Mobile Applications And Services for Converged Networks

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What are we talking about here?

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

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

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

• Converged Networks
  • cellular, WiFi, WiMax, 2.5 G, 3G, 4G, IP, IPTV, etc

An End to End perspective on mobile applications!
In one word, we are talking about

Convergence
Two primary goals for this class are:

- Build your expertise in the area of Mobile Apps
- Enhance your understanding of the business ecosystem
- Your active participation will be critical
  - Working on your group projects
  - Group presentations
- Discussions in-class and all over campus
The 2011 CIC Competition

5th Annual Competition

- Five Category Sponsors
- 300 Participants, 82 Finalists, 23 Teams, 8 Winners
- Multidisciplinary Teams of Undergraduate and Graduate Students
- Four Competition Categories
  - Interactive Television
  - Cloud to Home
  - Social Commerce
  - Campus Community
- Awards Event with Live Demos of All Entries

For video of live demos of entries, visit www.cic.gatech.edu
Judging Criteria

- Innovation
- Market and technical viability
- Usability
- Completeness
- Presentation

The CIC is the launching point for innovative, viable products to move towards the next venture. Winners go on to:

- Commercialization
- Other Competitions
- Internships
- Career Opportunities
**Commercialization Pipeline**

**Student Innovators**
- Training
- Preparation
- Team Building
- Classroom & Lab Courses

**GT-RNOC**
- Develops and administers the platform
- Hosts Academic & Research activities

**GT Venture Labs**
- Hosts & administers the competition
- Supports development teams with coaching & tier one support on the platform

**Commercialization**
- Partners with Venture Labs for bridge
- Grants & assists in preparation for Angel investor presentations

**Sponsor’s Product Development**
- Live trials
- Hackfests
- Class projects
- Independent Study
- Research Competition
Class Syllabus

Some stuff we’ll be talking about this semester

- SIP - Session Initiation Protocol - VoIP
- IMS - IP Multimedia Subsystem
- Location Services
- Presence Services
- SIP and Web A/S - Application Servers
- Interactive TV - IPTV
- OSGI - Open Services Gateway Initiative
All Those Mobile Applications

- I keep seeing articles about thousands of new mobile applications.
  - iPhone
  - Java
  - Android
- Yes, but how many of them leverage real network services? - very few
- Still lacking simple things like shared presence, address book, identity
- Still too many silos!
All Those Web Applications

- And they’re using Web APIs for Network Services
- They’ve made it fun and easy!
There are lots of challenges to putting it all together.

And a whole lot of opportunities!!!
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)
Technical Integration Challenges

• What is the relationship between IMS and Web 2.0?
• congruent and consistent scale, resolution, and access controls
• exposing IMS services to web applications
• leveraging web services in IMS applications
• converged web and IMS services