



MILO Course Designer

Essential User Guide

Software Version 5

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Introduction

MILO Course Designer is an intuitive, graphical interface program for editing and producing interactive based training content. The content can be comprised of many different videos, graphics, texts, slides and questions that you create, as well existing documents. The content you create can be used for presentations, classroom instruction and testing and for use-of-force and firearms training.

MILO Course Designer is easy to learn, highly configurable, and is robust in features that enable you to quickly produce or modify individual lessons or groups of lessons known as classes and courses. The key to content designed with this application is the ongoing ability of an instructor to change the course of the lesson or presentation at any time.

This guide is specifically designed as a practical user guide for the basic features of the MILO Course Designer software and associated software tools. Should you need further information, please see the MILO Course Designer Software User Manual.

We sincerely Thank You For Your Business!

Technical Support

We offer 24/7 telephone technical support as well as email-based technical support. Please contact us with any concerns or problems at:

Email: support@milorange.com

Phone: 1-800-344-1707

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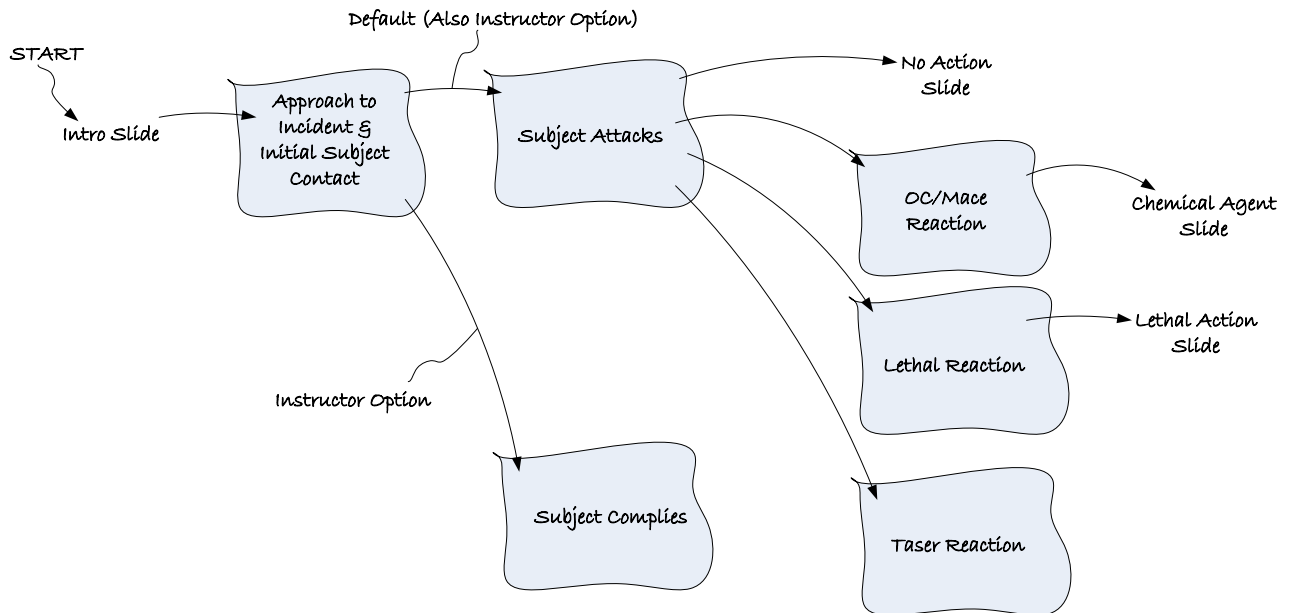
CHAPTER 1 – Filming Scenarios

NOTE: Scenarios are a generic industry term referring to training content. On MILO training systems, a scenario file is called a “Lesson”. Therefore please note that this user guide will use “Scenario” when we are referring to the general concept of the training content and “Lesson” when we are referring to the actual scenario file you are creating or editing.

All Scenarios should be based on a pre-defined training objective that meets your agency’s training needs. The scenario design should not guide the trainee to the right answer, but should offers opportunities for the trainee to make mistakes as well as choose the correct actions to deal with the situation presented in the scenario.

Before filming, be sure to identify the training objective of the scenario, the correct actions required to deal with the scenario and several “wrong” actions the trainee might take. You will want all of these elements represented in your training scenario.

Next, you should develop a storyboard, or plan, for the scenario. Draw the plan out on paper or computer beforehand and take it with you for the filming. See the simple scenario storyboard example below.



Location & Filming Tips

Location Tips

- When selecting the location for the filming, try to select a location where you can control the entire scene so that other people and objects are not moving through the camera view while you are filming and eliminate noise sources from surrounding events that might interfere with your recorded video.
- When filming outdoors, try to film on cloudy days or in shaded areas, to avoid sun shadows. Sun shadows will change over the course of your filming and may disturb the trainee when the scenario is used, due to significant shadow movement from scene to scene.

Filming Tips

- Remember that when filming, the camera is the trainee. Whatever the camera sees is what the trainee will see. Actors should interact with the camera as if it were the trainee.
- Zoom the camera lens all the way out before filming. Do not change or use the zoom during filming.
- Try to limit the movement of the camera as much as possible. It is best to have a single, fixed location where the camera will be during the entire filming. Even slight camera movement will cause large differences in the resulting video and can disturb trainees during the training.
- Actors should use “base positions” when multiple outcomes are possible. Any time an actor will have multiple possible outcomes from a preceding scene they should mark a base position on the ground and use that at the beginning of each outcome scene. For example, if an actor is approached and will have the possibility to 1) run away, 2) give up or 3) to become a threat, each of those three options is an outcome from the “approach” scene. The approach and each of those outcomes should be filmed as a separate scene. Actors should mark the floor with small objects (such as a coin) so they know where to place their feet when starting the film each of those outcome scenes. Actors should also remember their body position so that it can be repeated at the start of the outcome scenes.
- When filming a scenario with multiple possibilities, try to film all possible outcomes for each scene before moving on to other scenes. For example, if you have a scene where the suspect will pull a gun and shoot at the camera, be sure to film the die scene for that shooter as well as any other scenes such as the shooter running away after firing at the trainee.
- Film a reaction scene for every weapon your agency uses. Although not all situations call for use of lethal or less lethal weapons, it is good practice to film a reaction scene for each type of weapon your agency uses or expects to use in the future. This will help your scenarios stay relevant through agency policy changes in the future.

CHAPTER 2 – Capturing Video

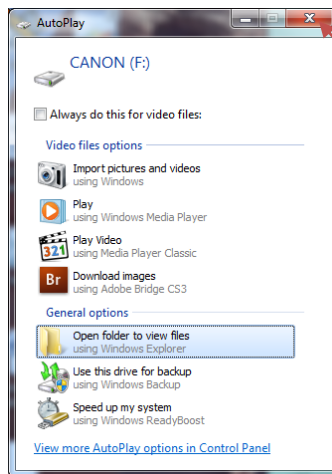
With MILO systems, you will connect the video camcorder to the system and use the included Simple HD Convert tool to copy, merge and convert your video scenes into a single video file that the system can use for the Lesson file.

Simple HD Convert

Simple HD Convert is the software utility to capture high definition video onto the MILO Range system. You must use the included AVCHD camcorder as Simple HD Convert does not support HDV or standard definition cameras.

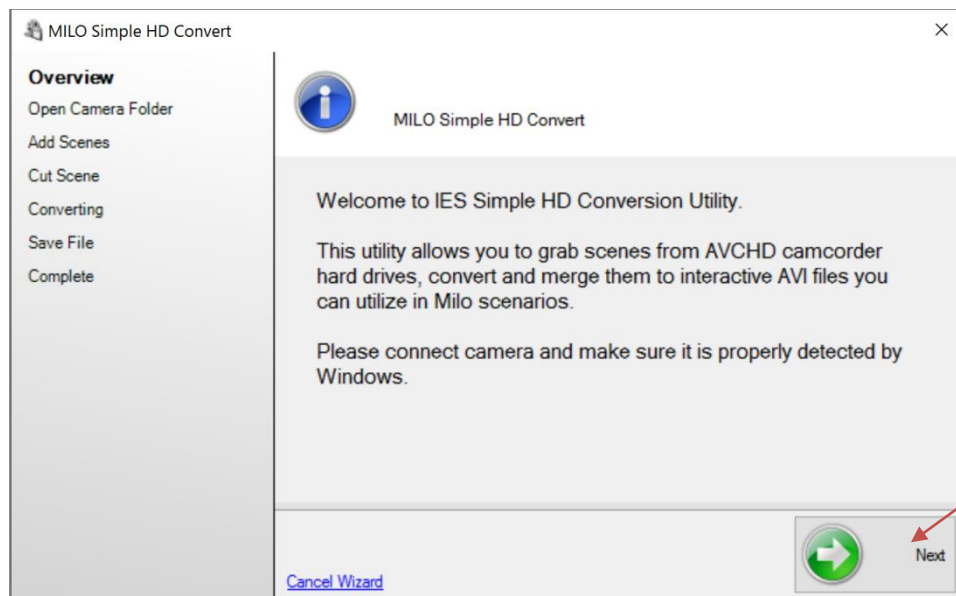
Connecting the Camcorder

1. Power off your video camcorder.
2. Connect the USB cable to the camcorder and to the MILO computer.
3. Power on the camcorder.
 - a. If you are prompted by the camcorder to select USB connection type, select “Computer.
 - b. If you are prompted by the computer that new hardware was connected, wait until Windows informs you that the new hardware is ready to use. If you are prompted with the AutoPlay window, simply close that window.



