# CineDemo Quick Start Guide

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Please provide feedback and comments to:

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Plexon Inc Proprietary

## Introduction

This Quick Start Guide will help you get started right away using the Plexon® CineLyzer® demonstration software. This software allows you to try for yourself some of the key features of the full CineLyzer System. There are many additional features and functions in the full system. See the *CineLyzer with Photometry User Guide* (referred to simply as the *User Guide* in this document), available on the Plexon website or in the Help dropdown inside the CineDemo application itself.

## Installer

1. Download the installer from the Plexon website to your PC or copy it from existing media, such as a USB drive.
2. Double click the installer icon ![icon] to begin the installation process.
3. The installer prompts are similar to most typical Windows programs. Accept the prompts to allow the installation to proceed normally. Accept the default file locations and setup options in the prompts (except that you need to accept the licensing agreement as shown below).
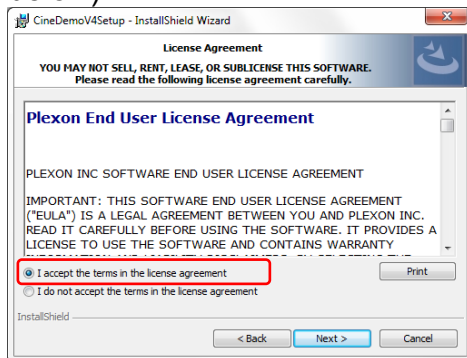


During the installation process, the system may display a notification that it is reconfiguring the Windows C++ Redistributable files – this is a normal function of the installer.
4. When the installation finishes, you will see the **CineDemo V4** shortcut icon ![icon] on your desktop. The system will prompt you to restart your computer and you should click **OK** to restart.

Notes:

− During installation, additional files will be installed on your hard drive in the default folders – C:\PlexonData and C:\Program Files (x86)\Plexon Inc\CineDemo V4.
− After you restart your computer, you might see a prompt indicating a Java update is available; do <u>not</u> perform that update.

## Starting the Application and Viewing the User Interface

1. To start the application, double click the **CineDemo V4** shortcut icon on the desktop. (You do not need a license key for this demonstration version of the application.)

