



Code less.
Create more.
Deploy everywhere.



The Mobility Project, Qt для мобильных устройств

QTMobility

- Цель проекта:
 - предоставить разработчику кроссплатформенные QT API, традиционно используемые в мире мобильных устройств
- Разработчики проекта:
 - подразделения Nokia + разработчики QT
 - открытое сообщество
- Целевая платформа:
 - мобильные устройства Nokia
 - настольные системы

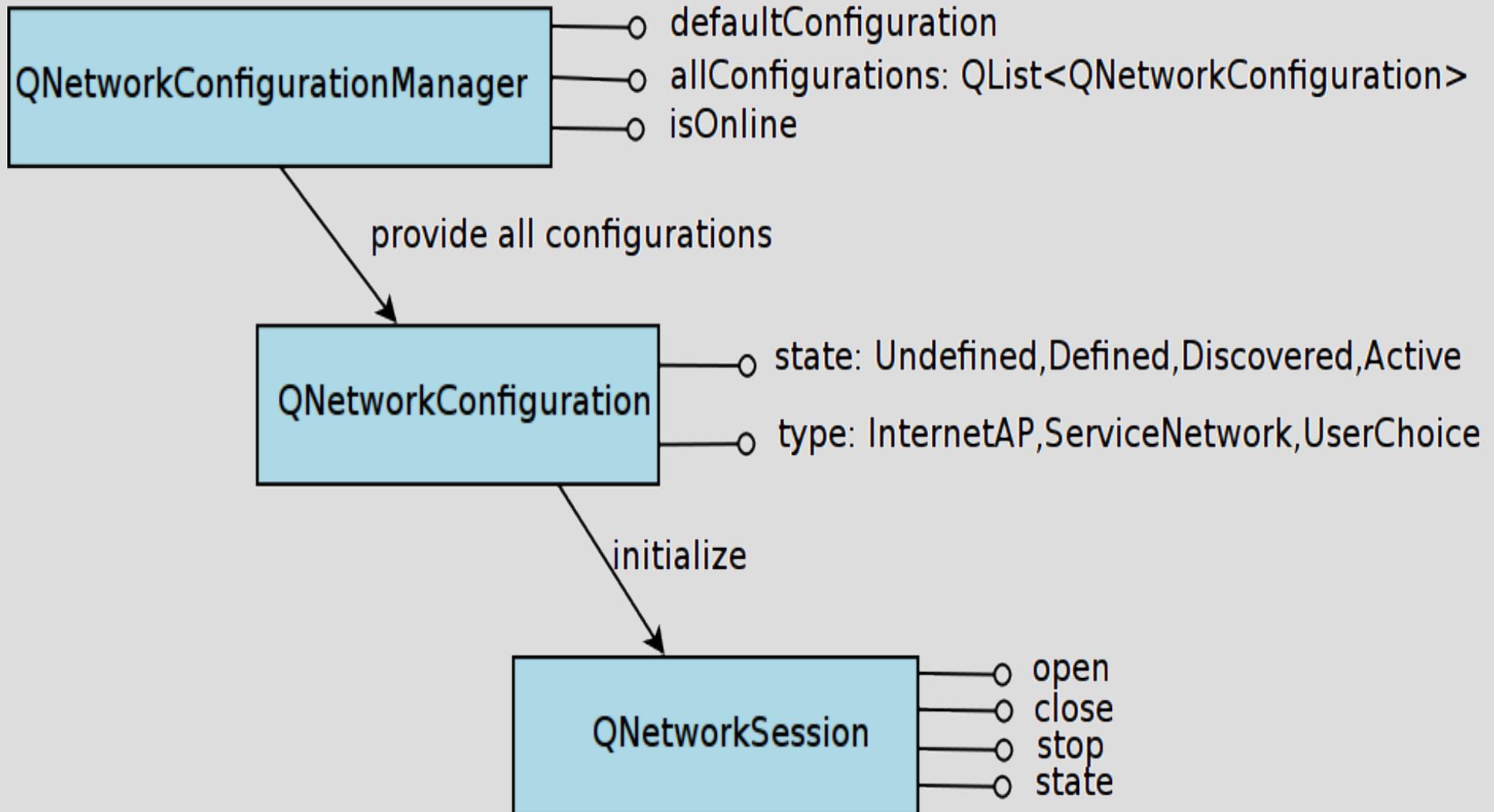
КОМПОНЕНТЫ

- Bearer Management
- Contacts
- Location
- Messaging
- Multimedia
- Publish and Subscribe
- Service Framework
- System Information
- Sensors
- Versit

