LOCATION-BASED SERVICES & ASSESSMENT

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AGENDA

• Location-based services
• Designing a survey
• Enticing stakeholders and collaborators with assessment data
• Designing an app
• The future!
LOCATION-BASED SERVICES: CONSUMER FACING

HTML5 Geolocation API – IP address, cell tower triangulation, GPS, Wi-Fi nodes, and more

GPS & Google Maps API – cell tower triangulation and Wi-Fi nodes

Intelligent Mail barcode scanning, RFID, and GPS
LBS AND MOBILE DEVICES IN ACADEMIC LIBRARIES

- NSCU – WolfWalk
- Urbana Champaign – Minrva
- Brooklyn Museum – Ask
- University of Oklahoma – NavApp
Price Gilbert and Crosland renovations and Roving staff

Remote print collection and rising gadget checkout

Decline of traditional reference and rise of instruction
ASSESSMENT FROM LOCATION-BASED SERVICES

Collecting data from sensing equipment
- Specific internal location of users – wireless network triangulation
- Use of furniture and equipment – RFID signaling
- Number of users in a room – infrared signaling

Collecting data from the app
- Demographic information tied to log-in credentials
- Facilities issues and response times
- Contextually specific use of app
- Staff/faculty interactions with user
SURVEY DESIGN COMPONENTS

- Subject Matter Experts
- Student Advisory Boards
- Research
- Library Data
- Demographic Data

**Location-based Services Survey**

- Purposive sample of GT affiliates
- Tested and retested
- IRB approval
SURVEY RESULTS

• 31 responses or 3% response rate 😞
• Undergraduate and graduate students struggle with finding a place to study
• Graduate students want to track the location of requested items
• Preferences around notifications are ambiguous
• Reservations of books and computers popular across status categories
LOW RESPONSE RATES

Likely causes

• GT Library beginning to emerge as campus leader
• Survey fatigue from continuous improvement efforts from the GT Library

Unlikely causes

• Too many questions
• Spam filters
Ways to improve

- Target the survey to specific groups and pursue them
- Wait a year or so to redeploy the survey without IRB approval (for internal use only)
- Offer reward lottery for participation
HOW TO USE LIMITED RESPONSES

• Respect the insights and limitations of the survey
• Integrate other sources of data and information
• Note the successes of peer institutions
  • Minrva – 1000+ Android installations
  • NavApp – 500+ Android installations
ENTICING COLLABORATORS WITH DATA

Potential developers

- GTRI Electro Optical Sensing Lab
  - Internal building use for predictive modeling for first responders and other clients
- IPAT & RNOC
  - Smart Cities
  - Extending student work
- Cytilife
  - Extension of existing services
  - Improve models

Potential future collaborators

- Parking and Transit Services
  - Assessing parking, traffic, and egress
- Campus safety
  - First response to incidents
- Registrar
  - Campus space use
ENTICING LIBRARY STAKEHOLDERS WITH DATA

• Public Services
• Campus Engagement and Scholarly Outreach
• Library Facilities
• Fulfillment services from the Library Service Center
• Assessment
USING ASSESSMENT TO DESIGN THE APP

LBS App Use Cases

- Internal mapping and revealing location
- Room capacity
- Free and reserved computers
- Catalog integration
- Communication with faculty/staff
- Real-time facilities assistance
- Campus construction and navigation
ASSESSING THE APP, ASSESSING OURSELVES
Are location-based services and mobile devices a good match for my library?

- What problems are we solving? What information are we lacking?
- What are our existing mobile services?
  - Bounce rate and other metrics
- How much money can we spend?
- Who can we partner with?
WRAP-UP AND THE FUTURE

Machine learning and AI

Seamless checkout

Full campus integration
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