Increasing Values of Location-based Apps for End Users

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Barriers of Adoption
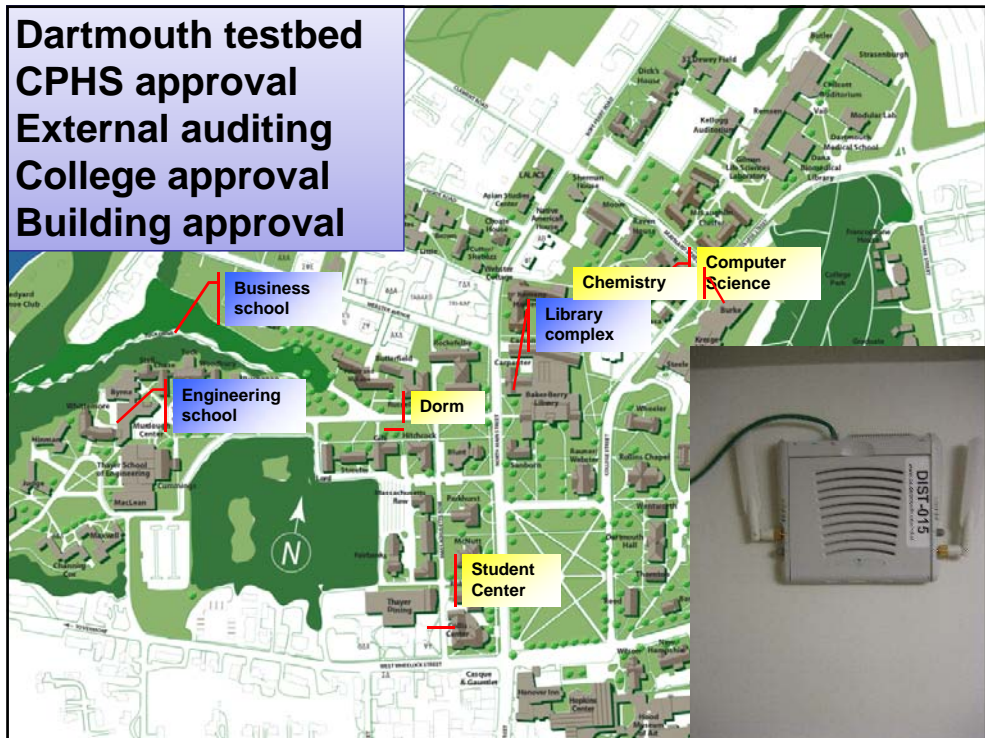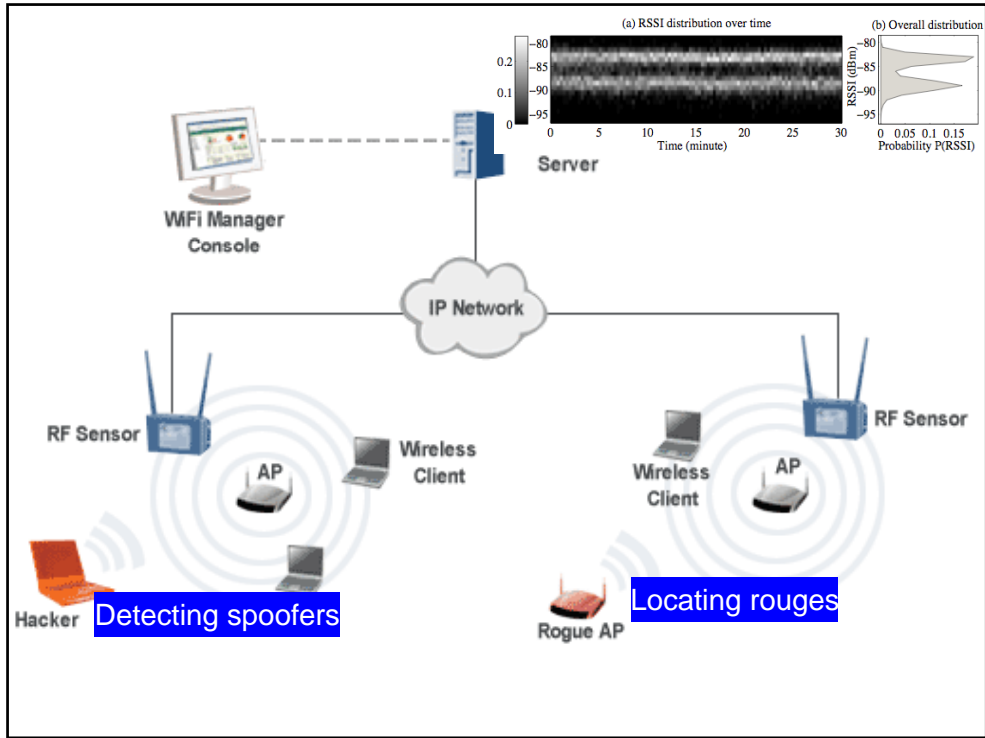
- Localization technology
- Devices and platforms
- User privacy and security

Two Projects

- Wireless Networks Monitoring
- Mobile Social Networks

WiFi Monitoring

(a) RSSI distribution over time
(b) Overall distribution

WiFi Manager Console
Server
IP Network
RF Sensor
Wireless Client
AP
Hacker
Detecting spoofers
RF Sensor
Wireless Client
AP
Rogue AP
Locating rouges