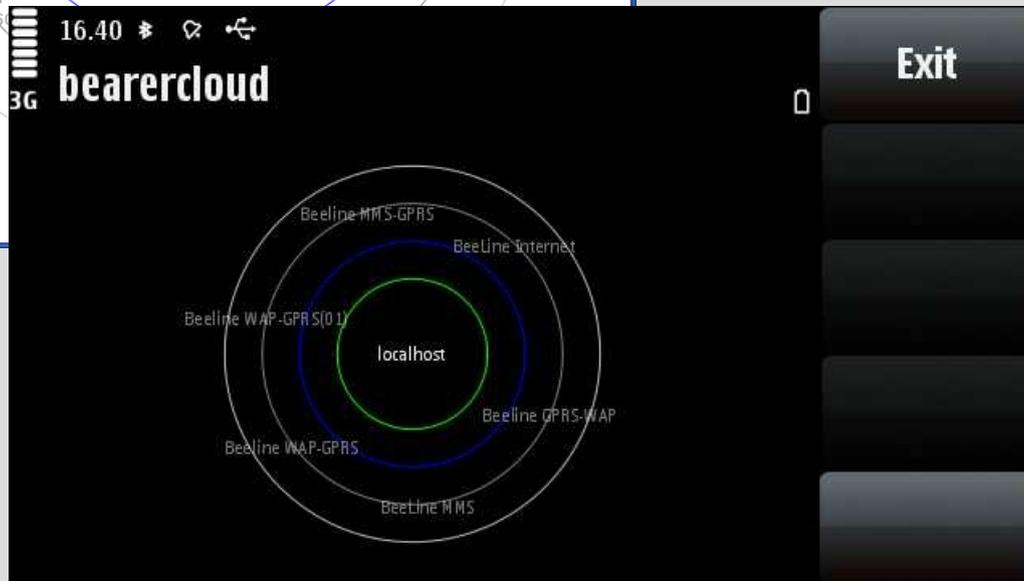
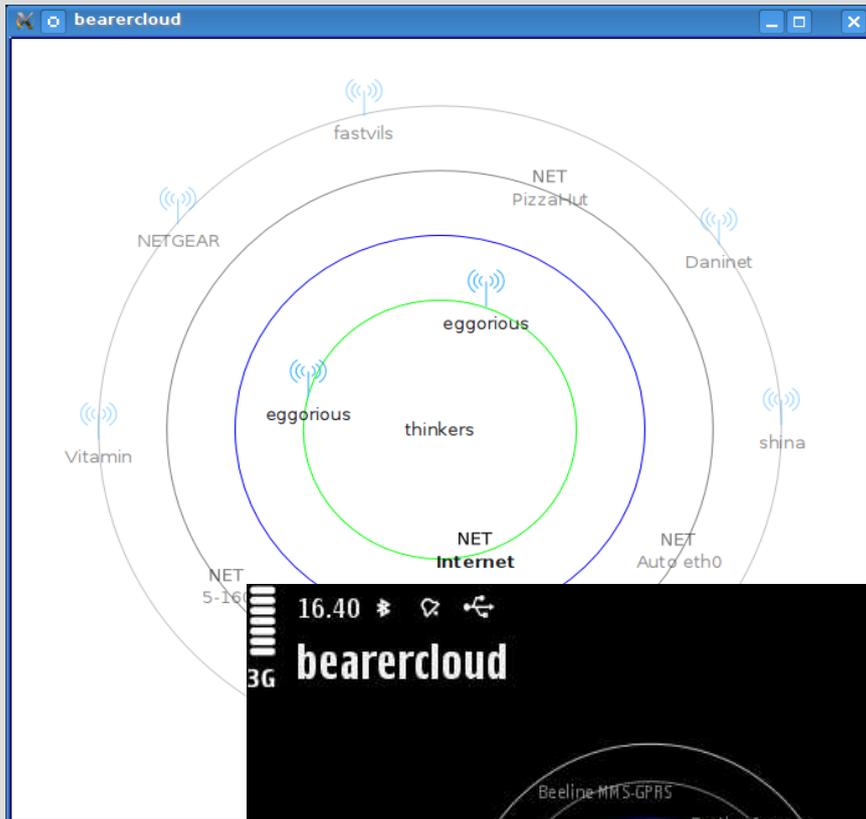
Bearer Management

- Предоставляет доступ к:
 - переключению между соединениями
 - выбору наиболее подходящего соединения
 - управлению соединениями
- Примеры приложений:
 - WiFi сканер
 - NetworkManager

Bearer Management API



Bearer Management demo



Form 16.40

3G

System State
Online State: Offline
Configurations
Name:
State:
Type: Invalid
Purpose: Unknown
Identifier:
Roaming:
Children:

