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Using JavaScript inside Adobe Acrobat Professional 7.0

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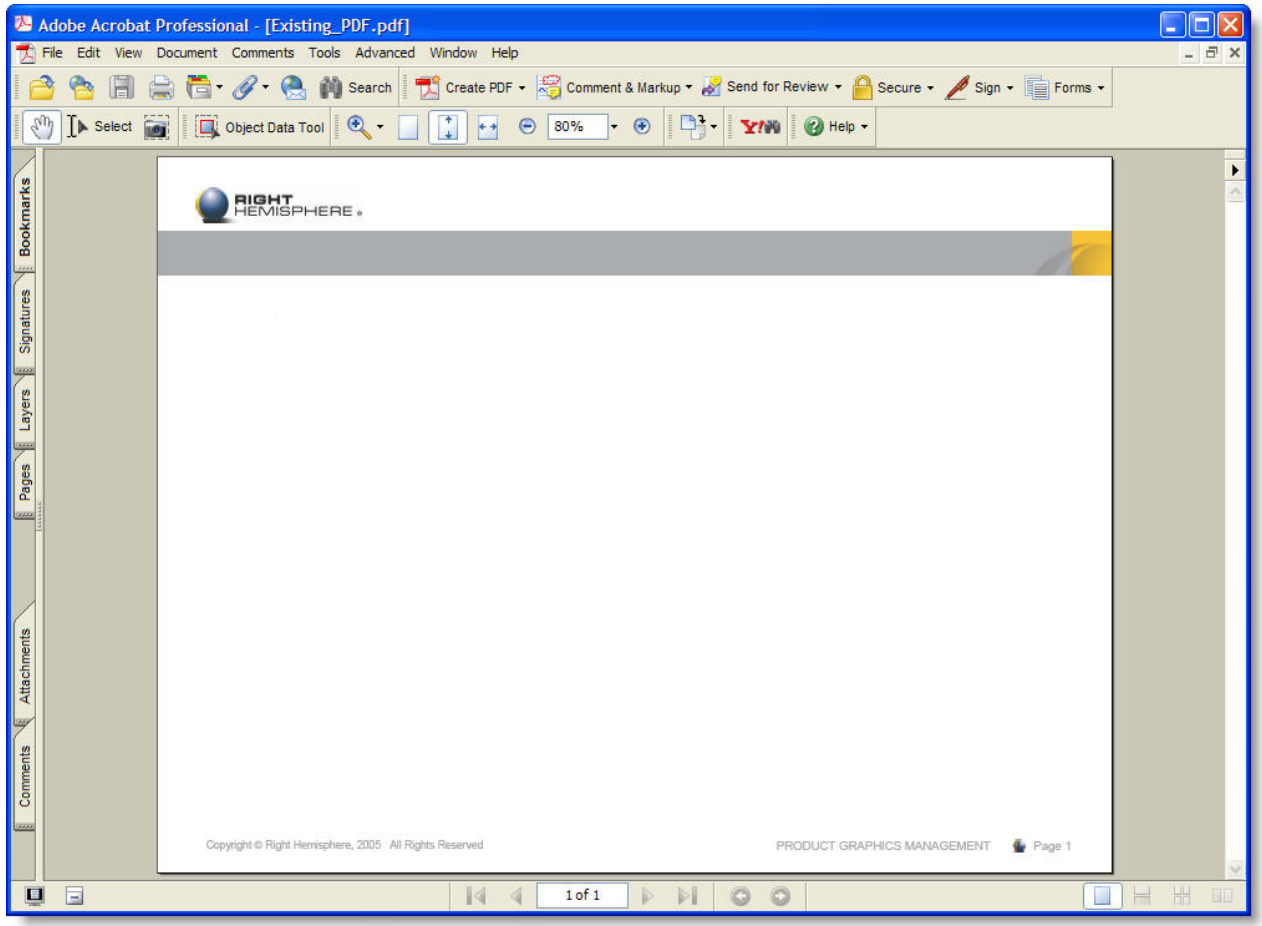
Last Modified: 08/17/2005

