Lab 6b: Creating a Software Simulation

Hopefully you have spent a bit of time reviewing the examples of simulations. As mentioned, we believe that software simulation works best as an assessment of software skills learned...as it allows for a very authentic performance that can be scored by a computer. But if done carefully, software simulations can also be effective as a guided practice, which combines a bit of showing with a bit of having the learner practice what was shown, while getting immediate guidance and feedback from the computer. Knowing how to create these types of simulations will be very valuable skill for you to master. This lab is just to get you started!

Watch the Video Training

Watch the following short video tutorials:
- Captivate 9: Creating a Software Simulation (3:28)
  Pooja Jaisingh, Adobe Guru
- Captivate 8: Interactive Screen Capture for Software Simulation
  Aaron Quigley, Lynda.com
  - Exploring software simulations (3:30)
  - Recording an application (3:54)
  - Adding a screen capture to an existing project (3:10)

Deliverable

Your deliverable for this lab will be to create a one-to-three minutes simulation for either a software guided practice, or a software assessment. This can be a simple lesson how to use any software application or web service you wish to create instruction for. If you need ideas, we are always looking for help in MIST in explaining how and what to post to ITCDLand, or how share your Google drive, or do a Zoom meeting, etc.
Why Captivate?
Some of you have asked, "Why use Captivate at all for Software Simulations? Why can't we just use Camtasia Studio to do simulations?"

Well...for demonstrating the features or functioning of software, a website, or a game... Camtasia is great! And we say"go ahead and use it for this!" But at its best, all Camtasia can provide is a movie that may have some callouts added, possibly an index, and maybe an embedded quiz.

As useful as movies are for showing the learner a series of steps or procedures, they are not simulations. The learner just cannot interact with a movie, as they might with the actual software, website or game. All they can do is watch, and then try to apply what they are seeing to practicing with the actual software. This is the type of training that you are doing in learning Captivate! It can be slow going, and frustrating when you forget the series of steps or where you just saw someone click...and then have to watch it over and over! This is why we prefer to provide a printed handout along with the video. Each has its strengths.

So, yes... if all you want to do is demonstrate some software, then stick with Camtasia Studio. But if you want to have the computer teach and interact with the learner while they simulate using the actual software, and have the computer able to provide guided instruction, feedback and automatic scoring...then Captivate is the correct tool! Let's get started.

Full 30-Frame Video Capture vs. Slide Software Simulation
Captivate has two methods of capturing software. It can do high definition, 30-frames per second video screen capture and save as a movies ...just like Camtasia, and it can do this off your computer monitor...as well as from iPads, smartphones for the Mac This method is called a Video Demo/Device Demo...but as you already can do the same using Camtasia, we will not cover it in this lab.

Instead you are going to try out Captivate's second method of screen capture, called Software Simulation. How it works is that as you are showing how to do an operation in a software program, or web service, on your computer, Captivate takes an individual screenshot (makes a slide) for each time you click. So instead of 30 frames per second, you might only be seeing one frame every 3 minutes! This means that a Captivate Software Simulation can be hundreds of times smaller in file size than a Video screen capture of the same lesson! How can that possibly work?

Generally when you are working with software, the screen does not change very often...and usually only after you click on something...or drag something. So Captivate only captures the screen-by-screen changes. Captivate then automatically adds invisible click boxes at each place that you clicked on the screen. It also
automatically adds mouse animations, call-outs, and information boxes that attempt to explain, or can be used as hints for what is being, clicked on, each step of the way.

What good are these invisible click boxes? For a Demonstration...they have no value. But if you choose either of the other two types of Software Simulations that Captivate can produce, Training or Assessment, then magic can happen. Remember each of these invisible click boxes cover the exact places on the screen and in the exact order that the learner must click, in order to use the real software to achieve the same outcome that you just demonstrated.

Let's try this out.

Preparing your Performance
1. Before opening Captivate, decide on something you might demonstrate how to do using your favorite software, or online service, or website. Keep the lesson/assessment quite short. You will be astonished at how long it takes tweak even 30 seconds of software simulation! It is easy to stitch together bunches of 30 second lessons in Captivate. It is a real time sink to record and try to fix 10 minutes of instruction that got our of control.

2. Carefully write down in abbreviated form the essential steps that must be followed. It is easy to get flustered when the camera starts to roll! Now practice actually doing the process a few times. Don't worry about needing to rush. As this is not being recorded at 30 frames per second, but one slide at a time for each click, ...you have total control how long each slide actually will show after you are done recording. So you can work slowly and accurately while recording and then speed things up later on.

3. To talk, or not to talk, that is the question.

We suggest that the first few times you create a simulation lesson, that you not try to narrate and do the demonstration at the same time. Even though the natural voice has been shown to be more effective than voiceovers, you will waste a lot of time fixing narration errors and tweaking action to match narration if you try recording your audio and the action at the same time.