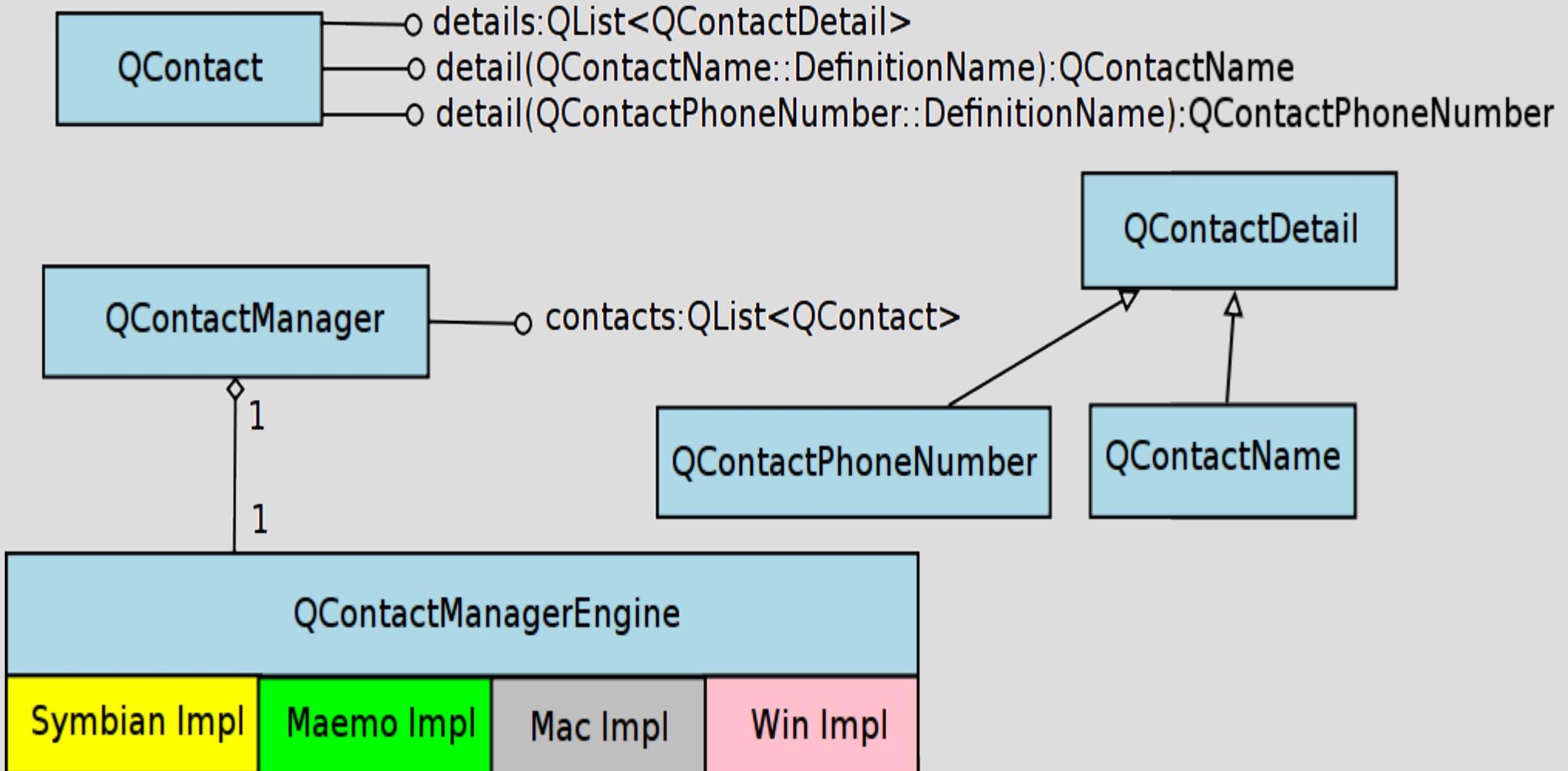
New Session
Delete Session
Scan

Exit

Contacts

- Предоставляет доступ к адресной книге, как телефона, так и сим-карты
- Возможность добавлять в книгу свои собственные поля данных
- Примеры приложений:
 - Email клиент
 - Синхронизатор контактов телефона с внешним Internet-сервисом

