Tamino Mobile
XML based Integration, Development and Application Services for Mobile Computing

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Director Product Marketing
- Mobile Computing -
Tamino Mobile Overview
Tamino Mobile – The Value Add

The value of a consistent “End-To-End” technology is:

Consistent mobile access
How: One approach for all devices
Result: Reduce costs for mobile enabling

Consistent Application architecture
How: Using the same platform for all mobile Applications
Result: Reduce TCO per application

Consistent data format and storage
How: One standardized data format
Result: Reduce costs for data administration

Consistent integration
How: One integration approach, independent of the access method
Result: Reduce costs for integration
Tamino Mobile Suite Description

Software AG's Tamino Mobile Suite is a platform for fourth-generation mobile applications that uses XML from the front to the back end. It is the most homogeneous one on the market and enables integration of existing application systems, development of Web services, native XML data storage, and access (both online and offline) to corporate data.

All types of mobile applications are supported:

- Browser based applications for Voice, Web and WAP
- Offline applications with synchronization
- Alerts based applications
Multi-Channel Applications are Complex

**Services**
.NET/HailStorm
CRM
Web Services

**Application Logic**
Legacy Application
Java EJB
JSP/ASP

**Data Sources**
Web
RDBMS
XML
HTTP

**Multitude of Modes**
Real-Time
Off-Line
Alerts

**Multitude of Devices**
J2ME
Smart Phones
PDAs
PCs

**Multitude of Channels**
Voice
Web
Data
Problem #1

Taming the Device Chaos

- Screen Orientation
- Pixels
- Color
- Fonts
- Image Formats
- Language
- Character sets
- Modal interface
- Scripting
- Java
- Streaming
- Other Capabilities...

...
Problem #2
Supporting Multi-Channel Access

Example: On-line trading
– multiple access mechanisms need to be supported
Problem #3
Supporting Multiple Usage Modes

**Real time**
1. Online trading
2. Manage MyAlerts on a Web site

**Offline+Sync**
1. My-Portfolio-to-go! Shows portfolio & news locally offline
2. Synchronize & download latest news and quotes

**Alerts**
1. Receive alerts onto PDA and trigger local application
2. Alerts initiate transactions

Example: On-line trading – multiple usage modes need to be supported
How is This Being Addressed Today?
Typical Enterprise implementing point solutions

...Complexity of Integration...

Processes
- .NET
- CRM
- Web Services

Applications
- Java/ EJB
- JSP/ASP
- Legacy Application

Data
- Web Content
- RDBMS
- XML
- HTTP

...Complexity of Interaction...

- Sales Force Automation
- Inventory Order Service
- Voice Access Portal
- SMS/WAP Alerts Application
- ...

Software AG
THE XML COMPANY
Model View Controller
One-time Modeling, Multiple use
One Process – Many Devices

An application consists of processes ...

but on different devices ...

One and the same process may have different navigation methods and display information in different ways.
Flexible and Rapid Application Development

- **Rapid application development** with user-interaction modeling, emulators and plug-ins to industry standard tools
- **Lower maintenance costs** with complete separation of presentation layer, business logic layer and data layer
- **Lower integration costs** through co-existence with existing infrastructure, web services and standards (UA-Prof, J2EE, xHTML)
- **80% reduction in templates** with single authoring
Tamino Mobile
Suite Components

Interactive Development Environment
- User interaction modeling
- Template builder
- Adapter builder
- Device emulators
- Offline code gen
- Debugging
- Plug in to 3rd party tools

Notification
- JMS queuing
- Publish/subscribe
- Personalization
- Rules engine
- Interactive alerts

Presentation
- ML transformation
- Template mgmt
- Auto device detection
- Device library

Synchronization
- Synchronize files, dbs, Java objects
- Incremental sync
- Smart synch

Interaction
- Security
- Multi-modal
- Session mgmt
- State mgmt
- Caching
- Runs adapters
- Reconnect
- Web services

Tamino
- XML Server
- Staging and Aggregation
- Repository
- Synchronization Server

EntireX XML Mediator
- Back end integration
- Routing
- Transformation
- Web-Service enabling

Business Analysis Engine
- Report building wizards
- Pre-built reports
- Accessible from 3rd party tools
XML based Integration

Business Transaction ≠ Technical/Database Transaction

Result:
- Decouple synchronization from back end processing
- Control about the information delivery process
- Get control about replicates
- Deal with network failures, system downtime etc.
- Deal with conflicts, if any
- Define and handle system events (changes) using pre-defined rules
- Implement protocol standards

Sync Adapter

The Sync Adapter keeps care on changes happened in the back end
End To End XML Processing

Management Console

Data Management Server

Aggregated/virtual Documents

Gateways

Sync

Connector

CRM

PPS

SAP

Trigger

Trigger

process

map

route

transform

CRM PPS SAP

Trigger

process

map

route

transform
Backend-Integration
via Web Service enabled Connectors

XML / Web service interfaces

XML Adapter Configuration Tool

Data Management

XML Mediator
Sequencer
SOAP Gateway
Communicator
Workbench

... and many more
The Value Of Document Oriented Integration

- Document oriented integration covers business transactions in XML documents and therefore reflect the well proven and established business processes which are today mainly based on paper documents.

