MobileTrade: A Maemo Client to Trading/Auction Web Services

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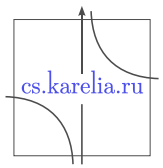


Basic Idea

Demo application (client) for web-services of

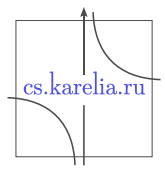
- Trading Business System, TBS (1C, SAP, . . .)
- Auction System (eBay)

Platforms

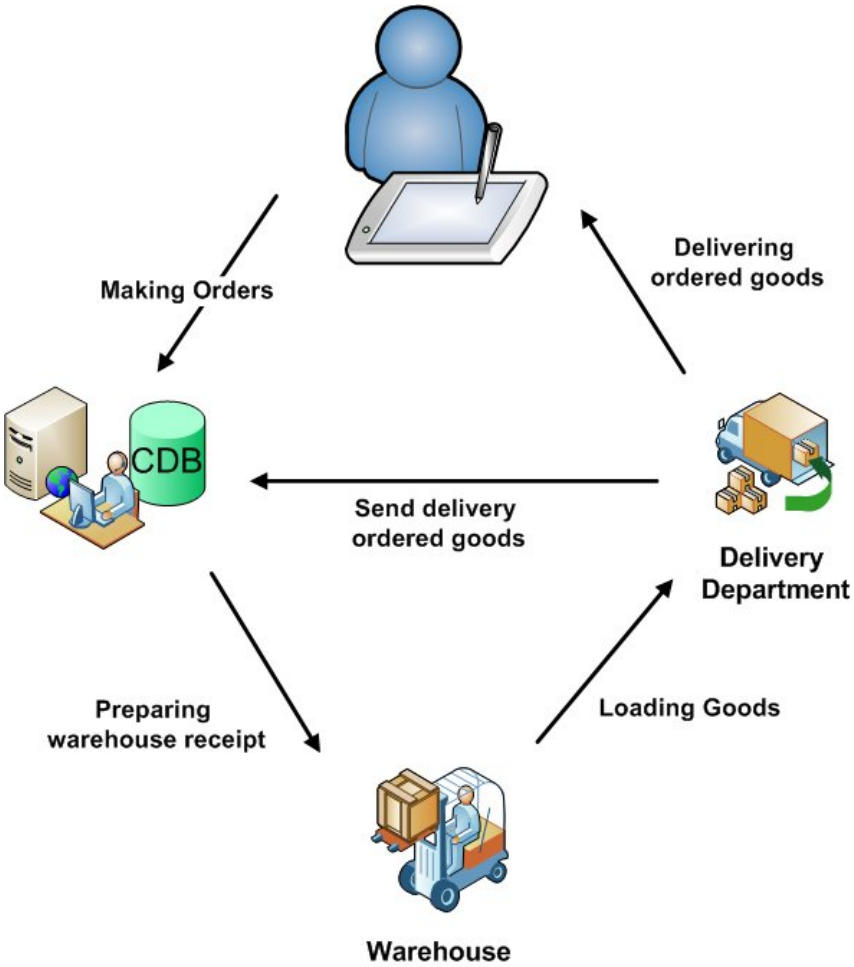
- Maemo 5 (Fremantle/Qt/C++)
- In future: MeeGo

Scenarios (mobile client)

1. Showing list of goods, searching, details: goods browsing
2. Selecting goods and making customer orders (internet shopping: amazon, ozon, . . .)
3. Participating in selling goods, e.g. via eBay