Also, as you will be making either a custom Demo/Training or an Assessment for this lab, rather than a plain Demonstration...what you say or don’t say for these will be different than what you might say while demonstrating the process. So for now just write a short script of what you think you might say. You can always use this in your guided instructions in captions...if you decide not to narrate.

Also, as mentioned, because Captivate makes a new slide for each click, it is very easy to add narration slide-by-slide afterwards. You can stop...and record the next slide at any time. You can also easily have others do voiceovers in other languages. Or you can use synthetic speech.
And because each slide in your Software Simulation is just a snapshot of the actual software's screen, should something change in the software interface AFTER you have made your training, you don't have to reshoot the video. You can just swap out the background images for those showing the new interface! This is especially helpful when a company changes its logo, colors, or branding!

These are just a few of the many advantages that slide-based Software Simulation has over Video or Device demos. But to be fair, slide-based Software Simulation is not suitable for showing all types of software or apps. Video games, for example require the 30-frames per second that Video Demo's provide. But you can combine both approaches! But in this lab, we will only cover using Software Simulation.

Lastly here are some …

**Rules for when to do Software Simulations**
1. There are a lot of steps and complexities that the learner needs to see and do, where a printed how-to is not enough.)
2. Access to the actual software is limited for the learner.
3. You have the time and resources to do it right.

**Rules for creating Software Simulations**
1. Keep the lessons short.
2. Keep the steps short. Show...let the learner try.
3. Get the learner using the "real" software as soon as possible. Creativity only happens using the real thing. Simulations, although helpful, dampen the spirits, and enslave the soul. Use sparingly!

Ready to give it try? Then let's do it!

**Recording your first Software Simulation**

4. From the New window when starting Captivate, select **Software Simulation**, and click **Create**.

Or if you already have a project open that you wish to add a recording to, choose **File>Record a New> Software Simulation**... (Cmd/Ctr R)
5. Decide if you want to capture your **Full Screen**, or just part of the **screen area**, or a specific **Application**. The smaller the area captured, the smaller your file size will be. Recording full screen on a large monitor will make a very large file size, which will slow down development and make it difficult for learners with less powerful computers or smaller monitors to play the eLearning.

Or you can choose **Application**, and pick the program you wish to record. Decide also if you want to capture the entire application window showing toolbars... or to capture just the Application Region

And if you turn on **Panning> Automatic**, you can select a smaller recording window size, which Captivate will then move about following your mouse, concentrating on where the action is taking place.

Leave **Audio** as **No Narration** for now. Choose **System Audio** if you have and application where you want to record internal audio. (Note: if on a Mac, in order to capture system audio, you will need to download and install a free plug-in, called **Sunflower**.)
6. As mentioned, Captivate can do a "show-me" Demo, a "try-it" Training, a "test-me" Assessment, or a Custom project, and can make all four at the same time!

You may adjust the settings for each of these types under System Preferences> Recording Modes. Here are the default settings:

**Demo mode** will capture and play back exactly what you see and do, and add additional elements showing and explaining what is being clicked on: Text Captions, Mouse location and movement, and Highlight boxes.

**Training mode** also records what is seen, but adds different additional elements useful for guiding the learner to follow along the same sequence: invisible Click Boxes with Failure and Hint Captions, and Text Entry boxes. The playback pauses and waits for the learner to do each step.

**Assessment mode** records the screens and sequence of steps and puts invisible click boxes where you clicked...but does not add any callouts, descriptions or hints. It does add: invisible Click Boxes and Text Entry boxes, with failure captions, but of course, no hints!

**Custom mode** allows you to create your own settings mix. For this Lab, you can choose to make a simple Training, or /and an Assessment, or a Custom combination, but just for practice now, go ahead and select all three modes of output.
7. Click **Record**, and a countdown will commence.

8. Perform your actions in the software you are demonstrating. Each click will capture one screen. If you wish to capture something that has changed on the screen separate from a click, just press **Cmd+F6 (Mac) / PrtScrn (PC)** to force an additional screen capture.

9. When done, press the **Cmd+Enter (Mac) / End key (PC)**
10. As you have selected all three modes, you will now see that three separate Captivate projects have been created, each on a separate tab: Demo, Assessment and Training.

11. Preview the Demo mode

Observe that the Demonstration mode has added helpful captions describing what is happening---all of which you can change, move or add to afterwards!

And watch the mouse cursor move about tracking where you are about to click. And because the mouse cursor is only simulated, you can even speed up the mouse action or slow it down...or change its path. Or even add additional mouse actions...in case you forgot to show something in your practice!
12. Preview the **Demo** mode, and then the **Assessment** mode.

