Informatik	Chair of Computer Engineering **Automotive Software Engineering Practical** Prof. Dr. Wolfram Hardt, Dipl.-Inf. Norbert Englisch	TECHNISCHE UNIVERSITÄT CHEMNITZ
SS 2015	Virtual Cockpit Introduction for usage of the tool Virtual Cockpit	19.05.2015

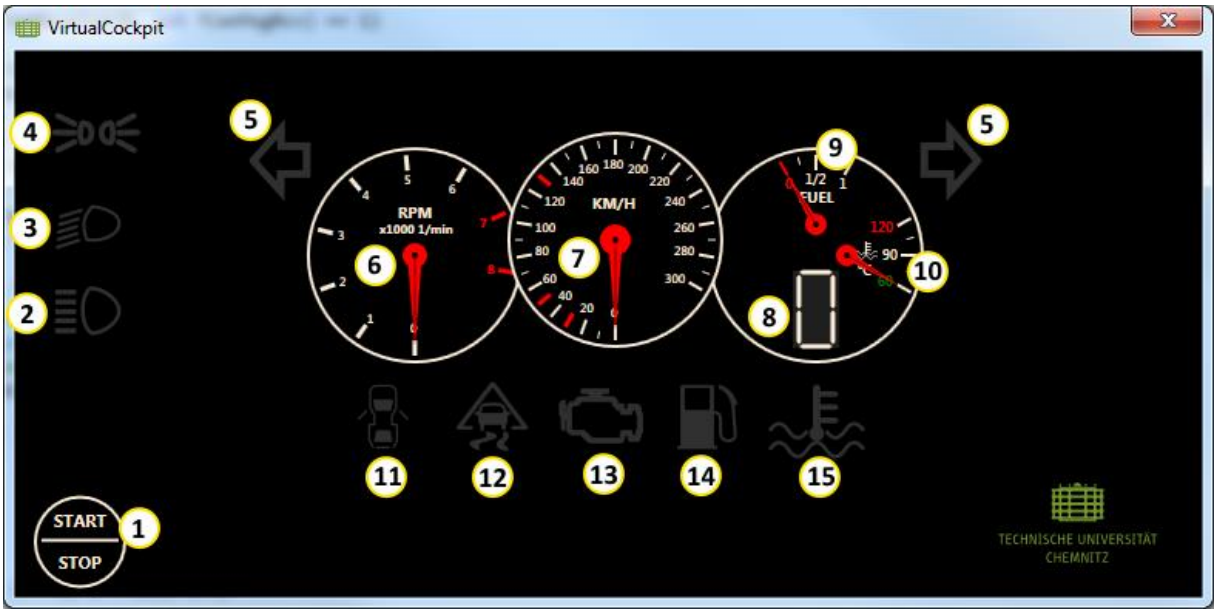
1. Introduction

The program "Virtual Cockpit" is used to visualize data from the CAN bus. It contains several visual elements which can also be found in modern day cars.

2. Startup

To start the program, open the Windows Explorer and Navigate to *"C:\Program Files (x86)\VirtualCockpit"*. Double click on *"VirtualCockpit.exe"*. Afterwards make sure that your PC is connected to the TinyCAN Can-Interface.

3. Explanation of Interface Elements



In the screenshot above you will find the following elements:

1. Start / Stop Button

When this button is clicked, the program tries to connect to the TinyCAN CAN-Interface. If it is already connected, it disconnects from the TinyCAN CAN-Interface, so the *"Can-View"* program can be used without closing the *"Virtual Cockpit"*. When the program connects to the TinyCAN, it also sends one message with ID 1 to the CAN-bus.

After the startup of the program it is disconnected from the TinyCAN CAN-Interface.

The TinyCAN CAN-Interface indicates if a program is connected to it. If there is an active connection, the green led will blink. If there is no active connection, the green led will not blink bust constantly glow.

2. High Beam Indicator

- indicates if the high beam light is on

3. Low Beam Indicator
   - indicates if the low beam light is activated

4. Parking Light Indicator
   - indicates if the parking light is activated

5. Left / Right / Hazard Indicator
   - indicates if left, right or hazard indicator is activated
   - hazard light: both indicators are blinking

6. RPM Indicator
   - indicates the value of the RPM signal
   - Range: 0-8000 1/min

7. Speed Indicator
   - Indicates the value of the speed signal.
   - Range: 0-300 km/h

8. Gear Indicator
   - indicates the currents gear
   - reverse gear, 1^{st} to 6^{th} gear

9. Fuel Level Indicator
   - indicates the current fuel level

10. Temperature Indicator
    - indicates the current engine cooling water temperature

11. Door Status Indicator
    - indicates if the doors are closed or opened
    - front left / right door, trunk door

12. ESP / Traction Control Indicator
    - indicates the status of the ESP / Traction Control
    - constantly on: ESP/TC off - malfunction
    - blinking: ESP/TC active
    - off: ESP/TC passive

13. Engine Warning Indicator
    - indicates engine status
    - constantly on: warning
    - blinking: error / malfunction

14. Fuel Warning Indicator
    - indicates very low fuel level

15. Temperature Warning Indicator
    - indicates very high engine temperature