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Communicating with a Large Customer Base via Mobile Messaging

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Motivation



> Mobile Phone

- > Most important and most personal digital communication tool
- > Adds customer feedback to classical marketing
- > Base of cross-media marketing activities

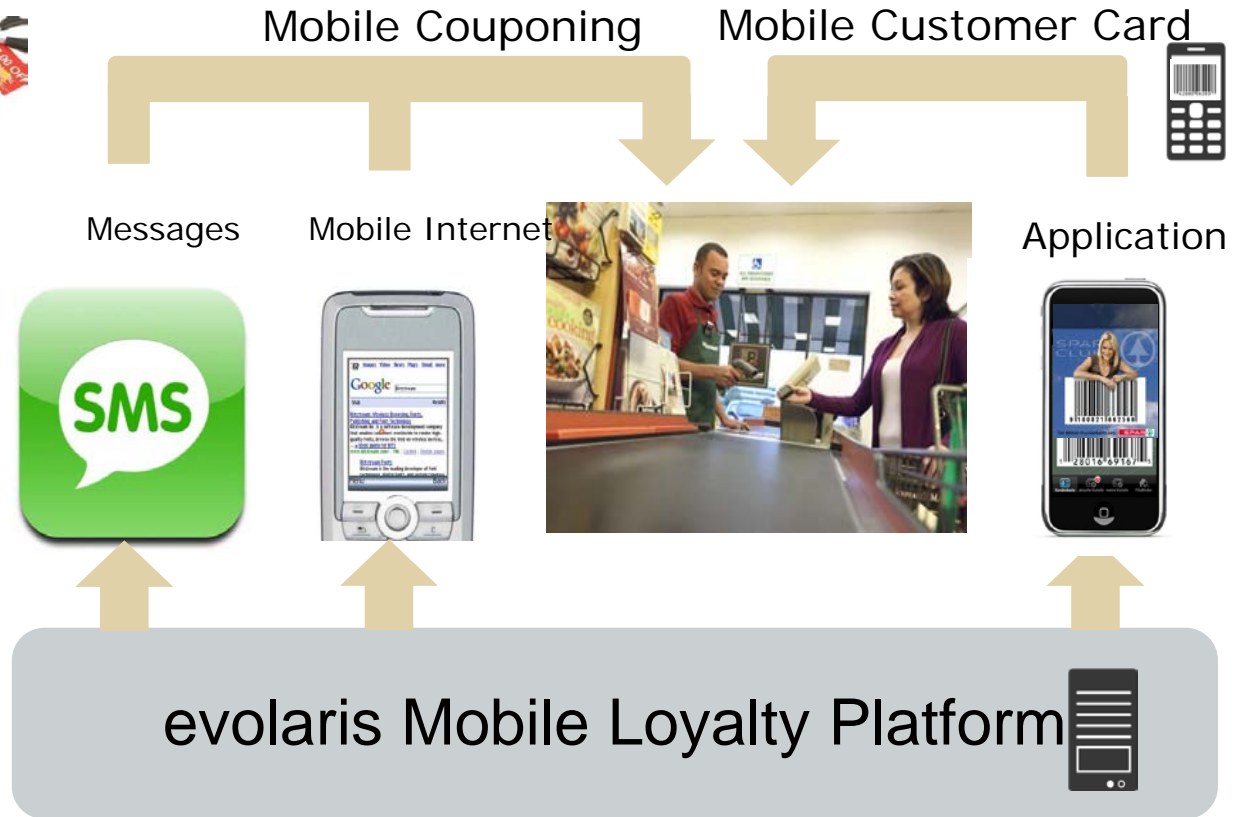
Motivation

- > Mobile Messages
 - > Fast
 - > Cost-effective
 - > compared to letters and brochures
 - > Personal

- > Advanced Content
 - > Multimedia
 - > MMS
 - > E-mail
 - > Tags
 - > 2D codes
 - > Links
 - > Information
 - > Mobile applications

Requirements

- > Central Control
 - > Campaigns
 - > Statistics
 - > Logging
- > Customer Data
 - > Master data
 - > Preferences
 - > User behavior
- > Messaging
 - > Personalized
 - > Timers
- > Interactions
 - > Incoming messages
 - > Dialogs
- > Reporting
- > Mobile application support



