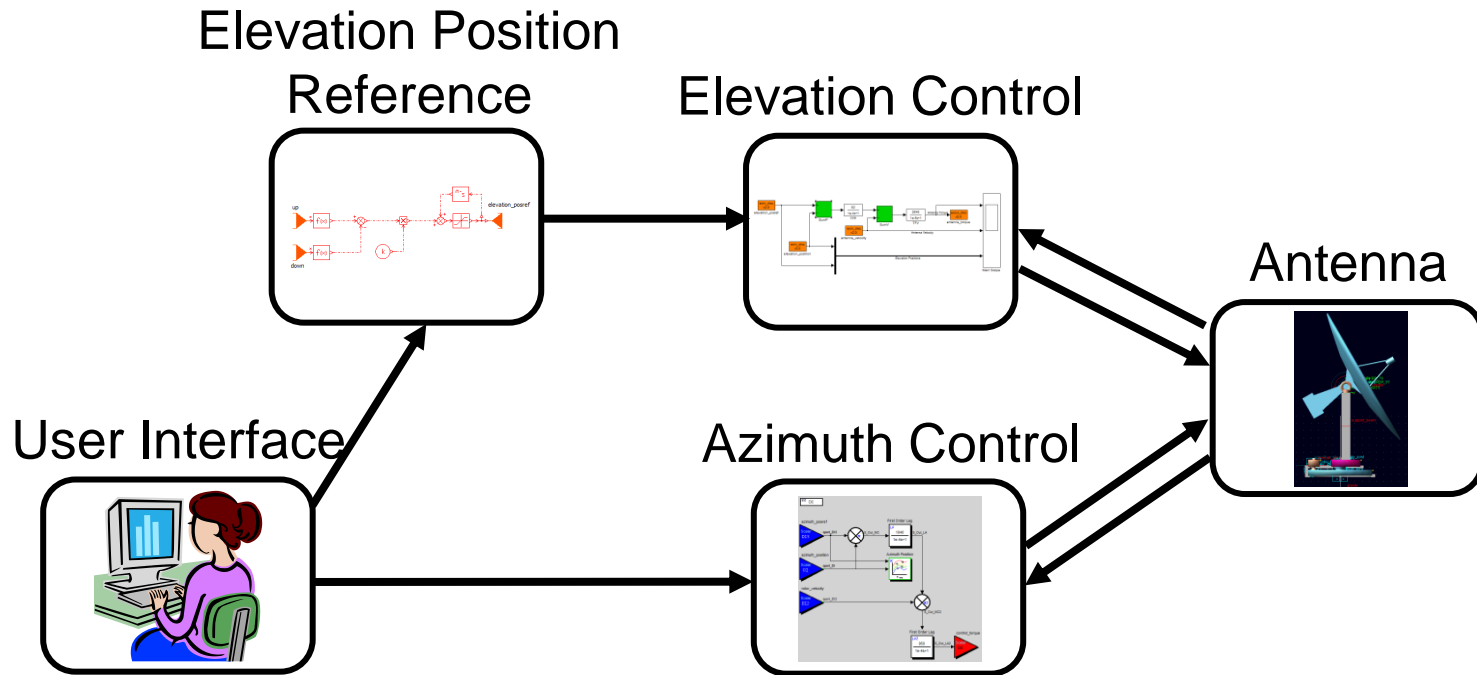




A CosiMate Application Antenna

KiasTek
Toulouse - France

Application Description



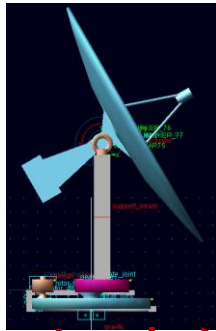
- Antenna: mechanical model (3D) in MD Adams
- 1D models computes torques to apply on mechanical parts to control the Azimuth and Elevation positions.
- User interface developed in UML diagrams (Rhapsody)

Co-simulation setup

Antenna (MD Adams)

Azimuth Control (Easy5)

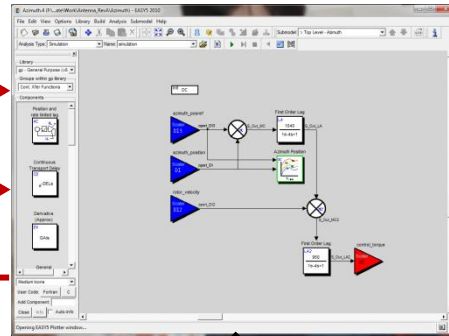
Elevation Reference (AMESim)



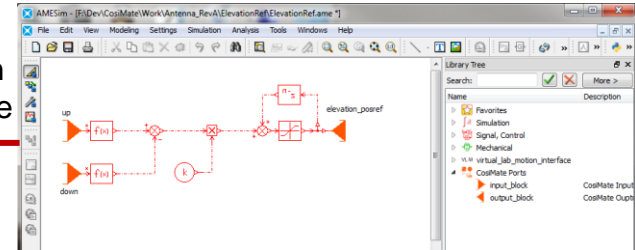
Azimuth Position

Rotor Velocity

Torque



Elevation Reference

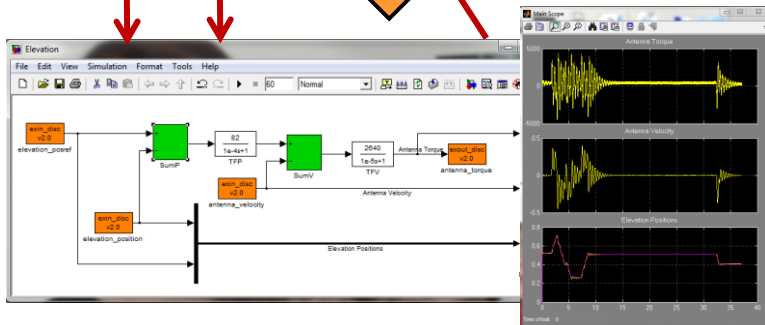
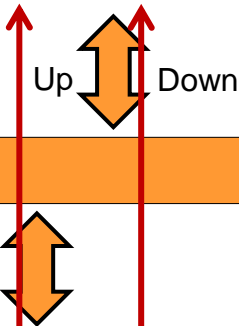