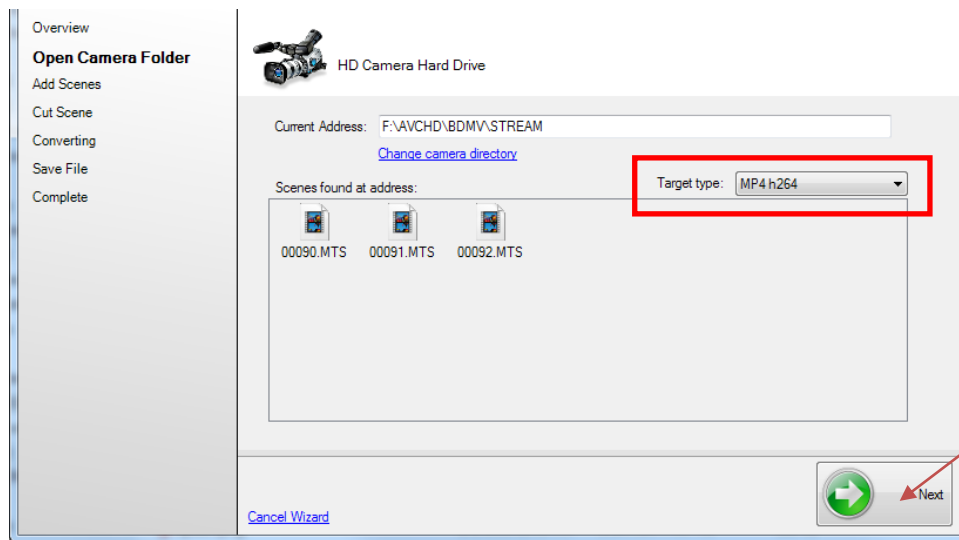
Open Simple HD Convert

1. Click the Windows Start button, click All Programs, select the MILO Course Designer folder and select Simple HD Convert from the menu.
2. Click on the “Next” button to begin the process of selecting videos to convert.



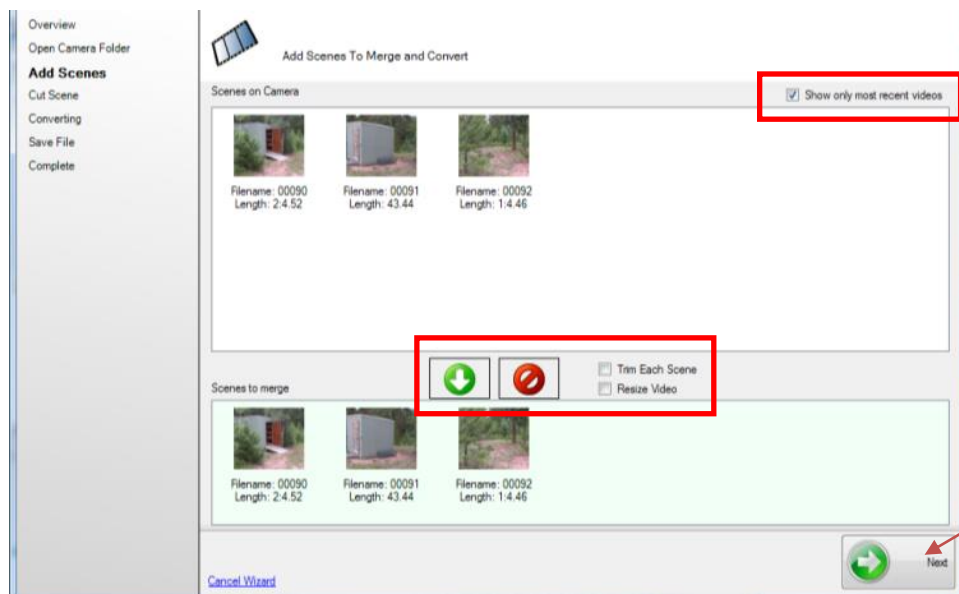
Select Folder on Camera

1. In this screen, you should see the files that are on your camcorder. If you do not see any icons in the list of scenes, use the “Change Camera Directory” to navigate to the folder on the camcorder where the “MTS” video files are located. Usually this is a subfolder of your camera such as X:\AVCHD\BDMV\STREAM.
2. Ensure that the “Target Type” is set to “MP4 h264” and then click “Next”.



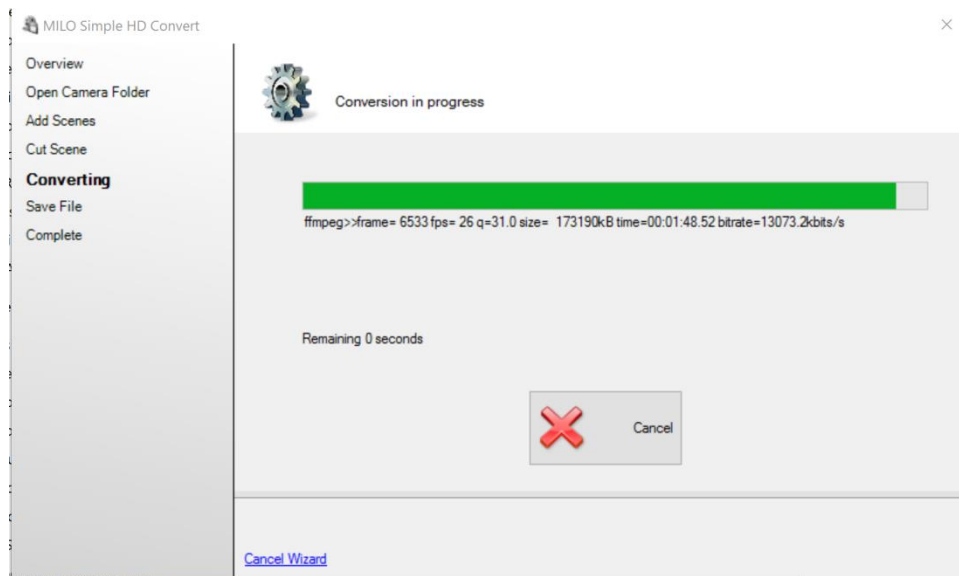
Select Camera Clips

1. A thumbnail for each scene will appear. If you don't see any scenes, you may need to go back and select the proper folder in the previous step, or uncheck the box “Show only most recent videos”.
 - a. NOTE: It may take 2 – 3 seconds for each thumbnail to appear. If it is taking a long time to show all thumbnails, consider removing old scenes that you have already converted and used for scenarios. You can remove them using Windows Explorer and simply deleting them or moving them from the camera to your My Documents folder.
2. To select a scene to include, simply Double-Click on the thumbnail for that scene. It will appear in the section below. To remove a selected scene, click on it in the the Scenes to Merge section and click the red Remove button.
3. When you have selected the scenes you want, click “Next”. The conversion process will start.
 - a. NOTE: If you would like to cut out lengthy unused footage from the scenes you selected, check the box to Trim Each Scene. You will be prompted to trim each scene on the following screens.



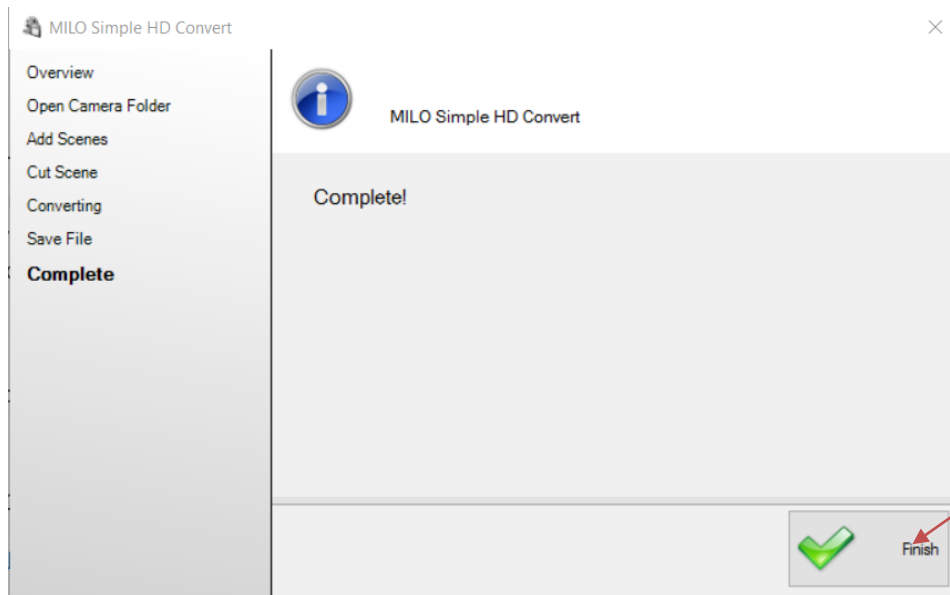
Conversion Process

When the conversion process is finished, a single MILO compatible video file will be created. It may take 10-15 minutes for your video to convert.



Save New Video

1. The system will prompt you where to save the video file. As a standard you should always save the file to your MOVIES folder, which is located at "C:\Movies" or "D:\Movies". Depending on your system.
2. Close Simple HD Convert by clicking "Finish".



3. Disconnect the USB cable from the computer and the camcorder and power off the camcorder. You are now ready to begin editing a lesson with the captured video file.

CHAPTER 3 – Lesson Creation & Editing

For creating the lesson you will use the MILO Course Designer software.

