

Sonoma County
Connectivity Report

A progress report on Phase Two of the
Sonoma County Connectivity Council

2003-2004

Presented by

The Sonoma County Economic Development Board and
The Connectivity Council II

Ben Stone, Director

Table of Contents

Letter of Introductionii

Executive Summary1

Connectivity Council II Overview2

Deploying Broadband in Sonoma County3

Proliferation of Hot Spots in Sonoma County5

 Sonoma County Library Hot Spots5

 Publicly Available Hot Spots6

 Sonoma County Hot Spot Registry7

KRCB Television Broadband Initiative8

Making Sonoma County More Internet Connectivity Friendly8

Recommended Future Action9

Appendix10

 Connectivity Council II Members10

 Hot Spot Briefing11

 Hot Spot Registry22

 Hot Spot Signage23

 Sonoma County Library Log-in Page.....24

 Sonoma County Library Profile.....25

 Press Democrat Library Article.....27

 North Bay Business Journal Articles30

Sonoma County Connectivity Council II

In 2001, the Sonoma County Board of Supervisors authorized the formation of the Connectivity Council. This group was charged with the responsibility of overseeing the assessment of connectivity opportunities and challenges throughout the county. The Connectivity Council subsequently issued a connectivity assessment report, recommending several actions that representatives from all sectors of the county can take to expand Internet access.

This report is the culmination of the second phase of the Connectivity Council's (Connectivity Council II) efforts. It outlines the progress that the Council has made in 2003-2004. With initiatives ranging from increasing wireless Internet access to expanding broadband Internet services for the community, the Council has made significant progress towards increasing Sonoma County's Internet connectivity.

The Connectivity Council II's success is largely credited to the strong public/private partnerships that formed during the year. Representatives from local service providers, city and county government, industry, education and community groups came together to work towards the common goal of increasing Internet access.

We wish to express our appreciation to the public and private sector representatives, educators, community members and staff who were involved with the Connectivity Council's activities. A special thank you to Kate Tansey, Economic Development Board Project Coordinator, whose diligent and thoughtful assistance made possible many of the successes of the Connectivity Council II. We look forward to the continued expansion of broadband Internet services in Sonoma County.

Warren Dranit
Co-Chair Connectivity Council
Partner, Spaulding McCullough & Tansil LLP

Curt Wheeling
Co-Chair Connectivity Council
President, Phase Seven Laboratories

Executive Summary

At the conclusion of the first phase of the Connectivity Council in 2002, a series of policy considerations ranging from online business transactions to classroom delivery of educational resources was produced for consideration. The Board of Supervisors subsequently authorized the formation of a second Connectivity Council, Connectivity Council II, to move forward with several of the proposed policies. While there were many areas in which the Council could attempt to make progress, members agreed that the Council would begin with following project initiative areas:

- Proliferation of wireless Internet hot spots (short range wireless Internet access to a fixed location)
- Increased broadband Internet access (fixed location Internet access)
- Making Sonoma County more Internet connectivity friendly

Several projects emerged from the three areas of focus, and were worked on in 2003-2004. The following report details each project including the partners involved, specific accomplishments, and suggested future action. Below is a summary of each project:

1. Installation of wireless “WiFi” hot spots in Sonoma County Library branches

The Sonoma County Library is installing free wireless Internet access to library patrons in a project conceived through the Connectivity Council II, and with considerable engineering and technical assistance from Sonic.net.

2. Expansion of wireless Internet access hot spots in Sonoma County cities

Members of the Connectivity Council facilitated partnerships with city government leaders to encourage the expansion of wireless Internet access hot spots in public areas such as parks, town commons, and squares.

