

# Logger Pro Video Analysis Basic Instructions

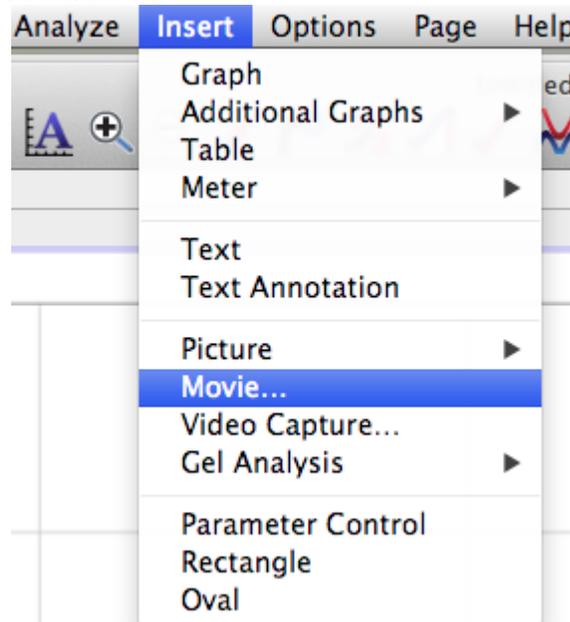
This file: <http://goo.gl/RSTXRz>

Download the video to your hard drive. If it is on the Google Drive then follow these steps. Click on the folder that contains the video. Not the video itself. Click on the little box next to the video's name. A menu at the top of the screen called, "More," will pop up. From this menu select "download."