Starting MILO Course Designer

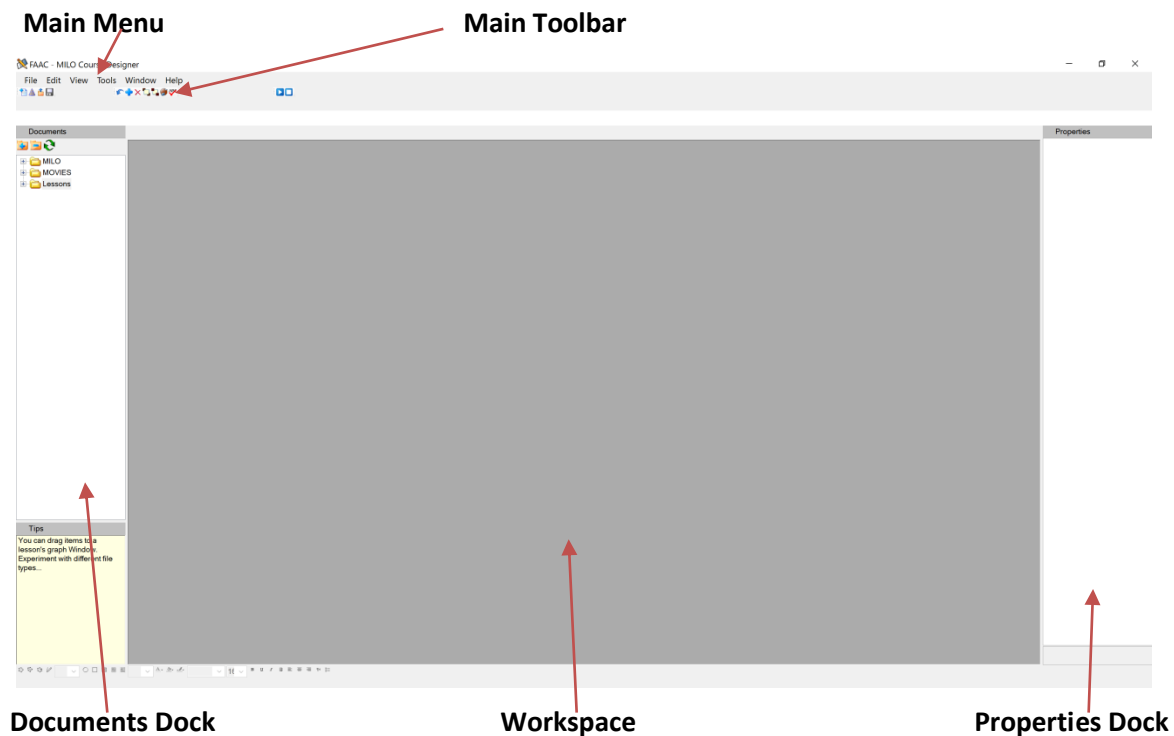
The MILO Course Designer can be launched by double-clicking on the Windows desktop shortcut, or by selecting the appropriate shortcut on the Windows Start Menu. An initial splash screen will be displayed, followed by the EULA acceptance. **NOTE:** In order to utilize the MILO Course Designer software, you must accept the End User License Agreement (“EULA”) each day the software is used. The EULA is accessible for review, from the acceptance screen and may change from time to time so be sure to review it before clicking Accept.

User Interface Overview

The MILO Course Designer interface is divided into several sections. This allows the user to have quick access to a variety of different information and controls without having to open and close windows and screens.

The most important part of the interface is the Workspace. The workspace is where you view and edit all of your Lessons and lesson items such as Slides and Scenes. Each type of item will have a unique editing view that opens in the workspace. You will use the various editing views to create your lessons, along with all of the Menus, Toolbars and Docks, to help edit and create items in the Workspace.

MILO Course Designer automatically determines what you have selected in the workspace and makes the appropriate changes to the rest of the user interface for you. For example when you have the Scene Editing view open, the properties dock shows the properties for the Scene, the Events menu is added to the main menu, and the scene edit view toolbar is made available below the main toolbar.



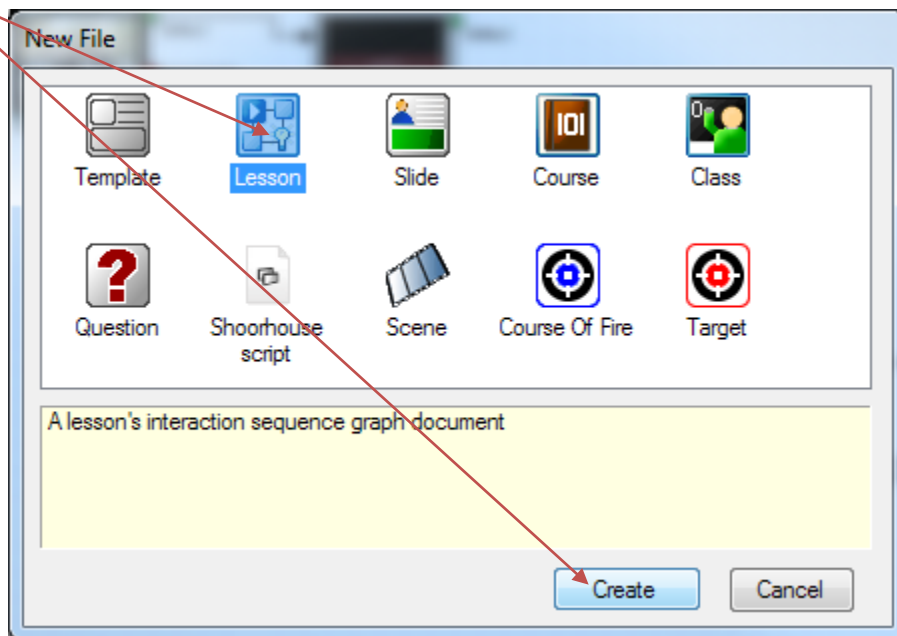
Lesson Creation



Remember that the Lesson is the file representation of your training scenario. Creating a Lesson in the MILO Course Designer software can be broken down into the four main steps listed below. These steps should be included in the creation of any basic Lesson.

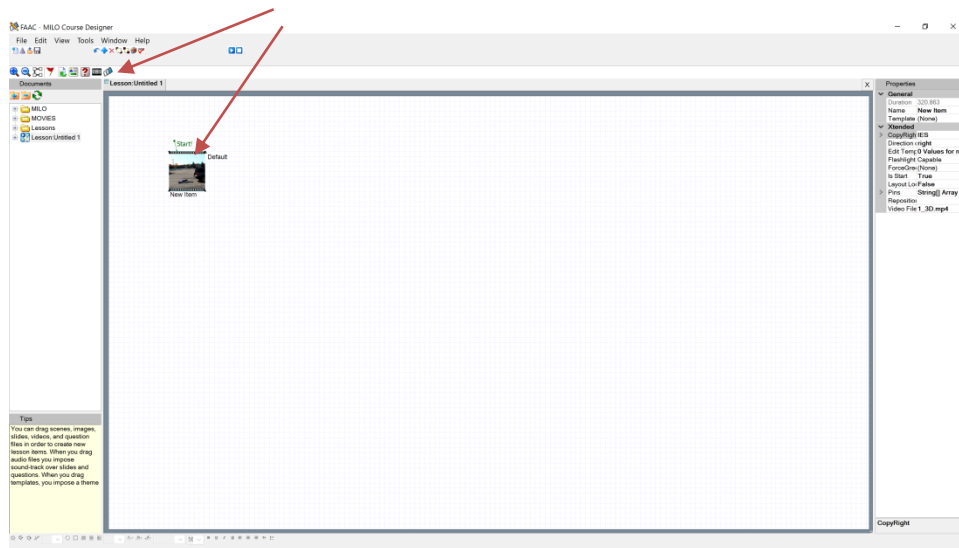
1. Create a new **LESSON** file and create the **SCENES**
2. Create and connect the scenes using **PINS**
3. Create **HIT ZONES** in the proper scenes
4. Place **EVENTS** into the proper scenes

Create Lesson with Scenes
The Lesson is the scenario file and the scenes are the clips of video within the Lesson that will allow a trainee to interact with the system. The scenes in the lesson are analogous to the scenes you filmed.

1. Click the File Menu in MILO Course Designer and choose New. Select Lesson in the New File Window that opens, then click Create.

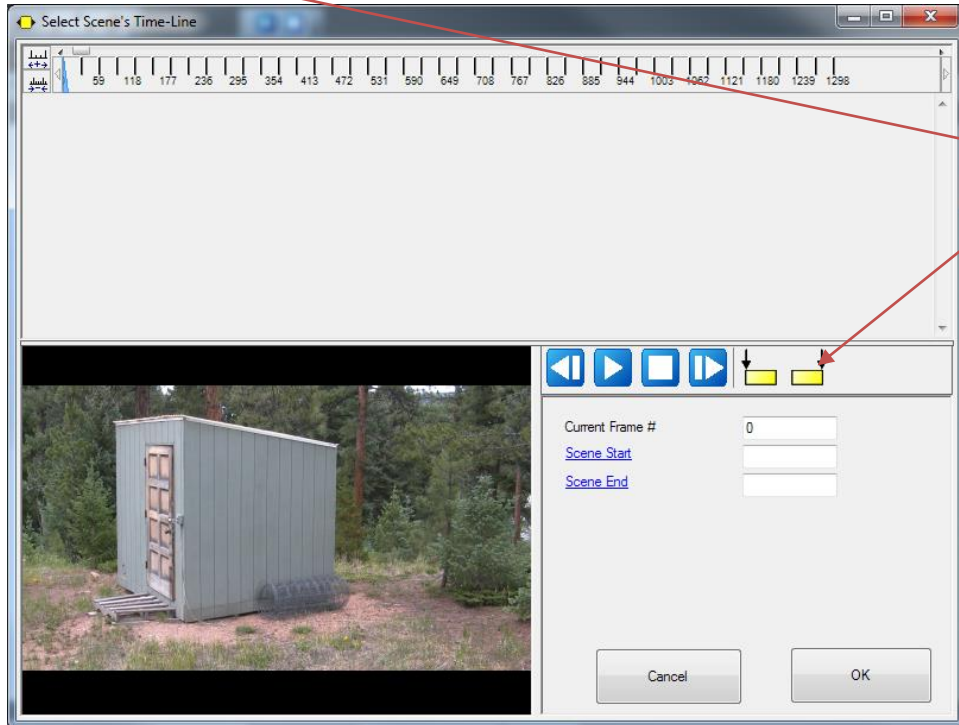



2. Make sure to occasionally save your work by clicking the Save button  on the toolbar.
3. Now create a scene in the lesson for each scene in your video. Use your storyboard as a reference to create the scenes. Start by Left Clicking the **INSERT SCENE** button  on the toolbar, then click-hold-drag the mouse across the work space grid to form a box that will represent the first scene.

