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## How to export IPGMovie images at a specific event?

*The functionality to export an image from IPGMovie is only available when the simulation is finished, but often it is necessary to take a screenshot when a specific event occurs or a certain condition is met. In this article it is shown how this can be done with the help of ScriptControl.*

Exporting images from IPGMovie is not possible during the simulation, since an export during runtime would lead to timing problems among other things. Nevertheless, it is still possible to export an image at certain condition or when a specific event occurs in the simulation with the following two-step approach:

1. Run the simulation and record when you would like to take the shot using a UAQ.
2. Use the simulation results and the replay functionality of IPGMovie to rewind and take the shots you want.

The example script explained below loads and starts a TestRun and exports two images from IPGMovie when the vehicle has driven exactly 200 m and exactly 500 m.

The script is structured as follows:

- a) Load the TestRun "Examples/BasicFunctions/Road/Networks/CountryRoad" and start IPGMovie.

```
1: LoadTestRun "Examples/BasicFunctions/Road/Networks/CountryRoad"  
2: Movie start
```

- b) Create a UAQ "Screenshot\_time" that contains the points in time for which a specific event occurs and a screenshot from IPGMovie should be taken. In this example a screenshot should be taken after the vehicle has driven 200 m and 500 m. The definition of the UAQ and the query whether the condition is fulfilled or not could be defined as a global Realtime Expression with the help of the KeyValue TestRun:DrivMan.Cmds. This way it is valid for all maneuvers during the simulation. Make sure that the created UAQ is saved to the result file by adding it to the output quantity list.

```
3: KeyValue set TestRun:DrivMan.Cmds {first() ? Qu::Screenshot_time=0;  
first(Vhcl.sRoad>200) ? Screenshot_time=Time; first(Vhcl.sRoad>500) ?  
Screenshot_time=Time}  
4: OutQuantsAdd {Screenshot_time}  
5: SaveMode save
```

- c) Run the simulation and afterwards perform a clean-up (delete the global Realtime Expression and set the SaveMode back to collect).

```
6: StartSim  
7: WaitForStatus running  
8: WaitForStatus idle  
9: KeyValue set TestRun:DrivMan.Cmds  
10: SaveMode collect
```

- d) Read "Screenshot\_time" from the saved result file and loop over all values. Every time the value of "Screenshot\_time" changes export an image from IPGMovie into the folder "SimOutput/Screenshots/CountryRoad" and log the export time. In this case the value of "Screenshot\_time" changes two times, once after the vehicle has driven 200 m and a second time after the vehicle has driven 500 m.

```

11:   ImportResFile [GetLastResultFName] {Screenshot_time} Results
12:   set event_old 0
13:   for {set i 1} {$i<[llength $Results(Screenshot_time)]} {incr i} {
14:       set event [lindex $Results(Screenshot_time) $i]
15:       if {$event>$event_old} {
16:           Log "Screenshot at $event seconds"
17:           Movie export window "SimOutput/Screenshots/CountryRoad $event.jpg" 0
18:               -start $event -end $event
19:           set event_old $event
20:       }

```

To run the script with CarMaker you have to download the file "4-007\_IPGMovie\_Images.zip", extract it into your project folder, open the script in ScriptControl and press the green Start button.