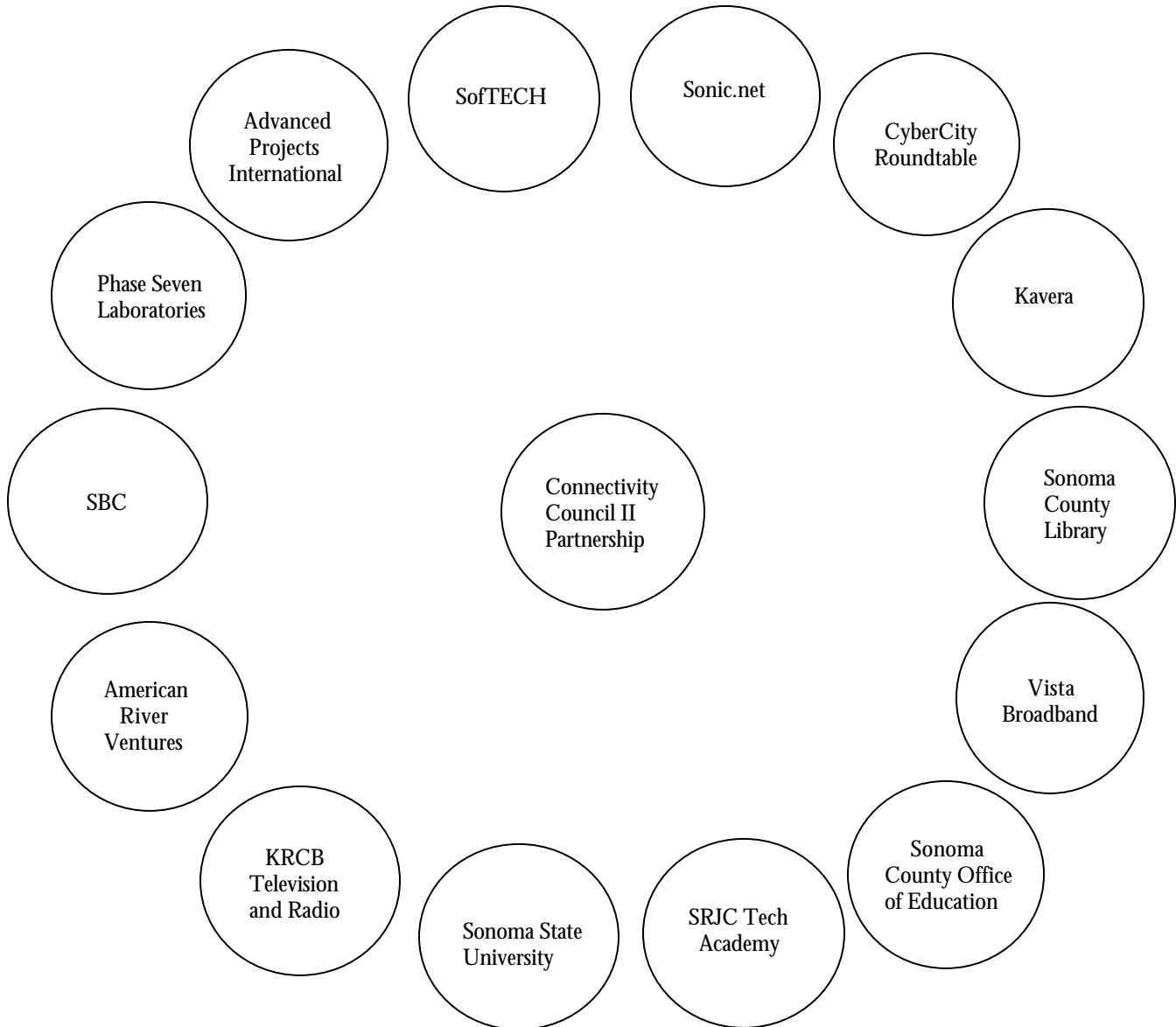
3. Creation of countywide hot spot registry

The Connectivity Council launched a hot spot registry, hosted on the North Bay Technology Roundtable website (www.nbtr.org/hotspots.html). The site, created by web designer John Foley at Resmatic, is designed to show the public where wireless hot spots exist around the county. While a number of hot spot registries exist online, this is the only known registry dedicated to Sonoma County hot spots.

4. Expansion of broadband Internet access via KRCB channels

Local public television station, KRCB, Advanced Projects International (API) and Sonic.net are partnering to develop broadband Internet access to consumers in remote areas of Sonoma County. The service, which will be available to a substantial portion of residents in Sonoma County, is provided by KRCB through its digital spectrum channels. Service will be offered in the coming months and can be utilized by various Internet Service Providers to assure delivery of the best service to the most customers in Sonoma County.

Connectivity Council II Partners



In 2002, a diverse cross-section of business, service providers, government, and education leaders were invited to serve on the Connectivity Council II. Representatives from the above organizations and companies stepped forward to participate in the second phase of the Council. For a full list of participants, please refer to the appendix at the end of the document.

