A Maemo Mobile Trade Client for Business Systems

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Goals and Problem Description

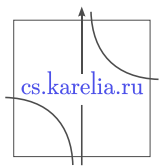
Developing a mobile solution

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

Example TBS are:

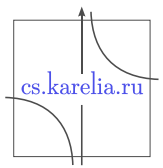
- MS Axapta
- SAP R/3
- 1C:Enterpriese 8.1, 8.2

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

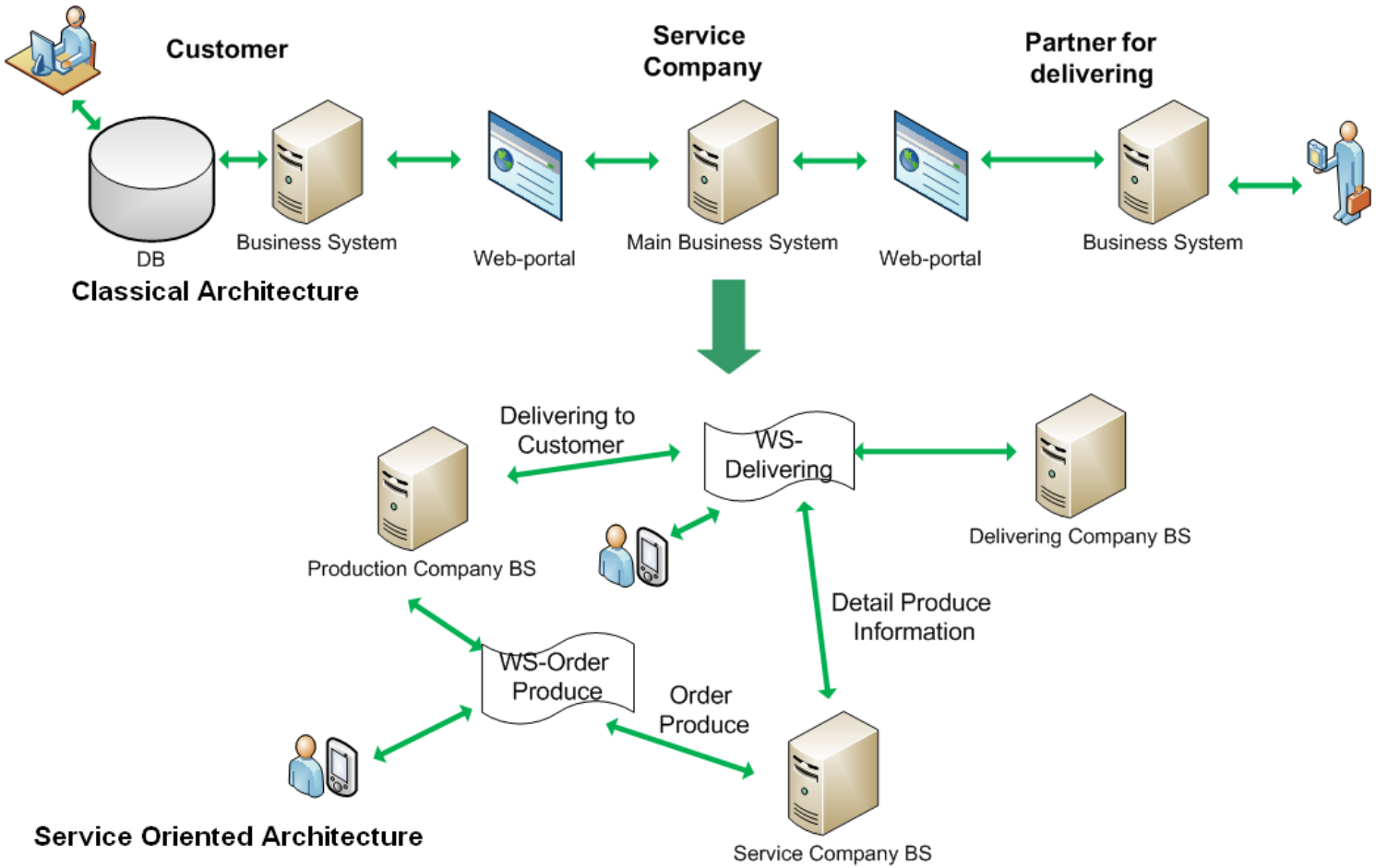


The Main Features

- 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 transfering business data between mobile device and TBS



Serice 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 Zabirohin, 2nd year student 
- Pavel Andrianov, 3rd year student 
- Pavel Nefedov 3rd year student

