MIT ARTEMiS
ART for Engineering
Mathematics & Science

http://web.mit.edu/artemis

Massachusetts
Institute of
Technology

Exercise 2
ANIMATING AND RENDERING IN MAYA
Visualization in Education: Creating Animations

Preparation

Watch the tutorial video

Animation in Maya

Online: http://www.youtube.com/user/mitartemis

Offline: 02_Maya2_animation.mp4 (available from the instructor)

Review template files

Beginner: if needed, use the files in folder Tutorial 2 for this exercise.

Keyframe animation and rendering

BEGINNER

Follow the workflow in the tutorial video to create and set a camera and a keyframe motion animation; then render the images of the animation through the camera. First, create the camera. Then set the screen size, resolution, frame rate, and start and end times for the animation and playback. Position the camera, so it shows the objects as needed for the torque video. Create keyframes at the start and end of the animation on the timeline. (You must position the objects in the last frame, as needed for the torque video.) Finally, render the image sequence and a single image of the green arrow. Remember to save the project and scene periodically, so you do not lose your work.

INTERMEDIATE

Same as for beginner, but try creating a camera, setting animation keyframes, and rendering images *after* watching the video tutorial. Refer only to the handout for the software options in Maya. Feel free to choose a different screen size, set different length of the animation, and use a different naming convention for rendered files. However, keep the frame rate at 30 fps and resolution at 72 dpi: these settings are good for video. Remember to save your Maya project and scene.

ADVANCED

Use your own 3D models and define your own keyframes for motion animation! You can work in other 3D authoring software, if you wish, e.g. 3DS Max. However, at the end you should have all necessary images and/or image sequences rendered in a graphic exchange format such as PNG, which can be used in After Effects.