



# Qt 5.7 License changes The Qt Automotive Suite The Qt Company in Japan

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Place for date

# Brief History of Qt

- › 1991 Qt Development Starts
- › 1994 Trolltech founded
- › 1995 Publicly released Qt 0.90 for X11/Linux under the FreeQt license
- › 1998 KDE Free Qt Foundation founded – License change to GPLv2
- › 2008 Nokia Acquires Trolltech – LGPLv2 introduced
- › 2011 Commercial license sold to Digia
- › 2012 All Qt assets transferred to Digia
- › 2014 New name – The Qt Company
- › 2016 The Qt Company separates from Digia – Qt 5.7 becomes LGPLv3

# Qt for Application Development, Open Source

## Add-Ons

Canvas 3D	Charts	Qt Quick 2D renderer	Data Visualization	Purchasing
Active Qt	Graphical Effects	NFC	Location	Qt 3D
X11, Windows, Mac Extras	Print Support	Sensors	Concurrent	WebEngine
Android Extras	Image Formats	Positioning	Serial Port	WebSockets
XML & XML Patterns	SVG	Bluetooth	D-Bus	WebChannel

## Essentials

		Multimedia Widgets	Quick Dialogs	Quick Controls
GUI	Widgets	Multimedia	Quick Layouts	Quick
Core	Network	SQL	Test	QML

## Desktop & mobile platforms

Windows	Mac	Linux Desktop	Android	iOS	WinRT
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## Development Tools

Qt Creator Cross-platform IDE	CPU usage analyzer
Qt Designer GUI Designer	GPU Profiler
Qt Linguist I18N Toolset	Clang static analyzer
Qt Assistant Documentation Tool	Qt Quick Compiler*
moc, uic, rcc Build Tools	Qt Quick Profiler
qmake Cross-platform Build Tool	Autotest integration

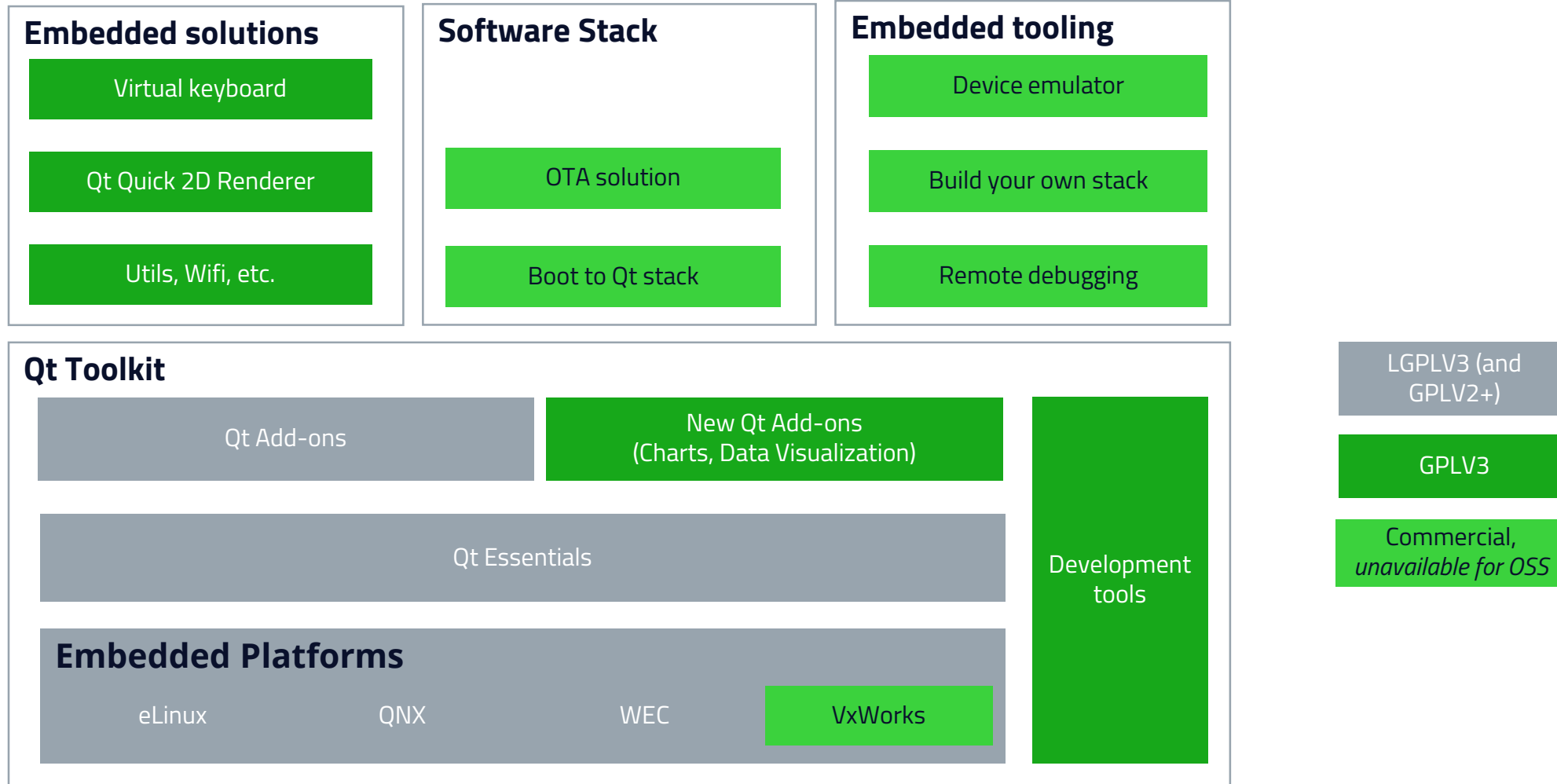
LGPLV2.1 (and GPLV3)

