CACP CENTER FOR ADVANCED COMMUNICATIONS POLICY

MUNICIPAL WIFI AND E-ACCESSIBILITY: THE IMPACT OF BUSINESS MODELS ON STAKEHOLDER INCLUSION

Paul M.A. Baker, Ph.D,
Center for Advanced Communications Policy (CACP)
Georgia Institute of technology

Alea M. Fairchild, Ph.D.
Vrije Universiteit Brussel

Jessica A. Pater
Georgia Tech Research Institute
Georgia Institute of Technology

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wireless RERC

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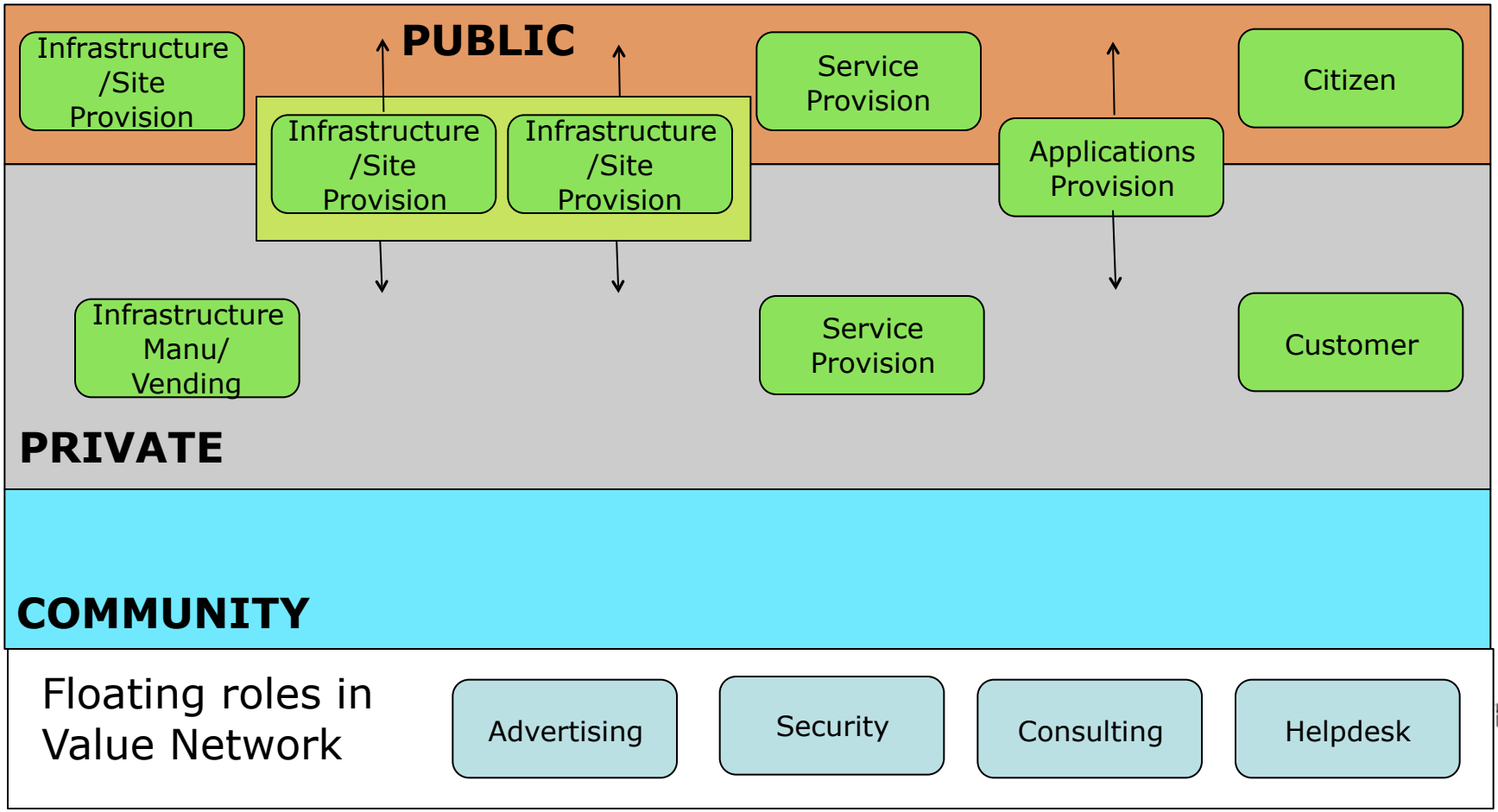
WiFI and People with Disabilities

- Bridging the digital divide is a key rationale for municipal WiFI deployment; facilitating more broadly accessible broadband connectivity with associated benefits (Bar and Park, 2006)
- >54.4 million Americans (19%) (US CENSUS), 10% of the EU or about 50 million (EC estimate) and 650 million globally (UN) have some kind of long-term or conditional disability
- American Disabilities Act of 1990
  - Mandates equal opportunity and benefit of U.S> municipal programs and services for people with disabilities
- Mobile technologies as an expansion of modes of specialized content delivery
- Accessibility of municipal websites – Project Civic Access (DOJ 2008)

Business Models in Municipal WiFi

- Generic Value Network Model (Van Audenhove *et al*, 2007)



Business Models in Municipal WiFi II

Model Type	Definition [Network management (NM) or service provisioning (SP)]
Private	NM or SP: Managed by private operator
Public	NM: The municipal authority is owner of the network and manages this itself SP: One or more public entities manage.
Open	NM: Municipal authority oversees its site, other parties involved in building of a network
Community	NM: The network is managed by the community
Wholesale	SP: Several private players are involved in service provisioning

