Preparatory work

RaPId Toolbox Tutorial

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Requirements

Requirements for the workshop are:

- PC with installed Windows 7 or later
- Distribution of RaPId Toolbox
- FMI Toolbox for Matlab/Simulink
- Matlab 2012b (32-bit)
  - Trial version can be found on:
    https://www.mathworks.com/programs/trials/trial_request.html

Requirements

Requirements for the workshop are:

Matlab 2012b (32-bit) toolboxes needed:

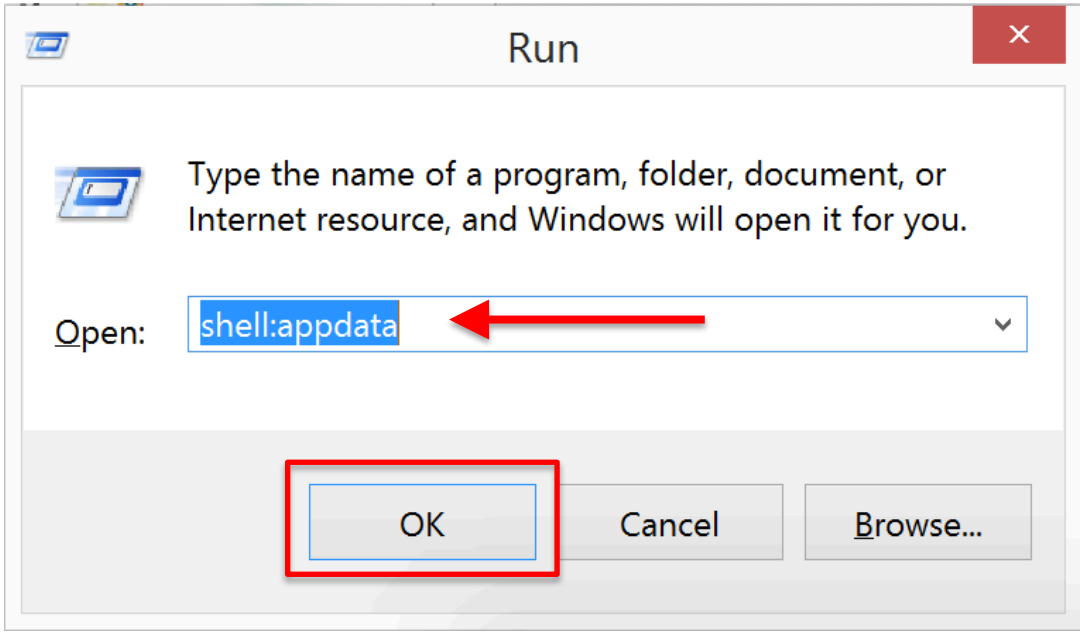
- FMI Toolbox (provided by us *see slides below*)
- Optimization Toolbox
- Global Optimization Toolbox
- Statistics Toolbox
- Simulink
- Signal Processing Toolbox
- Image Processing Toolbox
- Note!! Make sure to select the ones in red during the Matlab installation procedure.

Installation of FMI Toolbox

1. Install the FMI Toolbox by executing the file
   `FMI Toolbox-2.1-win`
2. Install the license according to the following procedure

