

Products distribution network m-management - business application model for mobile phones

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Problem

In Georgia most of the businesses operate as *product distribution networks*. Large brand name international companies (e.g. *Procter & Gamble, Colgate-Palmolive, Marlboro, Nestle, Mars, etc.*), as well as smaller domestic ones, have distributors which periodically bring products in numerous different points of sales(POS)/shops of “their” regions/districts/cities.

As the POS/shops are not related to each other, there is no universal management, which makes distribution planning rather complicated.

Problem

Distributor receives request, then brings requests from all “his” network PoS/shop, transfers it to stock management, which disburses products after 1-3 days, usually.

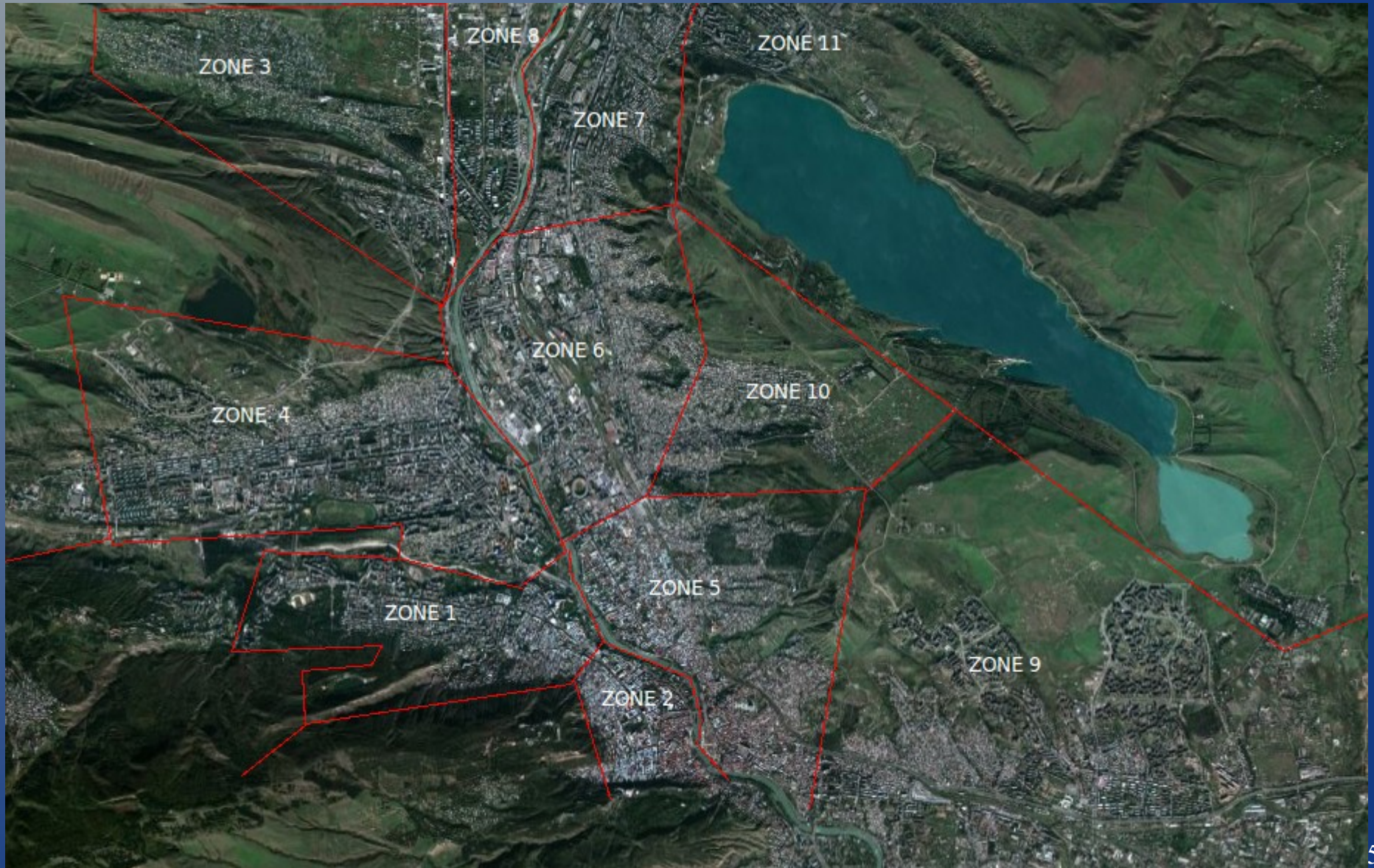
Sometimes, bringing the previously agreed amount, distributor finds out that competitive product was procured just few hours ago by shop manager and therefore his product is turned down or delay of procurement is requested.