LGPLV3 (and GPLV2+)

GPLV3

Commercial, unavailable for OSS

# Qt for Device Creation, Open Source



Feedback to these changes have been very  
positive by the open source community

# Motivation for License Change

- › Investment in Qt severely hampered by many companies using LGPL
- › Service model doesn't work for us
  - › Creates the wrong incentives
    - › We pride ourselves in making software that doesn't require an army of consultants
  - › No incentive to create great documentation
  - › Qt has always been a product company enabling and partnering with service companies
    - › We'd now be competing with them.
- › This change enables us to unify the product offering
  - › Most previously commercial only offerings now also Open Source
- › Fairness

# KDE Free Qt Agreement

- 4.3 The Qt Free Edition as a whole shall be licensed under the GPLv3 and/or a license compatible with the GPLv3.
- 4.4 The Qt Essentials must be available under the GPLv2+ and, in addition, under the LGPLv3 to be considered available under the Qt Free Edition Licenses for the purposes of this section 4.
- 4.5 The Qt Add-Ons must be available under the GPLv3+ to be considered available under the Qt Free Edition Licenses for the purposes of this section 4.
- 4.6 Qt Free Edition Parts that are a part of Qt Add-Ons and are available under the GPLv2, the GPLv2+, the GPLv3+, LGPLv2.1 or the LGPLv3 at the signing of this agreement must continue to be available under these licenses also for future versions of said Qt Free Edition Parts unless otherwise agreed to by the Board with a simple majority. However, The Qt Company may remove the LGPLv2.1 as a license from such a Qt Free Edition Part provided that the Part continues to be available under the LGPLv3 and the GPLv2+.
- 4.7 The Qt Tools/Applications must be available under the GPLv3 With Exceptions to be considered available under the Qt Free Edition Licenses for the purposes of this section 4.

