Example 1: SimMechanics Model of the Pioneer 3DX Robot Driven by Gravity Only
File(s): Pioneer3DXAssembly.slx (supporting files below)

Example 2: SimMechanics Model of the Pioneer 3DX Robot with Angular Velocity Actuation to Two Wheels
File(s): Actuated_Pioneer3DXAssembly.slx (supporting files below)

Example 3: SimMechanics Model of the Pioneer 3DX Robot with Motion Constraints
File(s): MotionConstraints_Pioneer3DXAssembly.slx (supporting files below)

Supporting Files for Examples 1, 2 and 3:
File(s): SimMechanics_Supporting_Files.zip

Example 4: SimMechanics Model of the Pioneer 3DX Robot Actuating Simulink 3D Animation in a Virtual Environment
File(s): SL3DAnim_Pioneer3DXAssembly.slx (supporting files below)

Example 5: SimMechanics Model of the Pioneer 3DX Robot Performing Collision Avoidance using Stateflow and Visualized in Simulink 3D Animation in a Virtual Environment
File(s): Controller_Pioneer3DXAssembly.slx (supporting files below)

Supporting Files for Examples 4 and 5:
VRML Files for 3D Animation Visualization:

- SL3D_Supporting_Files.zip

Look Up Table Data:

- WorldLUTData.mat

Example 6: Simulink Model to Interact with Pioneer 3DX Robot to do Collision Avoidance (supporting files below)
Files(s): main_demo_real_robot.slx

Supporting Files for Example 6:
ARIA Simulink Library:

- Pioneer3DX_Simulink_Library.zip, download the file here:
  http://robots.mobilerobots.com/wiki/Simunlink_Demo_Webinar

IMPORTANT NOTES:

1. The examples work only in MATLAB 8.2(R2013b) or later
2. Once the supporting files are unzipped, add the folders and sub folders to the MATLAB path
3. Examples 1, 2 and 3 require MATLAB, Simulink and SimMechanics
4. Examples 4 and 5 require MATLAB, Simulink, SimMechanics and Simulink 3D Animation
5. Example 6 requires MATLAB, Simulink and Stateflow