The problem became specially aggravated with financial crisis and consumers decreased confidence limiting shops ability to accumulate substantial stock of products.

Problem

- Distributors are assigned to specific area. Average 100-120 POS/Shops;
- Distributors getting information from each POS every week (Average 20-25 POS per day): amount of products sold by brand and name; They are inspecting each shop “manually”
- At end of week they are analyzing collected data and taking decision about new week distribution and reporting to head office.

Example of City Division



Example of Zone (Part)



Yellow – Supermarkets;
Red – small POS (less then 10sq.m.);
Green – bigger POS (10m2 - 30sq.m.)

Solution

The only appropriate solution is real-time information gathering in the central distributing office - which product is required (or – not anymore) and where, making product procurement timelier.

However, as most of the shops do not have computers and stock e-management software, the feasible solution is suggested – to develop simple product distribution m-management software and use distributors mobile phones for timely information provision.

Solution (cont'd)

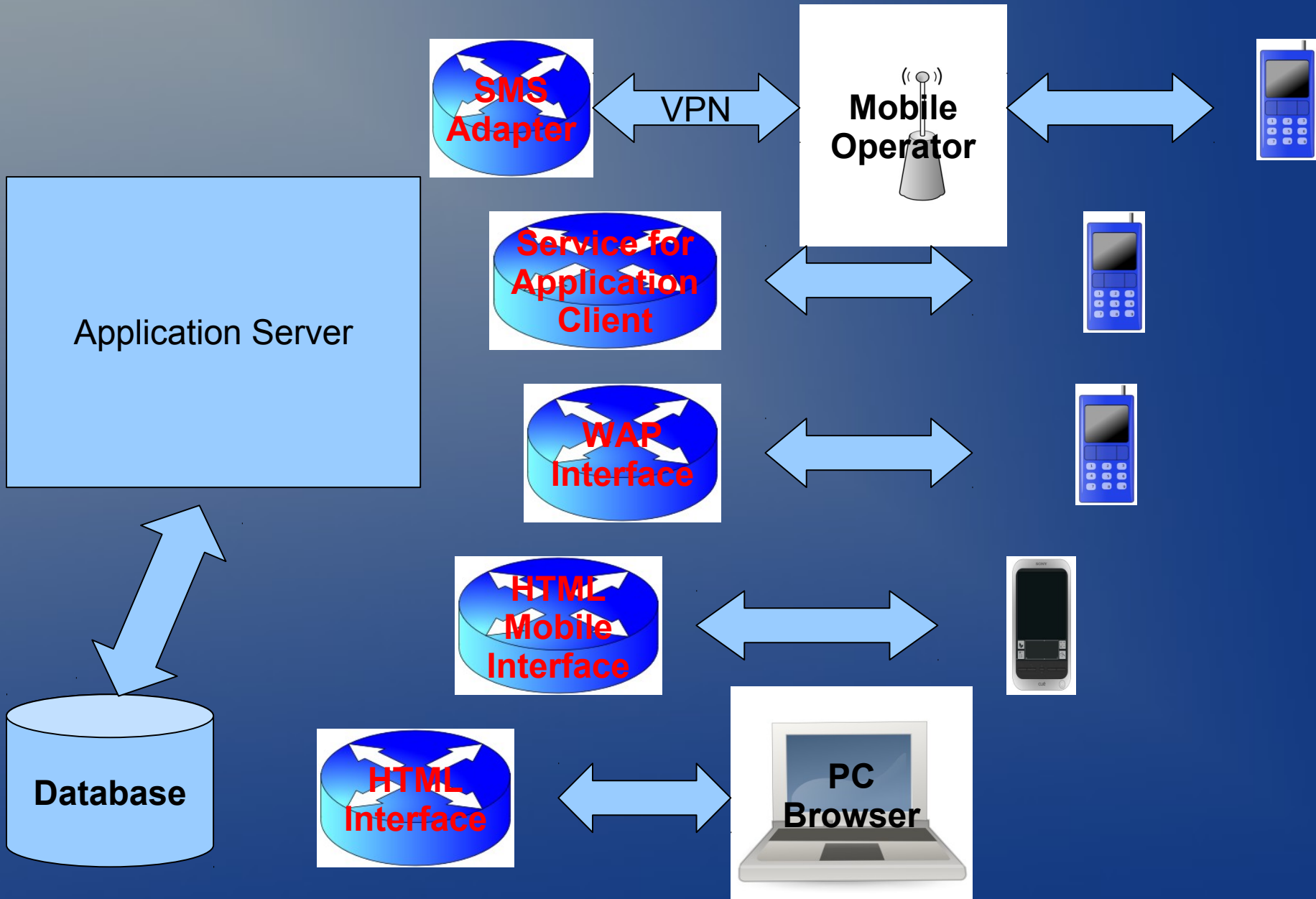
Solution will work with any platform (Windows Mobile, Symbian, Blackberry, Android), even WAP and SMS only could be used, and allow distributors to register/view product data into company's main database.