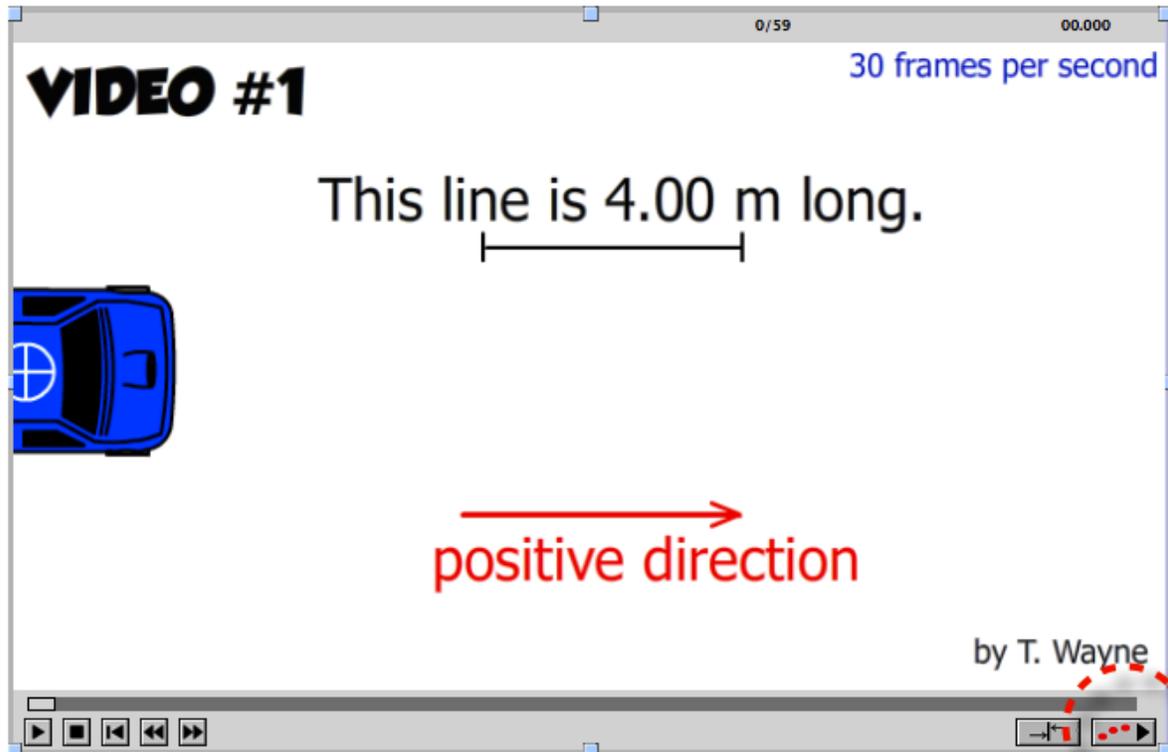


Video instructions paraphrasing what's below: <http://youtu.be/p3c8tMkGImI>

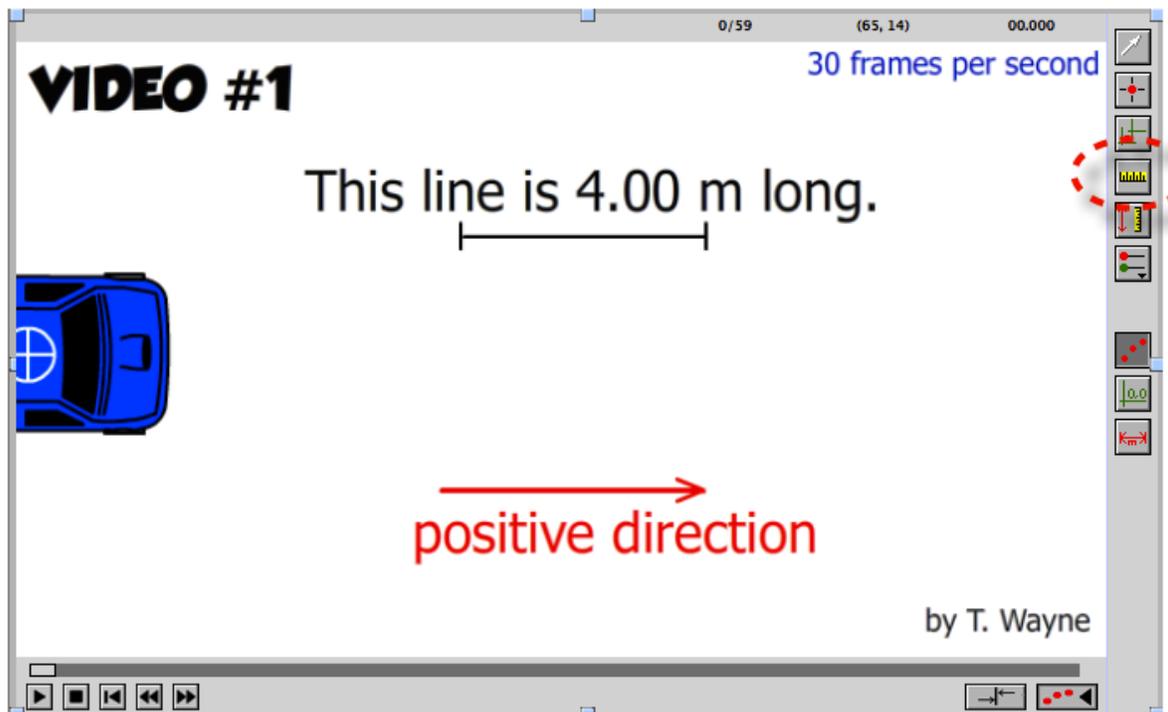
- 1 Open "LoggerPro." On a Windows computer press the "windows key." (It has the MicroSoft windows logo on it.) Type, "Logger." The application called LoggerPro should pop up in the list. Select it. On a mac type **⌘ - SPACEBAR** , then type "logger." Select the application "LoggerPro." If, "Logger Pro," does not appear, see your teacher
- 2 A new file is automatically created when Logger Pro is opened. If it is not then create a new file.
- 3 From the "Insert" menu select "Movie..." Navigate, on your hard drive, to the movie you want to analyze and select it.



- 4 Drag the corner of the video to make the video as large as possible. This will increase the accuracy of the data you collect.
- 5 Turn on the video data collection tools by clicking on the button at the lower right of the video screen, 



- 6 You must know the length of something in the video. Click on button that looks like the one below. It should be to the right of the video. Then drag the cursor across the length of the known object. You will see a line when you do this. A little dialog box will pop up asking you for the object's actual length. Enter this in meters, .