Contacts API



Contacts demo

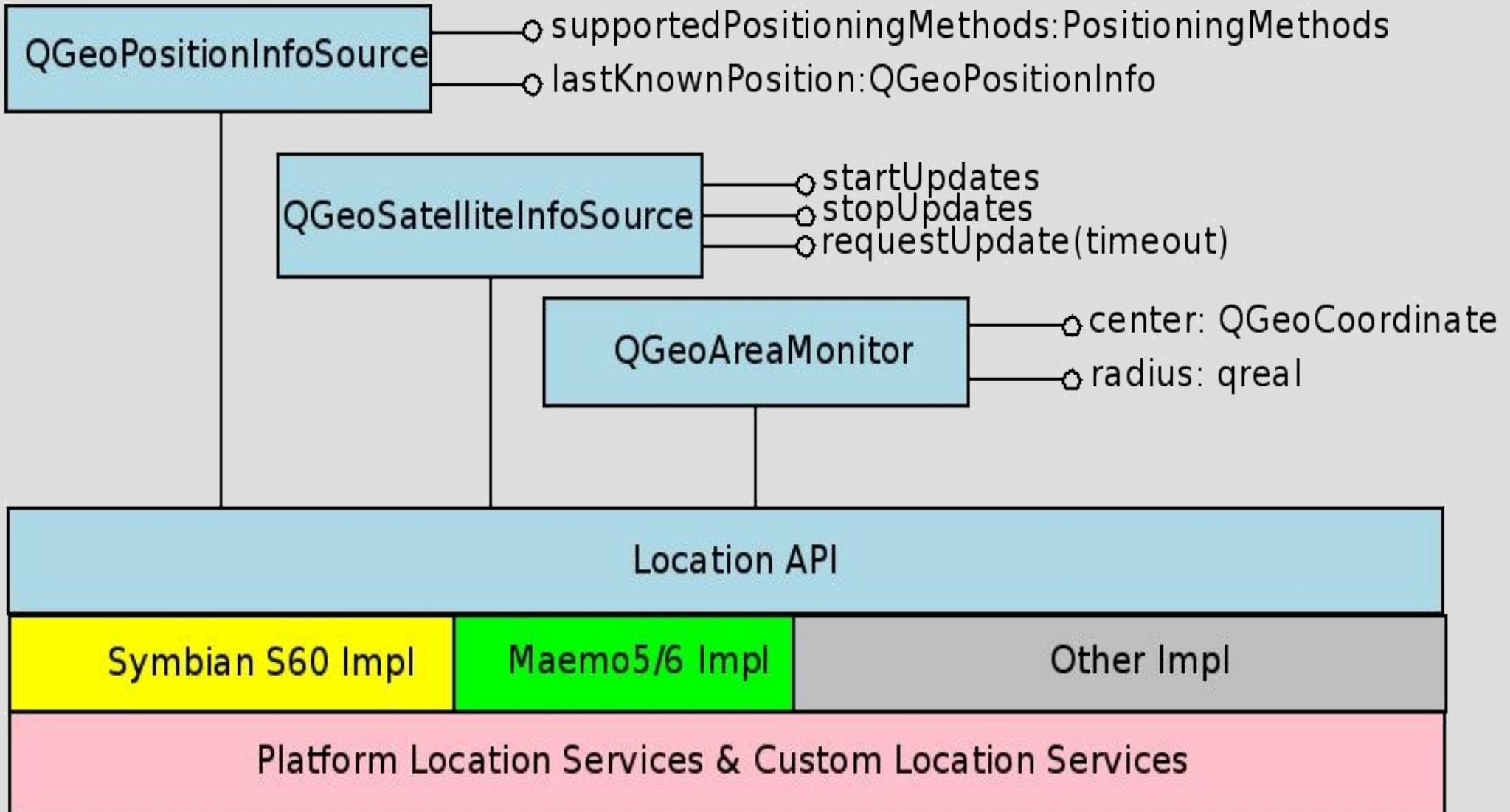
The image displays three overlapping screenshots of a mobile application titled "Sample Phone Book".

- Top-left screenshot:** Shows the main contact list. The status bar at the top indicates the time is 17:45, signal strength is 3G, and battery is full. The app title is "samplephonebook". Below the status bar, it says "Store: memory" and "Filter: Inactive". The selected contact is "Pavel Zubarev". At the bottom, there are buttons for "Add", "Edit", and "Delete".
- Bottom-left screenshot:** Shows a "NOTICE" dialog box. The name "Pavel Zubarev" is highlighted in blue. Below the name, there are fields for "Phone" (containing "911") and "Email" (containing "zps@osll.spb.ru"). A "Save" button is at the bottom.
- Right screenshot:** Shows a detailed contact form for "Freddy Gumboots". The form includes:
 - Name: Freddy Gumboots
 - Avatar: A photo of a penguin plushie.
 - Email: r.freddy.william.preston.gumboots.esquire@isp.com
 - Home Phone: (empty)
 - Work Phone: 012345
 - Mobile Phone: 123456789
 - Address: 1 Fantasy Avenue, Utopia, QLD, 4506Buttons for "Add", "Save", "Remove", "Find", "Import", "Export", and "Quit" are on the right. At the bottom, it says "Current Backend: memory" and "Contact 2 of 3 (Saved)".