# Some License Concerns we hear - Clarifications

- › Can always go from a LGPLv3 license to a commercial license
- › Linking to an LGPLv3 library does not taint the application code; it does not convert it to LGPLv3
  - › This is no different than for the LGPLv2.1 case.
- › However, code added to an LGPLv3 library does becomes LGPLv3
- › Combining LGPLv2.1, LGPLv3, as well as many other open source licensed components into the same application / system is possible for example using separate shared libraries



# License Concerns - Patent clause

- › Patent clause only applies to code added to the library
- › Doesn't affect the other parts
- › But if a 3<sup>rd</sup> party distributes an LGPL library then it cannot enforce any patent claims that the library may infringe



# Questions?



# The Qt Automotive Suite



# Three companies - Identified a need in the industry



**The Qt  
Company**



**PELAGICORE**  
Experience **Change**

# Qt in the car industry - Current Status

- › Qt highly relevant
  - › Qt Quick declarative UI, Internationalization, massive class libraries
- › Millions of cars on the road using Qt
- › 20+ OEM project supported by The Qt Company, Pelagicore, KDAB



Mercedes-Benz



# Things Going Well but...

- › OEMs, Tier-1s developing proprietary Qt based automotive APIs, application frameworks, tools
- › Duplication of effort
- › Harder to reuse across projects

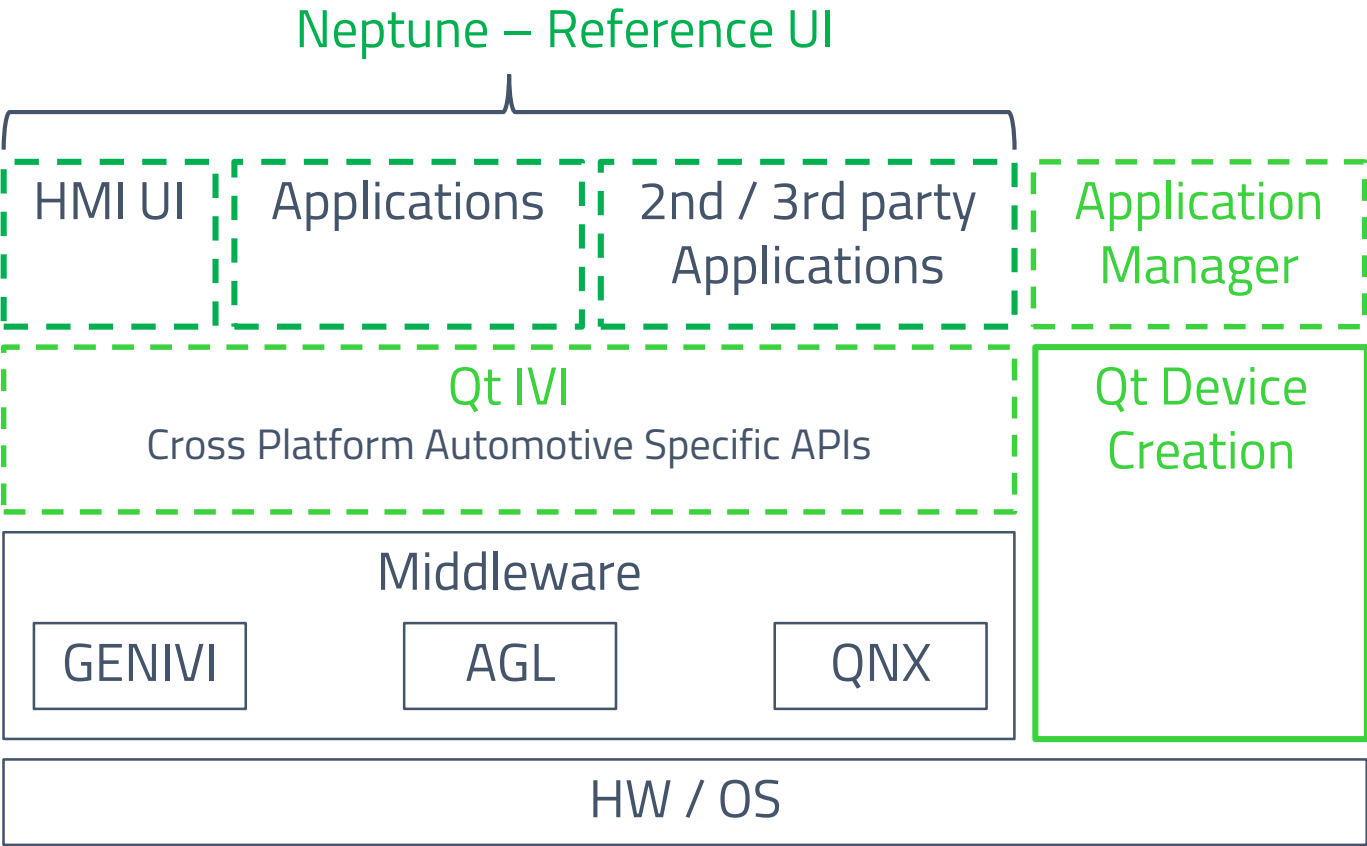
# 3 Focus Areas for The Qt Automotive Suite