Deploying Broadband in Sonoma County

When the Connectivity Council II began, there were several recognized barriers to deploying broadband Internet in Sonoma County. The Council worked to address some of the barriers, and found several alternative ways to offer Internet access to consumers. Namely, the Council chose to work on projects that allowed the Council to make a positive impact: wireless Internet access expansion and offering broadband in remote areas of the county. Below is a summary of the current broadband availability, limitations, and solutions that the Connectivity Council considered:

CURRENT BROADBAND AVAILABILITY

Several broadband Internet Service Providers are currently operating in Sonoma County utilizing various means for transport of broadband delivery. These providers include:

- ✓ **ATG/GE** uses DSL from central offices and remote DSLAMS in the larger cities in Sonoma County.
- ✓ **Comcast Cable** uses an existing and upgraded cable TV plant in various cities in the county.
- ✓ **DirectWay** uses two-way satellite services throughout much of Sonoma County.
- ✓ **SBC** uses DSL from central offices and remote DSLAMS in the larger cities in Sonoma County. Service is also available in some remote areas of the county. SBC also offers a wireless Internet service to customers.
- ✓ **Sonic.net** uses DSL from central offices and remote DSLAMS in cities in Sonoma County. Sonic.net also offers wireless Internet services from **Broadlink Communications**.
- ✓ **Vista Broadband Networks** currently broadcasts wireless Broadband along the 101 business corridor, and along other business corridors adjacent to Highway 101 in Sonoma County.

CURRENT BROADBAND LIMITATIONS

✓ **Population concentrated along Highway 101 corridor**

Broadband Internet coverage is good along the 101 corridor since a large portion of the Sonoma County population is concentrated along that area. Unlike their urban counterparts, the population in the rural and remote reaches of the county do not have extensive Internet coverage, largely because the population is more sparse and spread out. It is more difficult for traditional copper dependent service providers to offer service in the remote areas because the population is less dense.

✓ **Rural character of county inhibits broadband connection in remote areas**

Rural areas of Sonoma County, largely in the west county, have been slow to receive broadband services. It is difficult to install high-speed Internet in remote areas for a number of reasons: 1) the cable in these areas either does not exist or it is not updated, 2) homes are usually too far apart from the main network operating area to be easily connected to the Internet and 3) geographic terrain and foliage makes deploying broadband difficult. Realizing that it takes time and investment to deploy broadband services in the remote areas of the county, the Connectivity Council worked to explore new ways to expand service, such as using alternative frequencies to overcome the terrain and foliage issues.

Deploying Broadband in Sonoma County

SOLUTIONS TO BROADBAND LIMITATIONS

✓Encourage deployment of WiFi hot spots

The growth of the use of the Internet, along with the increasing demand for Internet access “everywhere,” opens up the opportunity for a connected community enabled with access to wireless Internet hot spots. The Connectivity Council worked to encourage the expansion of wireless Internet access points in areas that are most beneficial for Sonoma County residents and businesses.

✓Support expansion of broadband through digital spectrum channels

The Connectivity Council recognized that alternative frequencies should be utilized to deploy broadband Internet service to remote and geographically inhibited areas of Sonoma County. As a result, a partnership formed with public television and radio station KRCB to deploy broadband service through digital spectrum channels. While this solution proved to be effective, there are other solutions that may also be considered in the future.

Proliferation of Wireless Hot Spots

Realizing that Internet connectivity is a fundamental enabler of the future economy, Connectivity Council II made a concerted effort in 2003-2004 to work with government, business, and community leaders to raise awareness and to realize the potential of deploying hot spots. Wireless hot spots, also known as wireless fidelity (WiFi) hot spots, are wireless Internet access points. WiFi hot spots are often installed in cafes, businesses and parks so that Internet users can become more mobile. A user accesses the Internet hot spot using portable wirelessly equipped devices. WiFi is being integrated into a growing range of mobile devices including laptop computers, PDAs, and mobile phones.

In an effort to make wireless Internet access more widespread and available to residents, tourists, businesspeople and students alike, the Connectivity Council worked with government, business, and community leaders to initiate three hot spot projects: 1) Installation of hot spots in Sonoma County Libraries, 2) Installation of hot spots in public areas in several cities in Sonoma County and 3) Creation of a hot spot registry as a resource for the public to readily identify the existence of hot spots.

SONOMA COUNTY LIBRARY HOT SPOTS

In 2003, Sonoma County Library, a participant of Connectivity Council II, agreed to move forward in creating free wireless Internet service to library users. Connectivity Council II support was key in providing the initial momentum. Sonic.net provided substantial engineering and technical assistance to library staff during the investigation and planning of the project. The equipment and other costs were paid by Sonoma County Library, and the project was facilitated by Jim Rosaschi at the Library.

Considering that more than half of Sonoma County residents have a library card, Library WiFi access is a widely-available public service. Moreover, library cards are available for free. Any individual with a library card can access the library Internet service, provided that they bring their own wireless enabled equipment, such as a computer.

The Central Santa Rosa branch served as the pilot location for the technology in the fall of 2003. By the winter of 2003 an antenna, server, and security system were successfully installed in the branch. Based on the success of the pilot project, the Library installed hot spots in Rohnert Park, Sonoma, Petaluma, and Sebastopol branches. Service is provided using the Library's existing network. Because the Sonoma County Library is invested in the idea of equalization of service throughout Sonoma County, hot spots will be installed in all regional branches in the coming months.