Business Models in Municipal WiFi III

- Stratifications of Municipal WiFi business models

MODEL TYPE (NM - SP)	**EXAMPLES IN ACTION**
Private- Private	Bristol (UK), Cardiff (UK), Westminster (UK), Minneapolis (US)
Private – Wholesale	Philadelphia (US), Portland (US)
Public – Public	St. Cloud, FL (US)
Public – Wholesale	Stockholm (SE)
Open Site	Bologna (IT), Decatur, GA (US)
Community	Leiden (NL), Turku (FI), New York City (US)

Methodology: E-accessibility in a mobile context

- Media content analysis on accessibility beyond the connectivity criteria
- Accessibility Scale
  - AL (1): Little/no consideration – no specific mention of PWDs or disadvantaged populations
  - AL (2): Moderate consideration – peripheral mention of underprivileged groups; no detailed goals or intended impacts
  - AL (3): Substantial consideration – detailed discussion of disadvantaged communities with specific goals and ideals but nothing specific to PWDs
  - AL (4): Specific discussion of PWDs and the benefits of municipal wireless for this community

Results: European Municipal WiFi – Accessibility Sensitivity Analysis

- No network received more than a category 2 rating
- Bristol had no mention of PWDs
- Cardiff also had no mention, focused on business development and tourism
- Turku champions the sense of community, but no mention of PWD
- Stockholm greater awareness of social implications
- Bologna was more focused on community and municipal workers, no specific PWD mentions

Municipality	Category Rating
Bristol	AL (1)
Cardiff	AL (1)
Turku	AL (2)
Stockholm	AL (2)
Bologna	AL (2)
Leiden	AL (2)

Results: US Municipal WiFi – Accessibility Sensitivity Analysis

- Most projects are closely associated with levels of economic development within the communities
- Philadelphia was the only municipality that had public records referring to PWD
- Minneapolis mentions underprivileged groups, but not disadvantaged
- NYC still in development
- Decatur, GA recently built out, no mention of any specific groups

Municipality	Category Rating
Minneapolis	AL (2)
Philadelphia	AL (4)
Portland	AL (2)
St. Cloud	AL (1)
New York City	AL (2)
Decatur, GA	AL (1)

Results: Comparative Analysis of Models and Accessibility Awareness

City	Business Model	AL (1-4)	Stakeholder(s) involved
Bristol	Private – Private	1	City of Bristol, CitySpace, BelAir, Clear Channel, AdShell
Cardiff	Private – Private	1	Council of Cardiff, British Telecom, IBM, Mitel, Nortel, Apropos
Minneapolis	Private – Private	2	US Internet of Minnetonka, USI Wireless

Results: Comparative Analysis of Models and Accessibility Awareness

City	Business Model	AL (1-4)	Stakeholder(s) involved
Philadelphia	Private – Wholesale	4	City of Philadelphia, Wireless Philadelphia, Vision for Equality, Partners in Digital Inclusion
Portland	Private – Wholesale	2	City of Portland, MetroFi, Intel, DuVinci, Inc.
St. Cloud	Public – Public	1	City of St. Cloud, HP, Intel, MRI, Sprint, Warner, Cybershot

Results: Comparative Analysis of Models and Accessibility Awareness

City	Business Model	AL (1-4)	Stakeholder(s) involved
Stockholm	Public - Wholesale	2	City of Stockholm, Svenska Bostader, Ementor, Stoklab
Bologna	Open Site	2	City of Bologna, Univeristy of Bologna, RoamAD/HI-TEL Italia, Acantho
Minneapolis	Open Site	2	City of Decatur, Agnes Scott College, City of Decatur Schools, Columbia Technological Seminary, Downtown Development Authority

Results: Comparative Analysis of Models and Accessibility Awareness

City	Business Model	AL (1-4)	Stakeholder(s) involved
Leiden	Community	2	Wireles Leiden, Leiden University, HICCInet, Sun Microsystems, CeTIM, AA24, City of Leiden
Turku	Community	2	OpenSpark, City of Turku, four different universities, Amica Biocity, Buffalo Tech
New York City	Community	1	NYCwireless, Bryant Park Restoration Corp., Alliance for Downtown NYC

Conclusions

- There is a linkage between the type of stakeholder group and awareness of the needs for inclusivity/e-accessibility.
  - The greater the involvement from institutions that enable a wider public, the higher the AL rating the municipal wireless system exhibited.
  - The private model implies a different driver set for initial implementation and business goals while public models with either government or third party funding for initiation of the WiFi project may be a factor in consideration
- Potential influence of the ADA needs to be taken into account as Websites (but not currently WiFi systems specifically) while not specifically currently covered under Title 2 of the ADA have been deemed Title 3 public accommodations under some case law

Conclusions II

- The more diverse the stakeholder group the wider the range of consideration of WiFi user requirements
- Key difference between the Philadelphia implementation and the others is that business model category is the fact that service provisioning was initially done on a wholesale basis with tiered fees
  - Agility and adaptability of model allowed for the transference of network ownership from Earthlink to a locally formed entity in response to a changing business climate

Wrap-up

Further information:

- CACP: www.cacp.gatech.edu

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Policy Caveat

Die ich rief, die Geister
werd ich nun nicht los

From the spirits I have called
I now cannot rid myself

Goethe:"The Sorcerer's Apprentice"