Server Platform – User Interface

Label *

Template

Message Text

Diese Telefonnummer wurde schon für die Teilnahme am Gewinnspiel registriert. Jede Nummer kann nur einmal teilnehmen. Ihr evolaris-Team

characters: 135

Sender

Destination

sender

contact

user set

users


Filter

Show Fragments

De

| | Label | Interaction |
|----|--------|--|
| Mo | 01 | <i>prohibit voting twice</i> |
| | 01/1 | is there a log entry with operation tag "ALREADY_VOTED_RESEARCH_2010"? <i>log entry exists</i> |
| | 01/1a1 | SMS to sender: "Diese Telefonnummer wurde schon für die Teilnahme am Gewinnspiel registriert. Jede Nummer kann nur einmal teilnehmen. Ihr evolaris-Team" |
| | 01/1a2 | BREAK (ALREAD_VOTED_RESEARCH_2010) |
| | 01/2 | interaction log entry: ALREADY_VOTED_RESEARCH_2010 |
| | 1 | <i>log valid vote</i> |
| | 1/1 | interaction log entry: ARG_VOTE_RESEARCH_2010 |
| | 1/2 | SMS to sender: "Vielen Dank für Ihre Teilnahme! Alle richtigen Tipps nehmen an der Verlosung am 14. Juli teil. Die Gewinner werden telefonisch verständigt. Ihr evolaris-Team" |

Server Platform – User Interface


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Users | Messages | Events | Offers | Reports | Blogs | Surveys | Administration
 Demo ▾ | tom | Logout

Message Tasks

Message sending currently switched on

Filter

Messages of all groups
 Messages of client project (platform)
 Messages of group (Demo)
 Own messages (tom)

from to (current time: 2011-03-07 16:57:42)

State planned suspicious unallowed active failed successful

Type any any mobile MMS WAP push 2D code e-mail

Originator MSISDN E-mail

Contained message text

Select all (currently no messages selected)

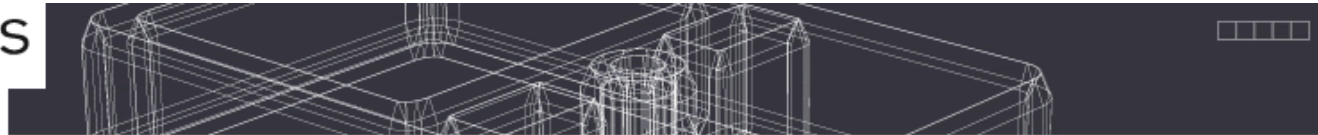
up to items per page

35 items found, displaying 1 to 20.

[First/Prev] 1, 2[Next/Last]

| | Planned | Originator | Sender | Receivers | State | Message | Type |
|--------------------------|------------------------|--------------------------------|----------------|-----------|-------------|--------------------------------------|-------------|
| <input type="checkbox"/> | 2011-03-07 16:04:59 | Thomas Ebner (436648414434) | 43676800858826 | 1 | 0/0/0/0/0/1 | http://s.evolaris.net/surveypa... | SMS |
| <input type="checkbox"/> | 2011-02-17 15:56:45 | Thomas Ebner (436648414434) | 1234567 | 1 | 0/0/0/0/0/1 | test Link öffnen für 2D-Code: ... | SMS |
| <input type="checkbox"/> | 2010-09-22 15:51:29 | Thomas Ebner (436648414434) | 43676800858801 | 1 | 0/0/0/0/0/1 | blabla | SMS |
| <input type="checkbox"/> | 2010-09-21 11:26:33 | Thomas Ebner (436648414434) | 43676800858850 | 1 | 0/0/0/0/0/1 | | WAP push |
| <input type="checkbox"/> | 2010-09-21 11:19:07 | Thomas Ebner (436648414434) | 43676800858850 | 1 | 0/0/0/0/0/1 | | WAP push |
| <input type="checkbox"/> | 2010-09-21 11:05:40 | Thomas Ebner (436648414434) | 43676800858850 | 1 | 0/0/0/0/0/1 | | WAP push |