- Open “Existing_PDF” or any PDF using Adobe Acrobat Pro 7.0



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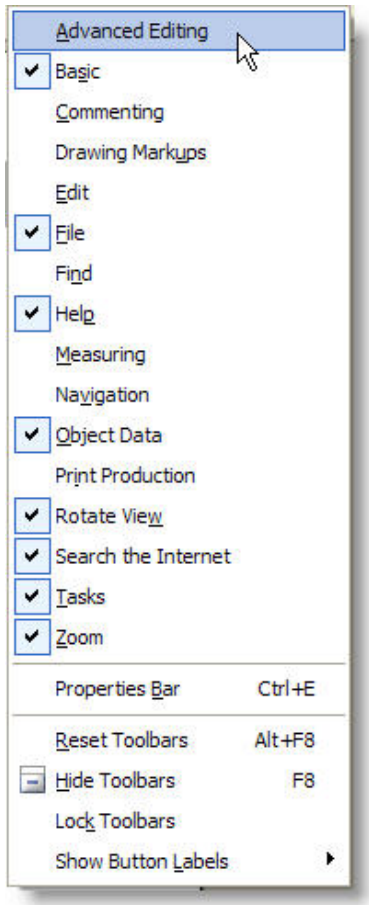
- Make sure you have the Advanced Editing toolbar visible. Do this, by right-clicking on any button on the top menus and select “Advanced Editing”



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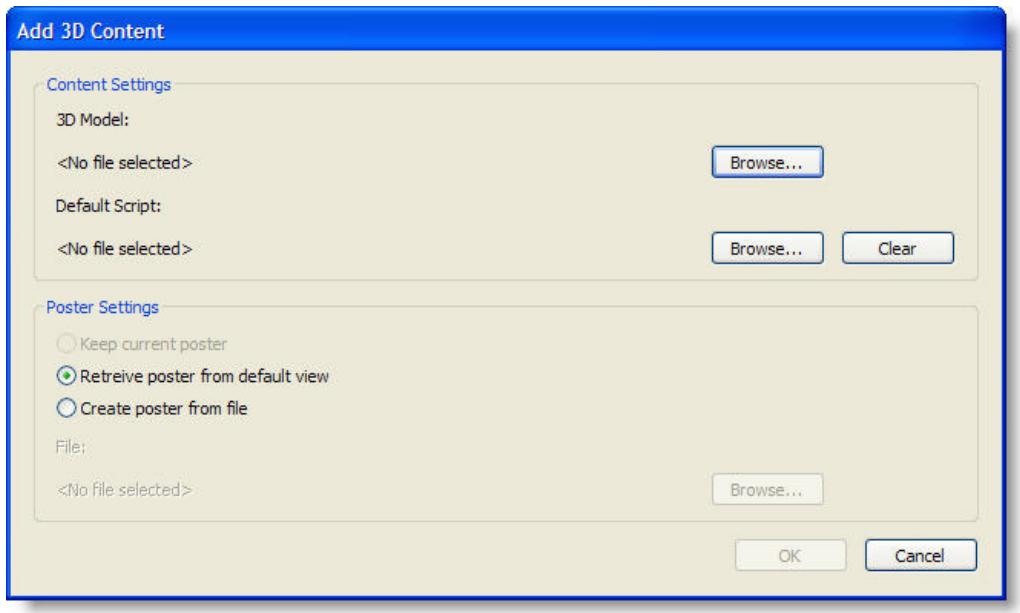
- Click on the 3D Tool, which has a picture of a cone, sphere, and cube on it.



- Next, drag a rectangle where you want the 3D model / scene to appear, and the dialogue box below will appear.