Antenna Velocity

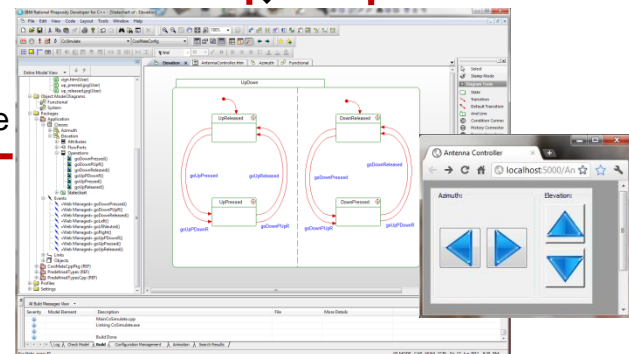
Torque

Co-simulation Bus

Elevation Position



Azimuth Reference

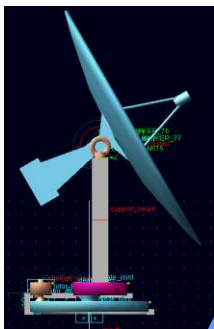


Elevation Control (Simulink)

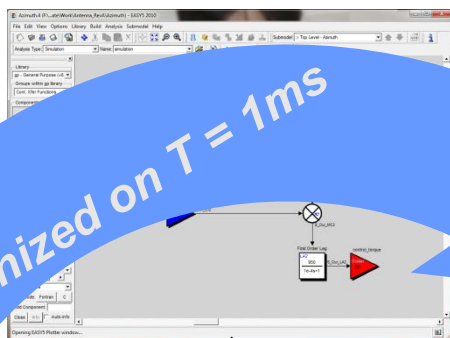
User Control (Rhapsody)

Data synchronization

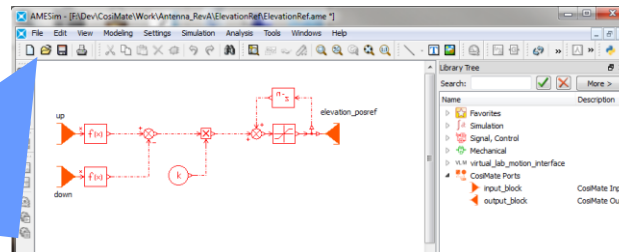
Antenna (MD Adams)



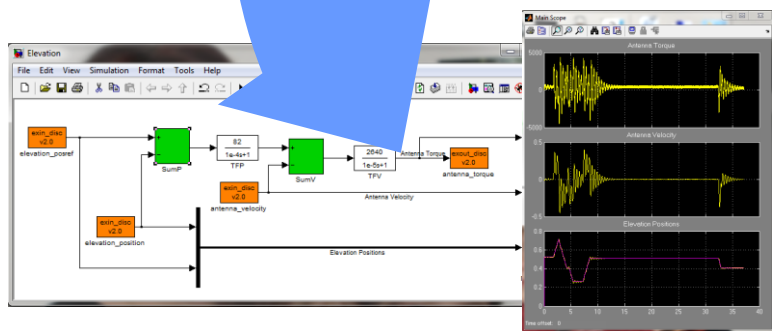
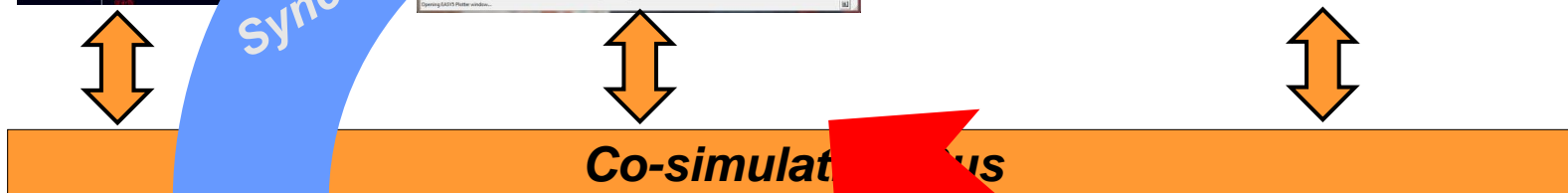
Azimuth Control (Easy5)



Elevation Reference (AMESim)

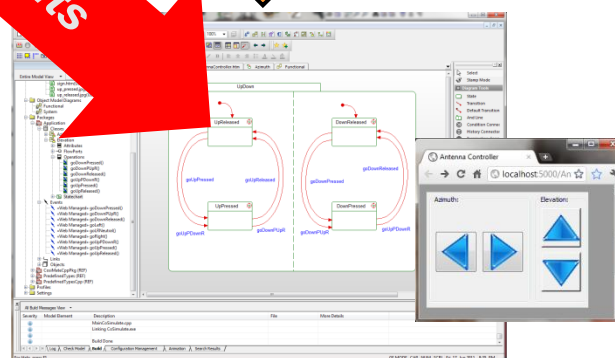


Synchronized on $T = 1\text{ms}$



Elevation Control (Simulink)

Events



User Control (Rhapsody)

DEMO

Click on this link to watch the video:

http://www.chiastek.com/products/Demo_Antenne.flv