Dartmouth testbed
CPHS approval
External auditing
College approval
Building approval

Business school
Chemistry
Computer Science
Library complex
Engineering school
Dorm
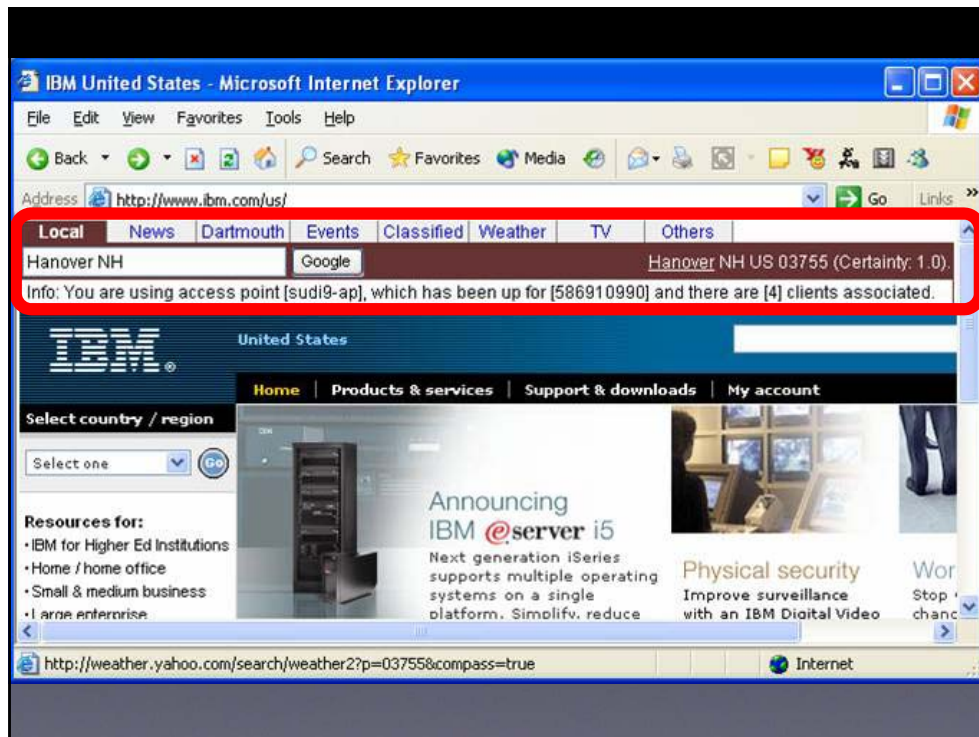Student Center

Automated Diagnostics

- Help desk challenges
  - Connectivity problems
  - Performance/quality issues
- Instrument nearby sniffers to capture

Mobile Social Networks

Mobile Applications

- Find
  - Business
  - Events
  - People (friends)
- Share
  - Location
  - Encounters
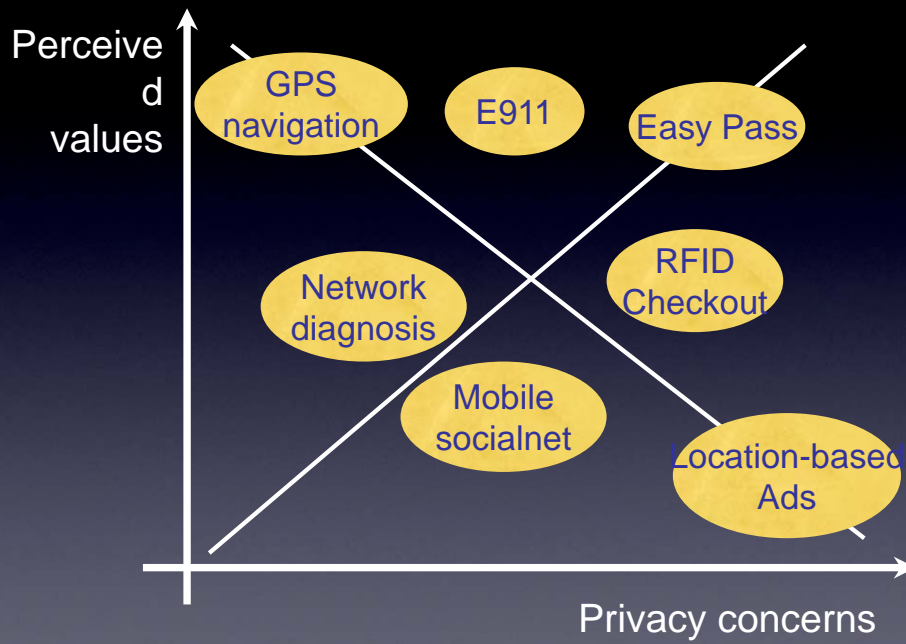 - What are you doing?

Deeper Context

- Beyond location
  - Feelings, moods
  - Love, like, hate, dislike + sth.
  - Need, want, desire

	SMS	Non-SMS
#updates	1205	19529
#users	1137	14654
top words	work 3% home 3% sleep 2.5% like 4.5% love 3% need 2% want 2% waiting 2% train 1.5%	work 2% home 1% sleep 1% like 2% love 1% need 1% want 1% waiting 0.3% train 0.1%

twitter

Summary

Considerations

- What are user perceived values?
  - Explicitly engaged
  - Implicitly inferred
- Who knows the location?
  - User devices
  - Service providers

  http://www.cs.uml.edu/~glchen/