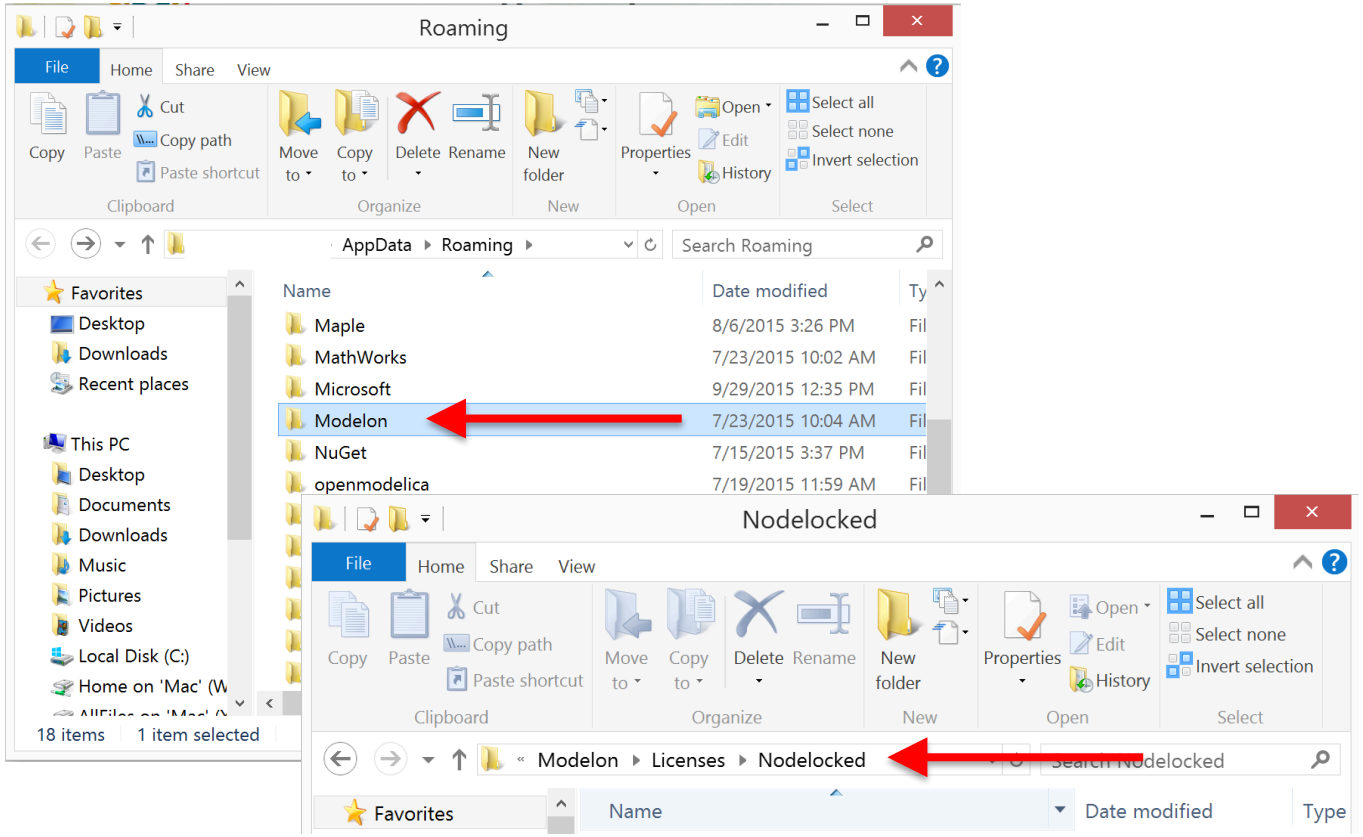
FMI Toolbox license

- Pressing the “Win key + r” opens up a run dialogue where “`shell:appdata`” should be entered
- Press “OK” to open a AppData Folder



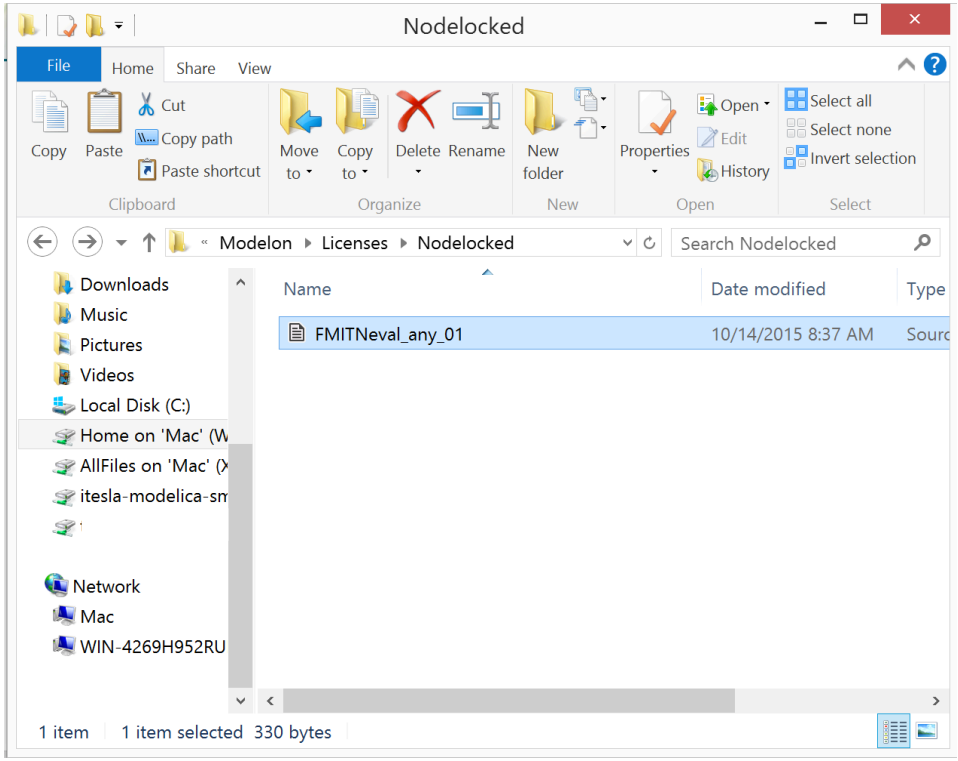
FMI Toolbox license

- Directory structure should be created as follows – `Modelon\Licenses\Nodelocked`