The CineDemo application will open and you will see a user interface like this. In the image below, the main areas of the user interface are labeled. For details about each of these areas, see Chapter 2, "Installing and Starting the System," in the *User Guide*.
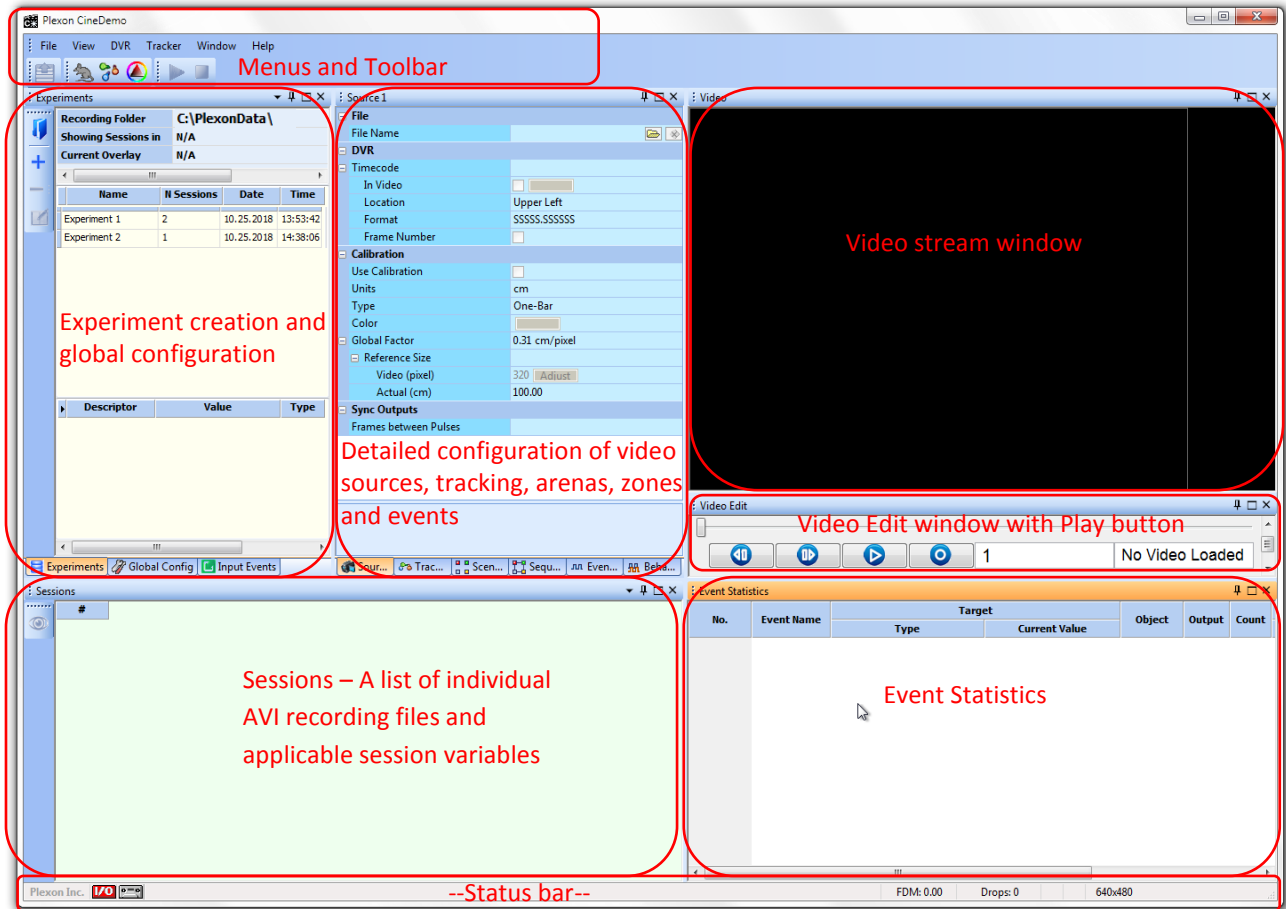


2. To view all the areas of the interface fully, ensure the application is running in full screen mode (filling the entire screen).
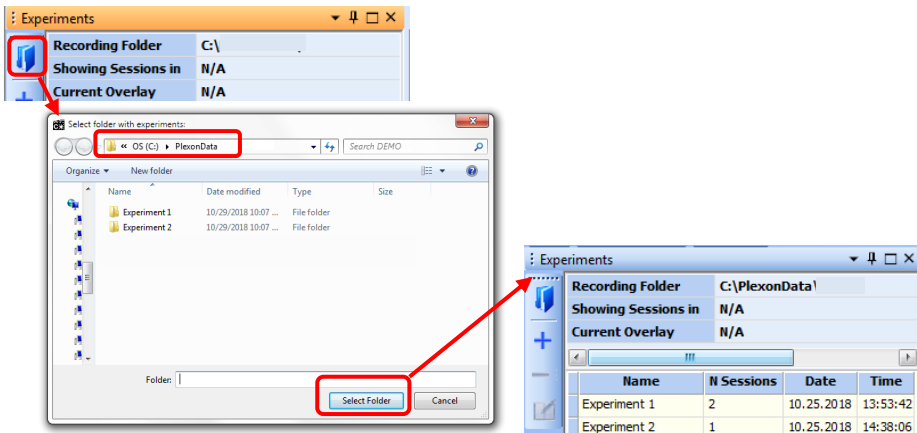
3. (If required) If you do not see the two experiments listed in the Experiments tab, click the **Change Recording Folder** icon and navigate to **C:\PlexonData** folder. The system should list the two experiments. Click the **Select Folder** button.
The **Experiments** tab should now display the **Recording Folder** and the two experiments, as shown in the sequence below.

In the remaining sections of this Quick Start Guide, you will see how to view and configure some sample experiments and analyze the data generated from these files. You will also be able to create new experiments using your own AVI files. When you run your own AVI files through the CineDemo application, you will be able to retrack the movements of the animal in your video, configure events related to the animal's behavior, and view the new data.
TIP: With the full CineLyzer System, you can also export data in Comma Separated Values (CSV) format for further analysis.