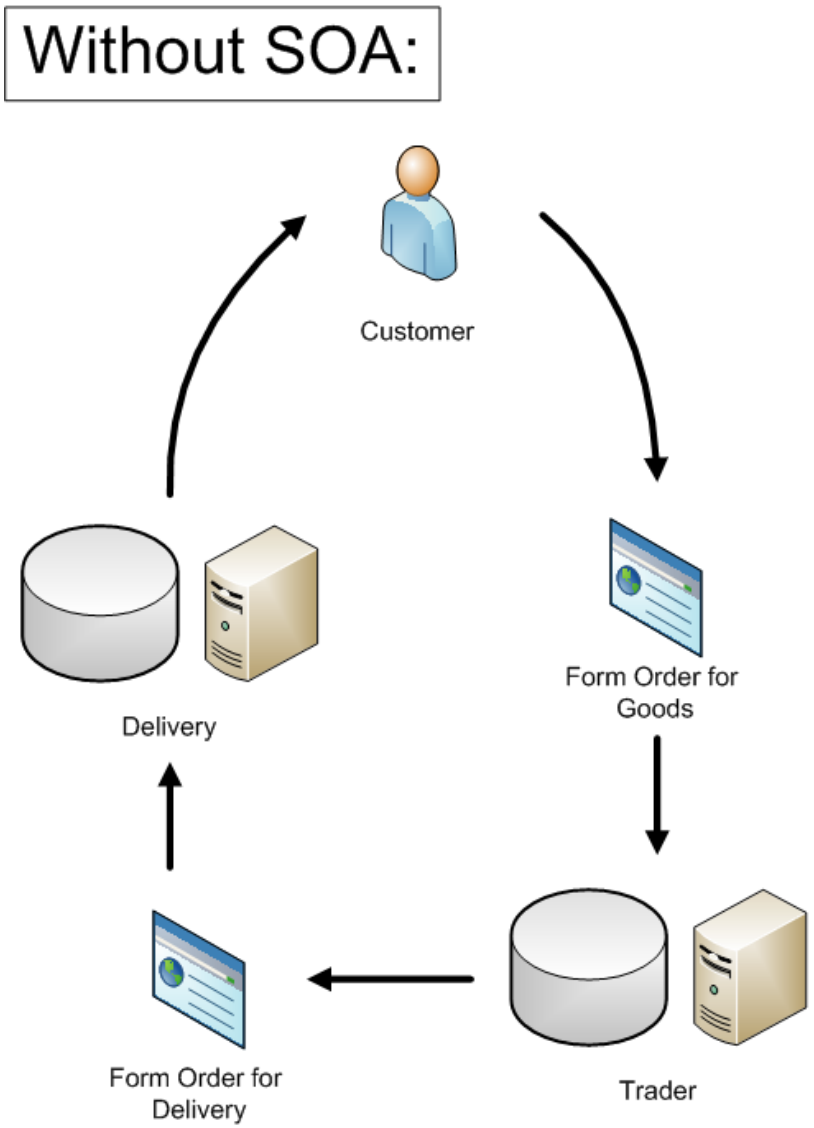
Trading Business Process

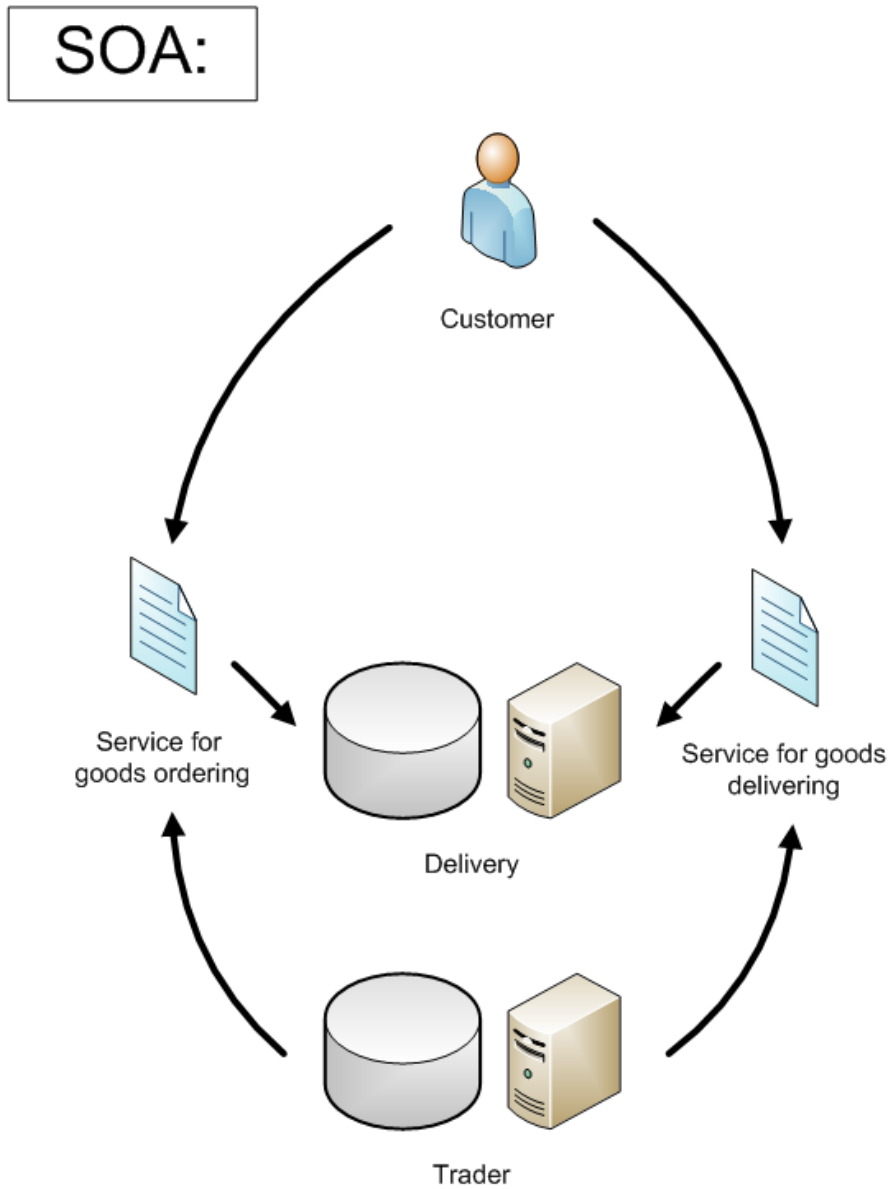


Our goals:

- Process efficiency
- User (customer) mobility
- Support for trading scenarios
- Cross-platform solutions

Service Oriented Architecture for TBS



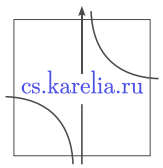


Application advantages

1. Efficiency in mobile trading
   trade agents, customers; small-medium-big companies
2. Sales results increase
3. Company public image improves

Features compared with existing applications

- SOA and web-services (unification)
- Cross-service solution (aggregator)
- Cross-platform (C++, Qt, . . .)
- Open source (GPLv2)
- Finger-touch GUI (to work out an office)
- Network instability (caching, off-line)



Usecase scenarios

Business scenarios:

- Show goods
- Customer orders
- Sell orders (auction as eBay)

Support scenarios:

- Configuration settings for different web-services
- Synchronization with TBS (primary database)
- Switching between on-line and off-line modes