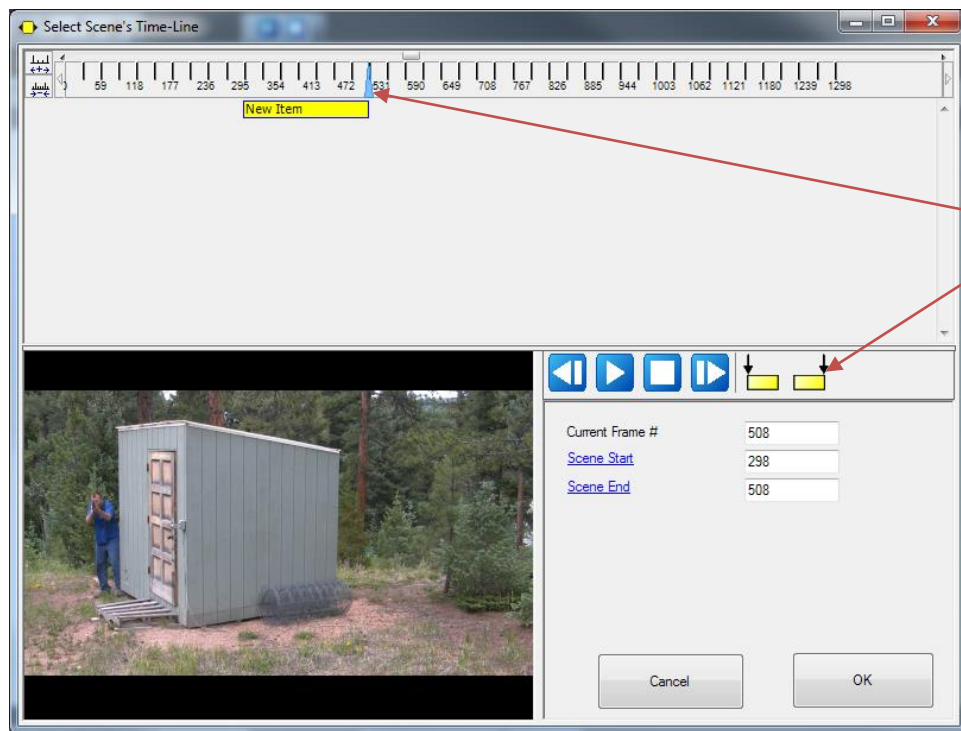



4. A dialogue box will open and ask you which video file you would like to use. Select the video file you converted earlier with Simple HD Convert, and click the Open button.
5. Using the timeline at the top of the window, find the start of the first scene and mark it with the **LEFT**

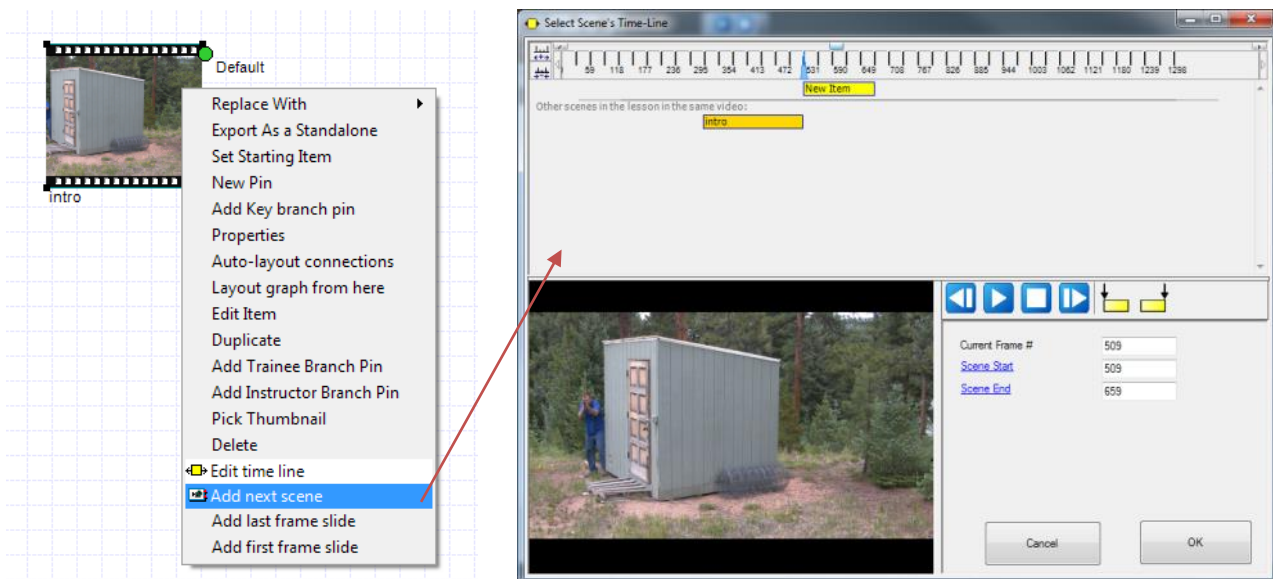
MARGIN button .



6. Now play the video until you reach a point near where you want to end that scene. You can manually adjust the marker on the timeline to be as accurate as possible to the desired end of the scene.
7. Mark the end of the scene with the **RIGHT MARGIN** button .

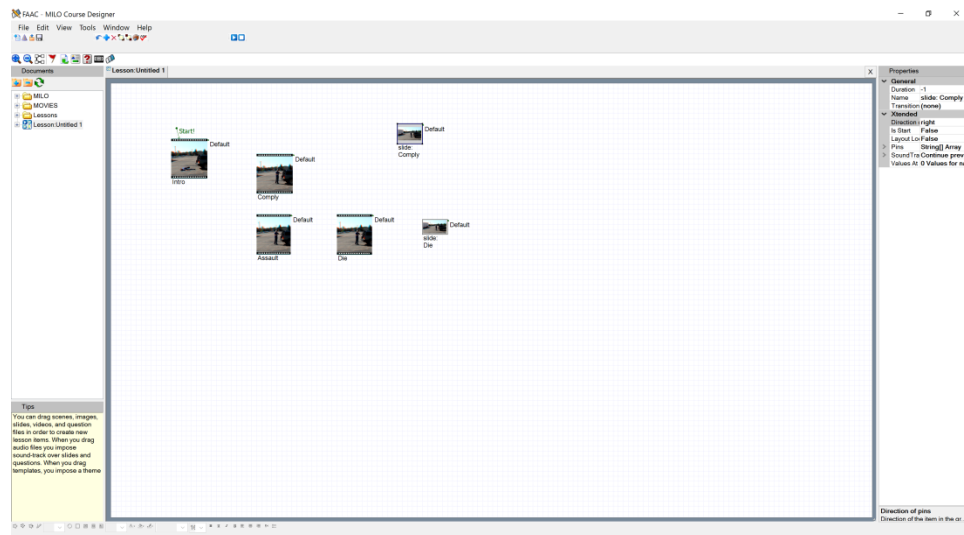


8. Click OK.
9. As this is the first scene in your lesson, RIGHT-CLICK on the scene you just created and click **Set As Starting Item**. This will ensure that the lesson starts with this scene.
10. Click on the scene you just created in the grid and type a name for the scene such as "intro".
11. To create the next scene from your video, RIGHT-CLICK on the intro scene you just created and select the **ADD NEXT SCENE**  menu item. This will create a new scene using the same video you previously selected and open the timeline window for the new scene.



12. Use the timeline and LEFT and RIGHT buttons to set the scene timeline.
13. Repeat step 10 thru 12 to create all of the remaining scenes according to your storyboard.
14. For each scene that will NOT branch to another scene (meaning the scenario will end on that scene) you have three options: 1) do nothing , 2) create a slide showing the end of the scene OR 3) create a message slide giving some information to the trainee
 - a. Do Nothing: If you don't connect anything to the scene, the Lesson ends when the scene ends.

- b. Slide Showing End of Scene: This will keep a static image of the end of the scene on the screen, so that the trainee can perform follow-up actions such as using radio to call for help or other tactical maneuvers such as clearing the scene of other threats. To create this slide, RIGHT-CLICK on the scene and choose ADD LAST FRAME SLIDE from the menu.
 - c. Slide Showing Message: This slide can provide some message to the trainee about the actions they took. There are several pre-made slide available under the MILO\SLIDES folder in the Documents Dock on the left-hand side of the screen. You can select one of these by dragging it from the dock to the workspace grid. If you want to create a custom message slide, click the SLIDE button on the toolbar, then click-hold-drag on the workspace grid to create the slide. Then DOUBLE-CLICK the new slide to open the slide editing view to draw shapes, images and text.
15. When complete you should have all the scenes you planned on your storyboard in the workspace grid and you may have slides as well. Your lesson should be similar to below.