## Viewing and Configuring Sample Experiments

In the C:\PlexonData folder you will see two sample experiment subfolders, Experiment 1 and Experiment 2, which are provided with the CineDemo application:

- Experiment 1 – Tracking an animal's movements and its presence in a specific zone within the experimental arena.
- Experiment 2 – Tracking an animal's movements and two behavioral events, namely, head direction and speed.

Note that Experiment 1 tracks the animal's whole body, while Experiment 2 tracks the animal by means of color markers placed (or painted) onto the animal. The available tracking modes are explained in Chapter 6, "Configuring the Tracking Parameters," in the *User Guide*.

## Experiment 1 – Tracking and Zone Entry

The data in this experiment are useful for determining when the subject enters various zones that are configured in the arena. These zones might contain, for example, rewards or hiding places for the subject.

1. Click on Experiment 1 to select it.
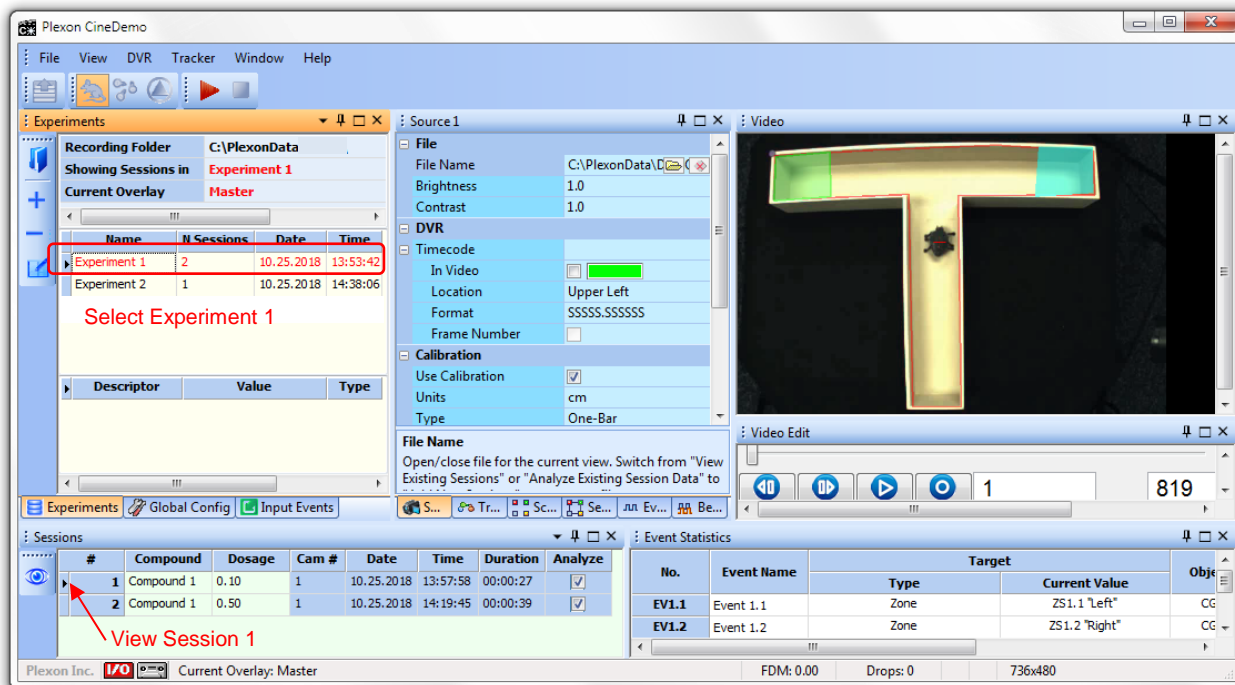
2. Notice the two recordings listed in the **Sessions** window (above). In Session 1, the subject has been administered a dose of 0.10 of Compound 1. In Session 2, the dosage is 0.50. Variables like this are fully configurable in the full CineLyzer System.

