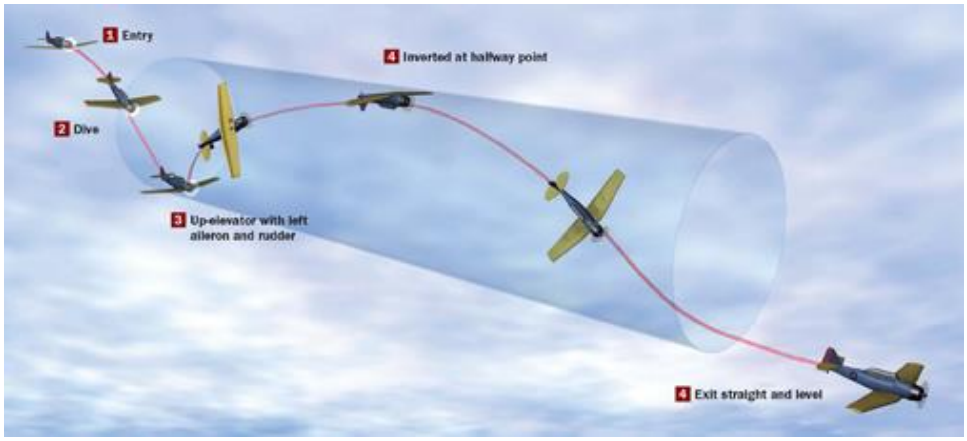
CSC 474 Computer Animation

Lab 3



Perform this flight maneuver with a plane in 3D animation

Your task is to produce the flight maneuver “Lomcovic” illustrated above.

Howto:

- Take Lab 2 and extend it by quaternions.
- Model a path and “spline” the path so it resembles the screwing path seen above.
- For the plane orientation, have an array of matrices which represent different stages of this flight maneuver. Let's call it e.g. Marr[..];
- Marr will be smaller than your spline path, but their actions have to align! Make sure of that. (t_Marr = t_splinepath / 20 for example, but it's up to you how to do that).
- Translate the matrices into quaternions and SLERP! Translate the result quaternion into a rotation matrix for the model matrix M of the plane!
- Have the camera placed somewhere, so one can observe the maneuver. It is up to you to have a moving cam or not.