7. Set the origin by click on the button shown below. The button should to the right of the video. Typically, place the origin on the first frame of the piece of the video you

are analyzing. Its placement is not that critical for most videos.



- Start collecting data. Click on button that looks like the one below. The button should be to the right of the video. Then carefully select any point of the moving body in the video. Click this location. The video will automatically move to the next frame. Continue to click the exact same location on the moving body in the video.



- When you have finished collecting data, click on the pointer button. This will stop the data collection process and prevent the accidental collection of data by clicking at some random place on the video.



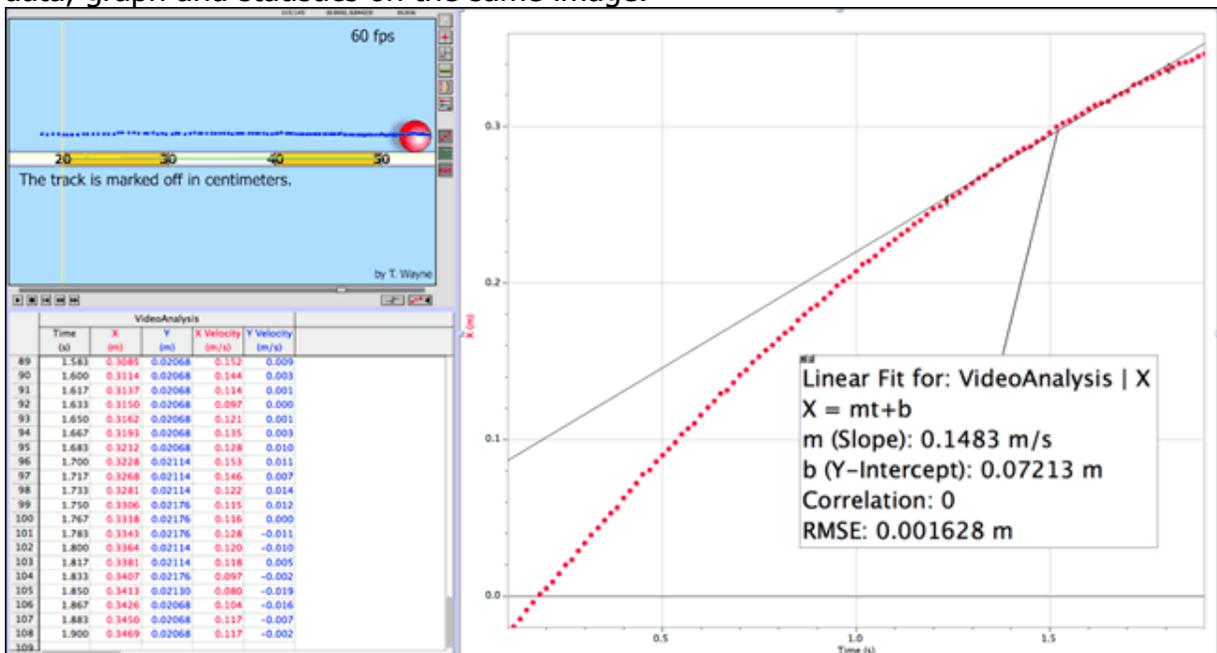
- If you want to collect data for more than one moving object from the same video, then click on the button below to switch between data collection sets.



- To measure the length of something in the video, click on the button shown below and drag the cursor the length of the object.