Examples:
- SAP change request for materials, customers etc.
- SAP material information sheet to add materials.
- FSA Service Report used for invoices, loan calculation or logistics

- Dealing with documents over the overall business process chain, limits the effort for
  - Maintaining procedure oriented interfaces due to changed data layouts or due to adding more system components
  - Using the same system for other business channels/scenarios (TCO)
  - Allows a revisable tracking and archiving of business transactions
  - Offer the chance to re-book an erroneous entry (logical step), compared to having only the result and the per back end system database transactions in place.
  - Handling conflicts, even for synchronization
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Tamino Mobile Applications
Tamino Mobile FSA
Mobilised functions

- Schedule appointment
- Customer information
- Material, history information
- Hotline reports
- Service reports
- Used spare parts
- Activities done
- Spare part catalogue
- Work order details
- Work order schedule
- Spare parts request

Plus any function from any other Tamino Mobile Application
Erklärung: Der KD-Schein wird zur Rückmeldung der Einsatzdaten verwendet. Im Idealfall können Steuerkartendaten übernommen werden (Serialnr. und Bezeichnung des Gerätes an dem gearbeitet wurde). Sonst werden die Daten erst von LgOrt A nach LgOrt B umgebucht werden (Beispiel: Techniker A erhält auf der Autobahn Ware von Techniker B).

Achtung: Diese Daten werden erst nach dem Verlassen der Praxis auf den Durchlägen nachgetragen, da für den Kunden nicht relevant.
Placer Dome, South Africa
Mining Industry, Supply Chain Mgmt.

Description
- 12,000 people, 17 mines worldwide, headquarters in Australia
- Sales 2002: US-$ 4.7bn
- First phase of roll-out with 50 mobile users, in 2004 several 100 users planned (per mine)

Features
- Material data (online/offline access)
- Order of materials
- Diverse search functions
- Integration into backend (Adabas/Natural)
- 60,000 positions in stock of materials
- Order and stock taking
- Synchronisation

Benefits
- Reduction of materials on stock
- Streamlined order and stock taking processes
- Elimination of paper forms and flow
- Integrated solution with automatic synchronisation of data
- Permanent check of inventory
- Higher accuracy of information
Tamino Mobile SFA
Mobilised functions

- Activity scheduling
- Commercial activity schedule
- To-do checklist
- Presented products
- Product orders
- Promotional item orders
- Promotional item provisioning
- Activity/visit report
- Customer and lead maintenance
- Customer info
- Contacts
- Locations
- Expense reports
- Customer and lead maintenance
- Tour management
- To-do checklist
- Commercial activity schedule

* All of them available both offline and online

Plus any function from any other Tamino Mobile Application
Tobaccoland, Austria
Retail, SFA

<table>
<thead>
<tr>
<th>Definition</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Leading distributor of tobacco and related products in Austria, subsidiary of Austria Tabak</td>
<td></td>
</tr>
<tr>
<td>• 55 sales staff (15 store checks/day, promotions)</td>
<td>• Efficient route planning (15 visits per day)</td>
</tr>
<tr>
<td>• PDAs, with Tamino Server &amp; Tamino Mobile DB</td>
<td>• Higher promotional effectiveness due to timely notification (promotions, discounts)</td>
</tr>
<tr>
<td>• Offline usage (data synchronisation at end of day)</td>
<td>• Higher service level due to more information about customer (e.g. sales figures, customer activities)</td>
</tr>
<tr>
<td>• Internet administration system (PC-interface)</td>
<td>• Lower process cost due to simplification</td>
</tr>
<tr>
<td></td>
<td>• Higher revenues due to faster billing</td>
</tr>
<tr>
<td></td>
<td>• Better control due to higher data quality</td>
</tr>
</tbody>
</table>

Features

• Customer data, history and notes
• Time and activity recording
• Travel expenses
• Catalog of promotional items
• Visit report
• Notification and messaging
Metro de Madrid, Spain
Public Transportation, MIS
Tamino Mobile Building Blocks
Application Building Blocks for Solutions
E.g. Field Service Automation - FSA

A “Building Block” consists of all components that form a specific business function like material management, activity booking or even authentication.

Several pre-defined “Building Blocks” form a specific mobile computing application.
Service Oriented Application Architecture

Architecture and Components

- Browser based Mobile Online front-end
- HTML based Admin interface
- Rendering
- Application-Controller
- Views
- Cache
- Integration Layer
- Adapter
- Services: Order-Mgm, Material-Mgm, News-Mgm, Activity-Mgm
- Services: Monitoring, Authorization, Replication, Persistence
- Data Management
- ERP
- Web-Services

PDA
- IE
- Views
- Appl-Controller

Server
- OSGi-Services
- Sync-Manager
- Tamino Mobile

Internet
Customer Example, Service Architecture

America: 4000 Users
- Browser
- Tamino Mobile Suite
- Smart Client
- Enhanced Sync
- J2SE

EMEA: 4000 Users
- Browser
- Tamino Mobile Suite
- Smart Client
- Enhanced Sync
- J2SE

APAC: 2500 Users
- Browser
- Tamino Mobile Suite
- Smart Client
- Enhanced Sync
- J2SE

Sync
- HTTPS
- Differences
- Compression
- Encryption
- Business Rules

Partner Web-Portal
- Browser Client
- Enhanced Sync
- TMO

Online
- Web Service
- TMS – Foundation Server
- Tamino XML Server
- Application Components
- Cache / Sync Server
- TMS Presentation Server

Logistic
- Invoice
- Inventory
- ...
Any Questions?

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