The task is to create a data visualization tool for the output of a traffic light detection system in WPF and C#.

The visual data comes from a set of JPG files, each corresponding to a frame from a forward facing vehicle camera. The camera records at 25 frames per second. The image files can be downloaded from http://s150102174.onlinehome.fr/Lara/files/Lara_UrbanSeq1_JPG.zip

You do not need to create the traffic light detection system, this has already been done. The label file is in XML format and available for download at http://s150102174.onlinehome.fr/Lara/files/Lara_UrbanSeq1_GroundTruth_cvml.xml

The goal is to create a tool that correlates these files and displays them as an animation showing a visual representation of the detection system.

Along with the visual output, please provide a basic analytic output of the drive. This should include the number of traffic lights encountered, the amount of time stopped by a traffic light, and the average length of time stopped when a red light is encountered.

The application should be developed in C# using WPF and .NET 4.7.2. All required supporting libraries used should be included with the application submission. There is no need to include the image or label files, but the application should allow the directory of these files to be configured.