Patrons access the Internet by entering their library borrower information in a log-on screen. Once users are connected, they can use the Internet to browse the web, conduct research using the Library's extensive databases, or check e-mail on web-based e-mail services. Users are restricted to web browsing only (http or https), and have enough bandwidth to conduct Internet research and to download larger documents. The Library does not monitor what patrons see online; only bandwidth usage and protocols are limited. Patrons can also now access the network in the Library's meeting room, substantially expanding the functionality of the meeting rooms.

Sonoma County Library installed equipment that controls user access, bandwidth and security. The Library's security system, controlled by a Blue Socket server, manages public traffic using existing wide and local area service. An antenna, installed at each "wireless" branch, provides good coverage in each building.

The initial installation costs were high, but the on-going costs are low. Once all of the Library branches are equipped with wireless Internet access, the maintenance and upkeep costs are perceived to be minimal.

According to Sonoma County Library, their WiFi initiative may be one of the more interesting and successful models in the country, in large part due to the leadership role of the Connectivity Council II, and because of technical engineering assistance provided by Sonic.net. This public/private collaboration helped to complete the project more rapidly and efficiently, and resulted in a secure and workable public service for the residents and visitors of Sonoma County.

PUBLIC WIFI HOT SPOT ACCESS

In January 2004, Connectivity Council members approached City Managers in all cities in Sonoma County to encourage installation of WiFi hot spots in public areas. A WiFi brief (Appendix), was circulated to City Managers highlighting the importance of installing WiFi hot spots, both for economic development and for the public good. The brief also suggested several locations in cities that could benefit from wireless Internet access, mainly in community centers, parks, and town squares.

The Cities of Santa Rosa, Rohnert Park and Petaluma, and the Town of Windsor, agreed to consider installing WiFi hot spots in public parks, community centers, or town commons. In each case, the Connectivity Council offered to facilitate partnerships between the City and local Internet Service Providers to create WiFi hot spot access. Several city leaders subsequently considered collaborating with various service providers to create a mutually beneficial installation plan and business model. Below is a summary of the Cities and Towns that are considering WiFi expansion:

1. The Town of Windsor

The Town Manager's Office in Windsor plans to install WiFi access throughout the Town Green. The Town Manager has partnered with a service provider to offer wireless Internet service free to the public using pre-existing town funds to offset the costs of installation and general usage fees.

2. The City of Santa Rosa

In the City of Santa Rosa, officials in the Office of Economic Development and Redevelopment are exploring posting signage that would indicate the presence of publicly available hot spots. The Connectivity Council provided a list of known public hot spot locations, and the City will identify public spaces where a small number of signs can be posted for a pilot project. All signage costs will be absorbed by the City. The City of Santa Rosa has also expressed interest in installing hot spots in various locations in the downtown area to better connect the area. The board of the Main Street Organization is supportive of highlighting the downtown area as a hot spot.

3 The City of Rohnert Park

The City of Rohnert Park envisions installing WiFi hot spots in the Community Center in connection with broadening and increasing use of the Center. The City Manager's office is working with its technical officer to determine a time frame for offering the service. The cost to the consumer is to be determined at a later date.

4. The City of Petaluma

The Information Services Technology Department in the City of Petaluma has collaborated with Sonic.net to explore installing a pilot hot spot in the Lucchesi Center, which will be available for public use. If a hot spot turns out to be viable in the Community Center, then the City will consider installing hot spots in other locations in the Petaluma.

SONOMA COUNTY HOT SPOT REGISTRY

In an effort to increase public awareness of currently existing hot spots, the Connectivity Council created a hot spot registry. While a number of hot spot registries and locators exist on the Internet, this is the only known Sonoma County-specific registry. All of the existing registries identify a small number of the available hot spots in the area. The goal of the Sonoma County registry is to create a comprehensive resource for Sonoma County. This listing of hot spots is hosted on the North Bay Technology Roundtable website (www.nbtr.org/hotspots.html) and was designed by John Foley at Resmatic (see Appendix). The registry allows users to search for hot spots by city. Each hot spot listing posts the location of the hot spot, the provider, and the cost (if known). Users can also post a hot spot location on the site, or request the removal of a hot spot, provided that an administrator approves the request.

A publicity campaign is being coordinated by the Connectivity Council to alert the public of the existence of a registry. A brochure will be created promoting the registry, and will be distributed to local tourism offices, businesses, visitor centers, Chambers of Commerce, and the press. It is the Connectivity Council's hope that a publicity campaign will not only increase usage of hot spots, but help expand the list of hot spot locations identified in the registry.