Server Platform – User Interface



Reporting - Umfragen - Default Kampagne

Group Overview

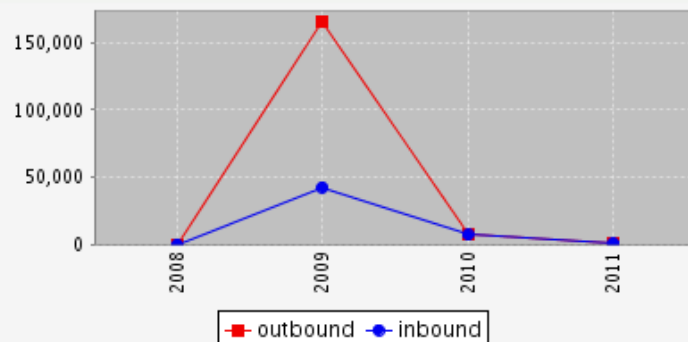
Group : Umfragen
Group since: 15.05.07
Number of registrated users: 0
Ratio of Deregistrations to Registrations: 0,00%

Number of all broadcasts: 123803

Reporting options

Reporting period: 01.01.08 - 07.03.11 Default Kampagne from 2008-01-01 to 2011-03-07 Anzeigen

Campaign Overview - inbound and outbound messages



[Listview](#)

Kampagnen-Rohdaten: [Excel](#) [CSV](#)

Campaign Overview

Campaign: Default Kampagne
Runtime: -

Number of Broadcasted messages: [123680](#)
Number of Outbound messages: [173747](#)
Number of Inbound messages: [49950](#)
Ratio of Inbound messages to Outbound messages: 1:3,5

Number of Registrations: [0](#)
Number of Deregistrations: [0](#)
Ratio of Registrations to Broadcastes messages: 0,00%
Ratio of Deregistrations to Registrations: 0,00%

Average membership time of registrated users: 0 days
Average membership time of deregistrated users: 0 days

Survey - 1.Version - Raiffeisen Wirkungsanalyse

Number of Broadcasted messages: 0
Number of participators: 0
Average time between broadcast and participations: 0 days

[Details](#)

Service - 1234

Number of Broadcasted messages: 0
Number of participators: 0
Average time between broadcast and participations: 0 days

[Details](#)

Technical Implementation - Technology

- > Base Technology (2006)
 - > Java (J2EE)
 - > Relational database (with Hibernate O/R mapping)
 - > Struts web framework

- > Middleware
 - > JBoss application server
 - > Apache Tomcat web Server
 - > MySQL / Oracle database management system

