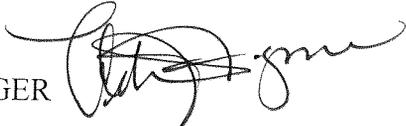




MEETING DATE: 06-19-06  
STUDY SESSION

### COUNCIL AGENDA REPORT

DATE: JUNE 14, 2006  
TO: MAYOR AND TOWN COUNCIL  
FROM: DEBRA J. FIGONE, TOWN MANAGER   
SUBJECT: STUDY SESSION ON WIRELESS SILICON VALLEY

#### RECOMMENDATION:

Discuss and provide comments on presentation by Seth Fearey, Vice President and Chief Operating Office of Joint Venture, the primary sponsor of the Wireless Silicon Valley project.

#### BACKGROUND:

The purpose of this study session is to provide the Town Council with an overview of the Wireless Silicon Valley project, along with an opportunity to comment and ask questions.

The Town of Los Gatos is one of more than 35 participants in an initiative launched by Joint Venture: Silicon Valley Network to encourage the development of a regional broadband wireless network. The Wireless Silicon Valley project is seeking proposals from vendors and network providers to establish and operate a network that will enable broadband wireless Internet access for residents, businesses, government agencies and outdoor venues within Silicon Valley (including cities in Santa Clara, San Mateo, and portions of Alameda and Santa Cruz counties).

#### DISCUSSION:

Attached is a copy of the presentation to be provided by Seth Fearey, Project Manager of the Wireless Silicon Valley project. In general, the presentation will cover:

- why communities have joined together to seek a regional approach to the provision of wireless services;
- the benefits of collaborating in this effort;

PREPARED BY: PAMELA S. JACOBS   
ASSISTANT TOWN MANAGER

N:\MGR\PJacobs\Special Projects\Wireless Silicon Valley council report.doc

Reviewed by: \_\_\_\_\_ Assistant Town Manager  Town Attorney  
\_\_\_\_\_ Clerk Administrator \_\_\_\_\_ Finance \_\_\_\_\_ Community Development

- how the wireless network can be used by residents, businesses, and public agencies;
- information about the Request for Proposals (RFP); and
- the challenges of the regional wireless model.

CONCLUSION:

The Study Session will provide Council with a fuller understanding of the process for and the benefits and challenges of the Wireless Silicon Valley project.

ENVIRONMENTAL ASSESSMENT:

Is not a project defined under CEQA, and no further action is required.

FISCAL IMPACT:

There is no fiscal impact associated with the Study Session on the Wireless Silicon Valley project.

Attachments:

1. PowerPoint presentation on Wireless Silicon Valley Project

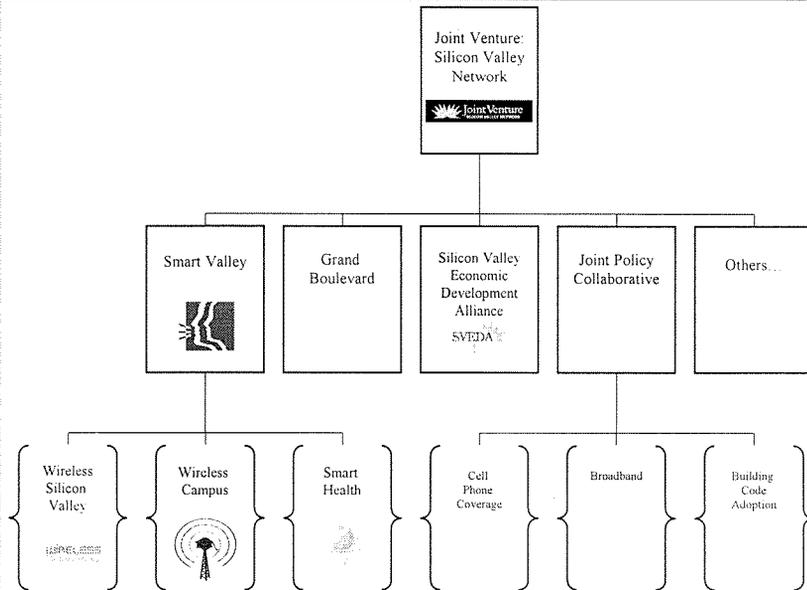


# Los Gatos Town Council Study Session: Wireless Silicon Valley

Seth G. Fearey, VP & COO  
Smart Valley Initiative Director  
Joint Venture: Silicon Valley  
Network