3. In the **Video Edit** window, click the **Play** button to play the video. As the video plays, you will also notice that there are behavioral events being tracked in the E**vent Statistics** window. As the center of gravity (CG) of the tracked subject enters Zone S1.2 on the right side (beginning in Frame 489) the system registers the event, and the event remains true as long as the subject's CG is in this zone. Also notice that the system is tracking the number of times the subject enters (and re-enters) the zone, the subject's time in the zone and its track length while in the zone. (See the image below.)
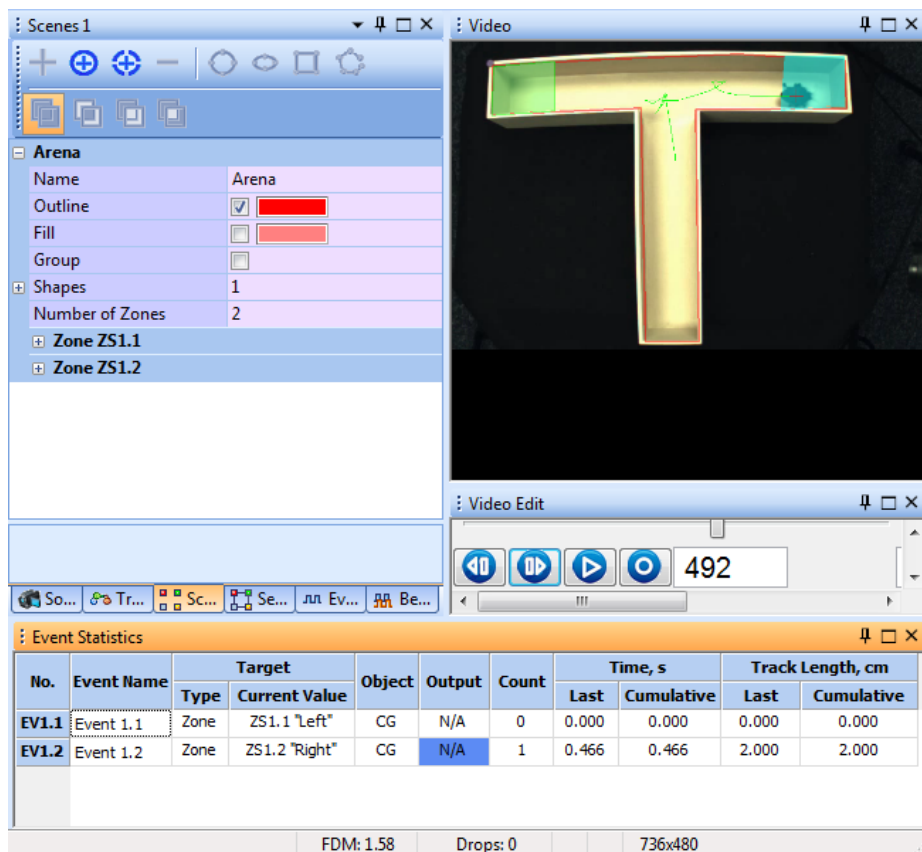


With the full CineLyzer System, you would also have the capability to extract the frame-by-frame coordinate data and event data as a comma separated values (CSV) file for further analysis.

4. Now click on Session 2 in the **Sessions** tab to select it. Then play this video file. Watch the **Event Statistics** window, and you will see the events that occur during this session.



Select and view Session 2
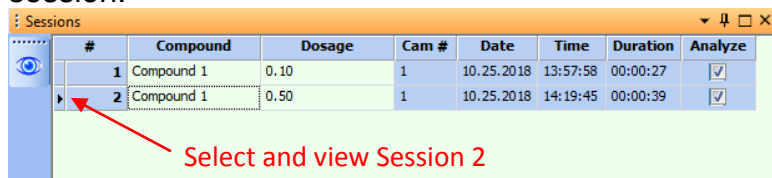
5. Note that each session in this experiment is a separate recording. For additional information on recording sessions, see Chapter 9, "Recording and Monitoring Video," in the *User Guide*. For the procedure for extracting data in CSV format for further analysis, see Chapter 10, "Analyzing Data and Adding Sessions."