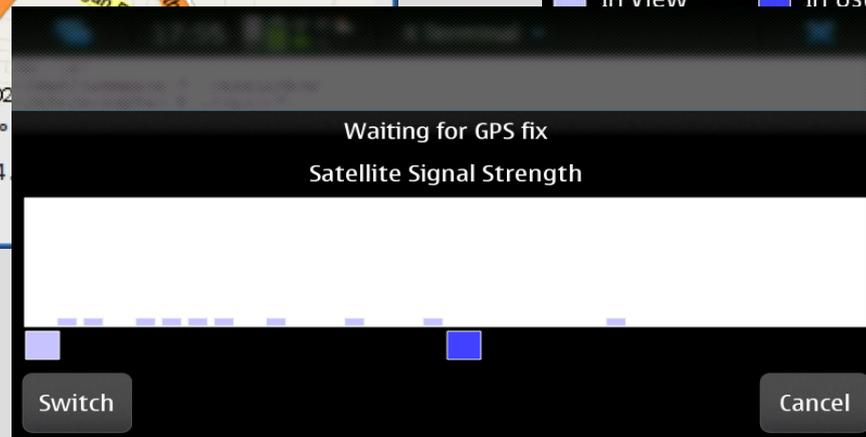
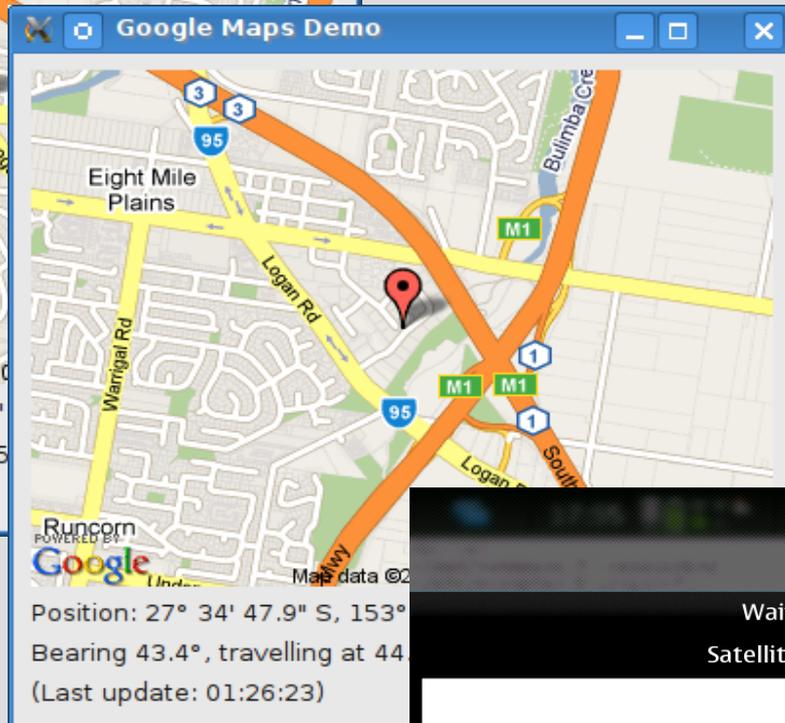
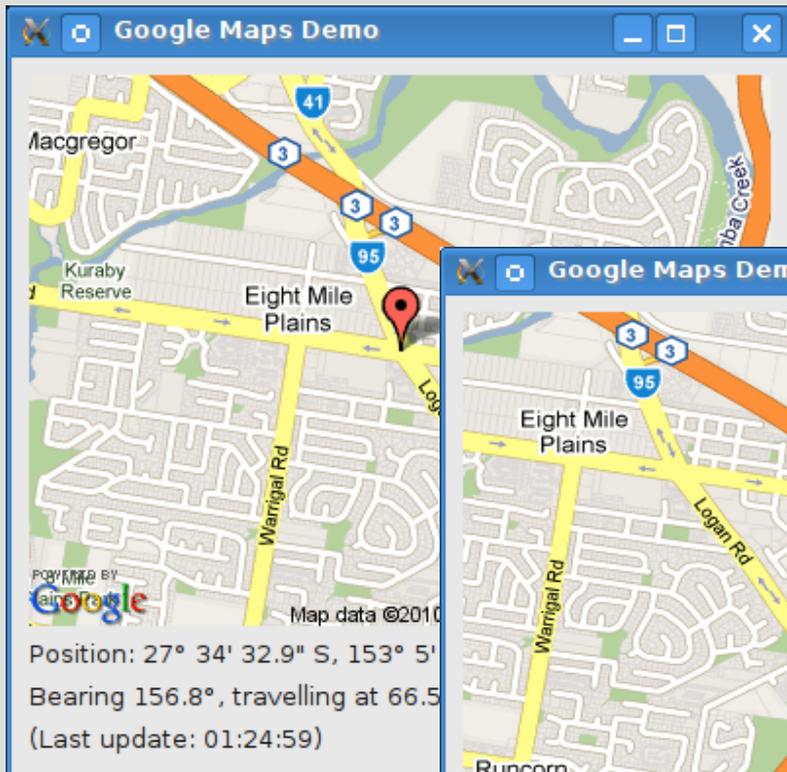
Location

- Предоставляет доступ к данным от устройств геопозиционирования
- Примеры приложений:
 - GPS note
 - OpenstreetMaps updater

