Programming with Qt for Automotive Suite

Based on Qt 5.9, created on February 28, 2018

KDAB

The Qt, OpenGL and C++ Experts
Fundamentals of Qt for Automotive Suite

- The Story of Qt
- The Qt Automotive Suite
- "Hello World" with QtQuick
- Introducing Qt Creator
- Practical Tips for Developers

Qt for Automotive Devices

- Qt for Device Creation
  - Setup Qt for Device Creation
  - Use Boot 2 Qt with QtCreator
  - Customize your Linux image
- Writing a Wayland Compositor
- Qt Virtual Keyboard module
  - Introduction
  - Building Qt Virtual Keyboard module
  - How to use Qt Virtual Keyboard
  - Add new keyboard (language) layout
  - Custom keyboard styles
- QtIvi - Integrating Vehicle Features
  - QtIvi - Introduction
  - QtIvi Architecture
  - QtIvi Vehicle Functions
  - Extending QtIvi
  - QtIvi Related Tooling
- Qt Serial Bus
  - Qt CAN Bus (Controller Area Network)

Application Architecture & Development

- Multi-page applications in QtQuick
  - Simple multi-page application
  - Multi-page application controlled from C++
  - Multi-page application controlled from QML
  - Driving multi-page applications via state-machines
  - Animating page transitions
  - Popup content
- Qt SCXML
  - Introduction to SCXML
  - Qt Build Time Support
  - Dynamic Loading at Runtime
  - SCXML Editor
- Qt Application Manager
  - Application Manager
  - Writing Applications
  - Installing Applications
  - Interacting with the Application Manager

Integrating 2D and 3D Content

- Integrating OpenGL and Qt Quick 2
  - Qt Quick 2 Rendering
  - OpenGL under or over Qt Quick 2
  - Separating Renderers
  - Qt Quick 2 as the Slave
- Custom 2D/3D Qt Quick Items
### QML Fundamentals
- Introduction to QtQuick
- QtQuick and C++

### Additional QML Topics
- WebEngine
- Animations
- States and Transitions
- Declarative State Machines
- Painting and Effects
- JavaScript in QML
- Drag and Drop

### Mixed C++/QML Topics
- Internationalization
- Unit Testing
- Plug-ins
- Platform, device, locale or resolution specific files

### C++ Topics
- The Event System
- Customized Drawing
- Resources
- Qt Debugging Aids
- GammaRay
- QPA

### Model/View
- Concepts
- Models
- ObjectModel