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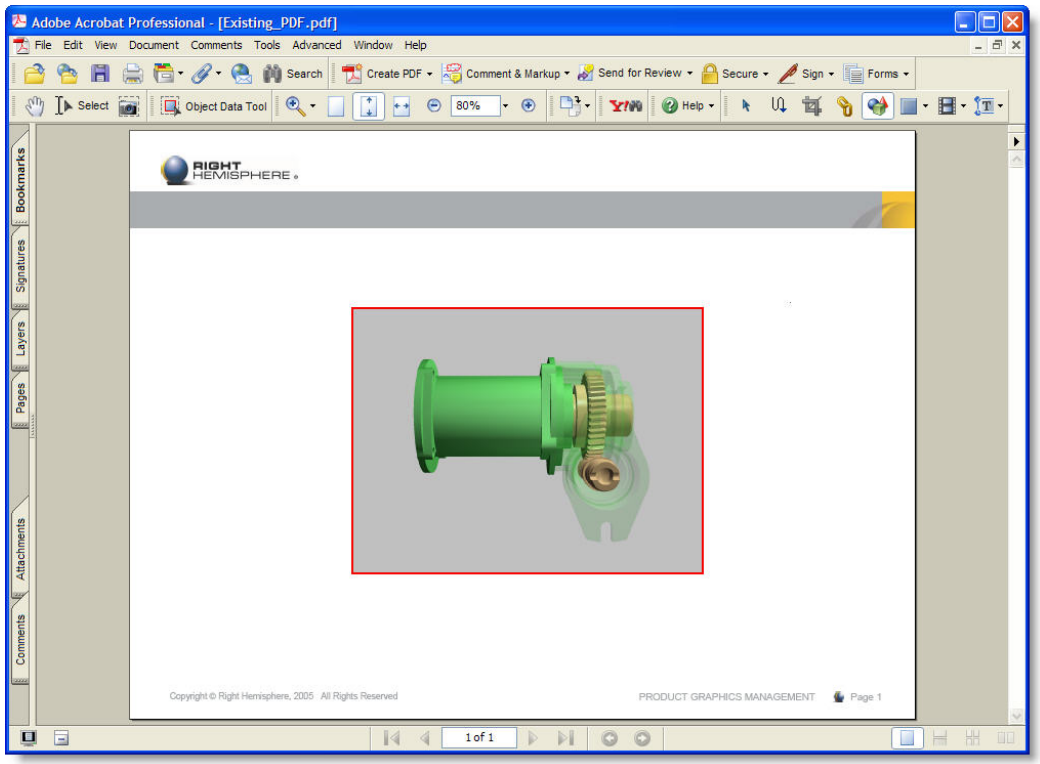
- Select the top “Browse” button, and browse to the supplied “Winch.u3d” file to embed the 3D model.
- We don’t have any JavaScript files yet, so press the OK button for now.
- You should see a thumbnail of the model you’ve placed into the scene.



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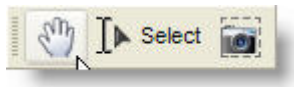
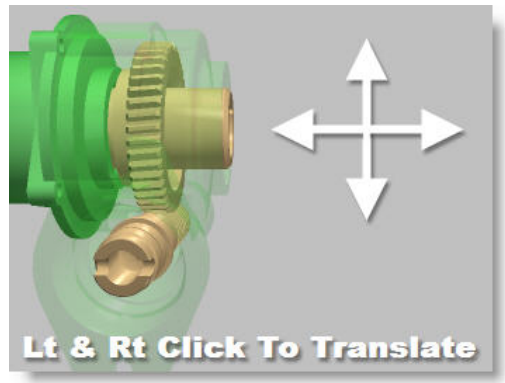
- Select the ”Hand Tool” and click on the 3D model window to view the interactive 3D file.



- Lt Click to Rotate, Rt Click to Zoom, Both Lt & Rt Click to Translate.







- The supplied “Winch.u3d” file has animation in it, but we can’t get to it yet.
- The next step is to create a basic JavaScript file and then attach it to the 3D scene.

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- First, let's create a new JavaScript file called "Basic.js". Right Click inside the Windows Explorer and creating a new text file. Then just rename it to "Basic.js".
- Windows Explorer will warn you that you're changing the extension, and you just want to answer "Yes" to the message.
- If you don't get that message, then you're not showing filename extensions, so talk to someone in IT about turning this on so that you can modify the extension.
- You could also use Notepad to create the "Basic.js" JavaScript file. Just make sure to specify "All Files (*.*)" in the filetypes pull down, or it'll include a .txt after whatever you type in for the filename.

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- Now open the “Basic.js” file in Notepad if you haven’t already. You can use any text editor if you have one that works better for you.
- The few lines of JavaScript below will enable the 3D scene to change the render mode for all the objects in the scene
- Check the Basic_Completed.js file for an in-depth explanation of what the code does.
- Cut and Paste or enter the following lines to the “Basic.js” JavaScript file:

```
function setRenderMode(mode){
  var i;
  for (i=0; i<scene.meshes.count; i++){
    scene.meshes.getByIndex(i).renderMode = mode;
  }
}
```

- Save the “Basic.js” JavaScript file to disk.

