Ford (China) Motor Company

SDL QT HMI Change Instructions

Version 1.0.0

Table of Contents

1. Overview

This article describes the changes will be made to the QT HMI part of the SDL HMI_SDK_LIB(https://github.com/APCVSRepo/HMI_SDK_LIB) project, for the current new design of the UI.
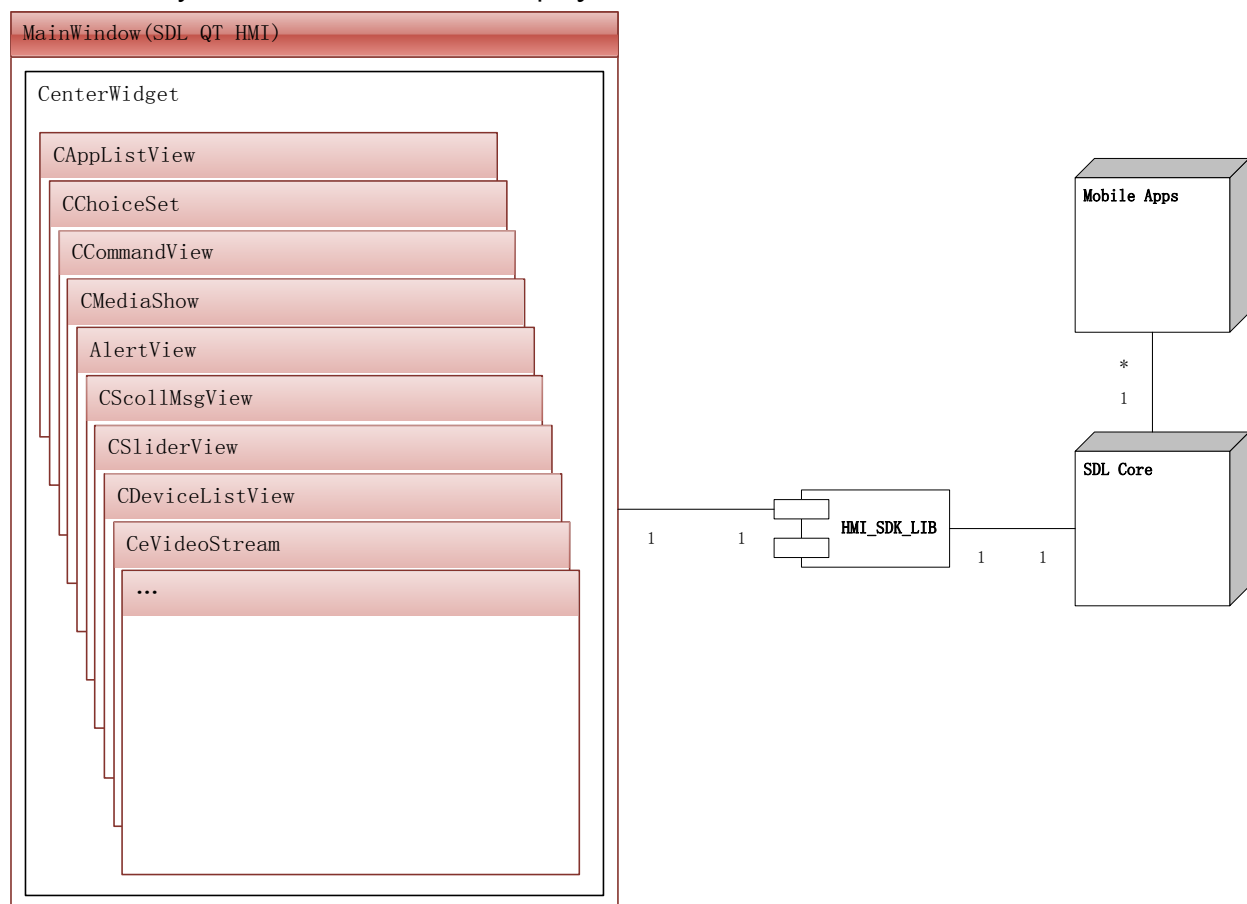
2. Change Instructions

2.1 Create New QT HMI Project

We will Create a new QT_HMI project named "SDL_QT_HMI" under the directory "HMI_SDK_LIB/SDL_QT_HMI/" which is based on the original QT_HMI project "Gen3UI" under the directory "HMI_SDK_LIB/ testSDK/".

