openPASS
- setup development environment -
- create simulation application -

I. System requirements

- Windows 7x64
- Administrator privileges
- Internet connection

II. Setup Qt

1. Install Qt 5.6.2 with MinGW 4.9.2 32bit from:
   https://www.qt.io/download/
   (during the installation process MinGW 4.9.2 needs to be chosen as an additional component for installation)
2. Set environment variables (for Windows):
   a. Go to
   "Control Panel\System"
   b. Navigate to
   "Advanced system settings > Advanced > Environment Variables > System variables"
   c. Edit the variable "Path" and add at the end:
   C:\Qt\Qt5.6.2\Tools\mingw492_32\bin\;c:\Qt\Qt5.6.2\5.6\mingw49_32\bin\;

III. Setup source code

1. Extract the source code to "c:\OpenPASS\Source"
   (path must be short to avoid compilation and execution issues)
2. Open "c:\OpenPASS\Source\Global.pri" and define binary output folders
   (DIR_DEBUG and DIR_RELEASE)
3. Delete all "*.pro.user" files, if any found
4. Start Qt Creator
5. Open "OpenPass_PCM_UseCase.pro" (when opening the first time you will have to "Configure" the project)
6. On the left navigate to "Projects > Build & Run > Build Settings > General" and toggle on "Shadow build"
7. (Re-)Build the project "OpenPass_PCM_UseCase"
   (executables, dynamic libraries and resources will be created and placed in the folder defined in step 2)

IV. Run simulation

1. Execute “openPASS.exe”
2. (Re-)Activate the tab “**PCM-Simulation**”
    a. Select a PCM database file obtained from GIDAS
    b. Define system configurations (multiple systems per agent must be separated by a semicolon)
    c. Define output directory (relative paths are allowed)
    d. Select PCM cases to be simulated
    e. Start simulation
3. Simulation results are written to comma-separated files *.csv and (additionally) openSCENARIO format *.xosc
4. Activate the tab “**PCM-Evaluation**”
    a. Select the folder, you defined in 2.c
    b. Highlight the PCM cases, you want to be presented (multiple selection with Ctrl and Shift is possible)
5. Activate the tab “**System**”
    a. Drag and drop system components in the system space
    b. Modify parameters
    c. Connect inputs and outputs
    d. Save your system
    e. Select your system in the tab “PCM-Simulation”
    f. Follow the steps 2–4