6. To get an idea of how the configurable parameters work, try changing some of the values in the **Tracking**, **Scenes** and **Events** tabs, then watch how the changes are reflected in the **Video** window display when you play the video.

## Experiment 2 – Tracking, Head Direction and Speed

The data in this experiment are useful when assessing the subject's interest and motivation.

1. Click on **Experiment 2** to select it. You should see an image like this.
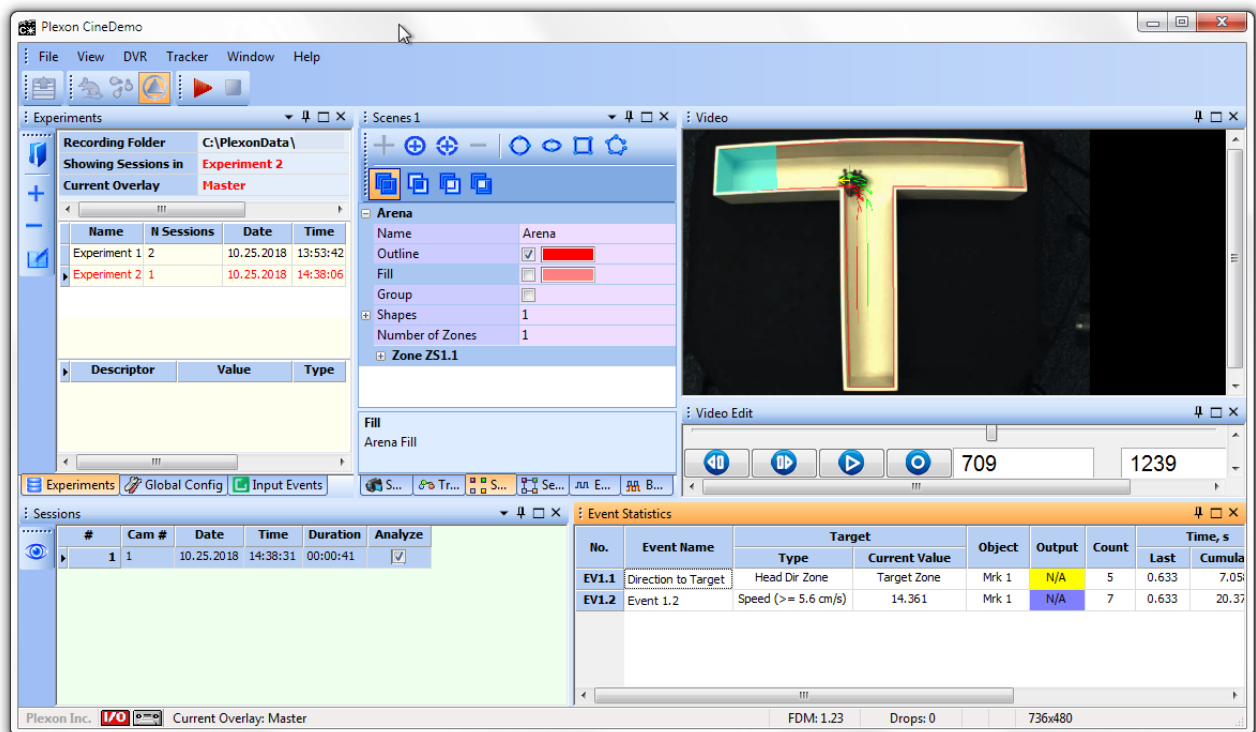


Click the **Play** button and watch the subject's movement and the **Event Statistics**. You will see that the system is tracking two behaviors:

– The subject's head direction – In this case the event is true when the subject's head is pointed toward the blue target zone within a certain angular tolerance.
– The subject's speed – The event is true when the subject's speed is greater than the configured value, 5.6 cm/second in this example.

For more information on the types of logical events that you can configure, see Chapter 7, "Configuring the Behavioral Events Parameters," in the *User Guide*.