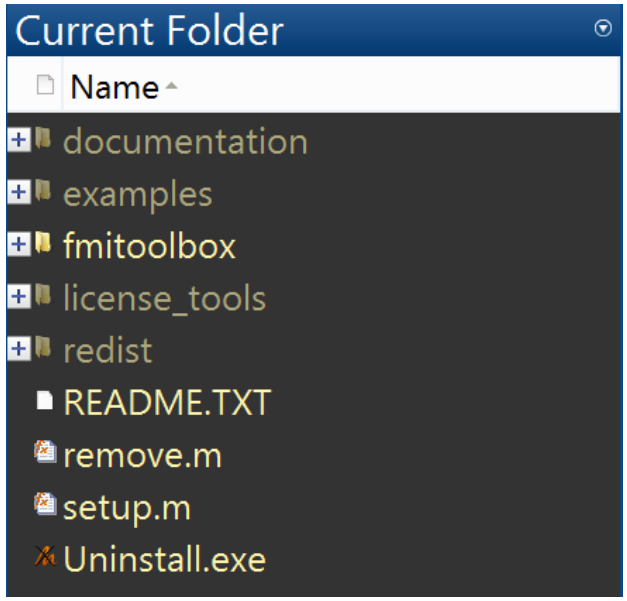
FMI Toolbox license

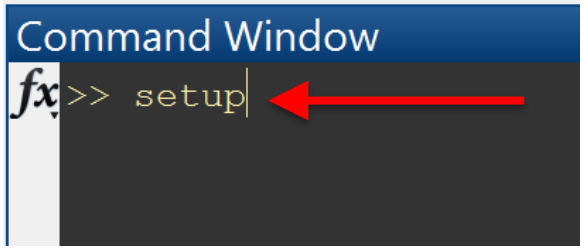
- On the bottom of the created structure, place the provided license file `FMITNeval_any_01.lic`



Finishing FMI Toolbox installation

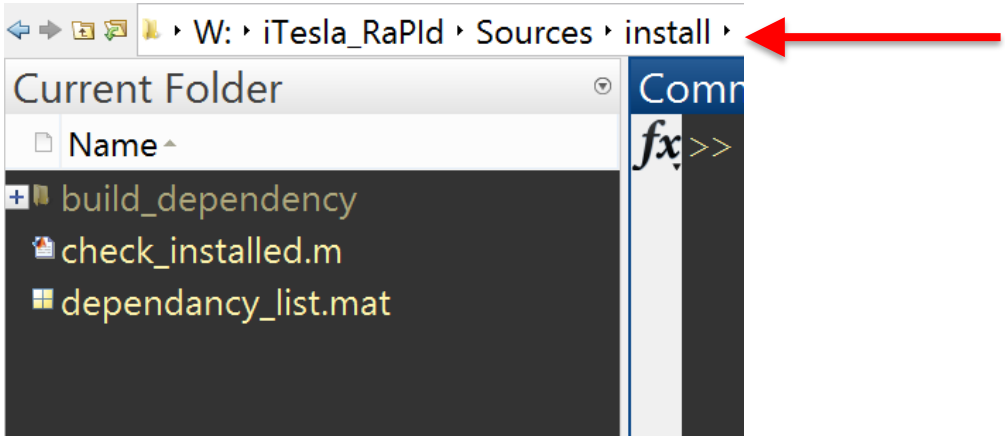
- Start Matlab and set the working directory to `C:\Program Files\Modelon\FMI Toolbox 2.1\` and execute the function `setup`