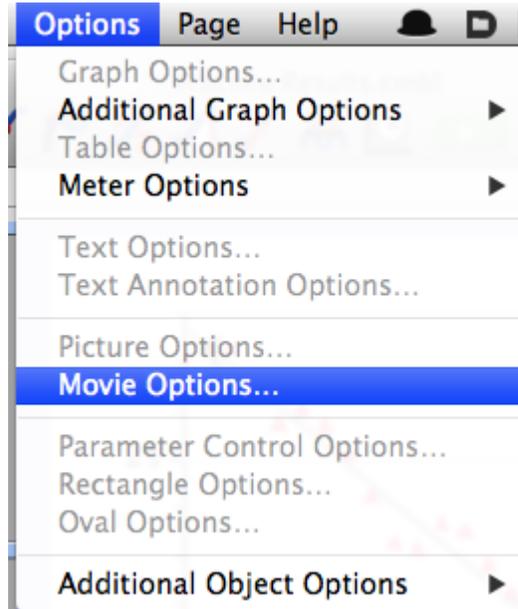


- Organize your screen. Press **control-r** on a **Windows** computer to automatically do this. Press **⌘ - r** on **mac** to do this. **Do this before taking your screenshot.** So it contains everything I want to see. (DO NOT delete the video.) **Use this automatic screen layout when taking a screenshot for a report.** (Use the "Snipping Tool" built into Windows to copy the screen image and place it in a document. ) Below is an *example* of what what your screen should look like. It has all four components, video, data, graph and statistics on the same image.

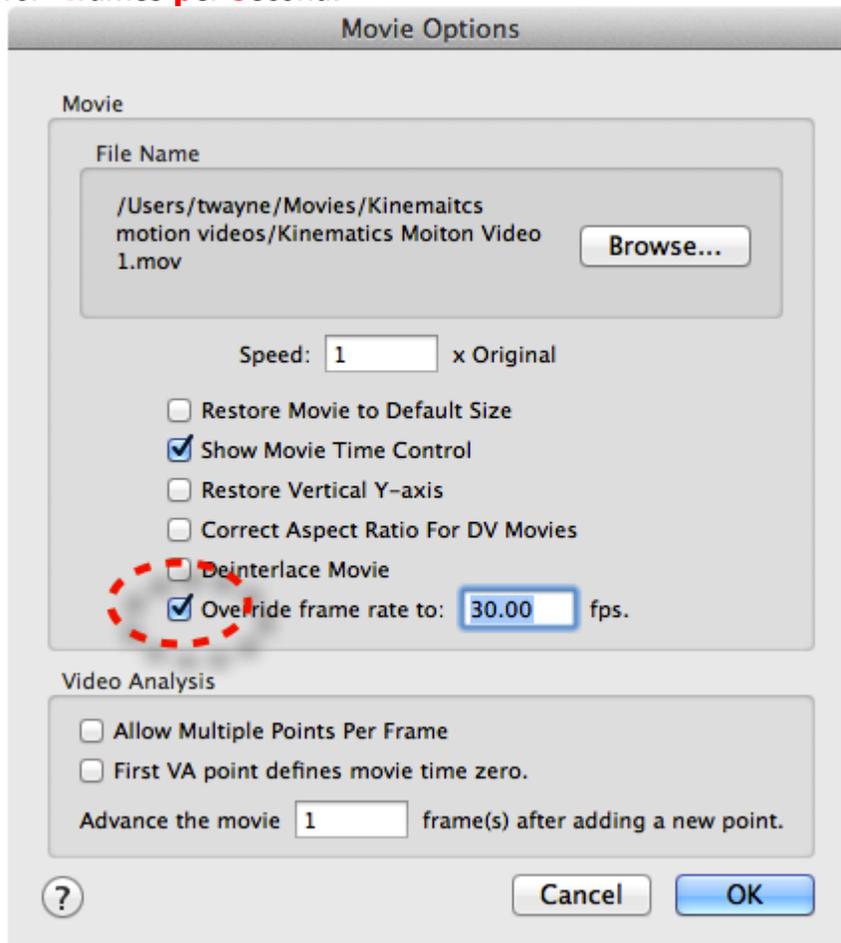


- Adjust the frame rate if needed. Most videos on the internet are shot at about 30

frames per second, "30 fps." But sometimes this is not the case. If you know your video is shot at a different frame rate then you will need to tell this to the software. Click once on the video in LoggerPro. Then select Movie Options... from the Options menubar choice.