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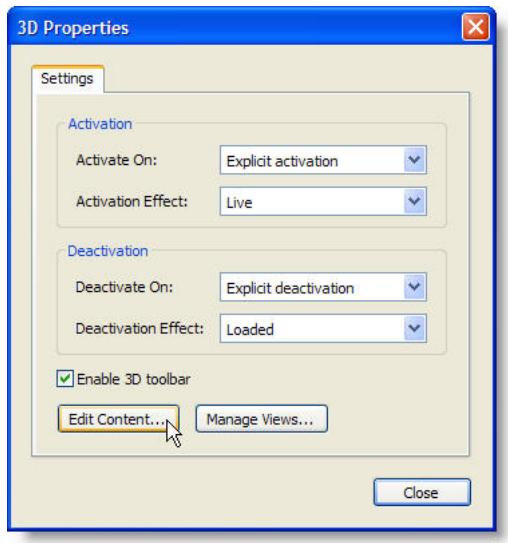
- Now that we've created and edited the JavaScript file, we need to attach it to the 3D scene.
- Go back to Acrobat and use the "Select Object Tool" on the Advanced Editing toolbar (it's the arrow icon).



- Double-click on the 3D model / scene and a 3D Properties window should appear.



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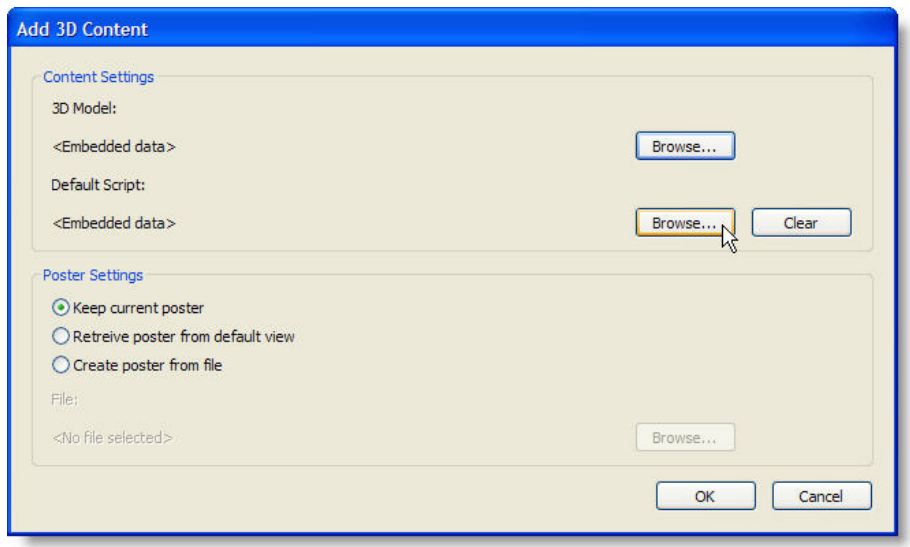
- Select the “Edit Content…” button, and you’ll see a window similar to the one when we first embedded the 3D view.
- In the Default Script section, press the “Clear” button, and then press the “Browse…” button. This will clear any previous JavaScript code we’ve attached to the scene and then let us attach new code to the scene. This is normally what you want to do so that you don’t have duplicate function calls.
- When you press “Browse…”, a window will pop up asking for a JavaScript file. Point it to the “Basic.js” file and press “Open” and then “OK”



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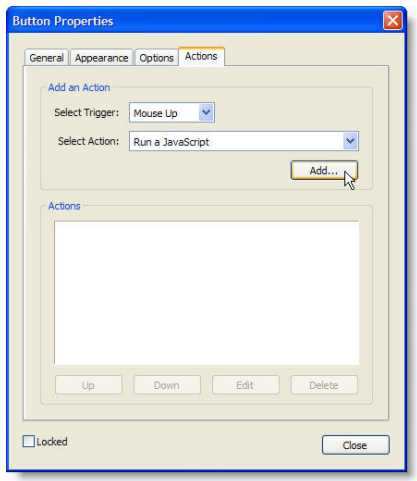
- Now, we need a way to call the setRenderMode function.
- The easiest way I've found to do this is by using a button.
- Select the "Button Tool" from the Advanced Editing toolbar and drag a button on the screen.