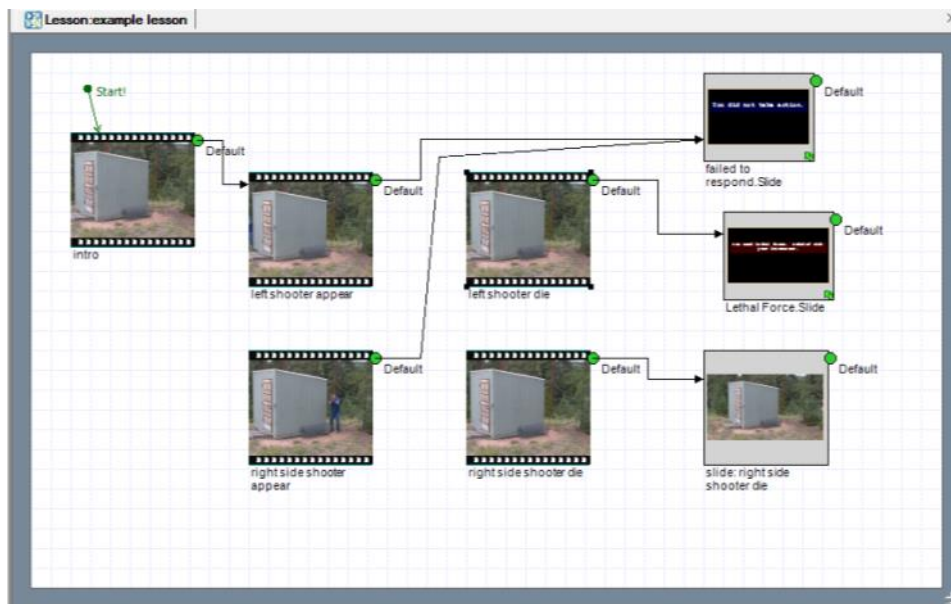
16. Be sure to save your work before continuing.

Create Connections (Pins)

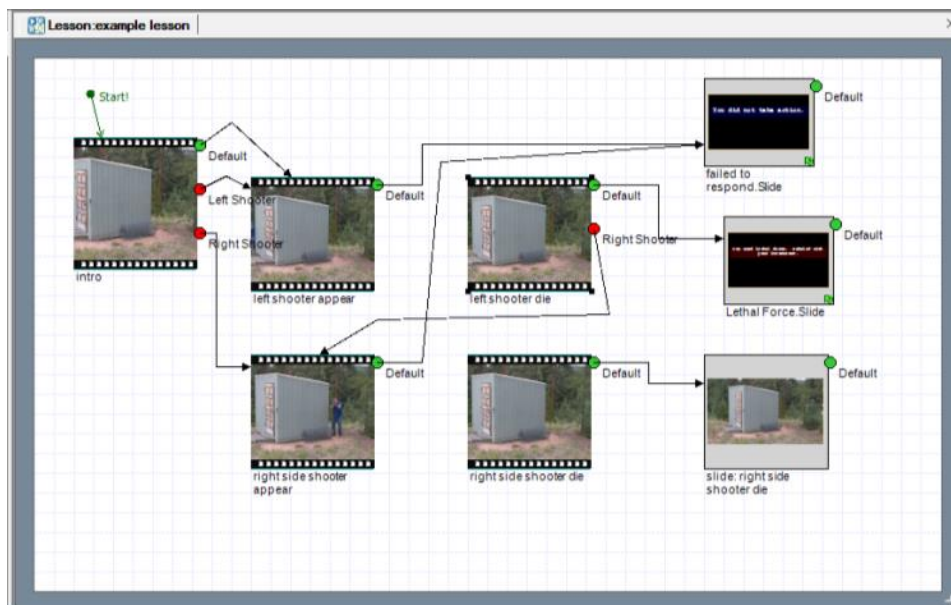
Pins are used to connect one scene to another so that an action in the first scene can cause the second scene to play. There can be several pins on one scene, indicating that there are several possible outcomes for that scene.

There are three types of **PINS**; they represent instructor branch options, branches that happen as a result of a trainee action, and the Default branching if no action is taken by the instructor or trainee. To connect a pin to another scene, click on the scene that has the pin, then click-hold-drag the pin to the desired scene it will branch to. When you release the mouse, you will see the line connecting the pin and the scene.

1. Start by connecting the Default pins of all scenes so that, if neither the instructor nor the trainee takes any action during the scene, it will connect to the desired scene. If the scene will be the end of the scenario, simply leave the Default pin unconnected and the scenario will end when this scene finished playing.

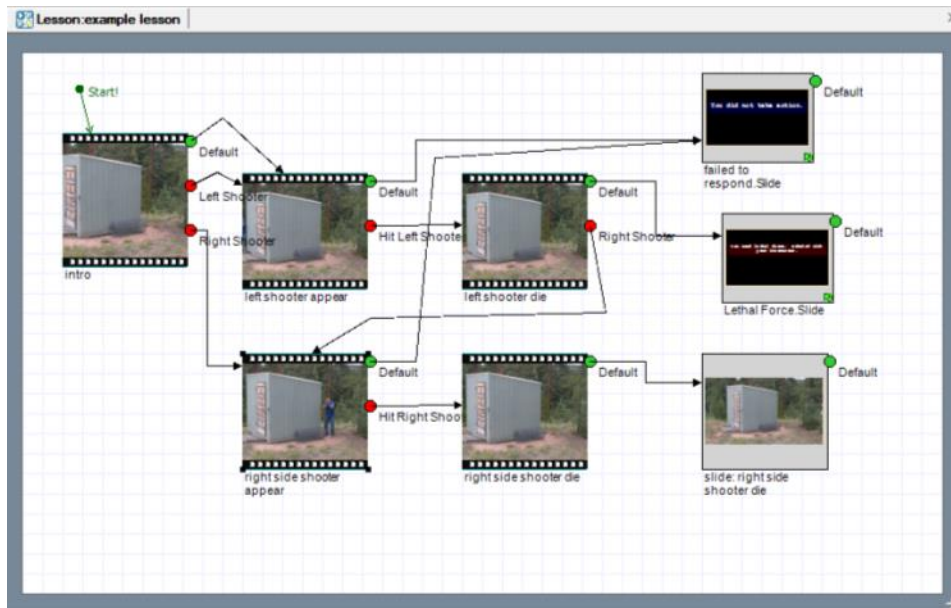


2. To create any required instructor branching options, RIGHT-CLICK on the scene where the instructor can select the branch (meaning the scene BEFORE the outcome you want) and choose **ADD INSTRUCTOR BRANCH PIN** menu item, and optionally, enter a new name. Now connect the pin to the desired scene.

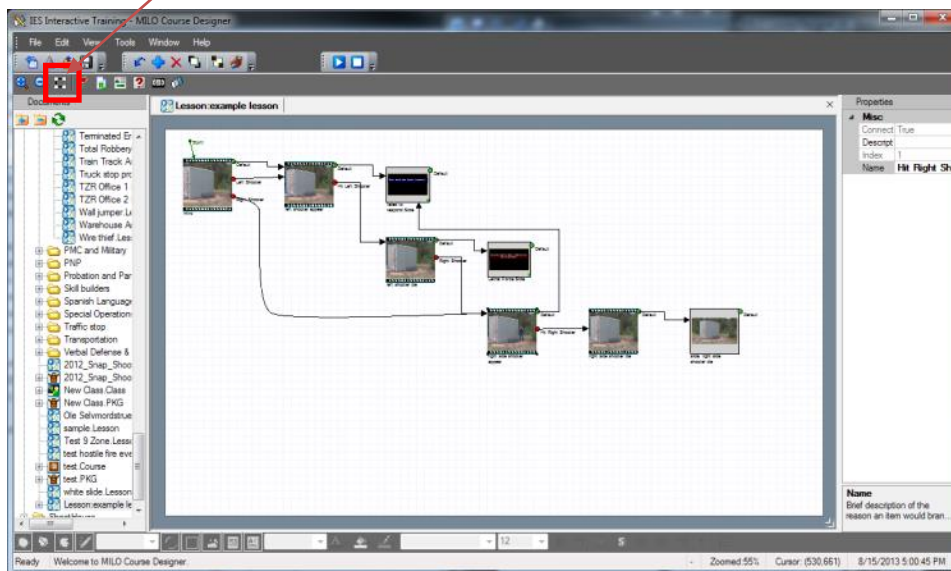


3. For each scene that will allow a trainee to use a weapon, RIGHT-CLICK on the scene and choose **ADD TRAINEE BRANCH PIN** and enter a name that represent the type of weapon they could use. Now

connect the PIN to the desired reaction or outcome scene. You may need to create multiple trainee pins to support more than one weapon (force option) that could be used in the scene.



- When completed, you can auto-arrange your items and pins to clean up the connection lines and arrangement. This may make it easier to follow the lesson's flow as well. The auto-layout button is on the toolbar.

