MAS - Mobile Applications And Services

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August 18, 2008
Mobile Applications

What are we talking about here?

• Mobile - not tied to your desktop
  • cell phones, pdas, tablets, watches, earbuds, cerebral implants, etc

• Applications
  • interactive, social, gaming, business, e-commerce, travel, informational, health care, etc

• Services
  • presence, location, identity mgmt, group mgmt, PoC, voice, text, video

• Networks
  • cellular, WiFi, WiMax, 2.5 G, 3G, 4G, etc
Business Integration Challenges

“Primary barriers to deployment are company culture and structure, not technical.” - IMS FOKUS Workshop

- IPR and product realization
- access and control
- content ownership
- custom solutions
  - generalized platforms with significant investment (SAP/Oracle)
  - financial transactions (banking, stock market, etc)
  - Security (video, alarming)
  - travel (schedules, coordination, reservations, etc)
  - ...plenty of other large verticals
- In short, who makes money and how?
Human Factors Integration Challenges

- lessons from the iPod
- have to account for diversity
- handsets, I/O, and networks
- location services case study .... “coupon spam”
- can’t assume *always on* connections (problem of Mobile Google Maps)
IMS Benefits - Official Story

- Access Independence - not just Cellular: wired, WiFi, WiMax, etc
- Standards Based - IP, SIP, portable across providers
- QoS - ability to link application needs to provisioning
- Billing/Charging - for commercial viability, carrier ROI, “one bill”
- Integration of new services - no more stovepipe applications
  - presence, location, group management, PoC, voice, text, video
Figure 1: Position of the IP Multimedia Subsystem within a mobile network
IMS Position

IMS - S stands for **SUBsystem**
SIP is just about signaling - call and session management

What about:
- legacy telephone systems?
- other carriers and their services?
- ISPs, cable and satellite operators?
- content providers?
- service providers?
- large enterprises?
Technical Integration Challenges

- What is the relationship between IMS and Web 2.0?
- congruent and consistent scale, resolution, and access controls
IMS and Web 2.0

- exposing IMS services to web applications
- leveraging web services in IMS applications
- converged web and IMS services
ConCal
Conferencing via Calendars

Your calendar sets up the conference call and calls you!
<table>
<thead>
<tr>
<th>Without Concal</th>
<th>With Concal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get invited via email</td>
<td>Get invited via email</td>
</tr>
<tr>
<td>Accept via email</td>
<td>Accept via email</td>
</tr>
<tr>
<td>Remember conference time</td>
<td>Answer your phone</td>
</tr>
<tr>
<td>Call into the conference</td>
<td>talk</td>
</tr>
<tr>
<td>Enter conference ID</td>
<td>talk</td>
</tr>
<tr>
<td>Enter PIN</td>
<td>talk</td>
</tr>
</tbody>
</table>
Scheduler: Zimbra Extension

Zimlet allows a meeting to become a conference call
Some projects from previous years.
Winner - Campus Community

SoCoNet - Social Community Network
Nils Kjellin, Christian Menkens, Matthew Rhodes, Anders Davoust

Idea: Provide a social community network application that enables individuals to interact, inform, and communicate using IMS enabled mobile phones.
“…your whole community in your pocket”

Features:
- Profiles (buddies and hotspots)
- Communication
  - Text Chat, Text Message, Picture Message, Voice Call, Video Call, Wall, Blog
  - Push-to-Talk IMS enabling service
- Multimedia
  - Photo Albums, Video / Audio Clips
- Lectures
  - Class Information, Lecture Material, Class Interaction, Announcements, Live / Recorded Lecture
- Events, Ticketing and News
  - Event Information, Reservations
- Subscriptions and Notifications
  - Community updates
Kinship

Devin Hunt, David Jimison

Idea: Instant video sharing with live interaction through chat and location-based collaboration.

Features:

• Video capture streamed to an IMS-based video service.
• Instantly accessible to multiple consumers
• Simultaneous chat for true participatory experience
• Video stored automatically - even if phone is lost
• Encourage collaborative capture and contribution of multiple users
• Videos also available to web users
Winner - Young Adult/Teens

MobMedia
Gaurishankar Krishnan, Shivam Goyal

Idea: Location based mixed media sharing using mobile devices.

Features:
- A medium for location-based encounters
- Discover and share media
- Drop media
- Get media recommendations and suggestions
- Create multiple avatars
- Buddy list
- Private, Protected and Public media
- Alerts, News Feed, Comments
Distributed Asset Tracking

David McCann, Dannon Baker, John Etherton

Initial Problem: current approach to asset tracking

- Infrastructure overhead
- Rigid process
- Special purpose technology

Our solution

- Personal responsibility
- Natural transactions
- Extensible tracking technologies
team make-up

Protocols
Architectures
Databases

UI design
Human Factors

GUI development

Prior Art

User Trials

Business Plan
Financials
Marketing

IMS Research Competition
But what should I do?

• inspiration
• keep it simple -vs- the kitchen sink
• first hand experience and frustration
• some concepts from last year
• search and re-search - read up on what is going on