KRCB Broadband Initiative

In 2001, the Federal Communications Commission (FCC) mandated that all broadcast stations provide digital service. Responding to this mandate, local PBS station KRCB installed a digital transmitter and has expanded its possibilities of digital service. KRCB has explored a partnership with Advanced Projects International (API) and local service provider Sonic.net to offer a pilot digital broadband Internet service to consumers in remote, unconnected areas of Sonoma County.

In the Fall of 2003, the KRCB transmitter was installed on Sonoma Mountain. KRCB, API, and Sonic.net ran several beta tests in early 2004 and the equipment appears to be fully functional. Once a business model is formulated by the parties involved, the service will be launched. KRCB is open to working with any Internet Service Provider to expand the service.

The benefit of the KRCB broadband service is that it will cover a significant portion of Sonoma County, allowing Internet users in the many unconnected reaches of the county to access high-speed Internet downloads, albeit for a slightly higher fee than other broadband service.* While several carriers have plans to roll out more service in remote areas of the county in the future, the KRCB service addresses the community's need for high-speed service for several Internet Service Providers to use this year.

Each of the three partners brings resources to this partnership: API in terms of equipment and experience with ISP to UHF conversion, KRCB in terms of licensed digital spectrum and a digital transmission plant, and Sonic.net in terms of a consumer and marketing base and local experience.

*The service is a broadcast service whereas a telephone line and modem are used for the upload from the customer to the Internet.

Increasing Internet Connectivity Friendliness

When the Connectivity Council II identified initiatives to pursue in 2002, it recognized that a concerted effort should be made to help service providers install and offer Internet service. Permits and regulations are a concern for providers, largely because there is limited access and high cost restrictions to installing broadband Internet infrastructure in Sonoma County. More energy can continue to be directed in this area.

Recommended Future Action

ADDRESS DIGITAL DIVIDE CONCERNS

According to the Digital Divide Network, the digital divide is the gap between those that can effectively use new information and communication tools and those that cannot. Most residents in Sonoma County have access to communication tools and information, although some segments of the population have less access to new technology. Efforts can be made to install Internet in areas including:

- ✓Community Centers
- ✓Low-income neighborhoods
- ✓Senior Centers

INTEGRATE BROADBAND INTO EDUCATIONAL INSTITUTIONS

Several local educational institutions, namely Sonoma State University, the Santa Rosa Junior College, and other local technical colleges, have extensive broadband Internet coverage. Elsie Allen High School is considering creating WiFi access throughout the campus, and giving lap top computers to all students so that they can utilize the service. Most K-12 institutions, however, are not all widely equipped with Internet access. Efforts can be made to collaborate with the Sonoma County Office of Education and other educational organizations to integrate broadband access into educational institutions around the county. With greater access to the Internet, educators can use the Internet as a teaching tool and as a means of communicating with colleagues, administrators, students and parents. More steps can be taken to determine how to connect our schools to a county-wide, or indeed a state wide, education network.

REVIEW REGULATION AND PERMIT PROCESS FOR INTERNET SERVICE PROVIDERS

The Connectivity Council recommends streamlining the permit and regulation process for Internet service providers while meeting the needs of local government. For example, it may be beneficial for applicable departments in Sonoma County, including the Permit and Resource Management Department to work with providers to make more tower space available on a cost-recovery basis. This would allow providers greater access to resources that they need to spread Internet connectivity more rapidly in the county.

ESTABLISH INFRASTRUCTURE TO MAINTAIN HOT SPOT LOCATOR

In order to better educate the public about the existence of hot spots, it is recommended that a method be created to link the hot spot registry site to the web sites of tourism centers, visitor centers, Chambers of Commerce, businesses, etc. and to distribute publicity materials to these locations. The registry web site is designed to allow users to add hot spot locations (based on approval by an administrator), so the more that the site is publicized, the more traffic can flow to the site.

ASSESS VALUE AND NEED FOR STANDING CONNECTIVITY COUNCIL

While the Connectivity Council I and II have completed many projects, the Board of Supervisors may consider approving the creation of a Connectivity Council III, which would be in place for one year. The Council would serve an advisory role for the projects that are currently underway, such as public WiFi hot spots, to ensure that they are seen to completion. It is recommended that the Connectivity Council III assess a broad range of infrastructure issues and move forward with areas that need the most attention.

At the end of the year, the Connectivity Council III could determine the need for a standing Connectivity Council. If it is deemed viable, the Board of Supervisors may consider creating a Council that would continually evaluate and address Internet connectivity-related needs in Sonoma County.