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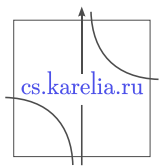
Plan

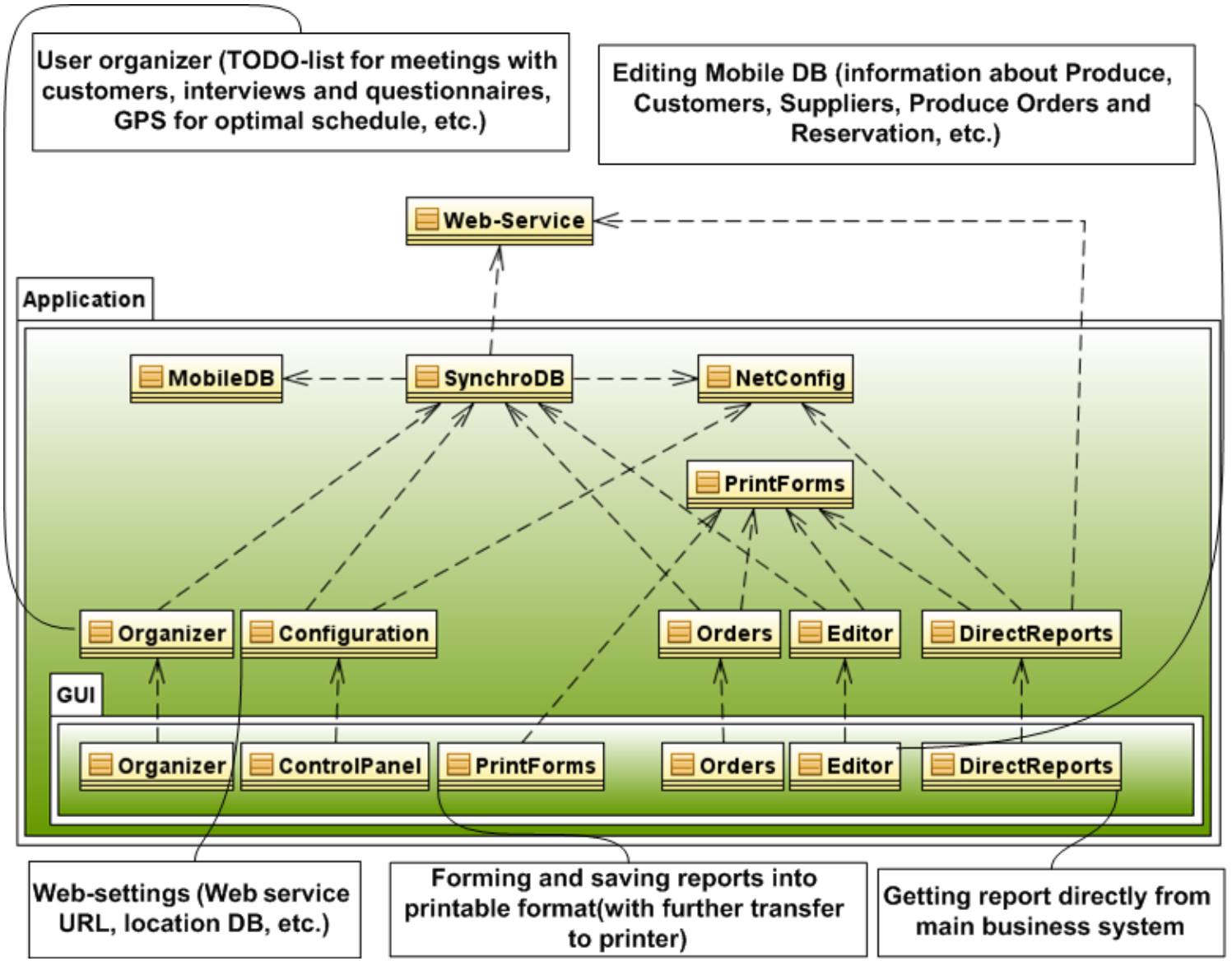
Feb.–May 2009: Developing a demo prototype