- A Button Properties window will appear.
- Go to the "Actions" tab and specify that on Mouse Up, Run a JavaScript, and press the "Add" button



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- A new window will appear asking for the JavaScript that you want executed.
- Look in the Simple_Red_Light_Max.pdf file for an explanation on the following code.
- Cut and Paste or enter the following code:

```
getAnnots3D(0)[0].context3D.setRenderMode("illustration");
```

- Now, we need to test the file.
- To do this, use the “Hand Tool” on the Basic toolbar.
- This will activate the page, but the 3D view is not on yet. You need to click on the 3D view and then it will turn on.

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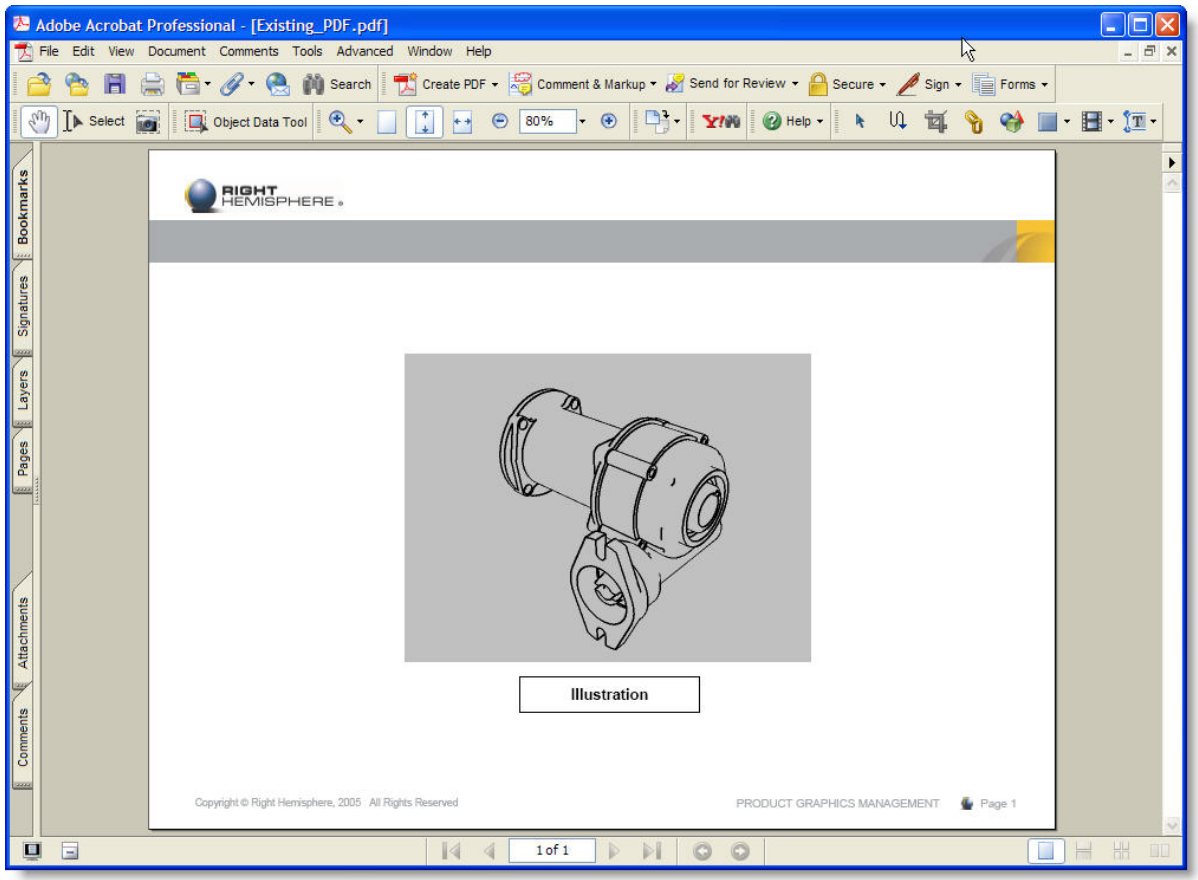
- You should be able to rotate the model, and then press the button which was created to set the render mode to Illustration.