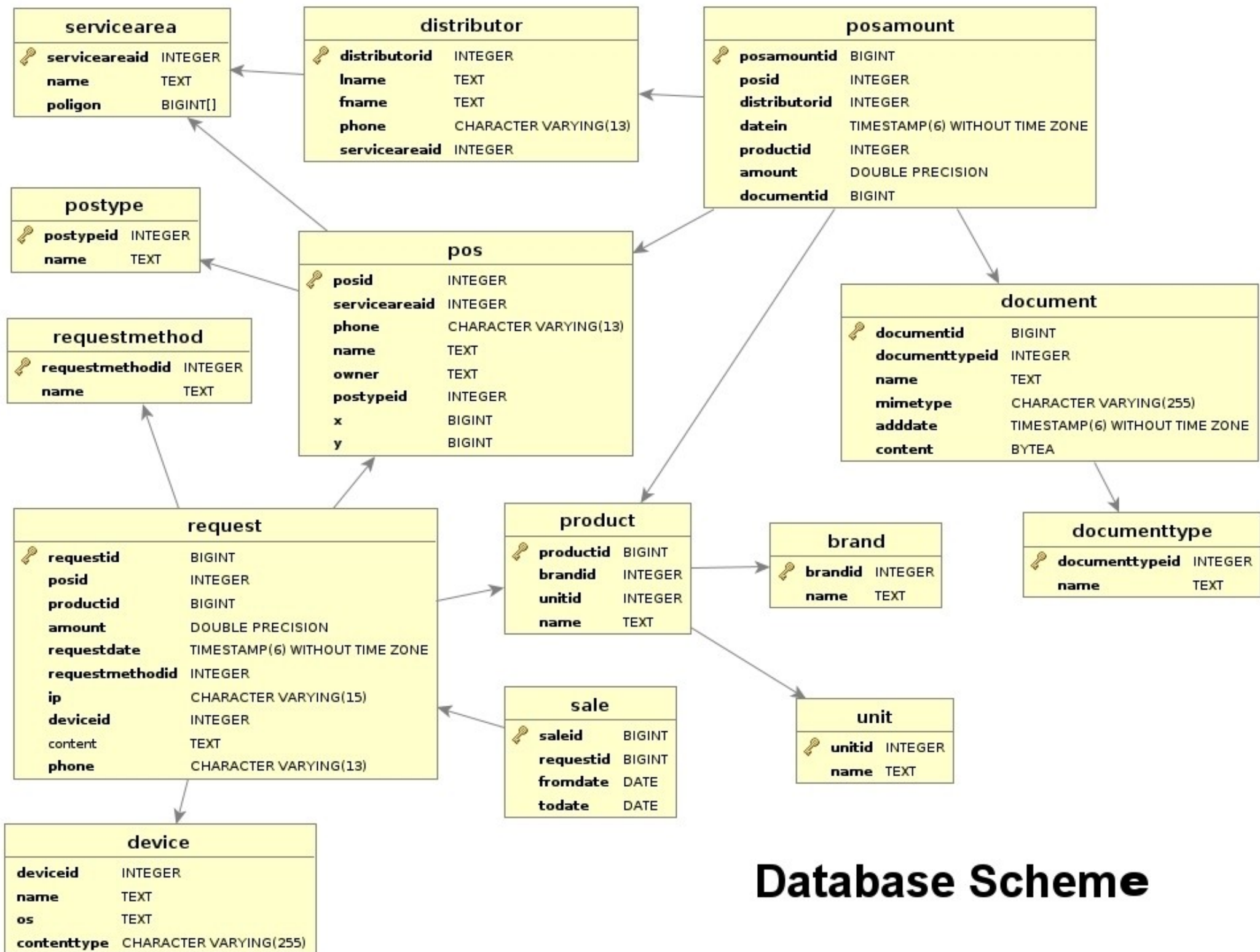
Alternatively, shop owners would also be able to provide request to distributors by special request form by WAP/SMS, which could be regarded as official invoice document.