Appendix

Connectivity Council II Partners

Warren Dranit, Co-Chair, Partner, Spaulding McCullough & Tansil LLP and SofTECH
Curt Wheeling, Co-Chair, President, Phase Seven Laboratories and
Chair, North Bay Technology Roundtable

Garrett Hill, Advanced Projects International and Kavera
J. Roy Martinez, American River Ventures
Bill Hammerman, Cyber City Roundtable
Nancy Dobbs, President & CEO KRCB Television and Radio
Nate Boblitt, NoCat
Doug Garrison, Santa Rosa Junior College
Rhuenette Alums, SBC
Jim Flessner, Sea Ranch
Matt Kirk, Sonic.net
Jim Rosaschi, Sonoma County Library
John Schiller, Sonoma County Office of Education
Saeid Rahimi, Sonoma State University
Matt Kirk, Sonic.net
Nick Smith, The Press Democrat
Scott Mindemann, Vista Broadband Networks
Rob Avery
Richard Lazovick
Larry Gitlin

Staff

Kate Tansey, Economic Development Board

The Connectivity Council is a project of the Sonoma County Economic Development Board.

**Sonoma County Internet Connectivity:
Broadband and WiFi Technology Brief**

Presented by the Connectivity Council in collaboration with the North Bay
Technology Roundtable and the Sonoma County Economic Development
Board

December 2003

This briefing was written and prepared by J. Roy Martinez and Kate Tansey

TABLE OF CONTENTS

SECTION I:	Situational Overview
SECTION II:	Current WiFi technology in Sonoma County
SECTION III:	Reasons to encourage WiFi in Sonoma County
SECTION IV:	Locations throughout Sonoma County that could benefit from public WiFi deployment
SECTION V:	Proposed business models
SECTION VI:	Appendices
	Appendix A: Sample revenue-generating business model

SITUATIONAL OVERVIEW

Internet connectivity is the currency of the future economy. The Sonoma County Economic Development Board (EDB) recognizes that increasing broadband Internet access will help to create an environment that will foster business growth and stimulate the economy. To this end, two years ago the EDB created the Connectivity Council to address Internet connectivity related needs to ensure that Sonoma County keeps up to pace with Internet technologies.

Although Sonoma County has developed an infrastructure to support Internet access, the Connectivity Council seeks to assist with the development of broadband connectivity, including wireless Internet access points (commonly referred to as WiFi hot spots) for mobile users. Broadband connectivity is seen as a major utility, after gas, electricity, water, and telephone. Business people, educators, students, and the community as a whole rely on fast Internet access to acquire information, to communicate, and to stay connected with the world. WiFi (wireless fidelity) technology is a pragmatic extension of broadband availability. Wireless Internet access can be as rapid as broadband, and it allows users to access the Internet with ease and convenience. As broadband connectivity increases, wireless technology will expand and will be viewed as a necessity for many users. If Sonoma County is to stay ahead of technological trends, government leaders must embrace the opportunity to expand WiFi technology today.

The purpose of this document is to bring to light the benefits of creating more WiFi hot spots (wireless Internet access points) in your city, and the role that you and your staff can take to support expansion of wireless Internet technology. The first part of this document provides an overview of the current picture of broadband Internet connectivity in Sonoma County. The second part proposes key areas that could benefit from the deployment of wireless Internet hot spots, and suggests several business models that you and your staff can adopt should you choose to create more Internet hot spots in your city.

The Connectivity Council hopes that you will join other city government leaders in Sonoma County in the movement to expand wireless technology.

CURRENT STATUS OF WIFI TECHNOLOGY IN SONOMA COUNTY

A number of local and nationally based Internet Service Providers (ISPs) have deployed WiFi technology in various areas around Sonoma County. Mobile users access the Internet through available hot spots using WiFi equipped devices. In today's technological environment, laptops, PDAs (e.g. Palm and PocketPC), and mobile telephones are all WiFi enabled. WiFi hot spots are most common in cafes, restaurants, schools, and some businesses. There is also a new trend to install hot spots in community facilities such as libraries, community centers, and government buildings. Below is a summary of ISPs that currently deploy hot spots, and the areas that hot spots currently exist:

- Internet Service Providers that deploy hot spots:
 - Boingo Wireless
 - Installed in McDonalds, Burger King, and various local cafes
 - Sonic.net
 - Plans to install 100 hotspots county-wide
 - Free to Sonic.net DSL subscribers
 - Subscription and/or pay for use otherwise
 - Surf-and-Sip
 - Installed in a handful of locations
 -
 - T-mobile
 - Installed in all Sonoma County Starbucks
 - Being installed at all Sonoma County Kinko's
 - Vista Broadband Networks
 - Plans to serve 1000 hot spots over a three county area
 - Free to Vista customers
 - Full roaming ability around counties
- ◇ Locations of WiFi Hot Spots
 - Cafes and restaurants – Starbucks, McDonalds, local cafes and restaurants
 - Sonoma County Library – in Santa Rosa branch; plans to expand to all branches
 - Sonoma State University -- campus wireless; access for students and faculty
 - Elsie Allen High School
 - Santa Rosa Junior College (main campus and satellite campuses)
 - Empire College
 - Santa Rosa Junior College Tech Academy

REASONS TO ENCOURAGE WIFI TECHNOLOGY IN SONOMA COUNTY

◆ **To promote economic and business development in cities**

Internet access has become a critical component of almost all segments of the economy. The vibrancy of our local economy is dependent on the continuous development of this key resource. WiFi technology promotes economic development in cities and in the County as a whole. For example, WiFi technology can bolster the strength of one of Sonoma County's top sectors - tourism. When tourists have easy access to WiFi technology, they can locate web pages that promote tourist destinations when they are in cafes, restaurants, or visitor centers. As another example, WiFi technology can aid business commerce by allowing small businesses to promote their services online, such as in the form of electronic yellow pages.

◆ **To provide mobile access to information**

The proliferation of WiFi hot spots can ease access to information on the Internet. Mobile users can access information services online such as Mapquest or Google while on the road or around town, speeding up their access to critical information.

◆ **To help businesses conduct commerce**

Vendors or businesses conducting commerce at booths can also benefit from WiFi technology. For example, deploying Internet hot spots at farmers markets or at fairs can enable booth vendors to accept credit card usage from customers, which could increase sales.

◆ **To help bridge the digital divide**

Despite the incredible growth of Internet access in the past decade, there are still many segments of the population that lack access to the Internet. The digital divide refers to the gap between populations that have Internet access and those that do not. It is necessary to provide more Internet access to groups and populations that lack Internet access so that they can tap into the wealth of information that those who have Internet access constantly have at their fingertips. Deploying WiFi technology communities and schools that have little access to Internet technology can help bridge the digital divide.

SUGGESTED LOCATIONS TO DEPLOY WIFI HOT SPOTS

- ◇ Places people congregate
 - Public squares
 - Healdsburg Plaza
 - Sonoma Plaza
 - Santa Rosa Courthouse Square
 - Cotati Square
 - Windsor Green
 - Petaluma Putnam Plaza
 - Transit malls
 - Santa Rosa Transit Hub
 - Petaluma Transit mall (being planned)
- ◇ Places people wait or sit around
 - Sonoma County Courthouse
- ◇ Places people get information
 - Sonoma County Public Libraries
 - Central Santa Rosa
 - Cloverdale
 - North West Santa Rosa
 - Rincon Valley
 - Guerneville
 - Petaluma
 - Rohnert Park
 - Sebastopol
 - Healdsburg
 - Windsor
 - Sonoma
- ◇ Places events happen
 - Fairgrounds
 - Sonoma County Fairgrounds
 - Sonoma-Marin Fairgrounds
 - Venues
 - Finley Center (Santa Rosa)
 - Lucchesi Center (Petaluma)
 - Luther Burbank Center (Santa Rosa)
 - City Veterans Halls
 - Hermann Sons Hall (Petaluma)
 - Sports Facilities
 - A Place to Play (Santa Rosa)
 - YMCA
 - YWCA
 - Public parks (various cities)

◇ Places where people access government information and services

- City Hall
 - Cloverdale
 - Cotati
 - Healdsburg
 - Petaluma
 - Rohnert Park
 - Santa Rosa
 - Sebastopol
 - Sonoma
 - Windsor
- Sonoma County Offices
 - Courthouse
 - County Clerk
 - PRMD
- DMV
 - Santa Rosa
 - Petaluma
- INS
- SCORE
- EDD (including Sonoma County Joblink)
- Redwood Empire SBDC
- Sonoma County Administrative Center
- Chambers of Commerce
 - Bodega Bay
 - Cloverdale
 - Cotati
 - Forestville
 - Geyserville
 - Healdsburg
 - Hispanic of Sonoma County of Sonoma
 - Mark West
 - Monte Rio
 - Occidental
 - Petaluma
 - Sonoma
 - Sebastopol
 - Santa Rosa
 - Redwood Coast
 - Windsor
- Tourism Offices

- Visitors centers
 - Bodega Bay
 - Cloverdale Wine and Visitor Center
 - Forestville
 - Geyserville
 - Healdsburg
 - Jenner
 - Petaluma
 - Russian River
 - Sonoma County Wine and Visitor Center
 - Sonoma Valley