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- Open the “Basic.js” JavaScript file, and cut and paste, or enter the following code to play the animation of the scene.

```
var mainAnim = scene.animations.getByIndex(0);
scene.activateAnimation(mainAnim);
function play(){
  var timepassed = 0.0;
  if(mainAnim.currentTime >= mainAnim.endTime){
    mainAnim.currentTime = mainAnim.startTime;
  }
  if (typeof animTimer != "undefined"){
    runtime.removeEventHandler(animTimer);
  }
  animTimer = new TimeEventHandler();
  animTimer.onTimeChange = true;
  animTimer.onEvent = function(event)
  {
      timepassed += event.deltaTime;
      if (timepassed <= mainAnim.endTime){
          mainAnim.currentTime = timepassed;
      } else {
          mainAnim.currentTime = mainAnim.endTime;
          runtime.removeEventHandler(animTimer);
      }
  }
  runtime.addEventHandler(animTimer);
}
```

- Save the “Basic.js” JavaScript file to disk. Repeat all Steps on Page 9 – 10.

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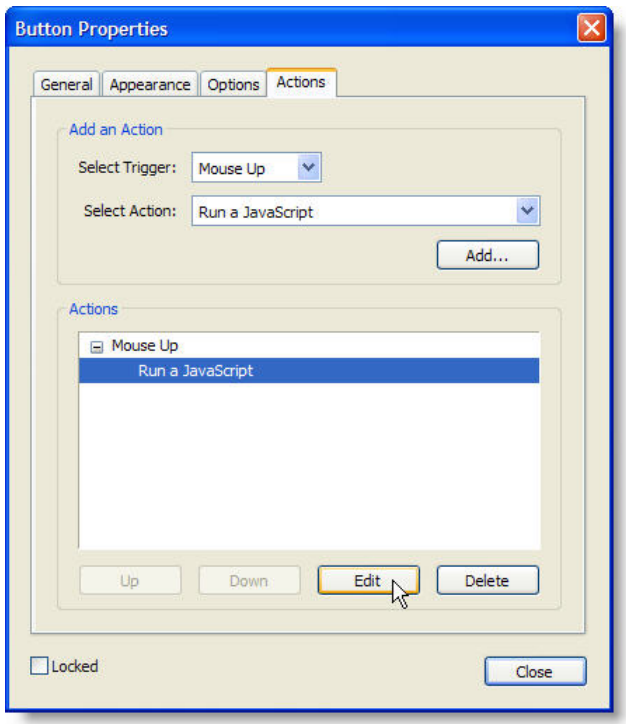
- Copy and Paste the “Illustration” button to create a “Play” button.
- Double click on the “Play” button with the “Select Object Tool” to edit the button.
- Select the “Actions” tab and Click “Edit” so we can replace the current Illustration JavaScript code.



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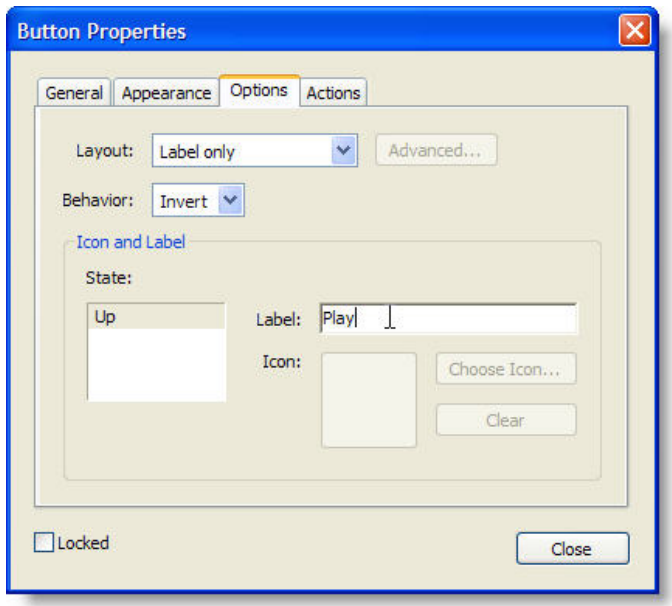
- Cut and paste or enter the following code replacing the Illustration JavaScript:

```
getAnnots3D(0)[0].context3D.play();
```

- Select the “Options” Tab and Edit the Label to “Play” and click “Close”