Standardize Qt  
Automotive APIs

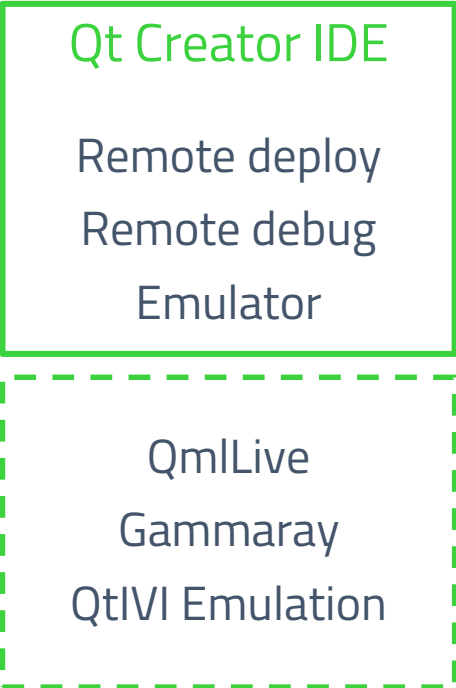
Productivity  
Tooling

App Manager &  
SDK Creation

# The Qt Automotive Suite



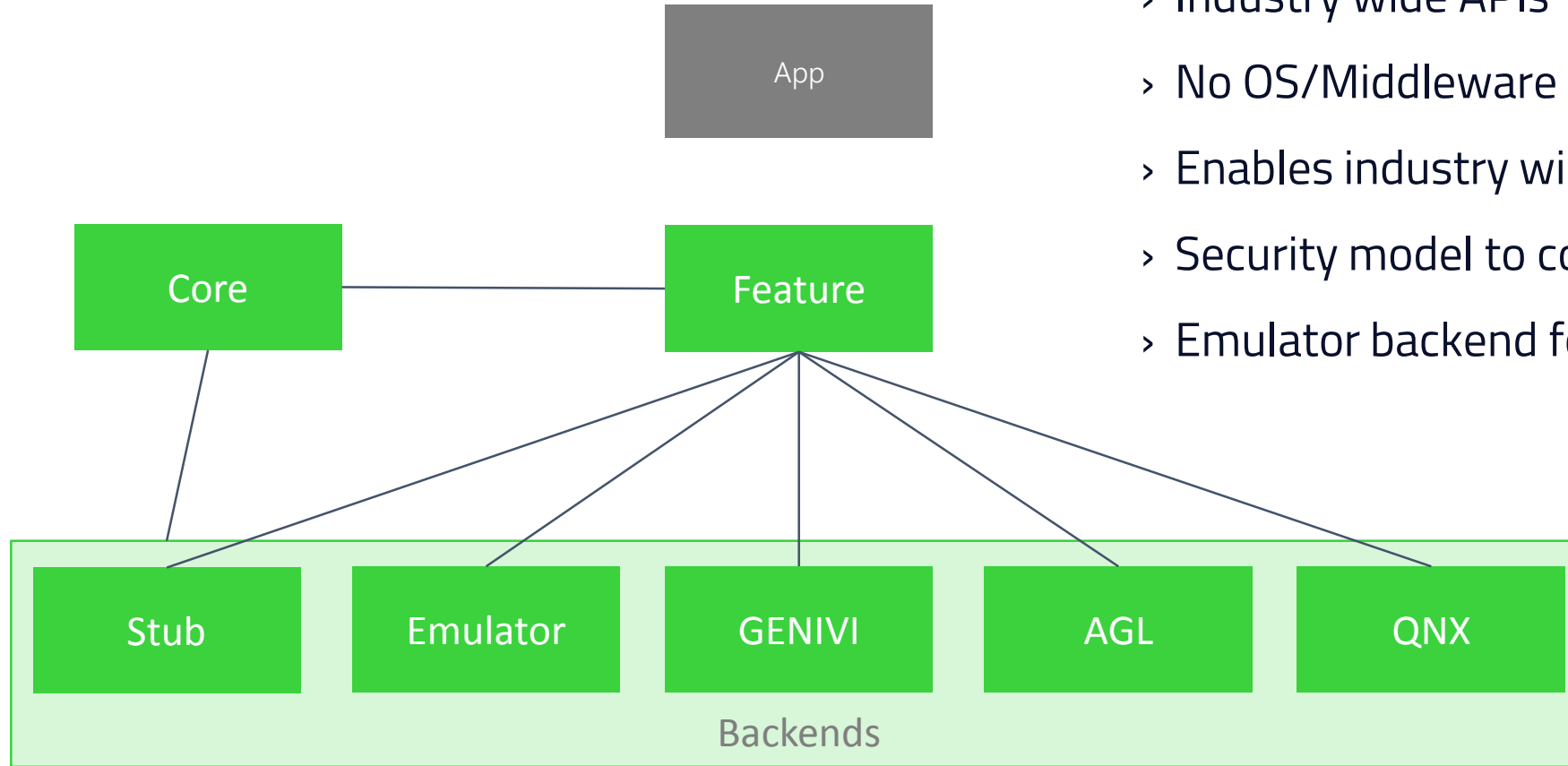