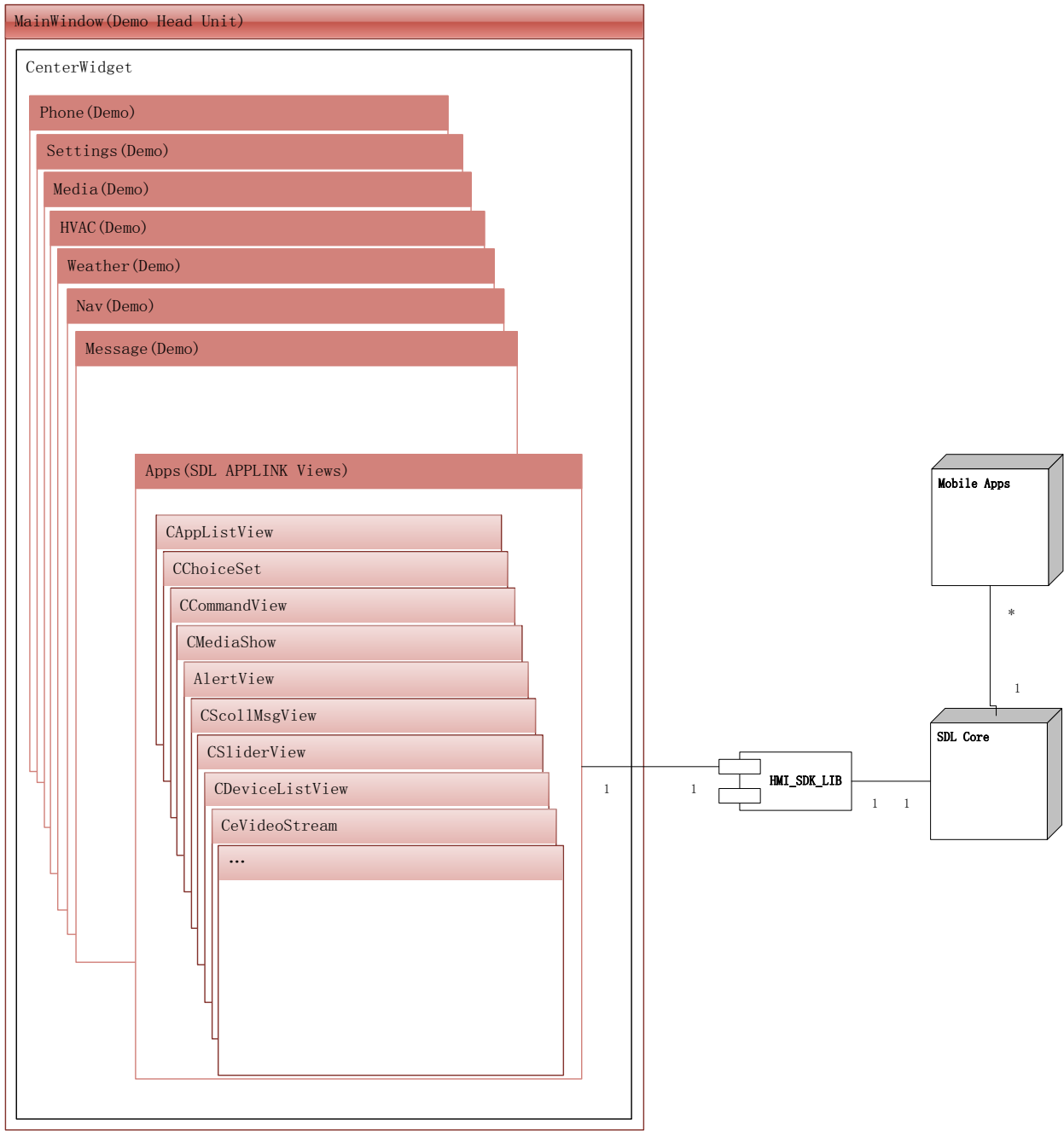## 2.2 The Change of UI Layer Structure

The UI Layer Structure of the Gen3UI project is as follows:

This structure is not very convenient for adding new module views for demonstration, so we

will modify the UI Layer Structure in project SDL_QT_HMI. The modified structure is as follows:

We extract the APPLINK interface, put it into a separate Widget, and maintain a side-by-side relationship with other demo apps (such as Phone, Settings, Media, etc.) of the Head Unit, just like a real one.