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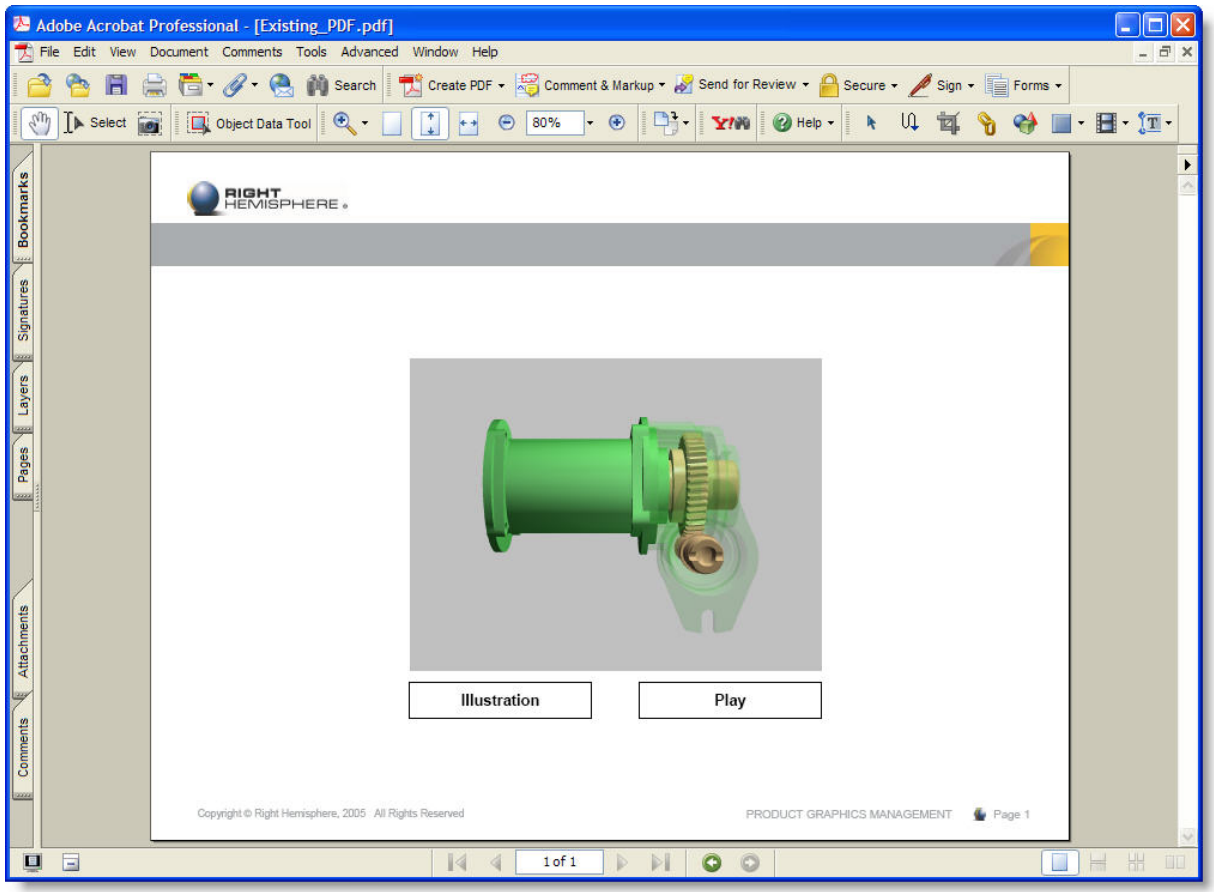
- Click “Save As” from the File Menu and Save the file to disk, or open the supplied “Final_PDF_JavaScript_Buttons.pdf” as an example!



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- This basic JavaScript example, has enabled the 3D Scene to change render modes, and to play an animation.
- Right now, or maybe before now, you may be asking yourself, “Where do I find all the API calls to know how to do all this?”
- First, look at the Simple_Red_Light_Max.pdf file. This will show you some of the main properties of the 3D annotation inside Adobe Acrobat.
- After that, take a look at the Acro3DJS.pdf file. This has all API calls for the 3D scene. It’ll allow you to get at the mesh objects, cameras, materials. Pretty much everything you need to control the scene.
- Also, you can look through the Basic_Completed.js file for a more in-depth description of what the JavaScript is doing in this example.

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