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WiFi Hot Zones: A Fad or the Future?

A New Technology for Redevelopment Project Areas

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When technologically savvy redevelopment practitioners envision future project areas, many of them see “Hot Zones,” entire city blocks where information from the Internet can be accessed via WiFi (Wireless Fidelity)-enabled devices. They see residents, workers, and tourists firing up notebook computers and WiFi-enabled Personal Digital Assistants (PDAs) and cell phones to glean – for free – online information about events and services available within walking distance in project areas. That future is now!

Local redevelopment and economic development agencies are increasingly recognizing the draw of WiFi technology. With initial deployment and first-year operation costing between \$25,000 and \$50,000, WiFi can provide redevelopment agencies a big bang for relatively small bucks.

Furthermore, as travelers decide to stay in certain hotels based on WiFi availability, corporations provide WiFi access for their conference rooms, and search engines and online retailers tailor products to serve location specific markets, WiFi can be viewed not only as an added draw, but also as a requirement for commercial and downtown redevelopment projects.



Culver City celebrates with a “wire cutting” ceremony.

WiFi Beginnings

WiFi “Hot Spots” arose when small, pioneering private companies launched Internet services in coffee shops, hotels, airports, and convention centers. Hot Zones developed after the introduction of WiFi “mesh technology” allowed for cost-effective deployment for multi-block areas. Cities are now considering how such technology can be used citywide. As competition for the “voice market” now begins to intensify between cable companies, traditional telephone companies, and cell phone companies, WiFi has become a wild card in the market place.

Companies like Aiirmesh, Verge Wireless, and local start-ups began partnering with cities and redevelopment agencies about two years ago.

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Because redevelopment agencies work closely with the business community and other stakeholders, agencies have been able to help finance and/or coordinate the WiFi projects.

Meanwhile, convention center operators offering WiFi services onsite realized that they needed adjacent outdoor service as well. As a result, they too have approached redevelopment agencies for assistance.

In January 2003, the City of Long Beach pioneered public involvement in WiFi service when it created a Hot Zone along four blocks of Pine Avenue within its downtown redevelopment project area. The action garnered immediate national and international publicity.

Since then, local governments throughout the United States have taken the lead in creating public WiFi districts or Hot Zones with redevelopment agencies playing an important part in coordinating and financing this effort.

WiFi Technology

WiFi has been around for only a few years, but technological advancements are allowing easier access in communities. WiFi uses the unlicensed 2.4 GHz frequency – the same frequency used for a home microwave, a portable home phone, or a wireless home computer network. WiFi operates at a much faster broadband speed connections and is a technological leap over ordinary, and much slower, current cell phone access to the Internet.

To access the Internet via WiFi, computers or other hand-held devices lock onto radio-like devices. A major asset cities provide is the use of overhead streetlights or other poles to mount the WiFi radio devices.

By using mesh technology – a form of communication technology originally designed for military use – the radio devices communicate with each other which eliminates the need for a central device mounted on a special tower as in cell phone technology. Thus, the devices provide a seamless canopy of WiFi service.

A single enterprise quality device can provide service for a city block or larger area, while several of these linked devices can service entire business communities or residential neighborhoods.

The speed at which WiFi has been deployed is, in part, a result of consumer enthusiasm over new technology and, in part, from aggressive promotion by technology companies. In addition, more and newer mobile WiFi devices are entering the marketplace such as smaller notebook computers, smart phones, PDAs, and hand-held gaming devices which are creating greater interest by the public in accessing this technology.



WiFi demonstrations within the hot zone.

Current WiFi Projects

Examples of redevelopment agencies involved in WiFi projects include the cities of Fullerton and West Hollywood. In January 2005, Fullerton launched a WiFi project covering 24 downtown

blocks. That same month, the City of West Hollywood received proposals for a pilot project on Santa Monica Boulevard from La Brea Boulevard to Fairfax Avenue and other commercial areas.