Observe how the project stops and waits for you to click on the next step. And if you hover towards a spot it gives you a hint! And when you click the correct location...it takes you to the next slide. And when you click on the wrong spot, it shows you a failure caption and prompts you to click the correct location.

Note under the Assessment mode, there are no captions and no hints to help you along. It is a test of the learners skills.

**Changing Captions, Click Boxes and More**

13. For the Training and Assessment modes, Captivate puts invisible click boxes wherever you clicked. You may need to resize or move these to cover exactly the button or menu item that you want clicked.

You can also change the Caption, Hint and Failure messages to be more specific.

Captivate does not always know exactly what you are clicking on!

And under the **Properties** panel you can change the fill and stroke colors of the Hint and Failure captions.

And once you get a caption’s color changed the way you like, you can change all the rest of the captions of the same type in your project by clicking on the drop down menu to the right of Style Name, and selecting "Save changes to Existing Style"
Creating Custom Mode Simulations

The following is excerpted from Adobe Captivate 8: The Essentials by Kevin Siegel, Iconlogic

If you want additional detailed training on creating Software Simulations, you can access Siegel’s excellent user manuals online through our CSUMB Library Safari eBook Portal

You have now learned how to record three kinds of eLearning lessons with Adobe Captivate: Demos, Assessments, and Training simulations. Between demonstrations and training simulations, which type of lesson results in the most effective learning experience for your users? There is no clear-cut answer. Demonstrations are relatively quick and easy to create (you just did). However, demonstrations do not allow for learner interaction.

When learners watch a demonstration rather than participate in an interactive simulation, the potential for learning is reduced. The Text Captions that are automatically created by Captivate for demo mode are great, but they are written in the imperative, or command, form, "Select the File Menu." Upon reading that instruction, a learner is likely to take the caption’s instructions literally and attempt to select the File menu, but as this is in demo mode...they can do nothing but watch!

And, at the same time that the learner is trying to interact with the demonstration, a mouse pointer that Captivate created when the lesson was recorded is likely moving around the screen. In this case, you’re going to end up with one confused and possibly frustrated learner.

Simulations are perfect for assessing what a learner has absorbed during a demonstration. However, because Simulations do not add Text Captions by default, there are no instructions telling learners what to do. Learners either perform the required steps, or click incorrectly somewhere on the screen and see a Failure Caption. Some people consider this kind of approach to eLearning to be a bit harsh because the learner is often experiencing negative feedback with no guidance.

What to do? Many Captivate developers create both a Demonstration and a Training/Assessment. That's all well and good until you remember that it could take several hours to produce the lessons. If you elect to produce both a Demonstration and a Training/Assessment, you are essentially making twice the work for yourself.
Demonstration or Training/Assessment: Which Mode is Best?
Instead of creating a Demonstration and a Training, I recommend you record a custom, or hybrid, lesson that incorporates the best of the Demonstration, Assessment, and Training modes. When you are finished recording in the custom mode, the result is a lesson that bridges the gap between a Demonstration and an Assessment/Simulation lesson.

14. Adjust the settings for a Custom mode under **System Preferences > Recording Modes** as shown.

**Settings for Custom**

By now you should be somewhat comfortable with the available options in this dialog box. You have selected **Add Text Captions** so that the Text Captions are created for you (like you saw with a Demonstration). Nice.

And because the captions are written in the imperative, as in "Click on the Button" so you may be able to use them in the new lesson with little editing. Nicer.

Everything else has been left deselected except for Click Boxes, Text Entry Boxes and Failure Captions (like the simulation modes).

These settings result in a highly interactive simulation out of the box. Nicest!

15. Record your software presentation again, but this time check only the box for **Custom** mode. When done, a new tab should show listing the **Custom** project.

16. Preview the **Custom mode** project you just made.

Observe As you move through the lesson, that the Text Captions are written in the imperative to encourage interactivity. There may be one or two captions you need to edit (some of the buttons are likely mislabeled, especially on the Mac side). Nevertheless, much of your caption-writing work is done.
Also notice that there are Click Boxes (hot spots) that make this lesson 100 percent interactive.

So now instead of just watching and then later trying to recall what they watched when they try to do the same, the learner is walked through the process. The computer first tells them what to do, where to click, and has them try to do it...with immediate guidance and feedback! Now the learner and the computer both know that the learner succeeded in doing the process. Nicest of all!

**Make Your Own**

17. You have had a chance to see a variety of examples of software simulations, and you have practiced now with creating four different modes.

Go ahead and make your own lesson. You may choose any mode you wish. And you are welcome to add any elements you wish, such as voice, audio, or game components. (Feel free to download the cptx file from Professor Challenger’s Zoomie Challenge from the examples, if you would like to do something like that.

**Are You a Zoomie Challenge?** - by Professor Challenger, 2015, Captivate 8

Flash   HTML5   CPTX

18. Post as Lab7b_yourlast name in all the usual places.