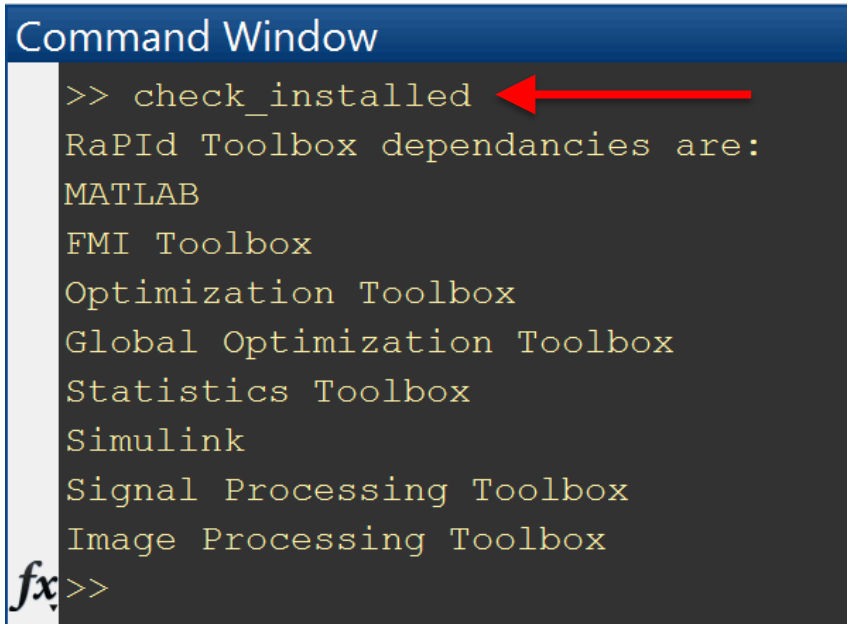
Matlab check-up

- Set the working directory to the `~\iTesla_RaPId\Sources\Install`



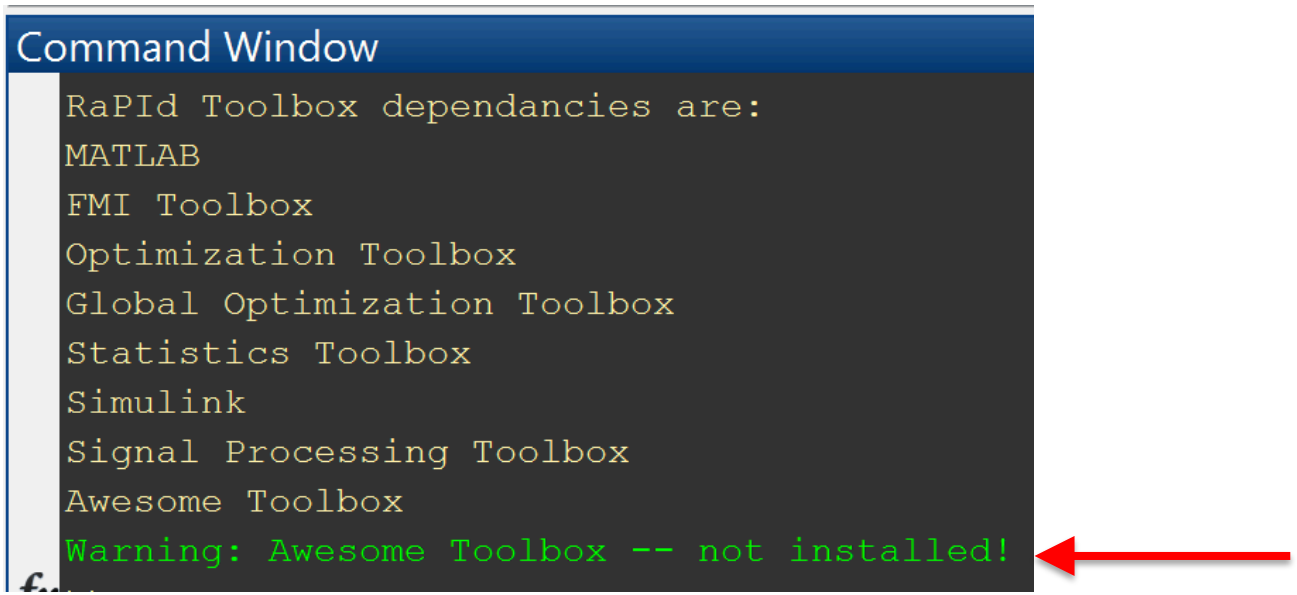
Matlab check-up

- Execute the `check_installed` function to check if all of the necessary toolboxes are installed



Matlab check-up

- If any of them are missing, warning will be displayed
- Note!! In order for RaPId to work properly, all of the listed toolboxes should be installed.



Matlab check-up

- To set up the RaPId toolbox, run the function `setup_rapid` (in folder \iTesla_RaPId\Sources), upon which the GUI should be shown
- Now, you are ready to go!