The Community Redevelopment Agency of the City of Los Angeles (CRA/LA), in partnership with the City of Los Angeles Recreation and Parks Department, expects its WiFi project in Pershing Square to be up and running in March. The project will be marketed to downtown residents, workers, and tourists to increase the number of Pershing Square visitors by offering broadband Internet access. Users will log onto an entry page for the Pershing Square WiFi District that incorporates information from CRA/LA sponsored, ExperienceLA.com – a website listing countywide culture events, institutions and transit information. Other links will provide information on the park, the neighborhood, and CRA/LA. Revenues

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are being identified for additional services as part of the business model.

Meanwhile, the cities of San Jose, Culver City, Hermosa Beach, Cerritos, Los Angeles, and Riverside have all launched WiFi projects as part of economic development initiatives, often with redevelopment agency involvement.

Furthermore, Hermosa Beach is considering expanding its system across the entire city and Los Angeles has created a mayoral panel to study how WiFi can help to meet the broadband needs of the entire city. Recently, Los Angeles also issued a Request for Information to determine the potential use of and revenues from leasing city-owned assets for telecommunication needs. In addition, San Francisco has WiFi plans in the works and Anaheim is now studying how to provide WiFi.

Adopting WiFi

In deciding to deploy public WiFi, several important initial steps must be taken, according to government strategist, Matt Stone. They include the following:

- ❖ Determining if the community will benefit from WiFi.
- ❖ Building a team with critical stakeholders.
- ❖ Developing partnerships with leading technology companies.
- ❖ Educating the community about WiFi.
- ❖ Developing a strategy to work with existing telecommunication providers.

Other considerations include planning for future expansion of the WiFi zone, investing in mesh technology to cover large areas, considering the amount of bandwidth to provide, determining how the Hot Zone will connect to the main telecommunications hub for the region, and deciding whether to mount WiFi devices on street lighting standards or other places. Although redevelopment agencies have created public-private partnerships and have provided capital for two-year pilot projects, sustainability is still in question as agencies search for a self-sustaining business model or decide whether to offer it as an ongoing service funded by the business community with local government incentives.

The Future of WiFi

Even as cities install existing WiFi technology, Intel is preparing to launch the next step, WiMAX technology, which uses the same core technology as WiFi, but is able to carry more information in a higher bandwidth and over longer distances. WiMAX would provide cost-effective hookups to regional telecommunication hubs for local WiFi networks or enable WiMAX-equipped computers to reach the Internet at distances of up to 30 miles.

While the incorporation of WiMAX into mobile devices is still many years away, there is currently over 75 million WiFi-enabled devices worldwide. Meanwhile, major corporations are looking at opportunities to compete against traditional telecommunication firms using Voice over Internet Protocol



(VoIP) connections for the home or the office, with some considering WiFi for VoIP.

Recently, SBC announced a partnership with the California Department of Parks and Recreation to create 85 Hot Spots in state parks throughout California. After a two-year test period, the project will be expanded to nearly 400 parks.

Many hotels now offer free WiFi in their public spaces or in rooms. While Starbucks and T-Mobile first provided paid WiFi, competing coffee shop retailers now see WiFi as a necessary free amenity for their customers. Within traditional shopping centers, WiFi, once restricted to the food court, is being deployed throughout the center. Business Improvement Districts are considering WiFi technology in mobile devices for their staff and in security cameras.

The day is fast approaching when WiFi will be as commonplace as other telecommunication infrastructure. Redevelopment agencies in consultation with their stakeholders should consider whether WiFi will become another standard feature in developing urban and commercial project areas.

You can learn more about WiFi and how redevelopment agencies are playing an important role in WiFi deployment by attending CRA's annual conference. A session entitled, *Public WiFi and Redevelopment*, is being held on Thursday, March 10 at 11:00 a.m. The session will feature a panel that will discuss the use of public WiFi as an economic development tool in redevelopment project areas. This writer will serve as the moderator, and representatives from Long Beach, Culver City, Verge Wireless, and Tropos Networks will serve as panelists. For further information on this session as well as additional information on the conference, go to CRA's website at www.calredevelop.org.

For further information on WiFi, go to the following websites: www.muniwireless.com, www.WiFiplanet.com, or www.Dailywireless.org.

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