

Time	Subject – Total video time 20:09
00:00	<b>Introduction:</b> - aileron pivot-points and animation - flaps pivot-points and animation
00:40	<b>Open Blender file</b>
01:00	<b>3D View:</b> - select left-aileron-control <b>Toolbar-Left,[Blender2FSX],[FSX Animation tool]:</b> - [+] - search for <i>l_aileron_percent_key</i> - [Assign] to the animation tag to the left_aileron_control <b>Panel-Properties,[Object],[FSX Properties]:</b> - check the Animation Tag: <i>l_aileron_percent_key</i> - check Length: 0-100
01:50	<b>3D View:</b> - select left-aileron-control - [R][X]20[Enter] to rotate the left-aileron-control to its animation starting position <b>Panel-Animation:</b> - set framecounter: 0 <b>3D View:</b> - [I][R] to set the 1 <sup>st</sup> animation keyframe <b>Panel-Animation:</b> - set framecounter: 50 <b>3D View:</b> - [R][X]-20[Enter] to rotate the rudder to its animation center position - [I][R] to set the 2 <sup>nd</sup> animation keyframe. <b>Panel-Animation:</b> - set framecounter: 100 <b>3D View:</b> - [R][X]-20[Enter] to rotate the rudder to its animation last position - [I][R] to set the 3 <sup>rd</sup> animation keyframe.
05:00	<b>3D View:</b> - select right-aileron-control <b>Toolbar-Left,[Blender2FSX],[FSX Animation tool]:</b> - [+] - search for <i>r_aileron_percent_key</i> - [Assign] to the animation tag to the right_aileron_control <b>Panel-Properties,[Object],[FSX Properties]:</b> - check the Animation Tag: <i>r_aileron_percent_key</i> - check Length: 0-100

05:00	<b>3D View:</b> <ul style="list-style-type: none"> <li>- adjust the 3D view so you see both ailerons</li> <li>- select right-aileron-control</li> <li>- [R][X]20[Enter] to rotate the right-aileron-control to its animation starting position</li> </ul> <b>Panel-Animation:</b> <ul style="list-style-type: none"> <li>- set framecounter: 0</li> </ul> <b>3D View:</b> <ul style="list-style-type: none"> <li>- [I][R] to set the 1<sup>st</sup> animation keyframe</li> </ul> <b>Panel-Animation:</b> <ul style="list-style-type: none"> <li>- set framecounter: 50</li> </ul> <b>3D View:</b> <ul style="list-style-type: none"> <li>- [R][X]20[Enter] to rotate the rudder to its animation center position</li> <li>- [I][R] to set the 2<sup>nd</sup> animation keyframe.</li> </ul> <b>Panel-Animation:</b> <ul style="list-style-type: none"> <li>- set framecounter: 100</li> </ul> <b>3D View:</b> <ul style="list-style-type: none"> <li>- [R][X]20[Enter] to rotate the rudder to its animation last position</li> <li>- [I][R] to set the 3<sup>rd</sup> animation keyframe.</li> </ul>
	<b>Playing the aileron animation:</b>
06:20	<b>Panel-Animation:</b> <ul style="list-style-type: none"> <li>- [&gt;] to see the animated parts of your aircraft moving (all at the same time)</li> <li>- [&lt;] to reset the animation current position to 0.</li> </ul>
	<b>Construction and animation of the flaps</b>
07:00	<b>Top View:</b> <ul style="list-style-type: none"> <li>- insert object at the left flap-position</li> <li>- shape the cube into the form of a flap</li> </ul>
08:30	<b>Left View:</b> <ul style="list-style-type: none"> <li>- adjust the position and size of the cube into the form of a flap</li> </ul>
09:35	<b>Front view /Top View:</b> <ul style="list-style-type: none"> <li>- [Tab] to switch to object mode</li> </ul> <b>Panel-Properties,[Object]:</b> <ul style="list-style-type: none"> <li>- rename the object to left-flap</li> </ul> <b>3D View:</b> <ul style="list-style-type: none"> <li>- check the scale of the flap</li> <li>- [Shift_d] to copy the left-flap to the right-flap and drag it in position</li> </ul> <b>Panel-Properties,[Object]:</b> <ul style="list-style-type: none"> <li>- rename the object to right-flap</li> </ul>
	<b>Creation of the flap pivot points:</b> <b>#FSX allows the separate control of each flap (flaps vrs flap-a-rons)</b> <b># In this video the choice has been made to control both flaps with 1 control surface.</b>

11:30	<b>3D View:</b> <ul style="list-style-type: none"> <li>- reposition 3d cursor to the middle of the wing.</li> <li>- insert object</li> <li>- shape the cube into the form on a pivot point</li> </ul> <b>Panel-Properties,[Object]:</b> <ul style="list-style-type: none"> <li>- rename the object to flap_control</li> </ul> <b>Panel-Properties,[Object],[Display]:</b> <ul style="list-style-type: none"> <li>- turn X-ray on</li> </ul> <b>3D View:</b> <ul style="list-style-type: none"> <li>- check the scale of the flap-control</li> </ul>
13:15	<b>3D View:</b> <ul style="list-style-type: none"> <li>- select left-flap</li> <li>- select right-flap</li> <li>- select flap-control</li> <li>- [Ctrl-P][Object] to parent the flaps to the flap-control</li> </ul>
14:40	<ul style="list-style-type: none"> <li>- select flap-control</li> <li>- select body</li> <li>- [Ctrl-P][Object] to parent both flap-controls to the body</li> </ul>
15:30	<ul style="list-style-type: none"> <li>- Select flap_control</li> </ul> <b>Toolbar-Left,[Blender2FSX],[FSX Animation tool]:</b> <ul style="list-style-type: none"> <li>- [+]</li> <li>- search for <i>L_flap_percent_key</i></li> <li>- [Assign] to the animation tag to the left_flap_control</li> </ul> <b>Panel-Properties,[Object],[FSX Properties]:</b> <ul style="list-style-type: none"> <li>- check the Animation Tag: <i>L_flap_percent_key</i></li> <li>- check Length: 0-100</li> </ul>
	<p><b># FSX flap animation must start in a ZERO or UP position</b></p> <p><b># Only 3 keyframe (0, 15 , 30) are now created for these flaps animations</b></p>
16:30	<b>3D View:</b> <ul style="list-style-type: none"> <li>- set framecounter:0</li> <li>- [I][R] to set the 1<sup>st</sup> animation-key-frame.</li> </ul> <b>Panel-Animation:</b> <ul style="list-style-type: none"> <li>- set framecounter:50</li> </ul> <b>3D View:</b> <ul style="list-style-type: none"> <li>- [R][X]15[Enter] to rotate the flaps to its animation middle position</li> <li>- [I][R] to set the 2<sup>nd</sup> animation-key-frame.</li> </ul> <b>Panel-Animation:</b> <ul style="list-style-type: none"> <li>- set framecounter:100</li> </ul> <b>3D View:</b> <ul style="list-style-type: none"> <li>- [R][X]15[Enter] to rotate the rudder to its animation end position</li> <li>- [I][R] to set the 3<sup>rd</sup> animation-key-frame.</li> </ul>
18:25	<b>Panel-Animation:</b> <ul style="list-style-type: none"> <li>- [ &lt;] to reset the animation current position</li> <li>- [ &gt;] to see the animated parts of your aircraft moving (all at the same time)</li> <li>- check if everything is working fine</li> </ul>
	<b>Save your Blender file</b>
	<b>Make a copy of the saved blender file to your backup folder</b>
20:09	<b>End of the video</b>