Location API



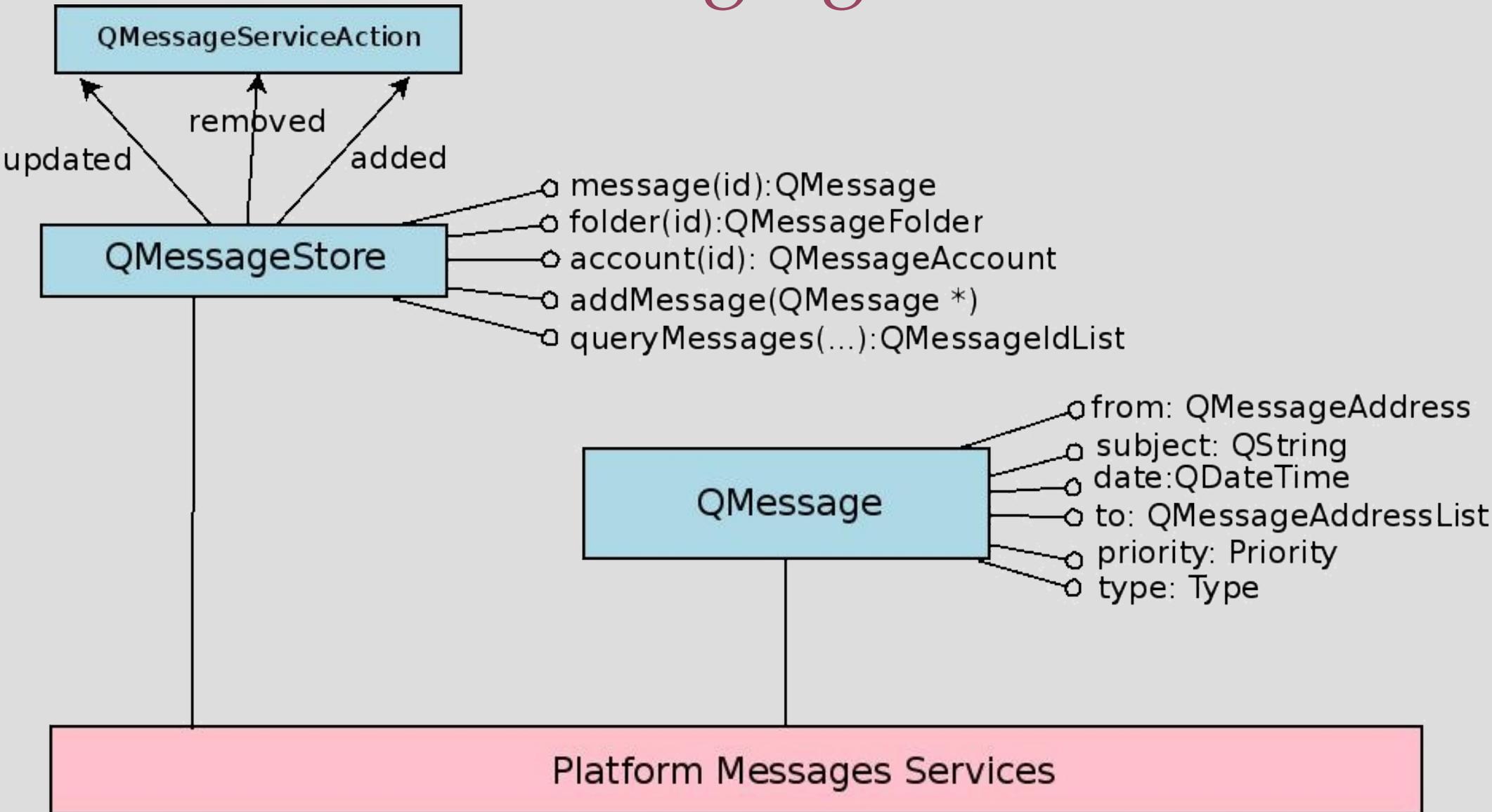
Location demo



Messaging

- Предоставляет отправлять/получать email, SMS, MMS сообщения
- Обработать сохраненные сообщения
- Примеры приложений:
 - Приложение “I'll be late. I'm on Nevsky station now.” (Location + Messaging)

Messaging API



Multimedia

- Проигрывание аудио / видео различных форматов
- Запись аудио
- Проигрывание и управление FM Radio

Multimedia demo

The image displays a multimedia demo on a mobile device. At the top, a window titled "slideshow" shows a "Google Maps Demo" of a road network in Queensland, Australia, with locations like Macgregor, Kuraby Reserve, and Eight Mile Plains. Below this, a video player window shows a historical map of the Pacific Ocean, featuring a globe and a circular inset map. The bottom window shows a detailed historical map of the Northern Hemisphere, with various constellations and figures. The interface includes a status bar at the top with the time 11:05, 3G signal, battery, and Wi-Fi icons, and a navigation bar at the bottom with a folder icon and playback controls.

Publish and Subscribe

- Предоставление приложениям единого иерархического пространства имен и значений (value space).
 - Навигация по дереву значений
 - Чтение/запись значений
 - Механизмы подписки и оповещения об изменениях