Summer 2009 (optionally): Experiments with the prototype

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



Architecture



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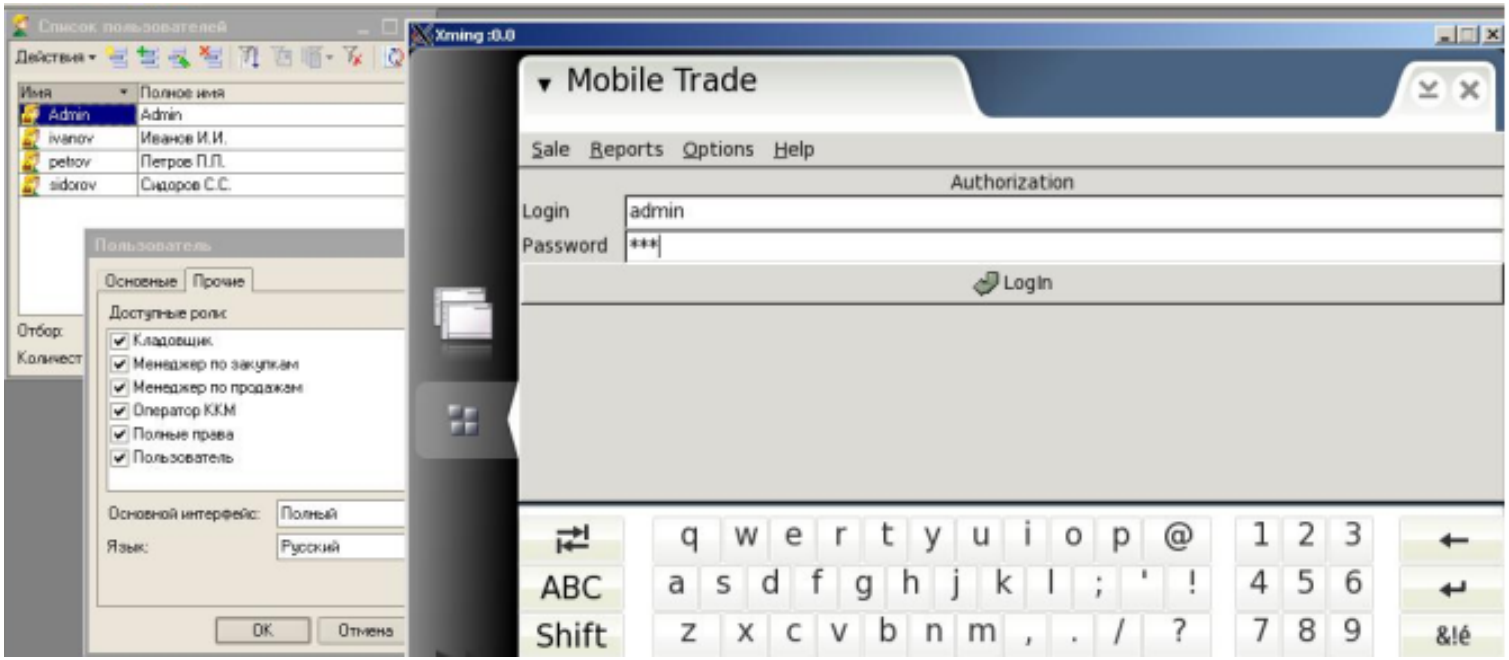
SOAP Technology

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

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



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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>
...
```

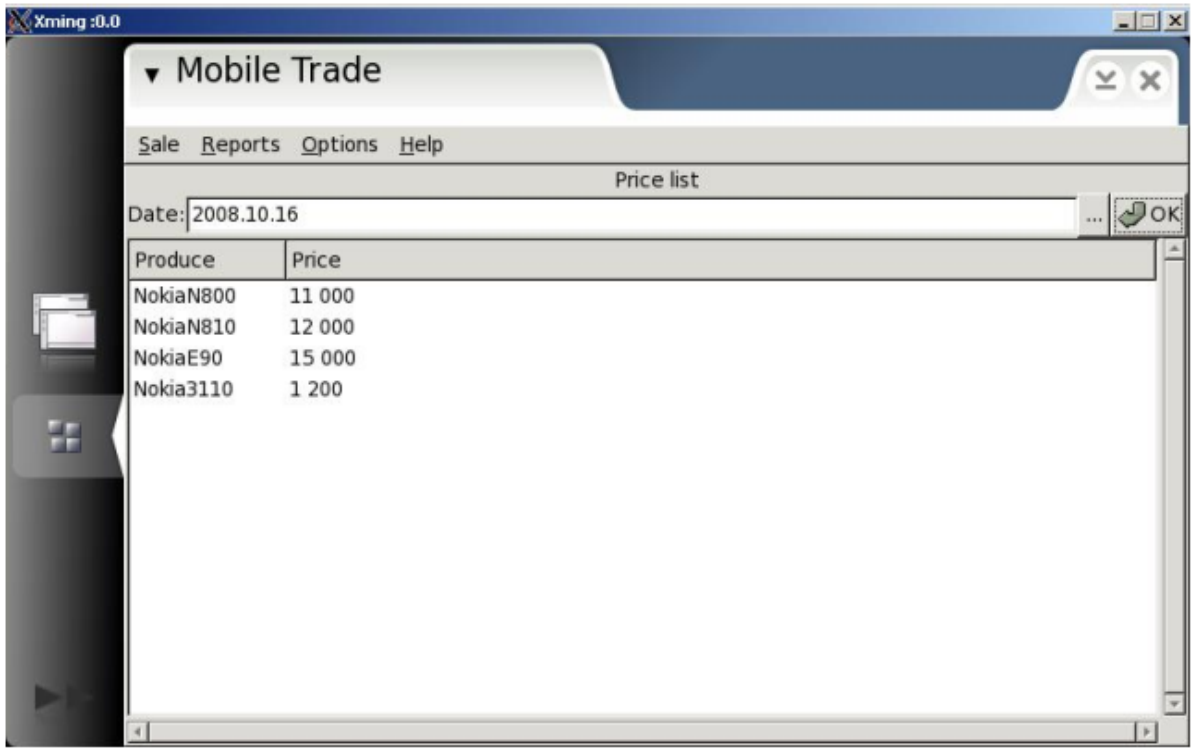
Web Service Description

