

Digitally Supported Neighborhoods

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Abstract – The new infrastructure of digital telecommunication and ubiquitous computation enables people to work, communicate, and entertain via electronic networks from their living places. Therefore, understanding the nature and design of digitally supported neighborhoods is likely to emerge as an increasingly important research question. This study investigates how neighborhoods in Melbourne can be more appropriately designed for new technologies and other convenience, especially for new residents with different life styles. It adopts Sidney Brower's (1996) typology of neighborhoods and explores social, spatial and technological implications of new emergent lifestyles, according to Clifford's (2002) classification, on every type. **Key Words** – Digitally Supported Neighborhoods, Implication of Modern ICTs, Telecommunication Based Lifestyles, Typology, Scenario Based Study.

SUMMARY

Existing urban areas attempt to adapt themselves to the digital revolution, and developers are 'future-proofing' their properties by building high-speed wiring into their new neighborhoods and homes. As the former infrastructures like roads deeply converted the structure and qualities of neighborhoods, the new infrastructure is making some fundamental changes in it. However if neighborhoods employ it without appropriate planning and foresight the result will be as sad as many cities like Venice that lost the residents and traders after its disability of taking the heavy infrastructures of modernism.

To develop and sustain the newly emerged neighborhoods, we need to know what will happen to them after they receive the infrastructure and how they must adapt themselves with changes in activities and lifestyles. The research issue of this thesis is to investigate how neighborhoods can be more appropriately designed for new technologies and other convenience especially for new residents with different life styles.

A digitally supported neighborhood is one which offers appropriate, affordable and community wide telecommunication infrastructures which has the potential to make a considerable change in residents' every day lives (BEV, 2001, p.3).

To get clearer image of digitally supported neighborhood, four residential areas and neighborhoods have been identified and studied as part of background research. All four of them are known for their telecommunication infrastructures and services and have been chosen in different shapes and types. They are:

1. Dubai Marina (phase one), Dubai, UAE (www.dubai-marina.com) – dense and high rise.

2. Small Town of Blakburg, Virginia, USA (www.bev.net) – sprawled and suburb style .
3. Small Town of Abingdon, Virginia, USA (www.eva.org) – sprawled and suburb style.
4. Colletta di Castelbianco Televillage, Liguria, Italy (www.collettadicastelbianco.com) - rural.

Mitchell (2000), Castells (2000), McCullough (2004), Clifford (2002), Wellman (2002), Negroponte (1995),... are people who are working in the related research areas. Some of them comment on very general impacts of telecommunication technologies on cities and lifestyles. However, others offer more detailed comments about neighborhoods in telecommunication era.

Studying, documenting and analyzing all available literature and 4 mentioned residential areas, 32 social, spatial and technological qualities have been identified for digitally supported neighborhoods which are based on different view points, opinions and theories. These qualities include:

- The neighborhood is close to highway and airport.
- Interesting and pedestrian scale streetscape.
- Multi-purpose common facilities for meetings.
- Technical assistant for computer & Internet in the neighborhood.
- Convenient delivery system.
- 24 hour alive and active.
- Wireless Internet all around the neighborhood and access to the net in every public space.

But, no one neighborhood is suitable for every one (especially about digitally supported neighborhoods which there are lots of opposite opinions about them) and the quality that differentiates them from each other lies in the symbiosis of many different lifestyles in close proximity to each other. It means different types of neighborhoods should provide and support different residential experiences and activities, so that different types support different ways of living (Brower, 1996, p.13).

Therefore, to get the best result for this thesis two typologies have been adapted. One is Clifford's (2002) typology of lifestyles and the other is Sidney Brower's (1996) typology of neighborhoods.

Clifford, through interviewing and studying people who had an alternative style of living based on increased use of the Internet in their every day life, defined four lifestyles which is believed can have considerable impact on future built environment. These lifestyles are: (Clifford, 2002, pp.49-55)

1. Live/Work Scenario: This lifestyle includes those who have opted to work from home electronically, more commonly known as telecommuter or teleworker.
2. Work/Live Scenario: This lifestyle includes people who do a part of their personal activities in their work place, because their job needs 24/7 supervision. Example of this lifestyle includes who supervise networks, websites or work with different parts of the world virtually and because of time difference need 24 hours presence in the office.
3. Global Nomad Scenario: These people use telecommunication technologies to facilitate flexible work, spend a large portion of their formative and working years abroad or on the move.

4. Augmented Living Scenario: While lives may be more enriched and more convenient as a result of technology, the work and personal lives of people in this scenario are still separate.

Also Sidney Brower (1996) classified neighborhoods in four groups - Center, Small Town, Residential Partnership and Retreat. The reason for choosing Brower's typology is that his work is mostly about engagement and satisfaction. Although other typologies are used to describe the way things are, he uses it to show the way things ought to be. It will help to make an appropriate analysis for typology of digitally supported neighborhoods and their qualities (which might not exist yet).

This thesis is investigating how neighborhood types that Sidney Brower suggested should change to be convenient for Clifford's suggested lifestyles. It takes the view that each neighborhood typology reflects a different way of living and when telecommunication technologies are introduced into each of these neighborhoods, they will lead to different consequences and changes. The questions investigated in this thesis are:

- What are the appropriate social, spatial and technological qualities of every type of digitally supported neighborhood (with residents which telecommunication infrastructures has had great effect on their lifestyle)?
- How different life styles brought with the new infrastructures affect (or suits) different types of neighborhoods?
- Are the consequences of these technological developments uniform no matter in which type of neighborhood they take root? Or do they result in different outcomes in different typologies?

Toward investigating these questions which will be conducted in Melbourne, 48 people will be identified in four types of neighborhoods, 12 from each type. Every 12 people in each neighborhood type will include 3 people with each lifestyle. Then, in addition to finding out more about their lifestyles, the interviews and questionnaires will try to find out the participants' preferences about the identified qualities. Also they will be asked to describe their priorities for choosing their neighborhood and if they have ever lived in their ideal neighborhood.

The result will help to identify:

- Each neighborhood type's liked and disliked qualities, their similarities and differences.
- Preferences of the same lifestyles in different neighborhood contexts.
- Preferences of different lifestyles in the same neighborhood.
- Identifying some pre-existing wired neighborhoods which have been a good living environment for some of the participants.

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