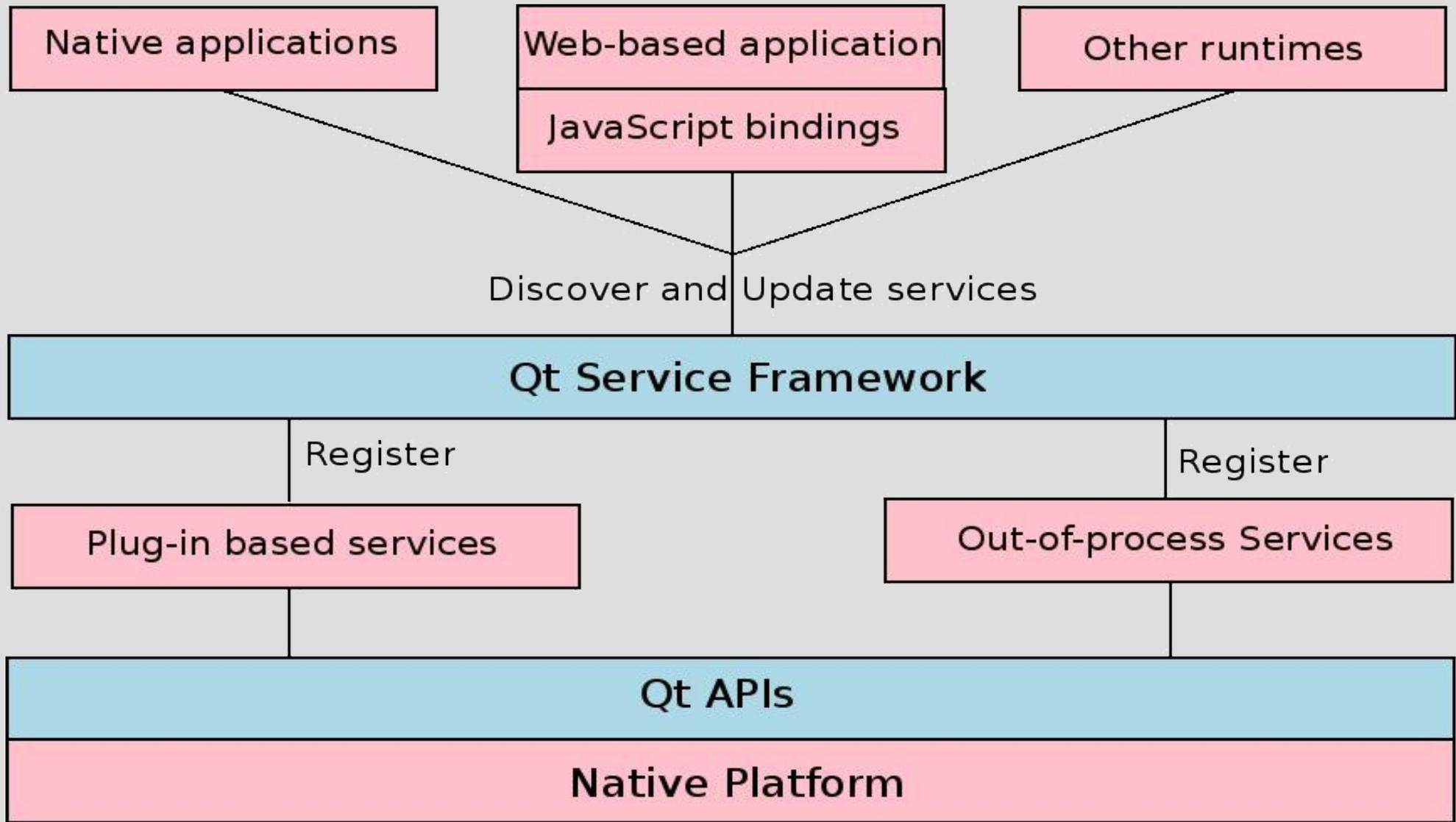
Уровни Publish and Subscribe

- Shared memory (linux)
- Volatile registry (windows)
- Non-Volatile registry (windows)
- Symbian settings layer

Qt Service Framework

- Обнаружение и работа с сервисами
- Централизованный реестр сервисов
- XML-based

Qt Service Framework API



Qt Service Framework demo

The screenshot displays the Qt Services Browser interface. The main window is titled "Services Browser" and contains several sections:

- Show services for:** A list of services including BluetoothTransferService, FileManagerService, and (All registered services).
- Invokable attributes for FileManagerStorage class:** A section for managing attributes of the selected class.
- All interface implementations:** A list of implementations for the FileManagerStorage interface, including com.nokia.qt.examples.FileStorage 1.0 (FileManagerService), com.nokia.qt.examples.FileTransfer 1.0 (FileManagerService), and com.nokia.qt.examples.FileTransfer 1.0 (BluetoothTransferService).
- Show attributes for:** A section for managing attributes of the selected implementation, with radio buttons for "Selected interface implementation" and "Default implementation for com.nokia.qt.examples.FileStorage (currently provided by FileManagerService)".