# Experiment 3 – Loading Your Existing AVI Files for Retracking and Analysis

This section explains how you can load your own AVI files, configure the parameters for tracking and behavioral events, and extract new data from your previously recorded experiments. This section guides you through one possible experimental scenario, but you can refer to the *User Guide* to find many other configurable options that more precisely match the needs of your experiment.

1. Ensure that the recording folder is set to C:\PlexonData\.

2. Click the "+" sign to create a new experiment. In the **Add New Experiment** dialog, enter the name Experiment 3. Add some **Descriptors** and **Experiment Comments** for the experiment and add some **Variables** for the sessions. Then click **OK**. The system displays your new experiment.
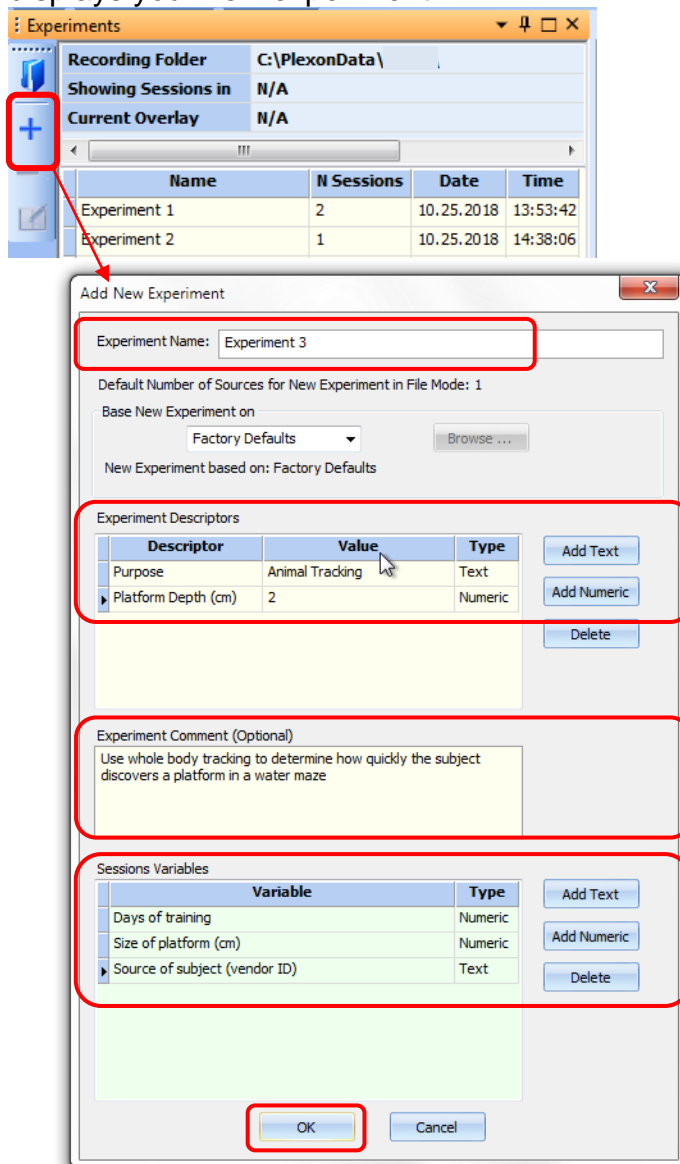
3. Click on Experiment 3 to select it.
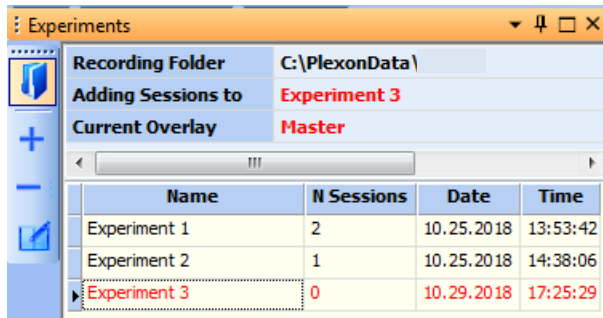


