

A Maemo Mobile Trade Client for Business Systems

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Goals and Problem Description

Developing a mobile solution

- Enhancing and reinforcing Enterprise Trade Business Systems (TBS)
- Accelerating the Service-Oriented Architecture (SOA) in TBS

Example TBS are:

- MS Axapta
- SAP R/3
- 1C:Enterprise 8.1, 8.2

SOAP is a protocol for exchanging structured information in the implementation of Web Services

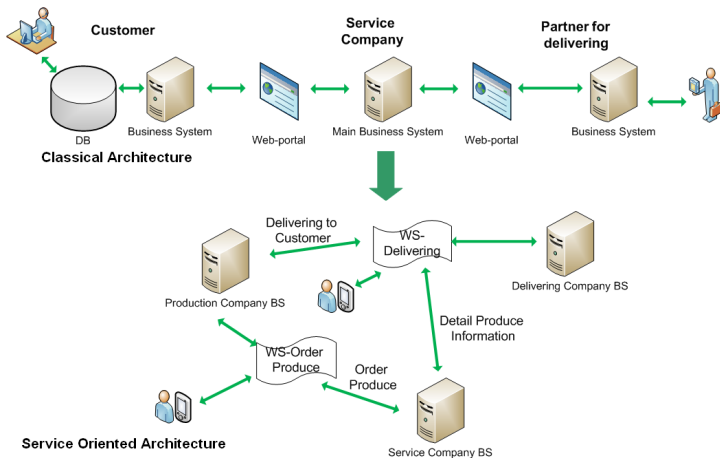


The Main Features

- Web-Services and SOAP (XDTO+WSDL) for synchronizing with TBS
- A Mobile device allows:
 - ▶ GPS - for reinforcing business logistics
 - ▶ WiFi - for general end-user mobility
 - ▶ Camera - for making pictures of goods, e.g. for sending them to TBS
- A Local Data Base for storing business data directly at mobile device
- Several security levels for transferring business data between mobile device and TBS



Service Oriented Architecture for TBS



Team

- Dmitry G. Korzun, project leader and instructor



- Igor Semenov, M.Sc. Student, technical manager



- Ekaterina Zabolotskih, 4th year student



- Denis Zabiroyhin, 2nd year student



- Pavel Andrianov, 3rd year student



Plan

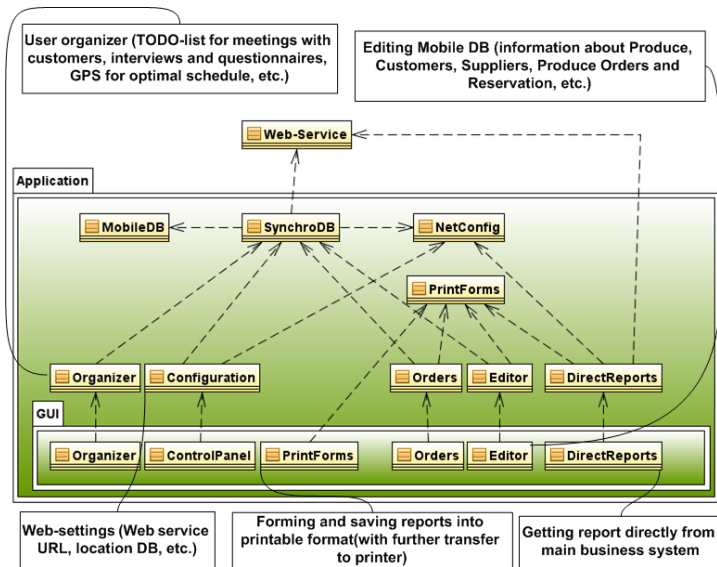
Feb.–May 2009: Developing a demo prototype

Summer 2009 (optionally): Experiments with the prototype

Autumn 2009 (optionally): Publishing the code in the MAEMO garage.
Project report for FRUCT seminar.



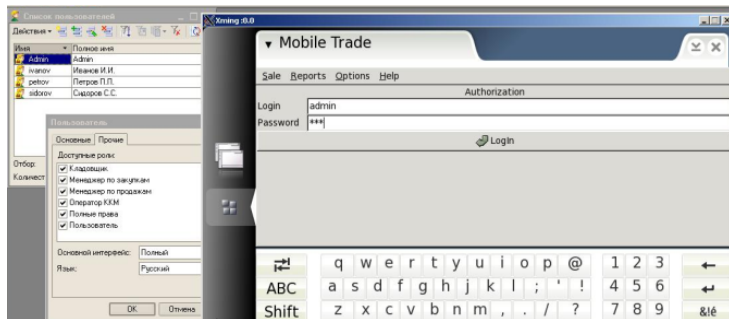
Architecture



SOAP Technology

We tried GSoap and cSoap. **cSoap** seems easier for usage

cSoap is a C-based implementation of the SOAP, provides **https (SSL) with OpenSSL**



UI Technology

```

...
<xsd:complexType name="ProduceItem">
  <xsd:sequence>
    <xsd:element name="Title" type="xsd:string" />
    <xsd:element name="ID" type="xsd:int" />
  </xsd:sequence>
</xsd:complexType>
  
```

Web Service Description



```

...
<glade-interface>
  <widget class="GtkWindow" id="window1">
  ...
  <widget class="GtkTreeView" id="treeview1">
    <widget class="GtkTreeViewColumn" id="ColID" name="ID"/>
    <widget class="GtkTreeViewColumn" id="ColTitle" name="Title"/>
  ...
  
```

LibGlade interface



Business Data from Trade System

```

...
<ListProduce>
  <Produce ID=1 Title="Nokia N800"/>
  <Produce ID=2 Title="Nokia N810"/>
  <Produce ID=3 Title="Nokia E90"/>
  <Produce ID=4 Title="Nokia E3110"/>
</ListProduce>
  
```



DB Technology

We tried the following database management systems for storing Business Data from TBS:

- MySQL
- Lite Sql
- Sedna
- SQLite

SQLite provides a good tradeoff between performance and memory capacity of a tablet



Results

- Requirements, User scenarios, Architecture and Design Elements
- IDE (Eclipse + Maemo Plugin) is used
- SQLite, cSoap are porting into armel architecture
- C++ Development
- Basic classes are implemented
- Coding, testing and integrating
- Demo Prototype



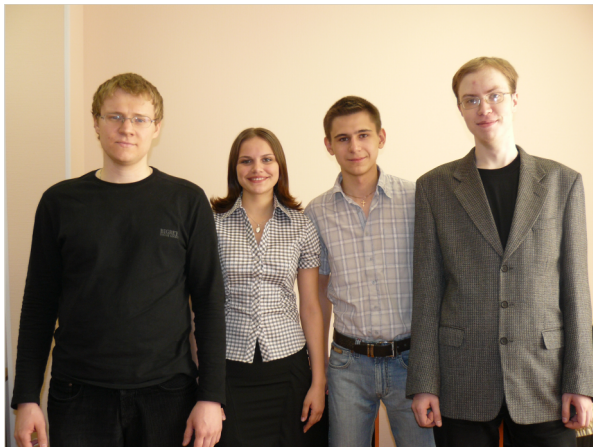
Прайс-лист

В валютах цен.
Цены указаны на 16.10.2005

Ценовая группа/ Номенклатура/ Характеристика номенклатуры	Покупная цена	
	Цена	Ед.
Nokia3110	1 200,00 RUB	шт
NokiaE90	15 000,00 RUB	шт
NokiaN800	11 000,00 RUB	шт
NokiaN810	12 000,00 RUB	шт



Thank you!



<http://maemo.cs.karelia.ru/wiki/Maemo-Business>