- > Servers
 - > Local
 - > Windows
 - > Mac-OS-X
 - > Production
 - > Linux

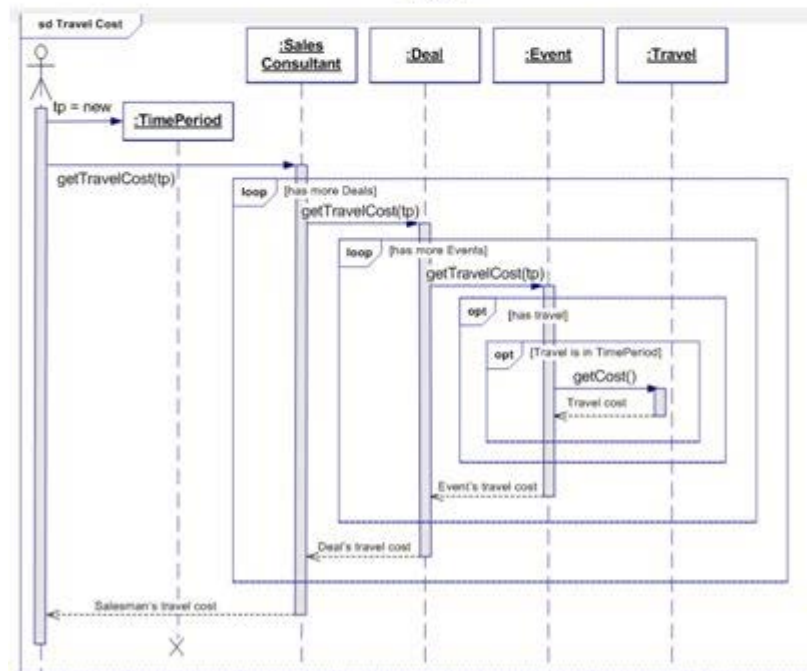
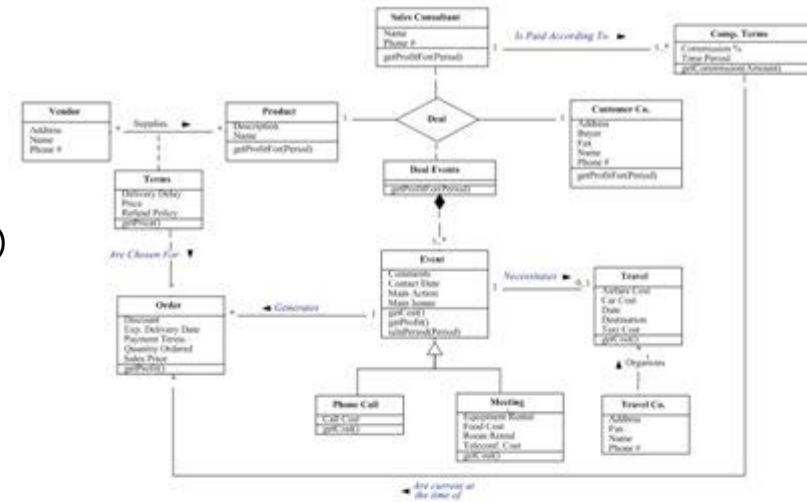
Technical Implementation - Tools

> Development

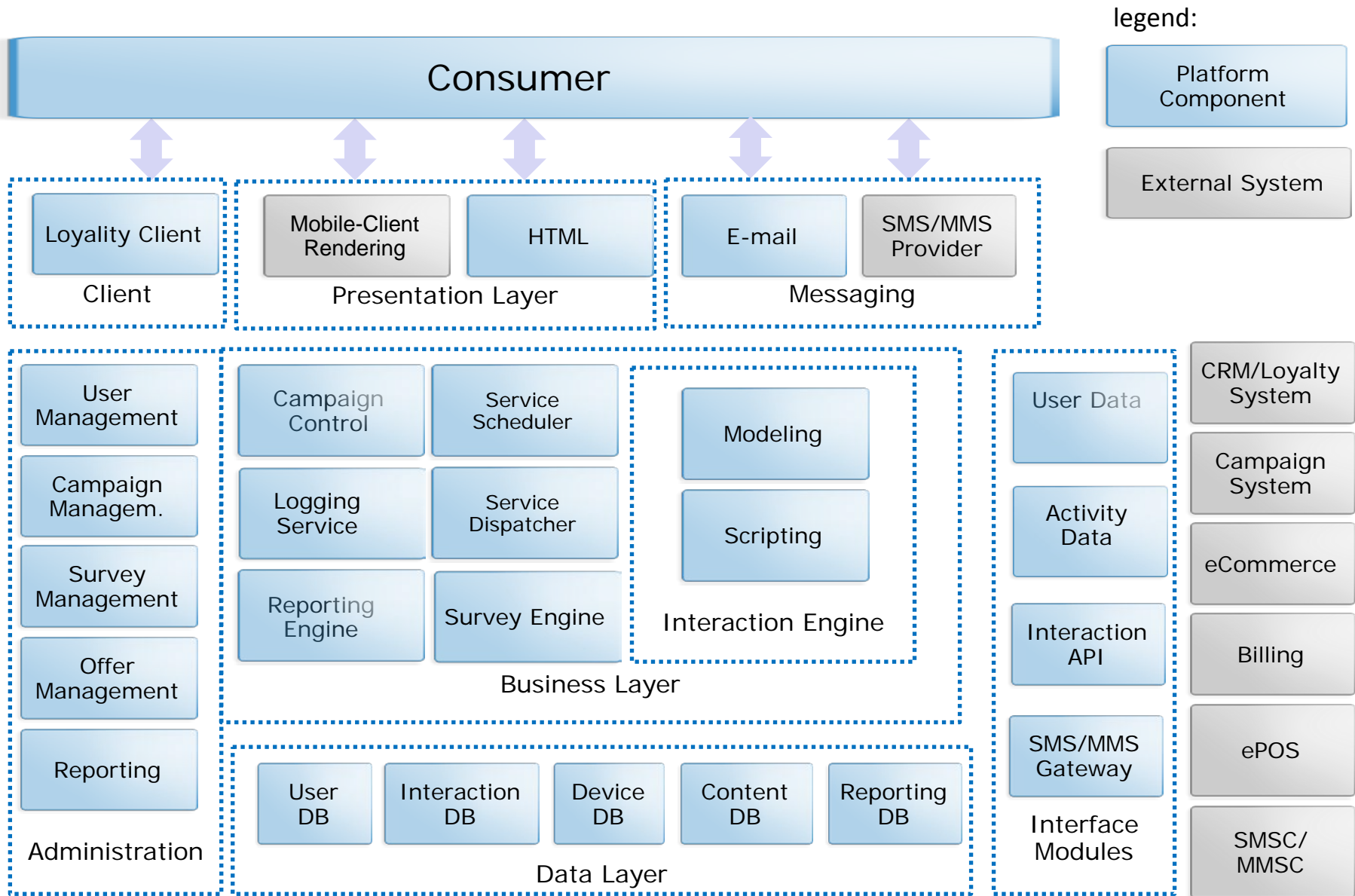
- > UML modeling
 - > Enterprise Architect
- > Development environment (IDE)
 - > Eclipse
- > Source code management
 - > Subversion
- > Building and testing
 - > ANT
 - > SQL
 - > Jenkins