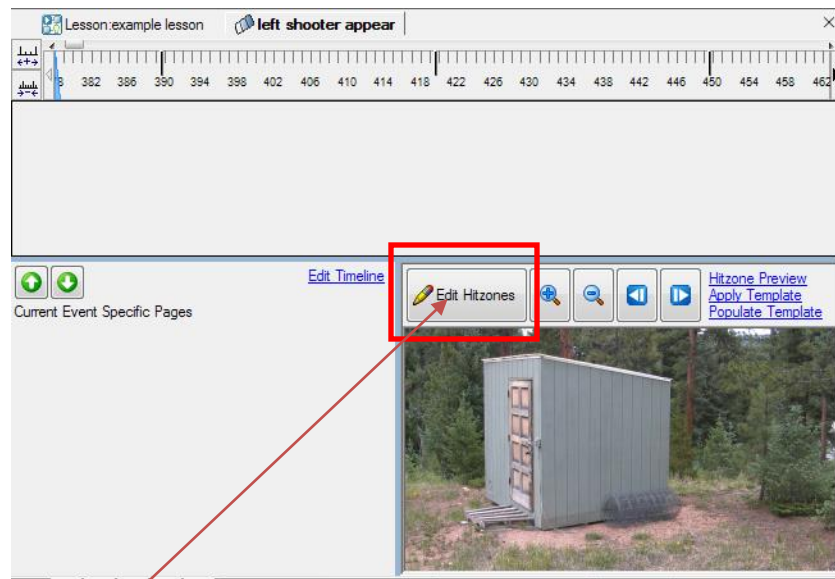


- Be sure to save your work before continuing.

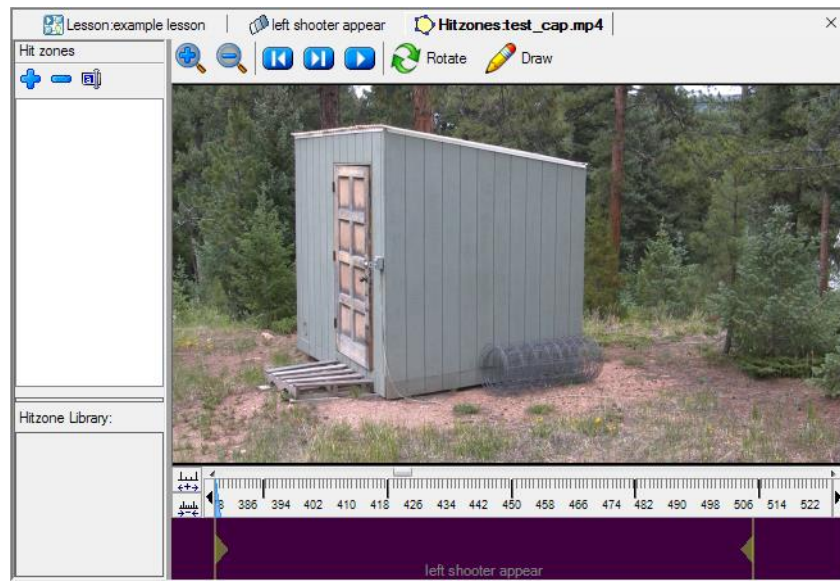
Create Hitzones

After you have built your scenes and connected them, you need to define the hitzones, or the areas on the screen where trainee can fire weapons and cause the system to react. You only need to create hitzones in scenes where trainees will use weapons.

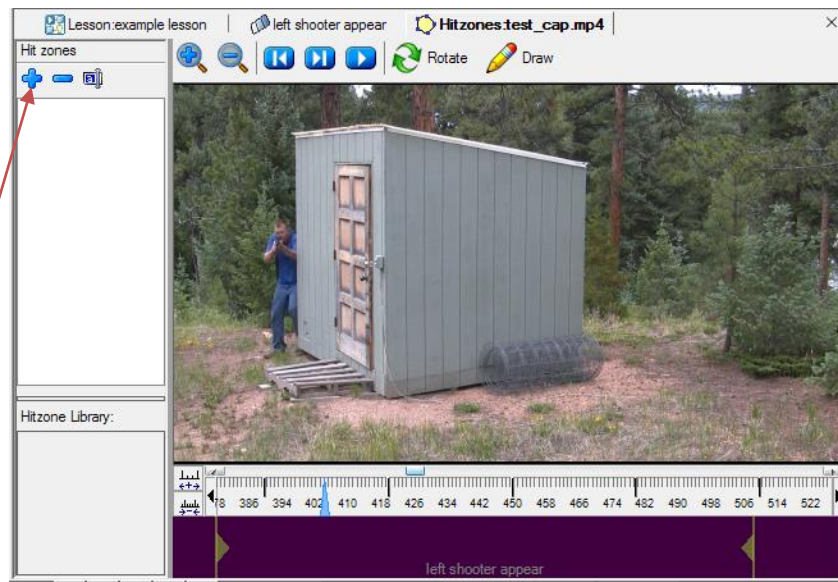
1. Double-click on a scene where a trainee will be able to use a weapon such as a firearm. The scene editing view will open.




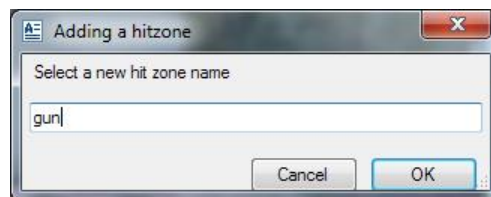
2. Click on the **EDIT HITZONES** button. The Hitzone editing view will open.




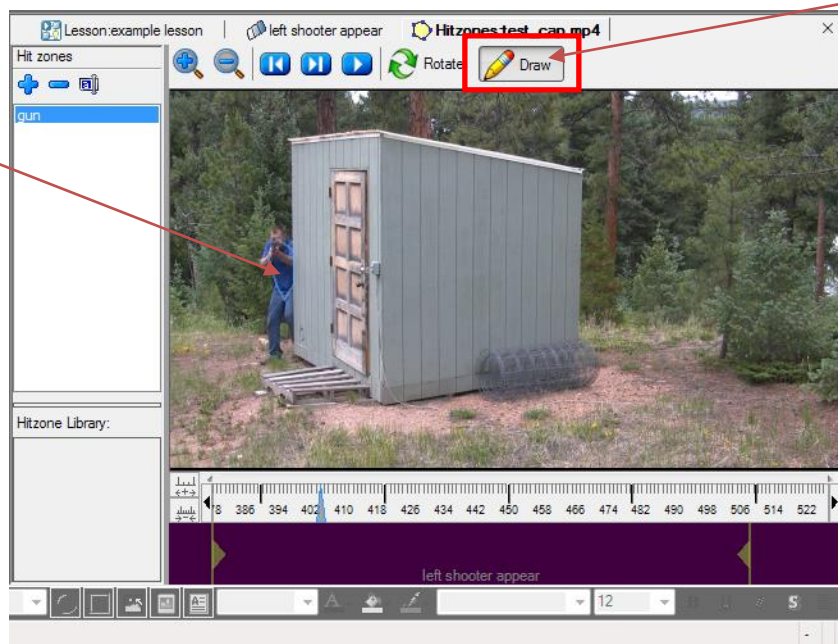
3. Use the timeline indicator to scroll the video the first video frame where the trainee can use their weapon.



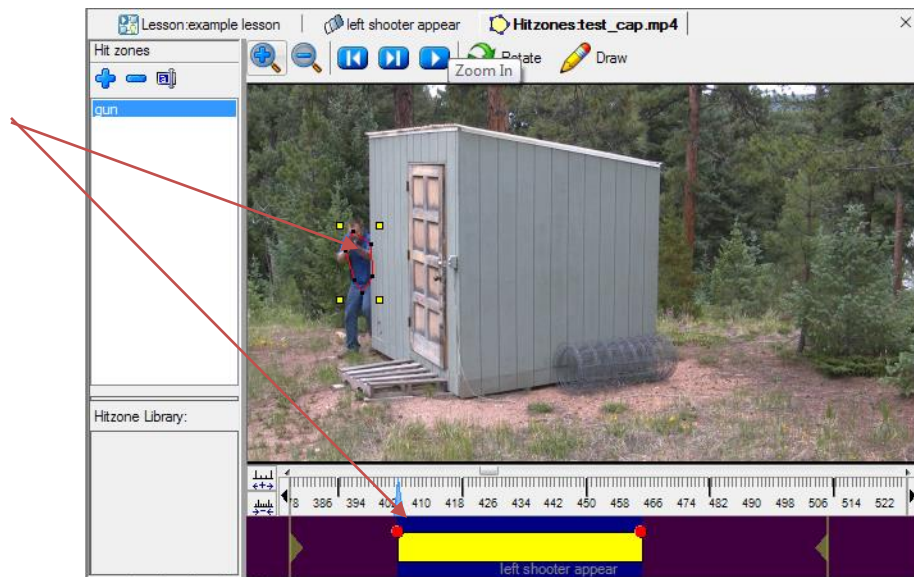
4. Click the **ADD HIT ZONE** button  above the Hitzones list.
5. Enter a name for the hitzone and click OK. The name should represent the weapon that will be used.



6. Click the **DRAW** button  above the video preview window. This will allow you to draw your zone.
7. To create the hitzone shape, click several points on the preview to define the shape of the hitzone. As you click, you will see a line connecting each point you clicked.