4. Select whole body (object contour) tracking.
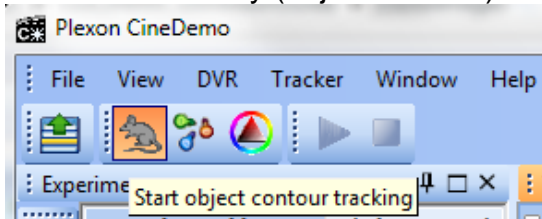


5. In the **Source** tab, click on the **Open video file** icon and select your AVI file.
   Notes:

   – Most typical AVI files load easily into the CineDemo application. However, if your AVI file does not load, contact Plexon support (+1 214-369-4957 or support@plexon.com) and the support staff will provide assistance.

   – If the system flashes a warning at the bottom of the screen, it needs additional parameters configured; this problem will be corrected in the next steps.

6. In the **Tracking** tab, take a background image and use the background (subtract the background from the tracking function). These steps are often necessary to ensure good tracking in the whole body mode.
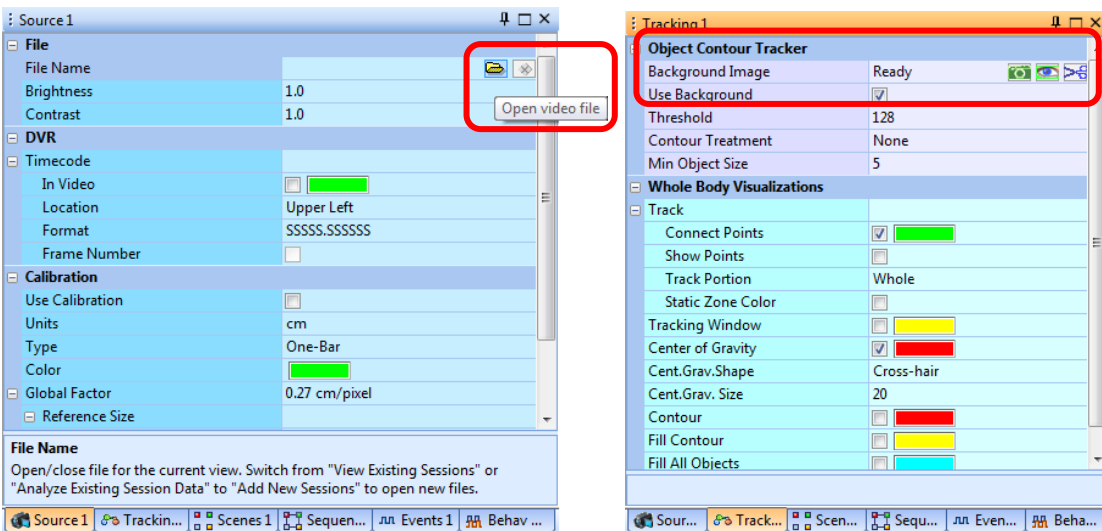


7. In the **Scenes** tab, draw an arena in the video window, for example a square or circle. In this example, we have selected the circular shape and drawn a circular arena representing a water tank.

8. Also in the **Scenes** tab, add a static zone inside the arena. In this example, we have added a rectangular zone representing a platform on which the subject can stand and rest.

