



CITY OF BEVERLY HILLS STAFF REPORT

Meeting Date: November 4, 2010
To: Honorable Mayor & City Council
From: David Schirmer, Chief Information Officer
Subject: Discussion of the City of Beverly Hills providing Internet services to businesses within the commercial areas of the City.
Attachments: 1. None

INTRODUCTION

At the October 15, 2010 Smart City / Technology Committee meeting, a request was made by Mayor Delshad to have a discussion with the full Council on the feasibility of providing Internet services to businesses within the commercial areas of the City. Staff is seeking direction from Council as to whether the City should pursue the development of a business case in support of this initiative

DISCUSSION

Background

The City of Beverly Hills has roughly 26 miles of fiber optic paths running throughout the city (figure 1). Each path contains multiple fiber optic cables, and each cable contains multiple fiber optic strands. The core of this metro Ethernet system operates at speeds of 10 gigabits per second, providing 1 gigabits of throughput at the edge of the network.

The primary purpose of this fiber is to provide computer network connectivity to the City's water utility infrastructure, remote offices, fire stations, parks, video cameras, wireless users, mobile workforce, etc. Additionally, as part of the Joint Powers agreement with the Beverly Hills Unified School District, the City provides local area network, and internet services to the four K-8 schools, the High School, and District offices.

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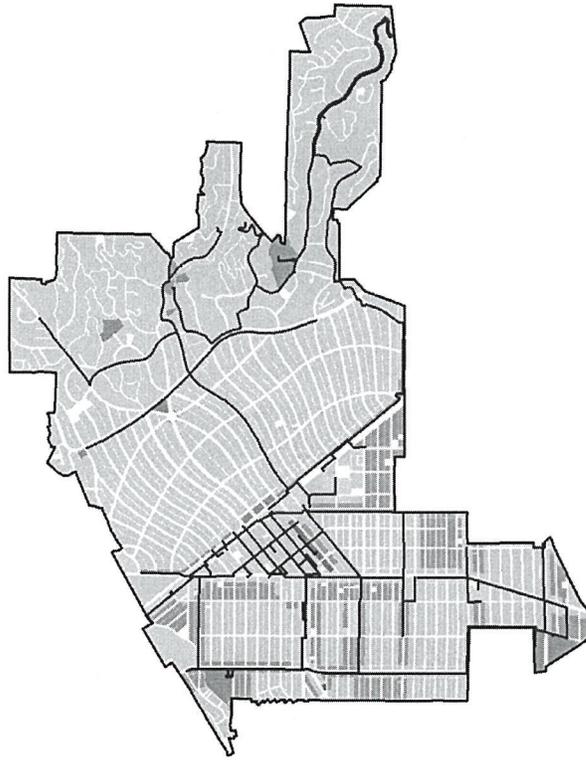


Figure 1: City of Beverly Hills Fiber Optic Network

Internet Services

While the City operates and derives benefit from this fiber network, the system by itself, does not provide internet access. Rather, the City must contract for these services through third party telecommunications companies (just as households receive these services in the form of a DSL line or a cable modem). Currently, the City's internet service provider is a reseller of AT&T data services. The Information Technology Department has developed plans to augment its internet services by connecting directly to a major point of presence on the internet (One Wilshire in downtown Los Angeles). Not only will this connection provide additional redundancy, but will also allow for increased bandwidth at lower prices. Effectively, the City is building the infrastructure to allow for scalable bandwidth access to the internet that will provide for business continuity and will be able to accommodate increased throughput that future applications will demand.

The City's fiber network may be thought of as analogous to an electric utility system, where there is generation, transmission and distribution. Generation may be thought of as the direct connection to the internet at One Wilshire where there is access to virtually unlimited bandwidth. Transmission would be analogous to the fiber optic cables running throughout the City as depicted in figure 1. The distribution piece, often termed 'the last mile', is bringing the service to the end user. This is often the most challenging piece, as the network needs to be physically extended into the end-users' facility.

This last mile piece often takes the form of construction (trenching, coring, jacking) from a node on an existing network to an individual premise where the service is needed (i.e.

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an office building). This last mile piece can be wireless, however, at reduced speeds and reduced reliability. Given this level of effort, this last mile piece tends to be

expensive, as the telecomm provider is often not directly adjacent to the premise where the service is needed. As a result most business and households tend to rely on the incumbent telecommunications providers for these services (e.g. telephone and cable companies).

Beverly Hills as an internet service provider

Given the proximity of the City's network to the commercial districts (figure 1), this last mile piece could potentially provide a significant advantage to the City were it to offer these services. By way of example, the City's network, and the Montage Hotel's network are within a few feet of one another, separated by an empty conduit. Physically connecting the two systems would be a very straightforward undertaking. Obviously, this is an extreme example, but the City's fiber optic cables are housed in conduits running under the sidewalks within the commercial areas.

We understand that the City of Alameda offers internet services to businesses and the City of San Bruno offers residential internet services.

Considerations

There are a number of issues that would need to be explored ranging from the legal regulatory hurdles to practical issues such as security, operations and maintenance to name a few. The following is a list of considerations:

- Regulatory Issues (ISP are subject to federal law and FCC regulations depending on the type of service provided)
- Security (firewalling potentially sensitive data, and protecting City data)
- Billing and customer service (quality of service issues)
- Not all business are adjacent to network
- Operations and maintenance expense
- Civil work required to for the last mile
- Inclusion of residents
- Incumbent telcos reaction (typically not well received)

FISCAL IMPACT

There are no fiscal impacts at this time. Should the Council elect pursue this initiative, it is expected that additional revenue streams could be realized, while at the same time, additional operations and maintenance costs would be incurred. These costs and benefits would be explored in much more detail insuring business case development.



David Schirmer
Approved By