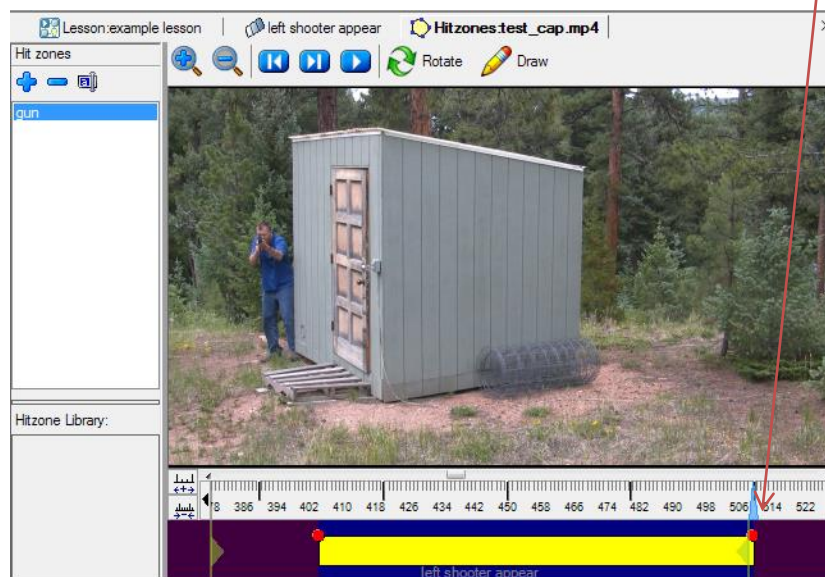
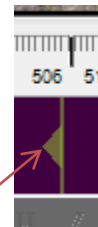


8. RIGHT-CLICK anywhere to complete the Hitzone. It will appear on the timeline and the preview window.



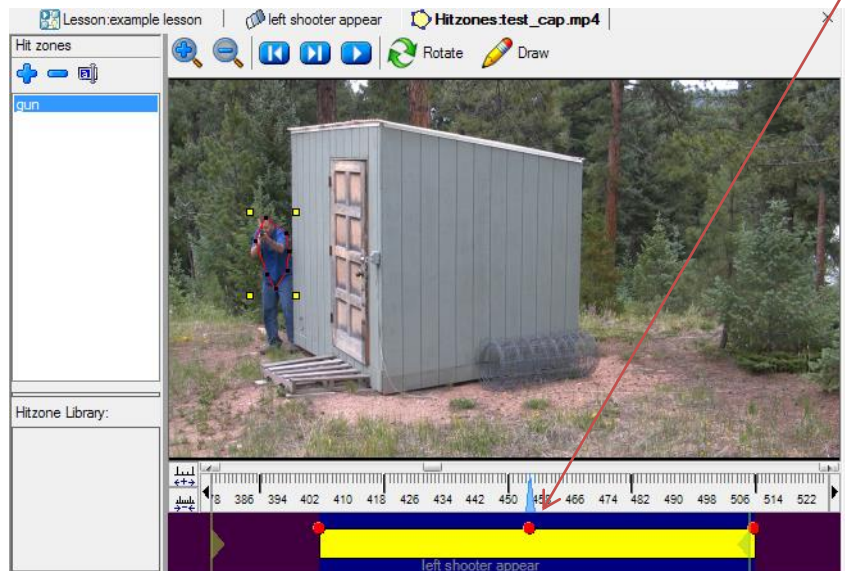
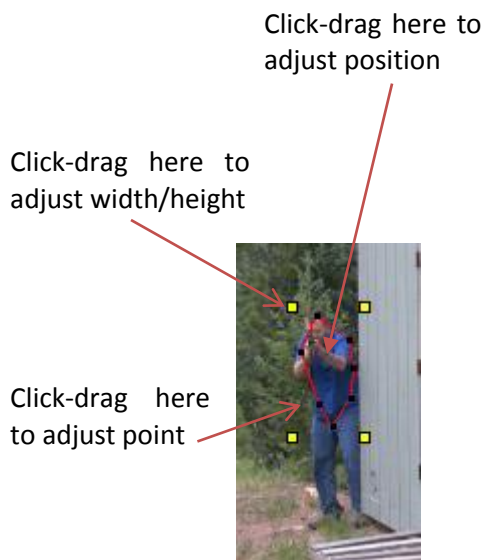
NOTE: The timeline shows the timespan of the hitzone, while the video preview shows the shape of the hitzone. The target in the video will move over time, so the hitzone will need to be adjusted to follow the target. Each point in time where the hitzone changes will be represented by a red dot on the timeline.

9. Click-hold-drag the red dot on the right side to the left or to the right so that it is on the last video frame where you will allow the trainee to use their weapon. As you drag the red dot, the video preview will update to show you the current frame the dot is on. NOTE: Usually you will drag this point a little bit beyond the end of the current scene, which is indicated by the yellow vertical line with arrow pointing to the left, in the purple area below the timeline.

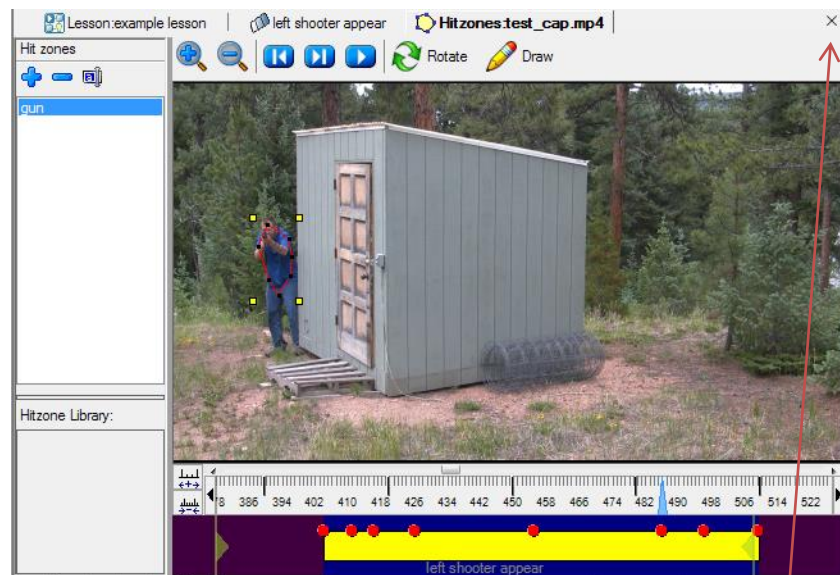



10. Click anywhere on the timeline between the two red dots and notice the hitzone position relative to the shooter. Now adjust the hitzone Position or shape as follows:
 - a. Adjust hitzone position: Hover the mouse anywhere inside of the hitzone and ensure you have the standard mouse pointer cursor. Click-hold-drag the hitzone to move the entire hitzone in any direction.
 - b. Adjust hitzone shape: Hover the mouse over any of the black points to change that point in the hitzone or use the yellow sizing handles to adjust the width or height of the hitzone.
 - c. Add Hitzone points: Click anywhere on a red hitzone line to create a new point to be adjusted.

NOTE: When you make any of the above adjustments to the hitzone, a new red dot will appear on the timeline.



11. Continue moving the timeline indicator to other frames between the red dots, checking the hitzone and making necessary adjustments, so that the hitzone follows the target in the video. You do not have to adjust the hitzone in every frame, the software will automatically adjust the hitzone between the red dots that you create. When complete, your hitzone timeline should look something like below. Your hitzone may have more or less red dots.

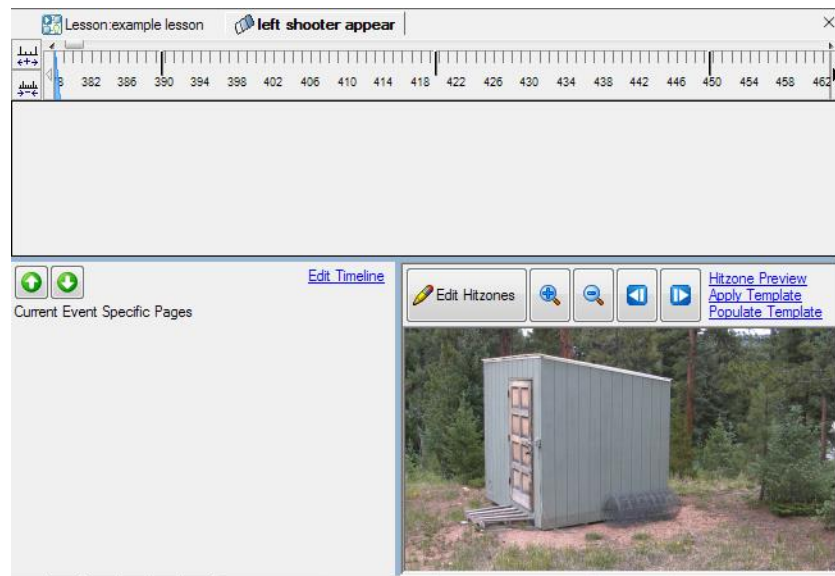


12. Click the SAVE button  on the tool bar.
13. If you want to create additional hitzones for other weapons, you can do so by repeating steps 4 thru 12. When complete, close the hitzone editing view by clicking the X in the upper right of the editing view.
14. Close the scene editing view that was opened earlier as well by clicking the X in the upper right of the editing view. You may be prompted that hitzones were created but not used. That is OK, click YES.
15. Find the other scenes in your lesson that will require the trainee to use a weapon. Repeat steps 1 thru 14 for those scenes, to create the necessary hitzones.
16. Be sure to save your work before continuing.

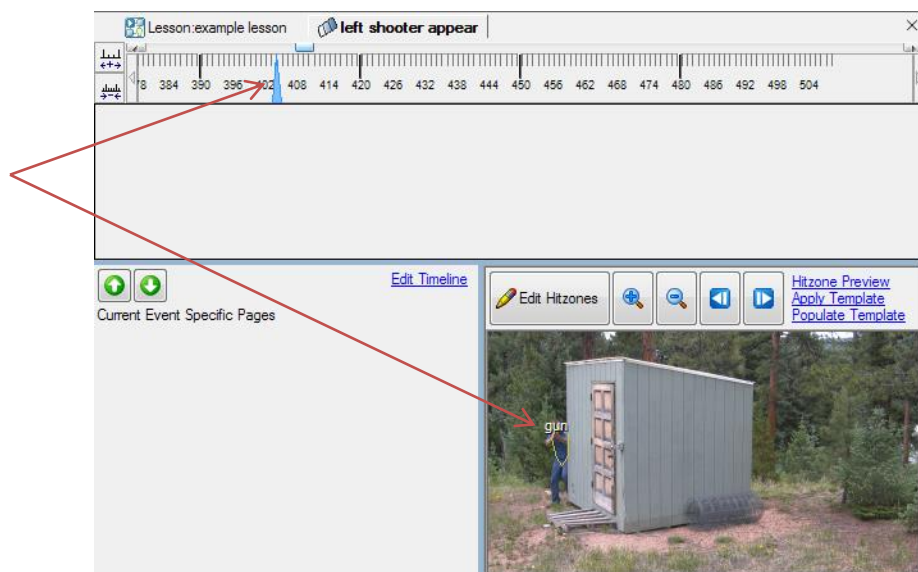
Create Events




In order for the system to react to trainee weapons and cause the Lesson to branch to another scene, the system must be told when, and under what circumstances, to branch. The way to do this is to create an EVENT in the scene. An event is a window of time in which the system will react to a specific type of weapon and hitzone.