**WIRELESS**  
*Silicon Valley*

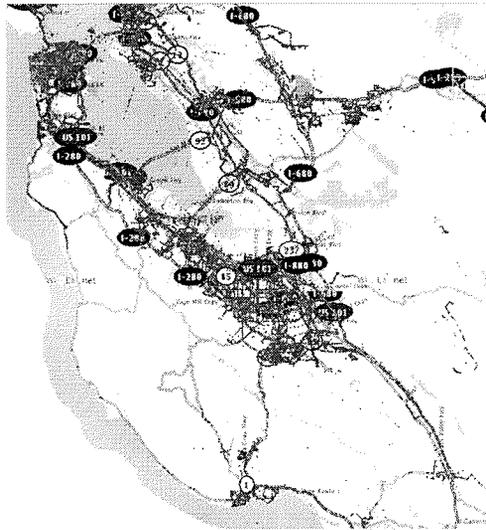
June 19, 2006





## Wireless in Silicon Valley Today

The Bay Area  
is #1 or #2 in  
number of  
Hotspots in  
the U.S.



Source: Wireless  
Geographic Logging  
Engine (wgle.net)



## Wireless in Silicon Valley Today

- Los Gatos was the first city in Santa Clara County to offer free wireless in the Town Plaza
- MetroFi is covering Cupertino, Sunnyvale, Santa Clara with free and paid services
- Google is building a free network in Mountain View
- Earthlink is extending the Milpitas Police network and opening it to the public
- We all have a history with Metricom
- But...

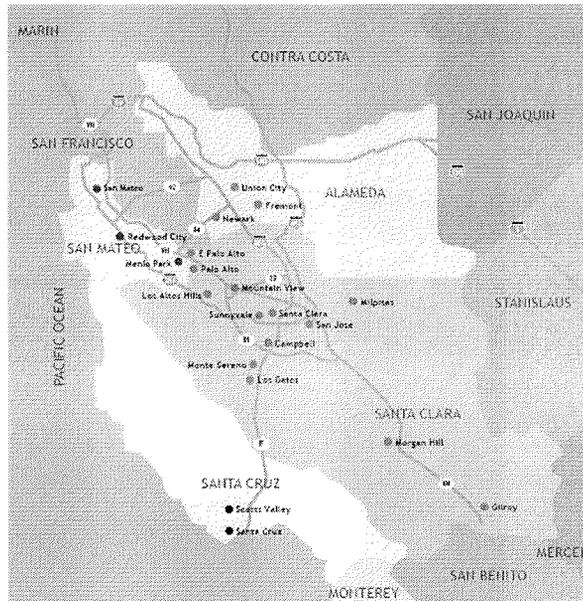


## Challenges

- Diverse topology with lots of trees and some very isolated communities
- And a lot of ground to cover...



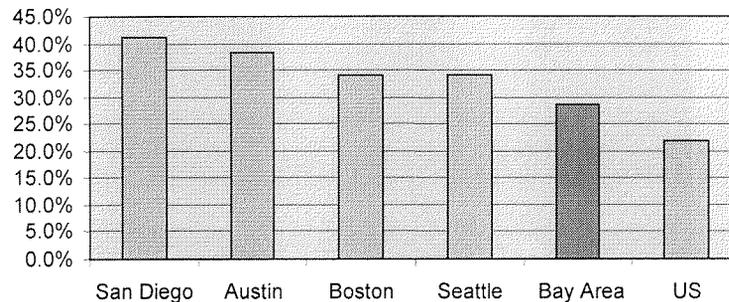
- about 1,500 square miles
- 2.4 million people
- about 800,000 households
- over 40 towns, cities, and counties





## We are not as well connected as we should be.

Percent of Households Using a Broadband Connection



Source: 2005 Index of Silicon Valley



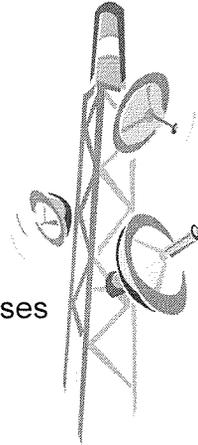
## The Wireless Silicon Valley Vision

- Cover all 1,500 square miles outdoors with high-speed, wireless, data network
- Offer seamless interoperability and mobility
- Attract a private sector owner-operator
- Serve public agencies, including libraries, police, fire, community centers, utilities, parking meters, public transportation
- Fill in broadband coverage gaps, underserved areas
- Provide visitors, local businesses with easy access
- Provide residents with an alternative provider
- Provide vendors with multiple revenue streams



## One network fits all

- Police
- Fire
- Hospitals
- Utilities
- Construction
- Visitors
- Service businesses
- The Arts
- Residents



- Laptop
- Phone
- Electrical, gas meter
- Water meter, irrigation controller
- Parking meter
- Signage
- Credit card reader

Outdoors, or in a train, bus, car, truck, ambulance, ...



