "mel" box, type 'impMdata' and select the (stem)xyzpts.csv
8. Select the three markers of a given bone, then the bone of interest, and then use the menu to constrain/point
9. Once bone is moved, delete constraint box.
10. Manually rotate bone into proper position relative to its markers
11. Select bones in order that they were smoothed (in Matlab step)
12. Imp (import) (stem)bones file, which will load the rotations/translations and drive the animation