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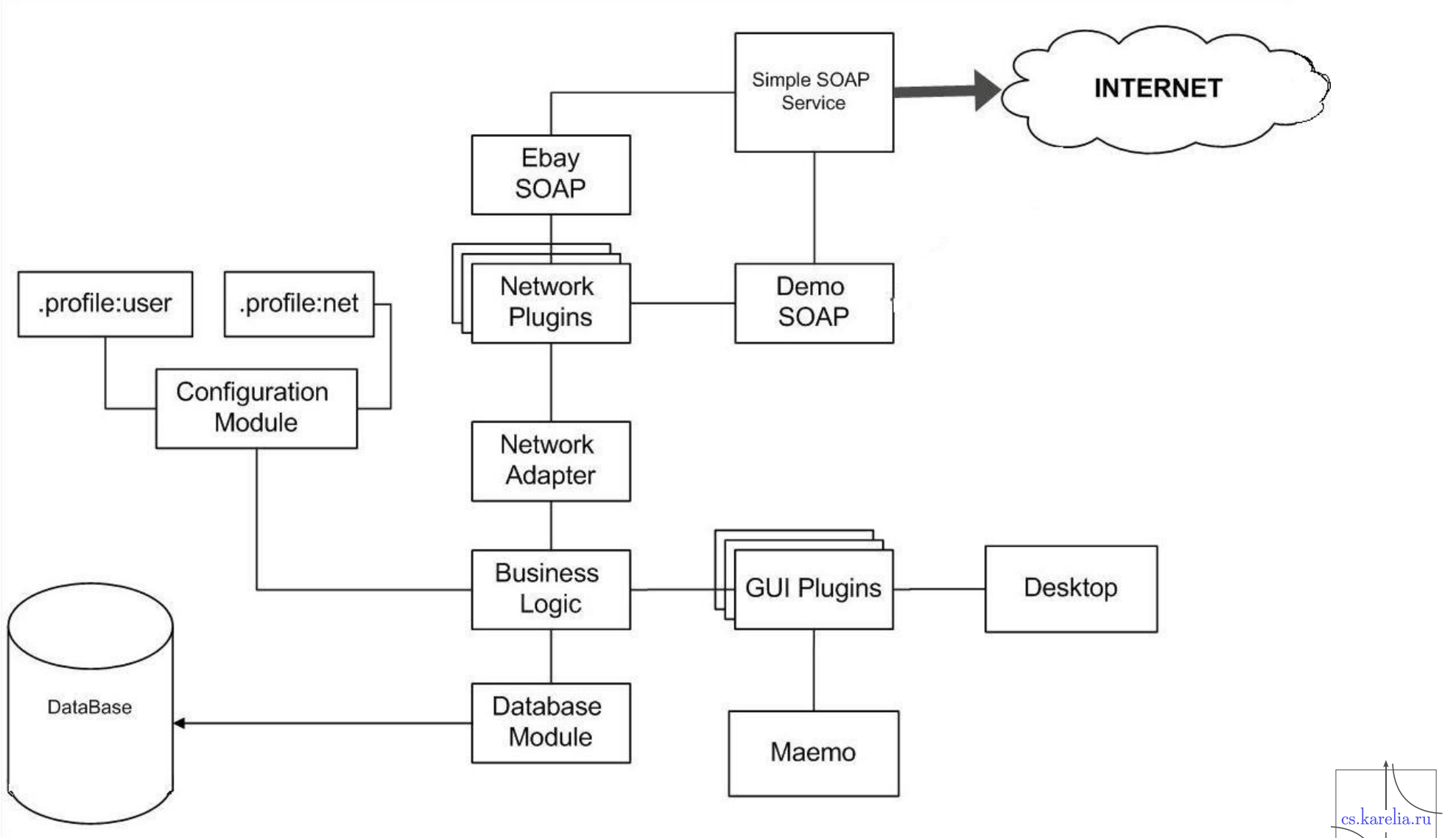
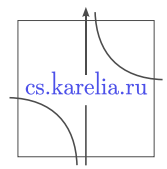
Architecture



Development and Repository

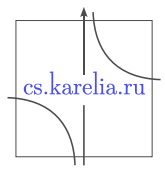
- C++ (using Qt Creator)
- Qt4.6-maemo: Maemo 5 GUI specific features
- SQLite: database support
- QtSoap: network support for web-services
- Qt Creator for producing GUI

- SVN (local repository)
  - business logic
  - user interface
    - maemo5
    - desktop
  - database
  - ...
- `http://gitorious.org/mobile-trade`
- `http://repository.maemo.org/extras-devel/pool/fremantle/free/m/mobile-trade/`
- `https://garage.maemo.org/frs/?group_id=1534`