The projects can be divided into the following structures according to modules:
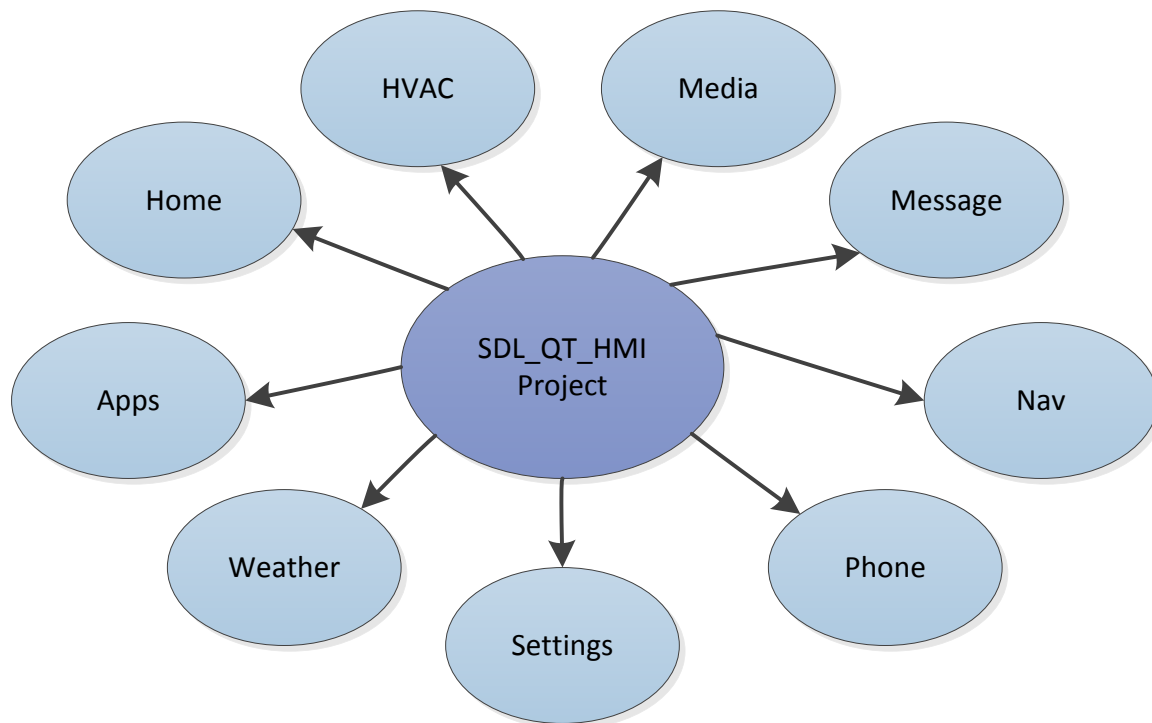
Apps is the main part of SDL_QT_HMI project, known as the APPLINK. It is used to demonstrate the interaction between vehicle HMI and SDL Core through HMI_SDK_LIB. The logic of this project and Gen3UI's HMI_SDK_LIB remains basically unchanged.

Home integrates simple screen management functions, including quick launch bar, status bar, function module entry and icon management, like a Head Unit System.

Other function modules (**Phone, Settings, Media, HVAC, Weather, Message, Nav**) are used for simple simulation of the vehicle modules, and some of them can be dynamically changed to a shortcut of the app after a certain type of mobile phone app is connected through SDL.

