

The Links Between Place, Computing and Mobility

Anthony Townsend

Taub Urban Research Center

Interactive Telecommunications Program

New York University

Why Does Intel Want to Talk About Place?

- A corporation that has made billions helping others overcome the limits of geography
- First of many sweeping generalizations
 - 1980s: Access to basic computing power (replacing the mainframe)
 - 1990s: Access to digital media
 - 2000s: Access to networks

Is It A Growing Recognition That?...

- Computing is rapidly moving off the desktop
- Out of the office, out of the home
- This is leading to new patterns of technological adoption and adaptation
- Time to follow the customers out onto the street, and lead them if necessary

Evidence of New Patterns of Adoption and Adaptation is Everywhere

- Emergence of “Smart mobs”
 - Highly coordinated social groups
- Return to pre-industrial spatial patterns of work
 - Cottage industries, flexible offices, mobile workers, itinerant workers, freelancers
- Networks penetrating previously closed spaces
 - Classrooms, retail, automobiles, public spaces

New Technology is Making This Possible

- Wireless data
- Automated positioning systems
- GIS / spatial databases

- The convergence of these three is the holy grail for the next era of networked computing & communications

But I Think That We Don't Know That Much About Why This is Happening

Because it's not technologically driven. The cellular phone is a great example.

But there are three reasons why we should be concerned:

- Computing is very rapidly leaving the controlled environment of the desktop
- Place is (arguably) the single most important determinant of communications and information needs
- Because comp. sci. & related disciplines lack concepts to deal with place

* Or What We Can Do to Anticipate and Shape It

- Database theory doesn't help us understand the way people understand cities
- User interface R&D seems to be struggling with mobile platforms
- Consumers don't really know what they want, but even worse neither do the companies

There Is A Lot That Can Be Learned By Engaging Urban Designers

- We think about place 100% of every day
- We have insight on what places for good or bad places. How do we know this?
- Because the history of urban planning is largely a history of mistakes
- We've screwed up, so you don't have to!
- Unfortunately, the technology/comp. Sci. community hasn't drawn much upon this body of knowledge

Three Useful Concepts from Urban Design for Thinking About Digitally Mediated Places

And especially, public places...

- Imageability
- Pattern Languages
- Third Spaces

- Example: How these can inform our understanding of the emergence of public Wi-Fi hotspots

Imageability (then)

- Lynch, Kevin. The Image of the City (1960)
- Argued that people form mental maps of cities
- Some cities “explain” themselves better than others

Imageability

QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.

Imageability (now)

- The device that knows where it is and can retrieve location-relevant information
- Profound ability to shape of our “image of the city”
- Clarify / confuse
- Select / find / avoid
- Examples: Driving in Houston, *Bonfire of the Vanities*, Vindigo

Driving in Houston (then)

QuickTime™ and a TIFF (Uncompressed) decompressor are needed to see this picture.

Driving in Houston (now)

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Pattern Languages (then)

- Alexander, C. A Pattern Language (1978)
- There are timeless ways of building cities
- Patterns that appear over and over again in places that have evolved organically
- Help structure life & space
- Are inter-related
- 280+ patterns

Pattern Languages (now)

- Are any of these traditional patterns changing?
- Do we need to add new patterns?
- More pragmatically: Can we improve any of these patterns through place-aware digital technology?
- NYU Class: “Theory and Design of Digitally Mediated Urban Space” will look at this - [course site](#)

Third Spaces (then)

- Between home and work
- Fulfill needs for low-responsibility social interaction
- Pub, café, etc.

Third Spaces (now)

- Many created online (IRC, blogspace, etc)
- That was sort of exciting
- Existing third spaces are morphing
 - Getting connected to networks
 - Sophisticated mix of physical and virtual elements
 - PC bangs, SMS mobs, wireless parks

Two Years of Public Wi-Fi: What Have We Learned?

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What Have We Learned?

- Digital network connections probably are a new pattern
- Existing patterns like park benches are not very adaptive - users and devices might need to be the adaptive ones
- People treat place-based cybercommons similar to the commons itself
- Still about connections, not content
- Public custodians are optimistically cautious and want slow, incremental deployment

Conclusion:

The Scope of the Challenge

- We are at the very very earliest stages
- Akin to discussions of hypertext in the 1960s/70s
- Took 10 years to get the web highly customized for desktop research and shopping
- How long will it take to understand how to make mobile, networked, place-aware systems that people want?
- My guess: 20+ years

Optimism or Pessimism?

- New variety of possibilities
- Means many new opportunities
- But also loads of new ways to fail!
- One R&D strategy is to accept that the nature of places and the way people perceive them really won't change that much
 - Cities haven't changed a great deal since the beginning
 - The challenge is to make our technology fit into places and the lifestyles and activities that are structured around them

The Future of Digitally Enhanced Space Will Be One of Managed Change

- Urban planners saw what the car did to American cities
- Intel and others will never be able to dictate the future the way GM did in 1939

Questions and comments are welcomed

- Anthony.Townsend@nyu.edu
- NYU Urban Research Center
www.urban.nyu.edu
- Class: Designing Mediated Spaces
www.mediatedspace.org
- NYCwireless
www.nycwireless.net