## Tooling



Qt Automotive Suite adds the items dashed in green

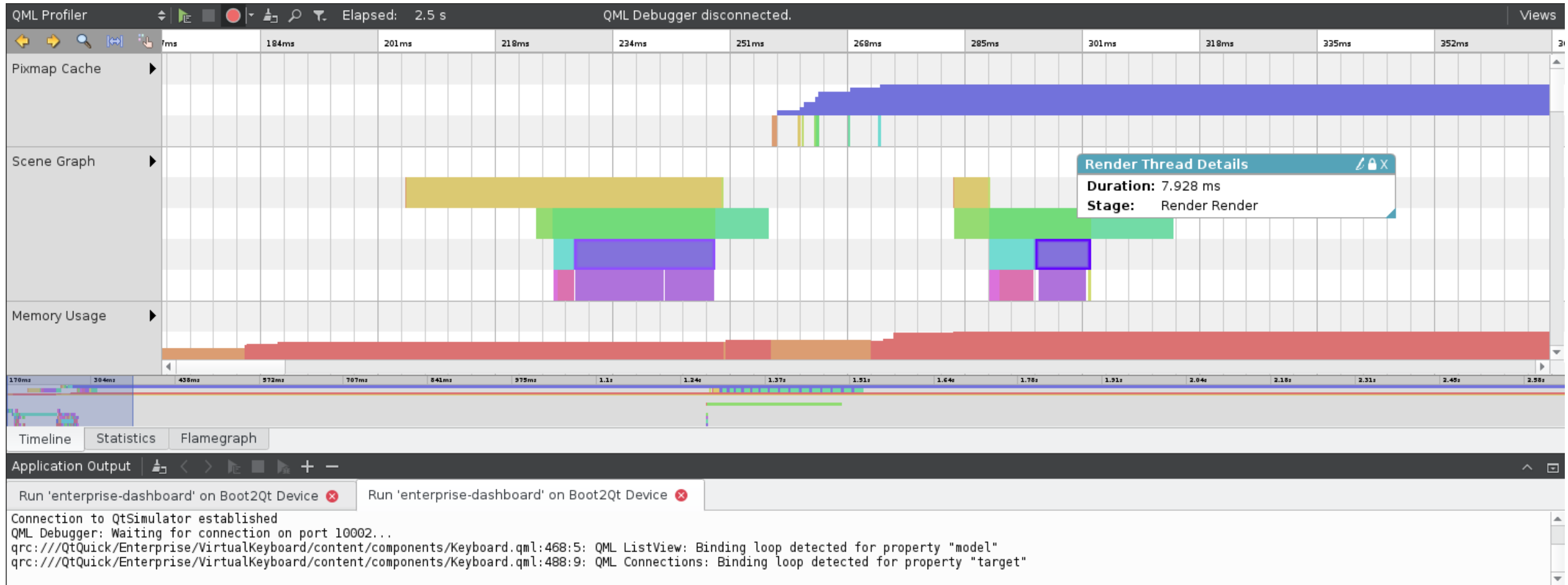


# Qt IVI - Extensible Cross Platform APIs



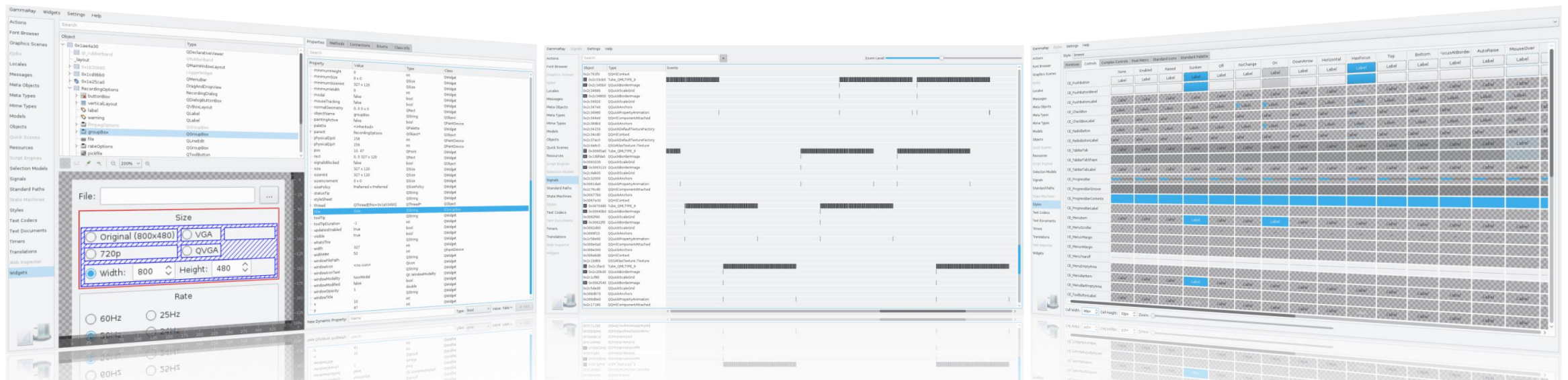
- › Industry wide APIs
- › No OS/Middleware platform lock in
- › Enables industry wide 3<sup>rd</sup> party app ecosystem
- › Security model to control app access to APIs
- › Emulator backend for desktop simulation