2.3 The Changed UI Layer UML
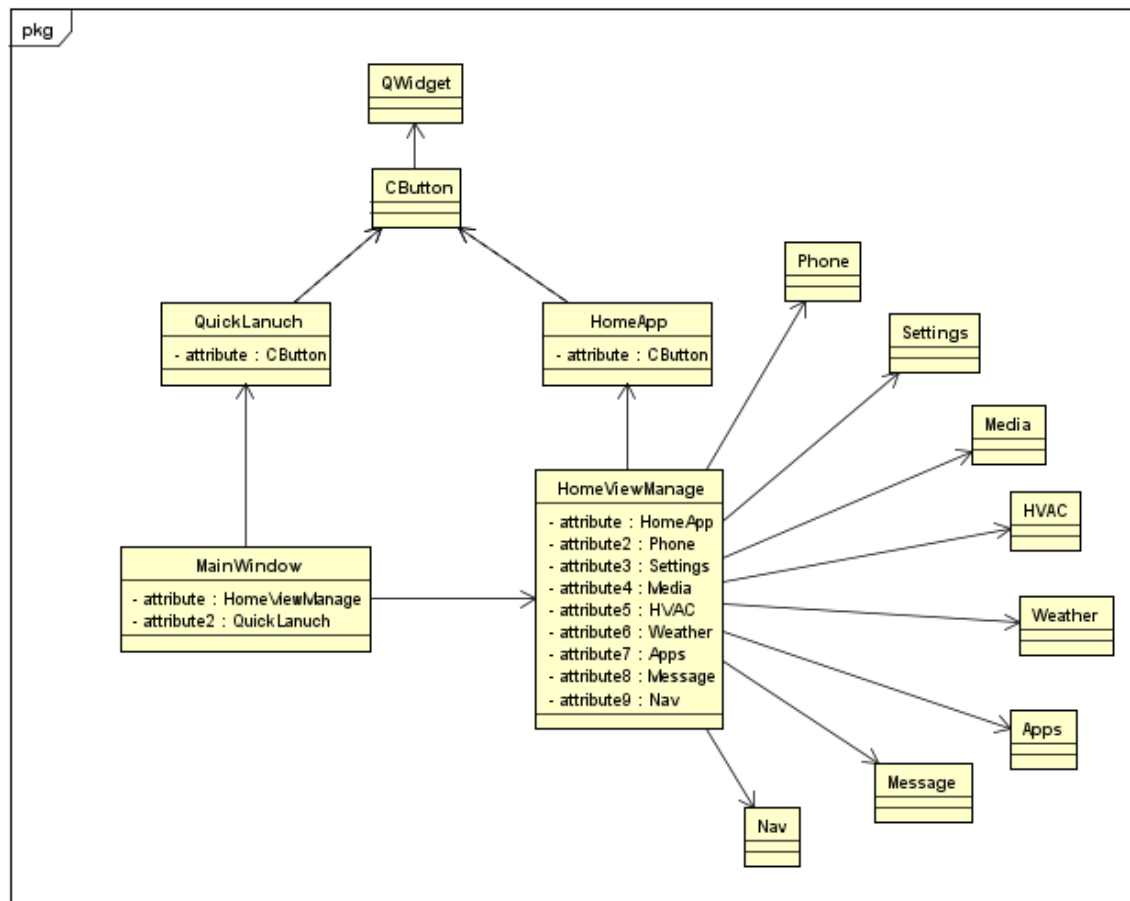
The UML structure is shown in the figure, which mainly contains the following contents:

✧ **CButton**: Custom Button class, including Normal and Pushed 2 states, text, picture display and partial animation effects.

✧ **QuickLanuch**: Quick launch bar class, provides shortcuts, including click, press, launch bar collapse and expand functions

✧ **HomeApp**: Manage each app entry button class, including app soft key click, press, move and other functions.

✧ **HomeViewManage**: As the HomeApp parent class, the window displayed as the HomeApp Screen. And manage the switching of applications such as **Phone, Settings, Media , HVAC , Weather , Apps , Message , Nav**.

✧ **MainWindow**: Display window as QuickLanuch and HomeViewManage.

✧ **Other**: The functional module related classes contains **Phone, Settings, Media , HVAC , Weather , Apps , Message , Nav .**

2.4 The Change of HMI_SDK

For now, there is no change will be made with the hmi_sdk.

3. Revision History

Date	Version	Description	Author
Apr/17/2018	1.0.0	Create	zenghuan