

South Bay Broadband Feasibility Study Update

SBCCOG

IWG

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Magellan Findings

- Generally, cities are paying too much for too little
 - Buying individually at retail
- Little competition in the marketplace,
- Existing vendors are milking a cash cow and lack incentives to invest,
 - infrastructure is like a “dirt road” where it should be a 6 lane arterial
- Most city decision-makers lack basic knowledge of network technology, economics and policy

Magellan Recommendations

- Develop a backbone that will aggregate demand so cities can buy collectively at wholesale
- Issue an RFP
- Form a consortium of cities, organized at least initially by the SBCCOG as JPA

SBCCOG Next Steps

- Seek short term funding to support planning, education and technical assistance
 - Education -- monthly “Tech Talks” – next is July 13
- Seek longer term funding for cities to offset capital expenses associated with the backbone
- Obtain support letters from cities
 - Not a commitment, interest in joining the consortium if “deal” is advantageous
- Issue an RFP

Why is this important?

- Market conditions for muni corporations, businesses and home consumers – all are currently getting ripped off.
- Demand for bandwidth is growing right now from known sources like 5G cell service and cloud access for software, data, and backup storage.

Why is this really important?

Because regional economic and environmental sustainability will require an abundance of affordable high quality network services -- forever.

Fiber is a magical technology

- Capacity can be increased by updating software or by adding new electronics
 - Researchers have tested speeds of 255 TB/s
- One strand can produce a gig/sec
- In 2003 a few traffic signals could be managed by one strand, now 5,000 households can be serviced by one strand

Fiber Backbone is like a data freeway for the entire SB

- Backbone is the first phase of what could become a total buildout through the South Bay
- That is, individual cities will be able to build out their municipal, commercial and residential wide area networks at their discretion. These are the main arterials and side streets that connect to the data freeway.
 - Santa Monica is making a lot of money through its build-out
- No haves and have-nots, every city will be connected

Demand for bandwidth can increase quickly and without warning

- Smart phones gained 2 billion users in 10 years
- Facebook founded in 2004 (0 subscribers), but not opened to the public until 2006 gained 1.4 billion subscribers by 2015, essentially 9 years

Recent Digital Technologies

Each a platform for more innovation &
network demand

- AI and robots
- Augmented Reality
- 3D Printing
- Internet of Things
- Drones
- Virtual Reality
- Telepresence

IoT – Sensors will be everywhere

- Billions – soon to be trillions – of sensors and devices connected to one another that will hold the promise of transforming society
- Transportation – produces data for real time decision making and for building algorithms for signal control, lane management, dynamic parking regulations, parking apps, etc.
- Cities can remotely monitor the condition of roads, bridges, buildings, parks, and other venues. Maintenance crews can detect conditions of any infrastructure that may need repair

Possible Municipal Applications

- Public safety CCTV
- WiFi around public buildings and transit corridors
- Traffic signal synchronization
- Telecommuting
- Resource for business retention and attraction
- Online building permits
- Partially automated city hall
- Develop institutional capacity -- IT dept. as strategic resource

Fiber backbone will be a platform for additional innovations -- LUTCAP

- High speed connections between neighborhood centers – within ½ mile of every resident
- Public network access centers in each neighborhood
 - Virtual presence: distance education, digital medicine, e-government, e-retail
 - Access to means of production – 3D printing, app development, government hack-a-thons, digital literacy

Bonus for acting now:

Grant funds available to innovators

- Columbus, Ohio received \$50 million for USDOT through Smart City Challenge plus \$90 million more from private partners for hardware, software, and support services
- The SBCCOG is multi-jurisdictional – the fiber backbone will be perceived nationally as a significant innovation by a group of small suburban cities