9. In the **Events** tab, configure an event that becomes true when the subject is inside the zone (over or on the platform).
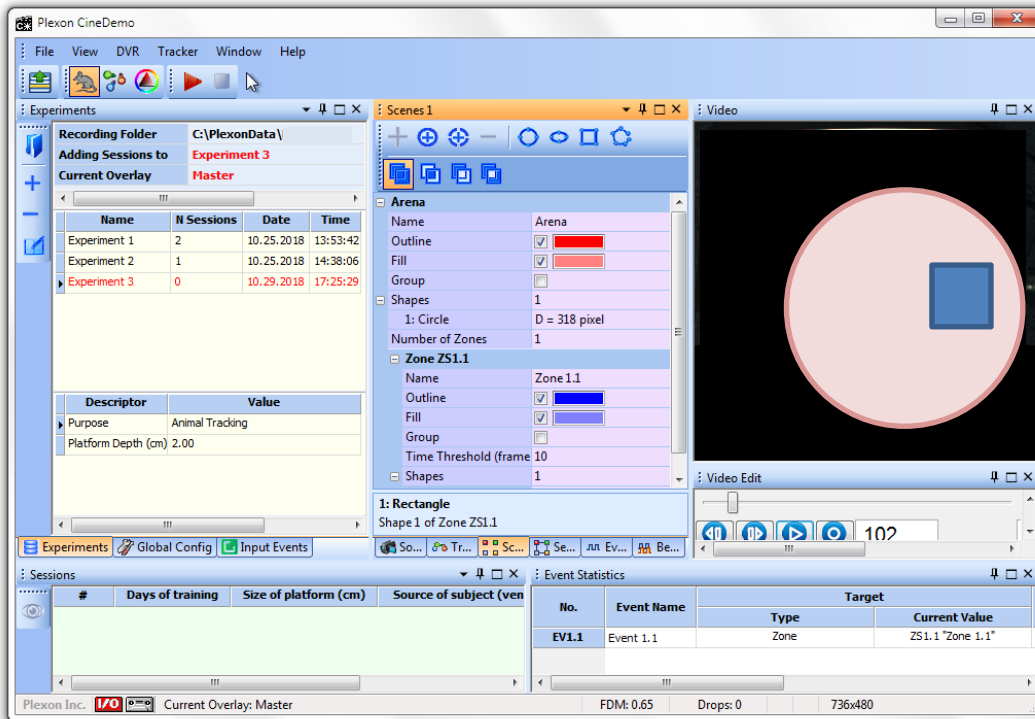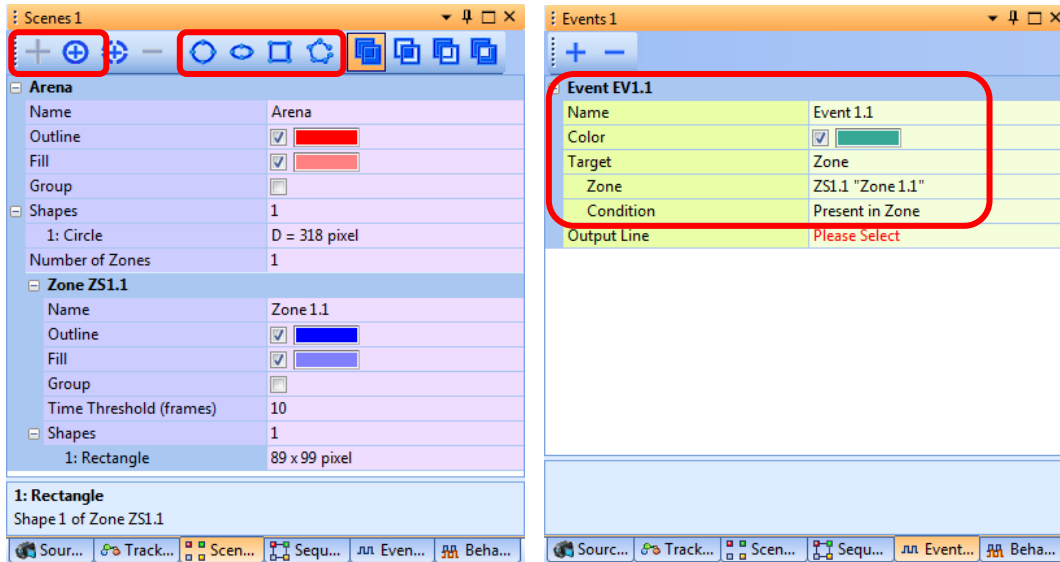


10. In the **Video Edit** window, click the **Play** button. As the subject moves through the zone, you should see the event reflected in the **Event Statistics** window. The event should be displayed as true when the subject is in the zone and false when it is not.

With the full functioned CineLyzer System, you will also be able to extract coordinate and event data from your experiment.

## Assistance Installing and Configuring the full CineLyzer System

If you would like assistance configuring the CineLyzer System and parameter settings for your experiment, please contact Plexon at +1 214-369-4957 or support@plexon.com.