Code Metrics

Module	Classes	LOC	COM	LOC/COM	ALL
Database	1	207	225	0.92	432
User Interface	73	2070	1215	1.704	3285
Business Logic	23	1355	1699	0.798	3054
Network	7	400	86	4.651	486
Manager	9	404	289	1.398	693
Tests	10	840	174	4.828	1014
Total	**123**	**5276**	**3688**	**1.43**	**8964**

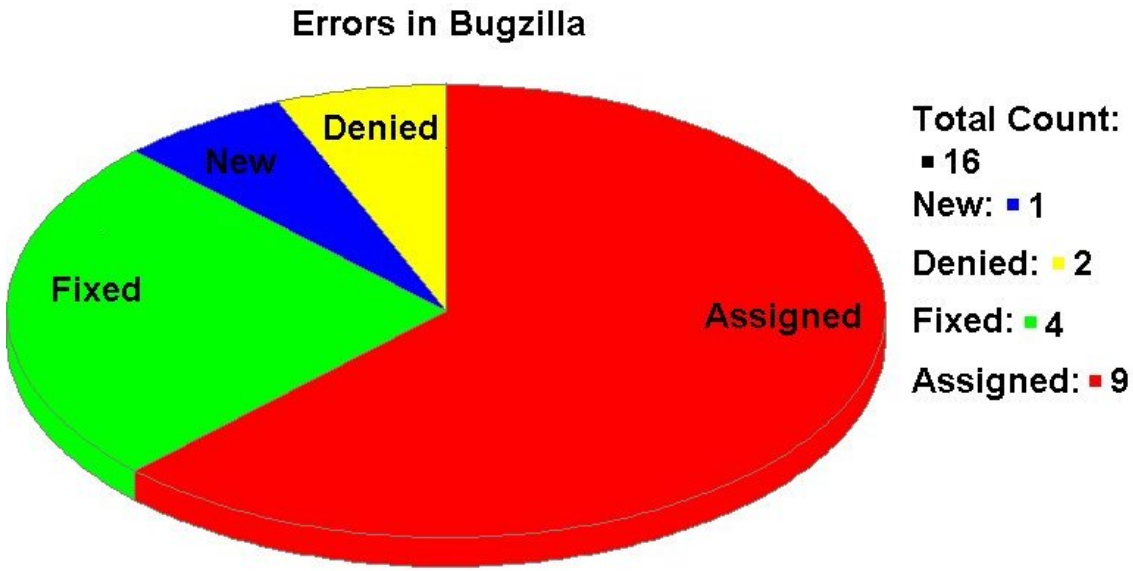


Uses

- QtTestLib/QtTest for automation
- bugzilla for bug tracking: `http://oss.fruct.org/bugzilla`
- valgrind for debugging

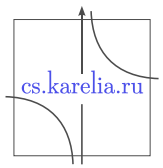
Types of testing:

- System testing
- Integration testing
- Unit testing
- UI testing (checklist)



Team

- **Ingmar Bergmann**: 5th year student, project leader, GUI and testing manager
- **Denis Zabirohin**: 3rd year student, architect, design, network
- **Pavel Andrianov**: 4th year student, problem domain, logic, database
- **Sergey Michailov**: 3rd year student, GUI, design
- **Artem Nikiforov**: 3rd year student, testing, design
- **Igor Semenov**: expert
- **Dmitry G. Korzun**: supervisor



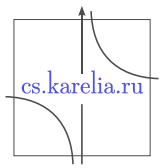
Results

Implementation

- MobileTrade release 0.21-alpha for Nokia N900
- Full Qt-based implementation
- Partial QtSoap-implementation

Further directions

- Support for customer orders
- Support for auction systems
- QtSoap implementation
- Comprehensive testing at N900



The source code is available at
http://gitorious.org/mobile-trade

http://oss.fruct.org/wiki/Maemo-Business

http://oss.fruct.org/bugzilla

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Thank you!