# QML Profiler - Find Rendering Bottlenecks Faster



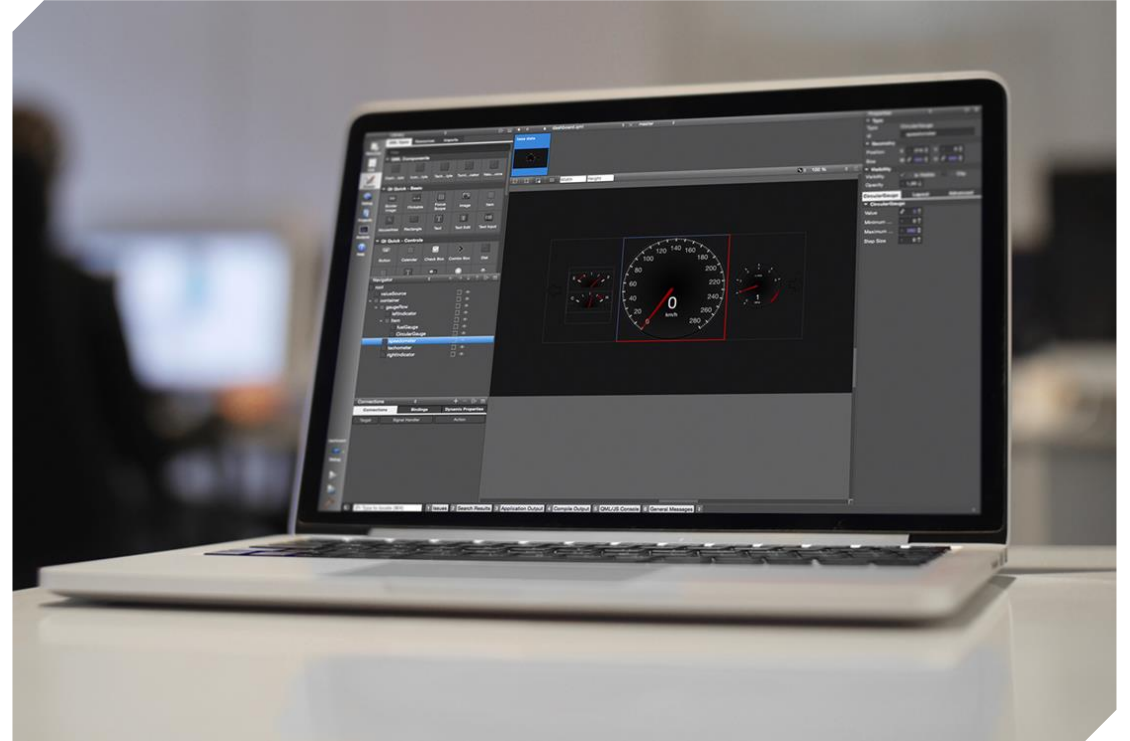
# GammaRay – Find Problems **Faster**

- › High level debugger
- › Visualize, Access and Modify properties of Qt objects at runtime
- › Over 20 Qt Objects Supported (Qt Quick, state machines, text layout, model/view, timers, etc)
- › No runtime agent



# QmlLive – Create a Better HMI by Iterating Designs Faster

- › Instantly see UI changes on a live target
- › Encourages rapid iterations
- › More iterations -> better product



# SDK Creation

- › Create a branded SDK with project UI and software assets
  - › Enable 3rd party app development and services
  - › Ensure consistent look and feel of HMIs/apps
  - › Reduce risk and save time with a single preconfigured install with all necessary tools
- 
- › Qt SDK + Program's HMI components + Program's software components => Program Branded SDK

# Developed Under Open Source Collaboration Model

- › All source code is available
- › Open bug system - full visibility of what is being fixed
- › All changes reviewed and approved in the open
- › Submit your own changes for review
- › Open mail list [automotive@qt-project.org](mailto:automotive@qt-project.org)

# What we Can offer AGL

- › IDE with debugging supported which Walt thinks is a challenge.
- › AGL compositor
- › Web Browser



# The Qt Company in Japan

› Dan Koo – Country Manager, Japan