## Proposed Service Tiers ("Business Model")

Basic Outdoors	Free or low cost, best effort speed, reliability, support for VPN
Enhanced Outdoors	Fee, high speed, best effort reliability, support for VPN
Indoor Guaranteed	Fee, CPE required, VPN
Government	Fee, high speed, QoS, support for VPN
Public Safety	Fee, high speed, QoS, extra security



## Example Applications

- Building inspections using handheld devices.
- Connectivity for events, e.g. signage, credit card readers, coordination
- Location sensing – computer aided dispatch for police, fire
- Webcams for security
- Construction site coordination
- Update GIS, workorder databases from the field
- Access to police databases and provide ability to file reports remotely
- Remote control of irrigation systems
- Automated meter reading
- Wireless parking meters – time of day pricing, open space sensing, credit card payment



## Some of the Benefits

- Convenience
  - Always available, no matter where you are
- Cost Savings
  - No need for wireline to install a sensor, camera
- Control
  - Remote control of signs, equipment; location sensing for tracking
- Timeliness
  - Faster response to information from the field



## Risks

- High cost of deployment
- Sustainability of the business model
- Technology changes
- Coverage
- Interference
- Complexity
- Network overload



## Process to Date

- Economic Development Managers
- Chief Information Officers/Information Technology Managers
- Co-chairs – Brian Moura (city), Dan Fenton (visitors)
- Monthly meetings
- Surveys
- Vision
- Fund raising – avg. \$2,500 per city
- Consultant – Intel Solution Services
- “Business Model” (tiers of service)
- 40 members in Santa Clara, San Mateo and Alameda Counties and the city of Santa Cruz
- Released Request for Proposal on April 28th



## Next Steps

- Outreach programs, study sessions for elected officials
- Form a review committee
- Develop a governance model
- Short list – end of July
- Selection – early September
- Negotiate of model agreement
- Make recommendation to cities and counties - October



## Governance

- Model: San Mateo County Telecommunications Alliance JPA



- Potential Roles
  - Negotiate model agreement
  - Recommend vendor(s) to cities and counties
  - Oversee deployment and operation
  - Champion the project, promote usage, applications
  - Forum for best practice sharing
  - Assist with priorities
  - Arbitrate issues, e.g. interference
  - Provide overall vision and strategy



## Later we can add

- Business Sector
- Utilities
- Water districts
- Public transportation
- Schools
- Disaster preparedness
- .....

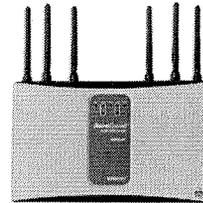
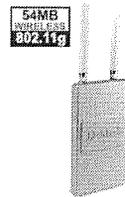
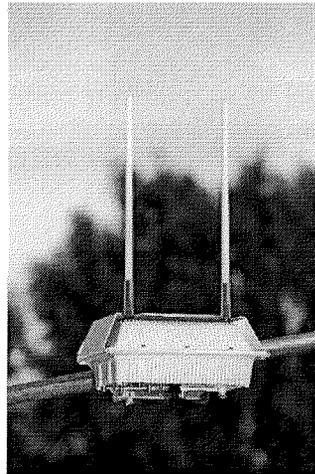


## The Role of Town and City Councils

- Encourage awareness of the program
- Encourage city staff and businesses to look for ways to use the new infrastructure to enhance services and cut costs
- Review the model agreement
- Address community concerns, e.g., health worries, aesthetics.



## Outdoor WiFi Access Points



## By working together

- We create a large market that can attract large players
- The network can be seamless as we move around the region
- We can share lessons learned as we deploy new applications
- We have buying power for applications software and equipment
- Each city doesn't have to re-invent the wheel when developing policies and negotiating agreements



## WIRELESS *Silicon Valley*

[www.wirelessiliconvalley.org](http://www.wirelessiliconvalley.org)



### Lessons from the City of Mountain View – p.1

- Set expectations early and often
- Need a city coordinator for permitting, legal, council meetings, advisor...
- Need a hot line for resident/business questions long before the system turns on
- Organize community training sessions
- Install, test, re-install, optimize
- Expect interference – work it out
- Expect higher AP density – at least 30/mi<sup>2</sup>



## Lessons from Mountain View – p.2

- Not enough mounting assets; office buildings are expensive
- Street lights come in many configurations and some of them won't work
- Ask residents for access to their roofs
- Trees grow, poles break, so document locations thoroughly and manage the inventory



## Lessons from Mountain View – p.3

- Test and approve signal boosters (CPE) (200 mw good, 50 mw doesn't work)
- Get retail stores on board and passing out information on connecting at home
- Citizen concerns are security and health. Appearance less so. Privacy an issue in San Francisco.