(Clicking the video twice can also bring up the dialog box below.) A dialog box will pop up. Check next to "Override frame rate to \_\_\_\_\_ fps." and enter the frame rate. "fps" stands for "frames per second."

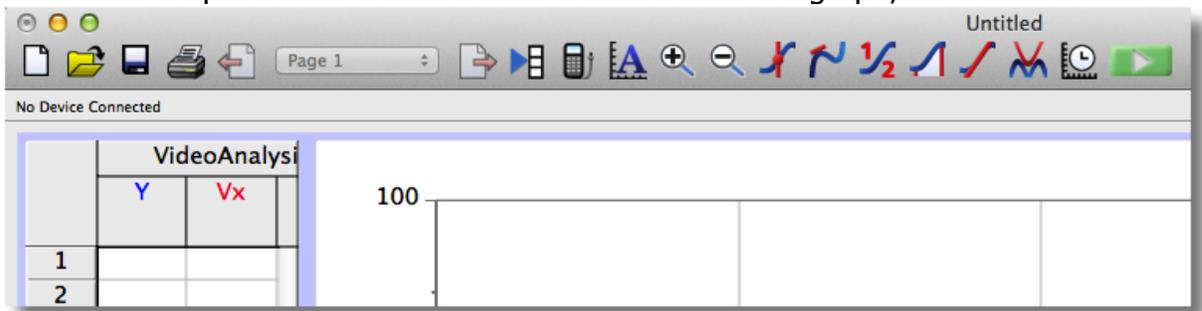


There is a glitch in the software. If want to keep all the data points you must override the frame rate AFTER all the data is collected. You can do this any time after analyzing the graph too. Your results will be adjusted automatically.

14. To find the slope of a graph
  - Highlight the data points on the graph you are interested in.
  - Select the best fit button shown below.



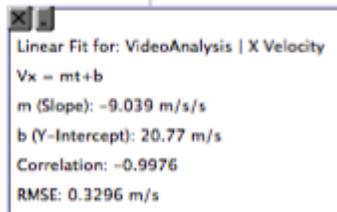
This button is part of the the button collection above the graph,



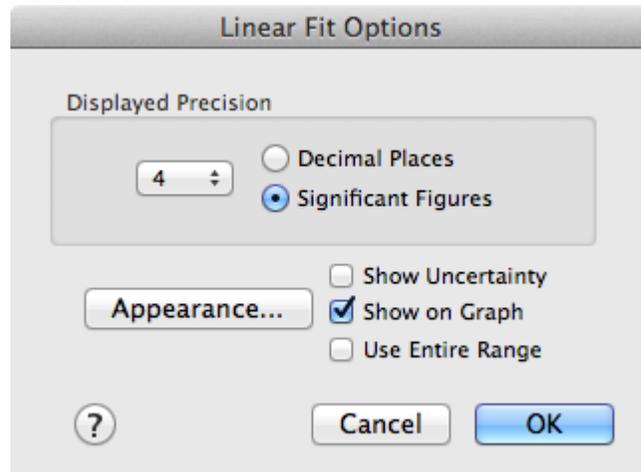
15. To find the average, also known as the, "mean," of a collection of data, highlight the section of the graph you are interested in and click on the button shown below.