Solution – technical tasks

- Create server side management application;
- Create client side applications for separate mobile models;
- Create client side web based interface for mobile phone;
- Create SMS adapter for message parsing;
- Create notification module for distributors (email, SMS).

Scheme





Database Scheme

Server

Apache-Tomcat
JSP and Servlets
JavaBeans
JDBC driver

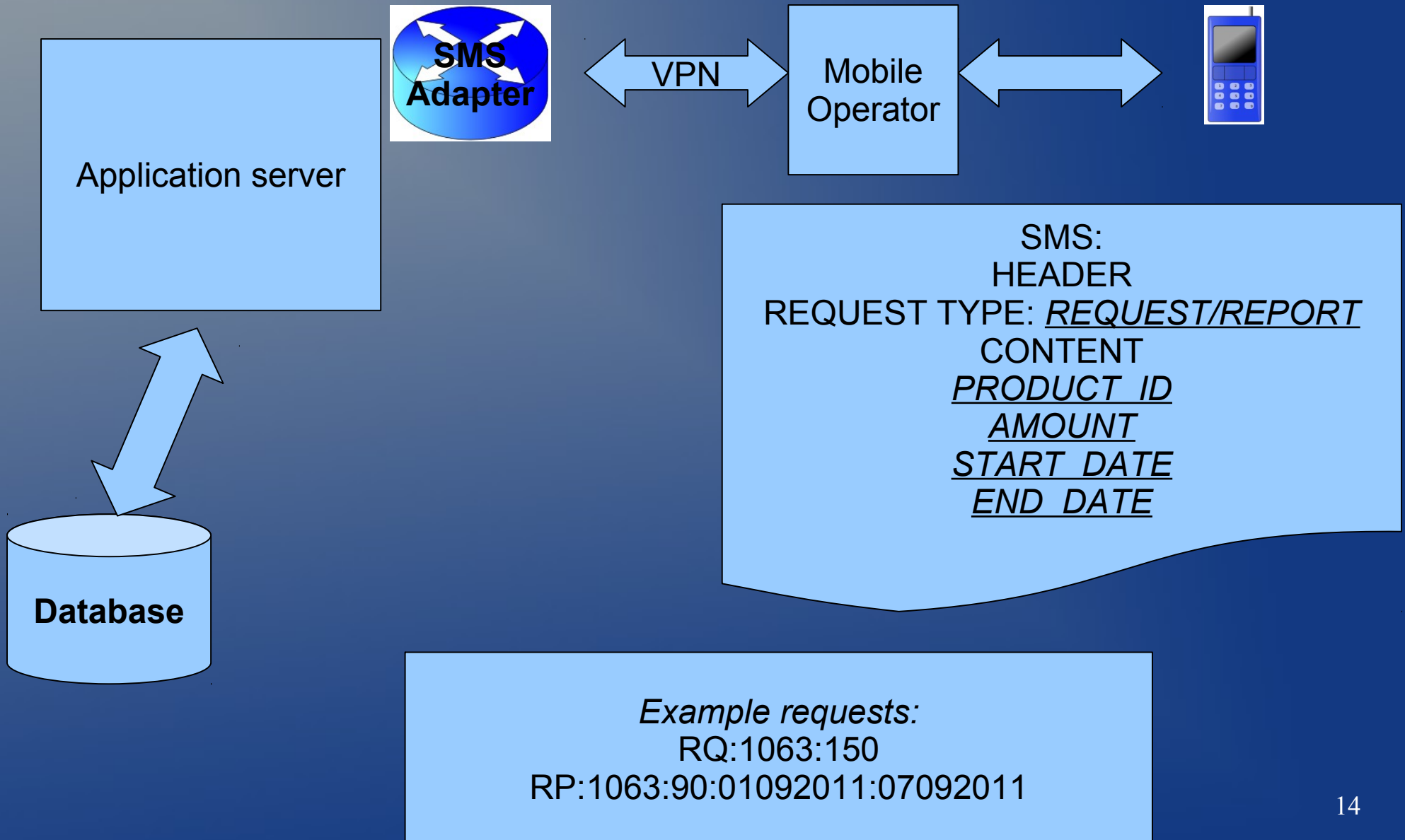
VPN connection with mobile operator

Clients - Mobiles

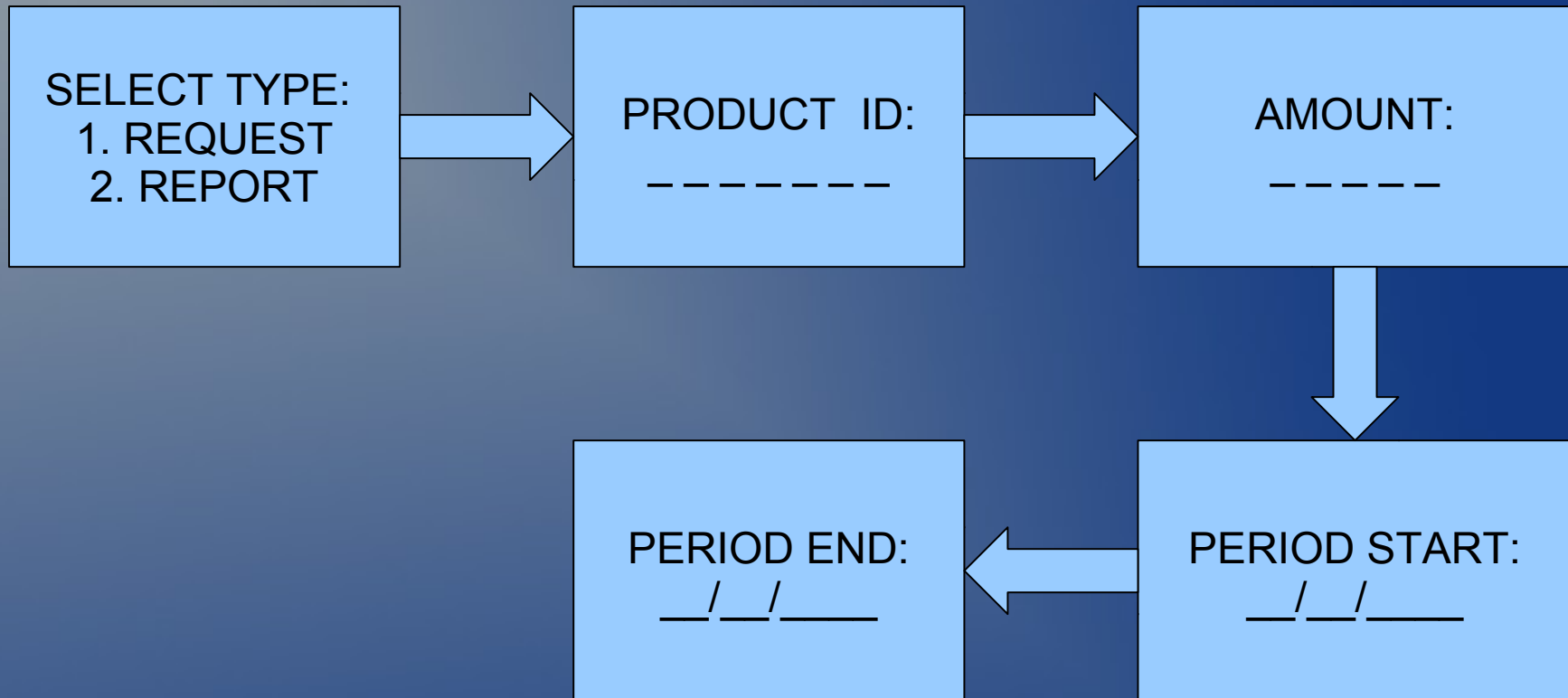
Any mobile phone

1. No HTML browsers: will use WAP or SMS messaging
2. With HTML browsers: will use special HTML pages generated for mobile devices based on specific models
3. Some mobile models: special application clients

Clients - SMS



Clients - WAP



Expected Outcome

The proposed model will result in:

- better and more efficient stock management;
- expansion of service distribution areas;
- decrease of distributor's repeated trips to shops due to corrected information;
- decrease of number of distributors;
- profit increase thanks to all above-mentioned.

Cost-efficiency

The approach would be cost-efficient as there will be no infrastructure development cost – ordinary – already existing cell phones will be used, and open source software platform will be developed.

Therefore, only cost will be related to software development