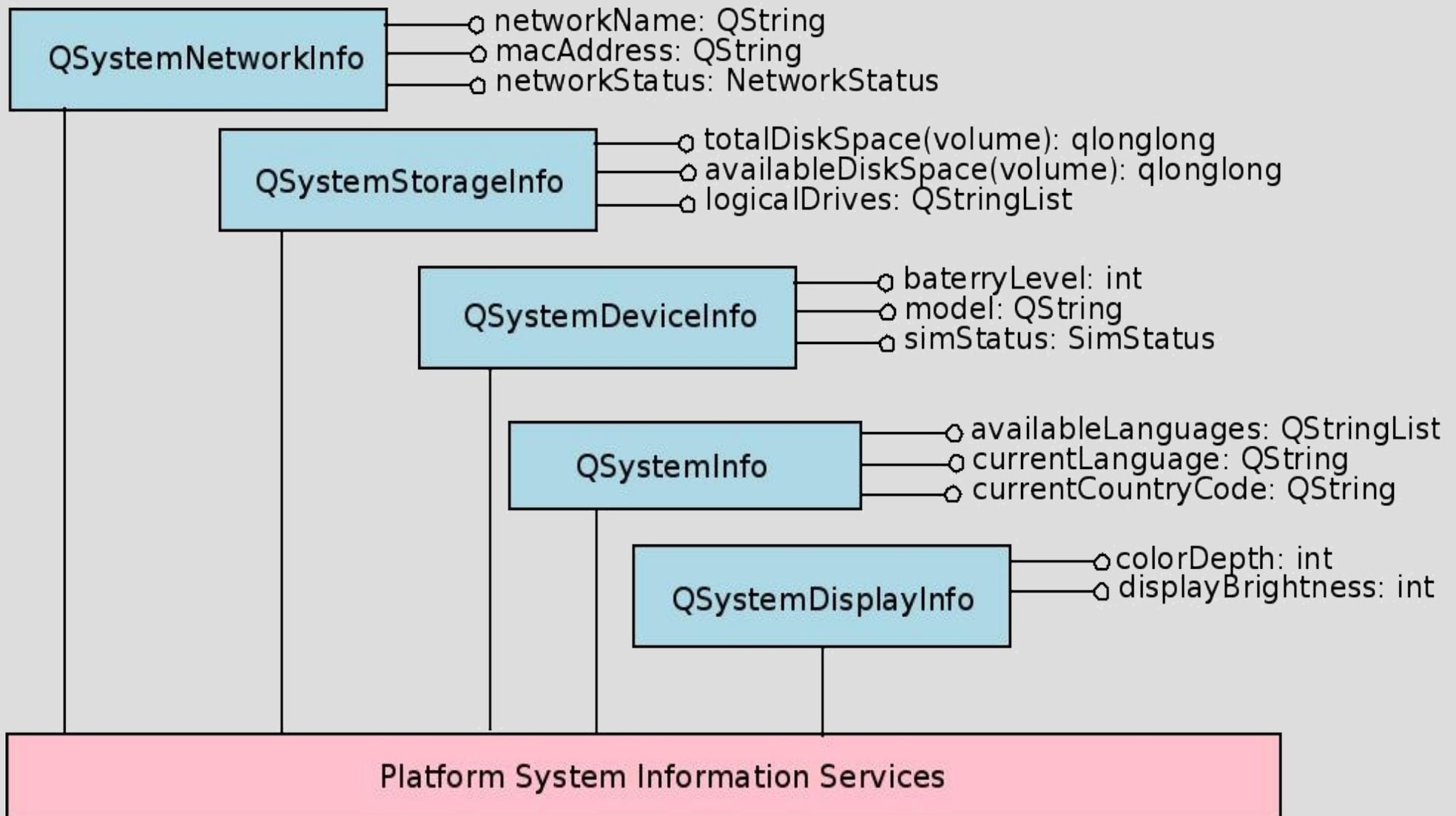
A floating dialog box is overlaid on the "All interface implementations" section, providing a more detailed view of the management options:

- Show services for:** (All registered services)
- Invokable attributes:** A section for managing attributes.
- All interface implementations:** A list of implementations.
- Show attributes for:** A section with a "Selected interface implementation" button.
- Buttons:** "Set as default implementation" and "Default implementation".

System Information

- Предоставление информации о системе
- Пример приложений:
 - Виджет рабочего стола с информацией об использовании системных ресурсов
 - PieChart утилизации диска

System Information API



System Information demo

The desktop application window titled "System Information" has a blue header bar with standard window controls. It features a tabbed interface with tabs for "General", "Device", "Display", "Storage", "Network", and "Storage". The "Device" tab is selected, showing a battery level indicator at 98% and the following system details:

IMEI:	Sim Not Available
IMSI:	Sim Not Available
Manufacturer:	LENOVO
Model:	x86_64 Notebook
Product:	Computer
Device lock:	<input type="checkbox"/>
Sim status:	Sim not available
current Profile:	Unknown
Input method:	Keys Keypad Ke

The mobile application window titled "System Information" has a black header bar with a close button. It features a tabbed interface with tabs for "General", "General2", "Device", "Device2", "Device3", "Display", and "Storage". The "Device" tab is selected, showing the following system details:

IMEI:	356938030037445
IMSI:	250021020561910
Manufacturer:	Nokia
Model:	armv7l
Product:	Computer

This screenshot shows a different view of the mobile application. The header bar shows the time 16:38 and 3G signal strength. The "General2" tab is selected. The screen displays the following information:

- QtCore:
- Version:
- Sim:
- Feature supported:
- Exit button

This screenshot shows the "Network" tab selected in the mobile application. The header bar shows the time 17:17 and 3G signal strength. The screen displays the following network information:

- Wlan:
- Network Status:
- Network Signal Strength:
- MAC address:
- Interface Name:
- Network Mode:

Sensors

- Доступ к аппаратным сенсорам
 - Акселерометр
 - Датчик света
 - Компас
 - Магнетометр
- Находится в стадии разработки

Versit®

- API для импорта/экспорта vCards
- Поддерживаемые форматы:
 - vCard 2.1
 - vCard 3.0
- Находится в стадии разработки

“Мобилизация” QT-приложения

- Maemo:
 - Scratchbox
 - Xephyr
 - MAEMO SDK
- Symbian:
 - Carbide.C++
 - Symbian SDK
 - Symbian emulator
- Проект:
 - <http://labs.trolltech.com/page/Projects/QtMobility>
- ИСХОДНЫЙ КОД:
 - <http://qt.gitorious.org/qt-mobility>
- Документация:
 - <http://qt.nokia.com/doc/qtmobility-1.0-tp>



Спасибо

Зубарев Павел,

zps@osll.spb.ru

Open Source & Linux Lab,

<http://osll.furct.org>, osll@fruct.org