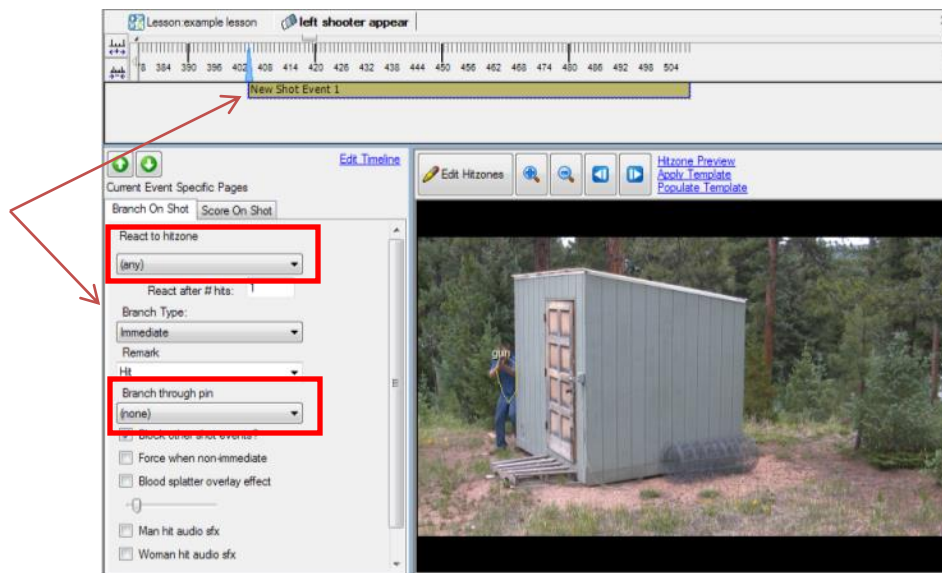
1. Double click on a scene that will allow a trainee to use a weapon. This should be one of the scenes that you created hitzones in earlier. The scene editing view will open.




2. Use the timeline indicator to scroll to the first frame of the scene where the trainee can use their weapon. Note that you should see the hitzone(s) you created earlier displayed on the preview window.



3. On the main tool bar, click the Event button for one of the type of weapons you created hitzones for (i.e. **SHOT EVENT** , **TASER EVENT**  or **OC EVENT** ). For example, if you created a hitzone called "gun" that will allow trainees to shoot the target with a firearm, the click on the SHOT EVENT button on the toolbar. A new SHOT EVENT will be created in the event list.

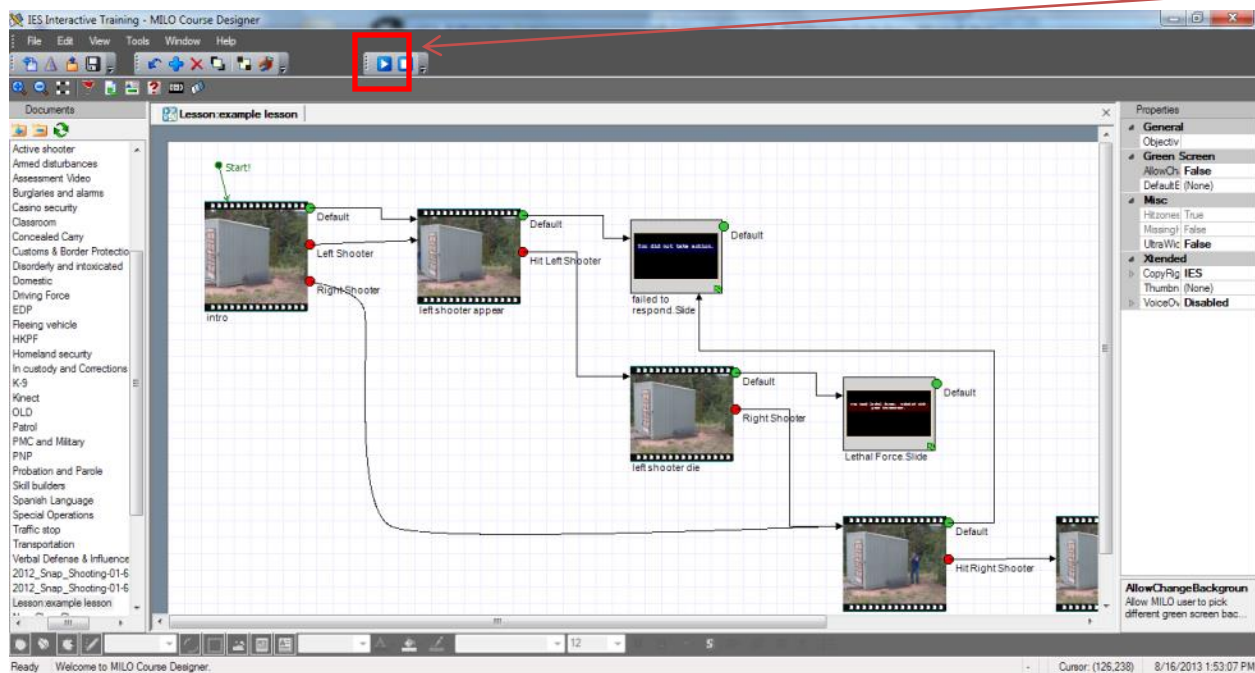


4. Below the event there are several options to tell the system how the system should respond during that event. You must select the hitzone to react to and the scene to branch to.
 - a. React to hitzone: This is the hitzone the event will respond to. Select the hitzone you created for the type of event you selected.
 - b. Branch through pin: This is the scene that the system will branch to if the hitzone is hit. Select the scene where the actor on screen responds to the type of weapon for this event and hitzone.
 - c. There are other event properties that you can select, but they are not required.
5. Create additional events for other weapon types if needed.
6. Close the scene editing view by clicking the X in the upper right of the editing view.
7. Click the SAVE button  on the tool bar.
8. Find the other scenes in your lesson that will require the trainee to use a weapon. Repeat steps 1 thru 7 for those scenes, to create the necessary events.
9. Be sure to save your work before continuing.

Test Lessons

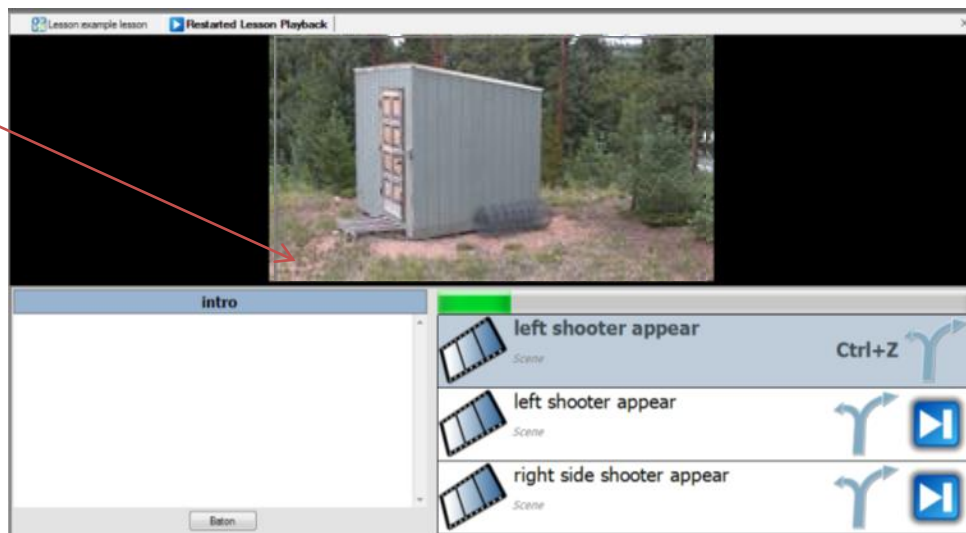
You can test the branching of a lesson within the Course Designer software using mouse clicks to simulate instructor branch selections and trainee weapon use.

1. Open the lesson using the File menu and selecting the Open command. Browse to the lesson you want to test and select it. Lessons are usually in the C:\MILO\LESSONS folder or subfolder.
2. From the Lesson editing view, click the Play button on the main toolbar at the top of the window.



3. The lesson testing window will open and begin playing the lesson.

Video Preview



Instructor
branch
options

4. To test the lesson, you can let the scenario begin playing and do not click on anything. The default series of scenes should play the way you expect. If there is any issue with the default series of scenes and branching, go back to the section of this guide that details how to connect the scenes.
5. To test the Instructor branching, click on any of the instructor branch options and check that the appropriate scene is displayed.
6. To test hitzones and events, you simulate the weapons a trainee will use by holding the appropriate keyboard key and clicking with the mouse on the view preview.
 - a. SHIFT+ Click = **Gun**
 - b. CTRL + Click = **OC (mace)**
 - c. SHIFT + CTRL + Click = **Taser**