```
...
<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>
...
```

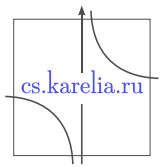


DB Technology

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

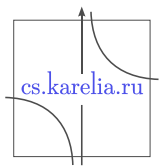
- MySQL
- Lite Sql
- Sedna
- SQLite

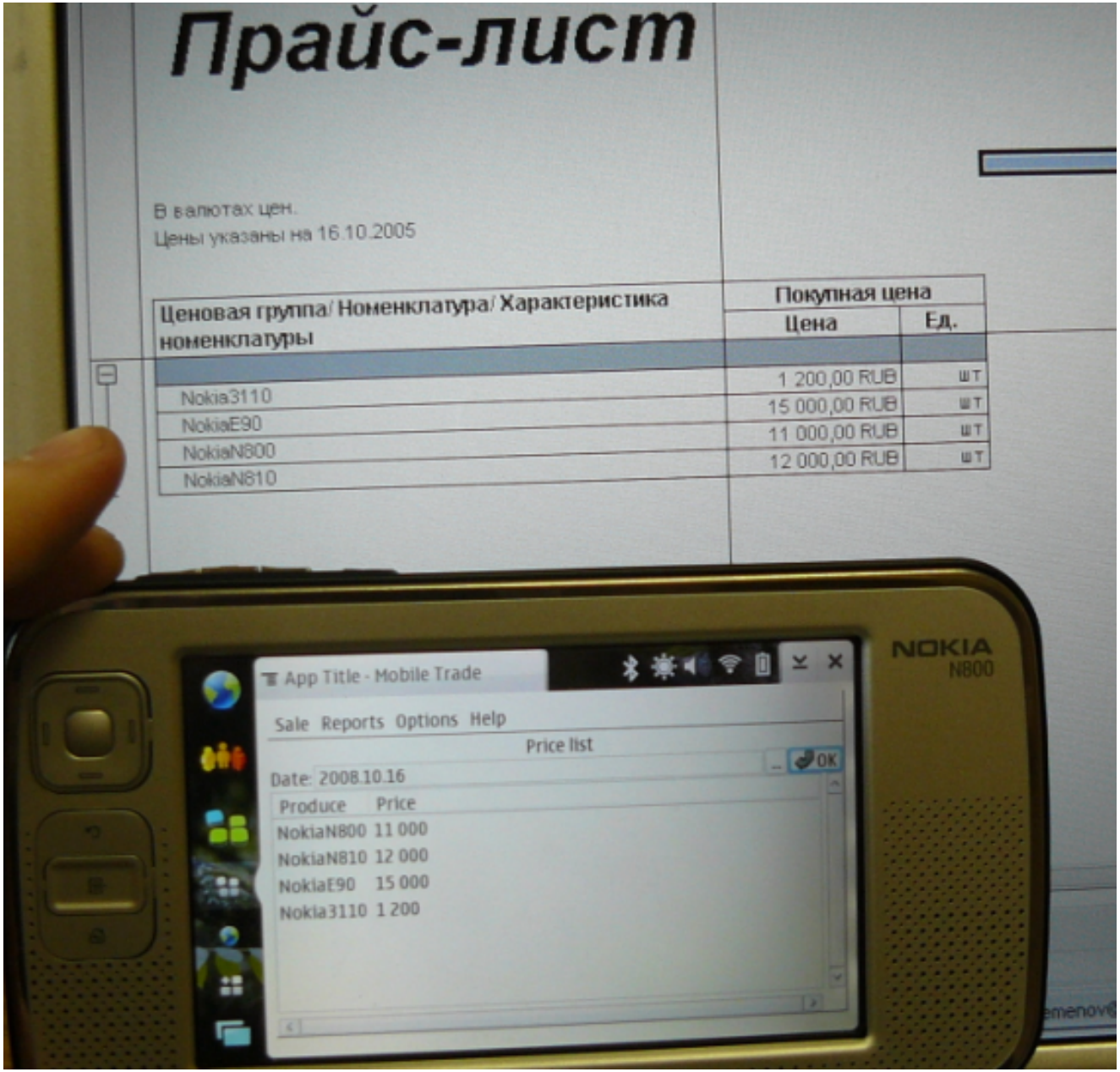
SQLite provides a good tradeoff between perfomance and memory capacity of a tablet



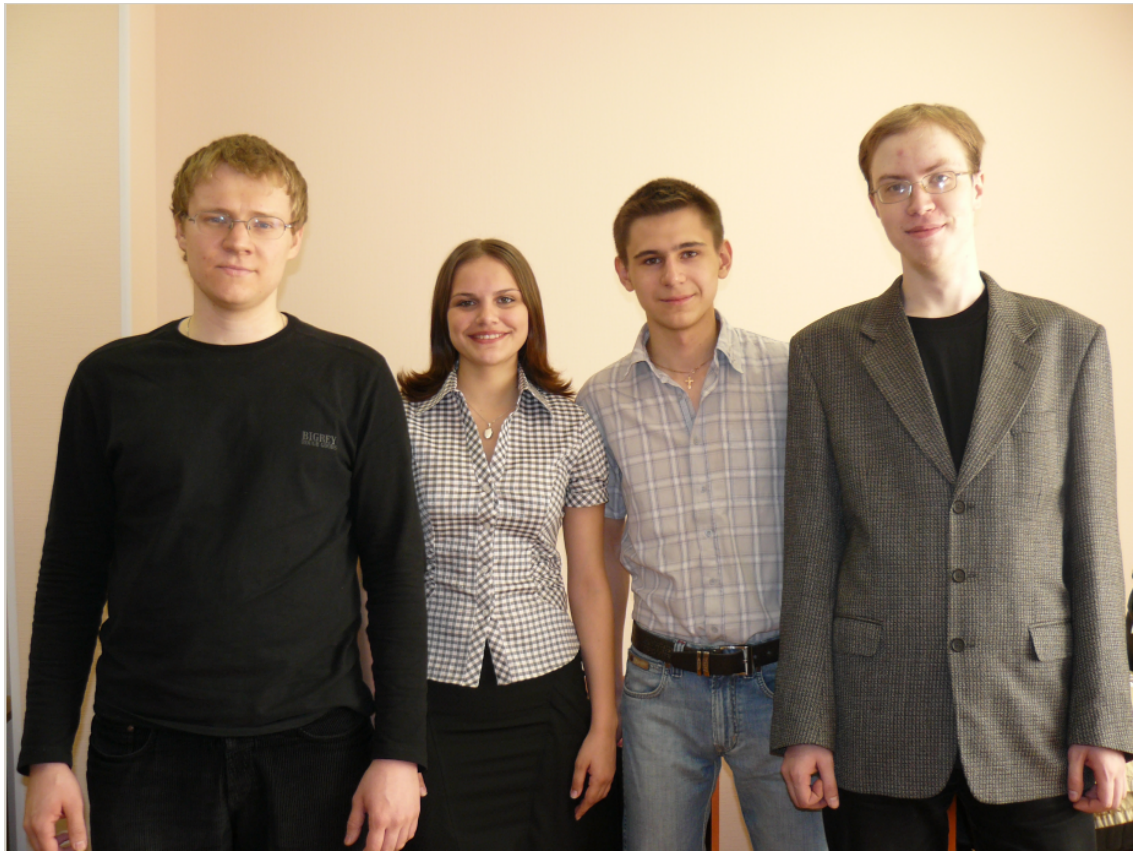
Results

- Requirements, User scenarios, Architecture and Design Elements
- IDE (Eclipse + Maemo Plugin) is used
- SQlite, cSoap are porting into armel architecture
- C++ Development
- Basic clases 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
App Title - Mobile Trade
Sale Reports Options Help
Price list
OK
Date: 2008.10.16
Produce Price
NokiaN800 11 000
NokiaN810 12 000
NokiaE90 15 000
Nokia3110 1 200
NOKIA
N800

Thank you!



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