> Production

- > PhpMyAdmin
- > SSH
- > Shell scripts



Technical Implementation - Architecture



Technical Implementation – Lines of Code

Totals grouped by language (dominant language first)

java: 105425 (82%)

jsp: 22945 (18%)

Total Physical Source Lines of Code (SLOC) = 128.370

Development Experiences – Platform Base

- > 5 Years, up to 4 Developers, 1 Tester
- > Technology
 - > From JBoss to Tomcat
- > Database Evolution
 - > Naming guidelines
 - > Schema evolution (compatibility)
 - > One instance, one schema, one project
- > Database Transactions
 - > Pessimistic versus optimistic locking
 - > Occasional timeout conditions
- > User Management
 - > More than 100000 users
 - > Optimization (SQL)
- > Message Handling
 - > Message tasks and messages
 - > Optimization (redundancy)

Development Experiences – Client Projects

- > Stable API
 - > Finally necessary for scripting support (Groovy)
- > Database Extensions
 - > Different table prefixes
 - > No cyclic dependencies
- > Client-Specific Projects
 - > Many platform base extensions
 - > Independent deployment hardly possible
- > User Interface Adjustments
 - > Menu configuration in the database
 - > From tables to XML

Evaluation

- > Reliability
 - > Constantly expanding system
 - > Strict deployment process
 - > Testing
 - > Check lists
 - > Less changes – more stability
 - > Configurable database attributes
 - > Scripting extension
 - > Only 5 platform versions in 2010
- > Performance
 - > Limited by database access and external systems
 - > optimized SQL queries
 - > bypass O/R mapping tool (e.g. n:m mapping)
 - > blocked data access (message sending)
 - > table indices
 - > 17,000 personalized messages in 30 minutes
- > External technical evolution in 5 years (Java)
 - > Mainly web frameworks

Lessions Learned

- > Development Process
 - > Guidelines are important (DB)
 - > Wiki instead of Word documents
 - > JavaDoc overrated?
- > Development Environment
 - > Minimize number of IDE projects
 - > Avoid complicated tools (JBoss) and frameworks (Struts)
- > Software Structure
 - > Keep base parts small (reusability overrated?)
 - > Avoid unnecessary layers (business layer always necessary?)
 - > Avoid indirection and interfaces
 - > "Escape the matrix of technology"

Thank you for your attention!

Questions?

Comments?

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