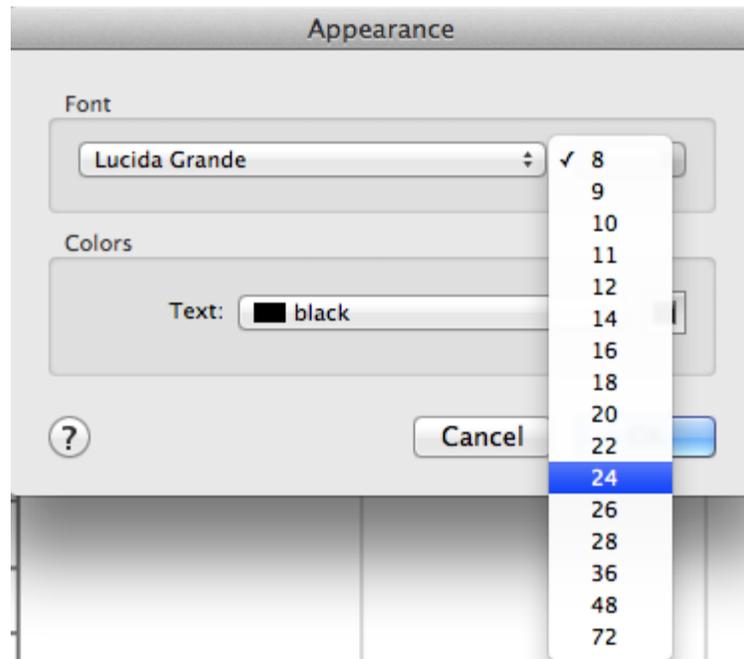
16. When the statistics dialog box is displayed, often the font is too small to be useful when the graph is pasted into a report. Generally the font needs to be increased to a 20 or 24 point font. To do this double click on the stats box.



Then select the appearance button.



Choose a larger font size and close these two dialog boxes.

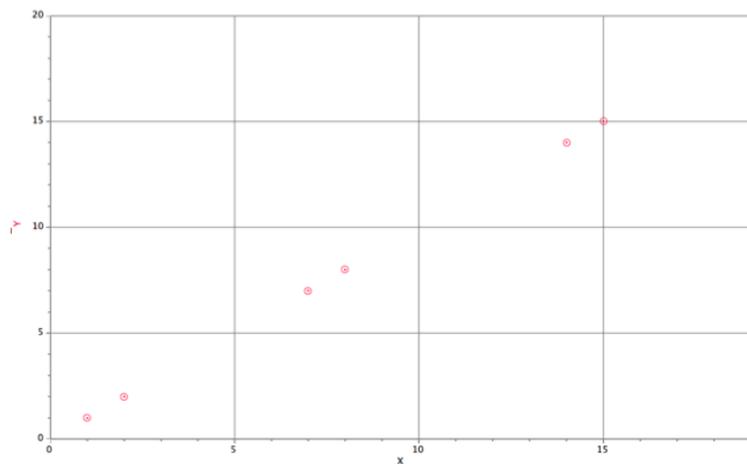


## Logger Pro Video Analysis Problem Solving

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### Problem.

Sometimes Logger Pro will skip data points. It will look like it is collecting points, but if you look at the data points in the columns.

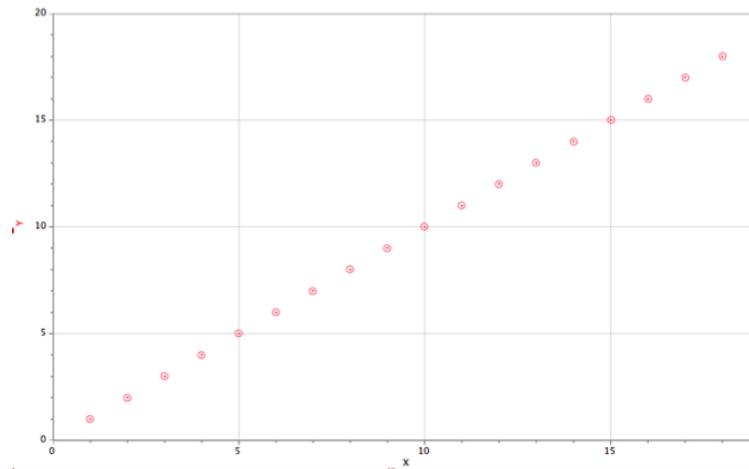


### Solution.

This order MUST be followed to ensure all the data can be recorded.

1. Insert the video into LoggerPro.
2. Move the pointer to the origin's position in the video.
3. Identify the origin in the video.
4. Set the scale from the video.
5. Collect data points from the video. All mouse clicks will turn into data.

6. Now and only now, after steps 2 - 5 have been done, change the frame rate of the video by selecting “Options” from the menu bar and scroll down to “Movie...”



**Return this paper to the teacher so others may use it.**