◊ Places People shop

- Shopping Areas
 - Coddington
 - Petaluma Outlet Mall
 - Santa Rosa Plaza
 - Montgomery Village
 - The Marketplace
 - Healdsburg Square
- Locations of antique fairs, farmers' markets, etc.
 - Downtown Santa Rosa
 - Downtown Petaluma
 - Downtown Sebastopol
 - Downtown Sonoma
 - Healdsburg Square
 - Walnut Park (Petaluma)

◊ Places where WiFi could help bridge the digital divide

- Low-income housing
- Schools
- Low-income communities and development areas
 - Roseland
 - Boyes Hot Springs

POTENTIAL BUSINESS CONSIDERATIONS

◇ Potential Business Models

Hot spots can be installed and maintained for a nominal fee, usually \$250 to install each hot spot and \$25-\$30 a month to continue the service. This is a nominal fee for a high-impact service. The parties interested in deploying hot spots may consider the following business models:

- The parties involved may **assume full responsibility for the cost of installing and maintaining hot spots**. In this case, deploying hot spots in public areas can be viewed as a free public service provided by city governments, Internet Service Providers (ISPs), and other sponsors.
- The parties involved may take a **cost-neutral** approach whereby they generate some financial support to offset the cost of deployment and maintenance. As one approach, an ISP can opt to offer the service for free provided that it has an opportunity to advertise its services on signs near a hot spot or on the website that users enter to access a hot spot. As another approach, cities and ISPs can offset installation and maintenance costs by soliciting business sponsorship of the wireless service. Businesses can advertise their services on the website that users use to access hot spots.
- If users are charged a fee for accessing a hot spot, then some **revenue can be generated** for the parties involved. For example, if a city and an ISP collaborate to set up hot spots in various locations, they can split the revenues generated from user fees and make a small profit. Please see Appendix A for a sample revenue-generating business model.

◇ Parties that can deploy Wi Fi Hot Spots

- **Cities** – City governments can take the lead in creating public Wi Fi hot spots. Some cities, such as Long Beach and Milwaukee, recognize that offering wireless Internet access can bolster the local business climate. Providing Internet access can also elevate the city's image as tech-friendly, which attracts both business and tourism to the area. Cities can also host the website that users access to enter a hot spot, and can link tourist destinations and local events on the main screen.
- **Businesses** – Businesses can enjoy a marketing opportunity if they support the deployment of Wi Fi hot spots. Businesses in Long Beach, for example, bought ad time on the city-run hot spot access site. This helped pay for the service while drawing in more customers for the sponsoring companies. Alternatively, businesses can donate the equipment needed for hot spots, which markets their product to the public. This approach was taken in Milwaukee, where Cisco donated all equipment.
- **Internet Service Providers (ISPs)** – ISPs are logical parties to involve in deploying Wi Fi hot spots. They are able to set up and maintain the service, and can work to identify areas that are well suited to have hot spots.

◆ Hot Spot Signage

Signs indicating the presence of WiFi hot spots accelerates and expands the public understanding that the service is available. Ideally, uniform signage will be adopted so that the presence of hot spots will be easily noticeable to the public, much like signs above telephone booths have become universally recognizable. Agreements must be worked out between Planning Departments, City Managers, and ISPs to determine who will provide, pay for, and maintain the signage. The attached Appendix A provides one example of proposed signage.

◆ Security Issues

Security is a key consideration for all parties involved. Most ISPs are able to set up secure hot spots by creating authentication, authorization, and accounting specifications. Below is a description of these three areas:

- Authentication is the process of identifying who a user is. Typically, a user proves to the system who they are by entering a valid user name and a valid password.
- Authorization is the process of identifying what a user can do. For example, after logging in to a system, a user may try to issue commands. Authorization determines whether the user is permitted to issue those commands. In some systems, authorization and authentication are merged into a single process.
- Accounting is the process of measuring the resources a user has consumed. Typically, accounting measures the amount of system time a user has used, or the amount of data a user has sent and received.

APPENDIX A: Sample revenue-generating business model

Revenue-generating business model for a Café		
Traffic Assumptions		
Daily café users		390
Utilization rate		1%
Monthly connects		90
Monthly in-venue sign-ups		5
Monthly Revenue		
Wholesale connect revenue	\$2.00	160
Bounty revenue	\$20.00	120
Total revenue		280
Monthly costs		
Business DSL		100
Maintenance		50
Equipment depreciation (\$500 over 36 months)		14
Total monthly cost for hot spots		164
Operating profit		116

Source: WiFi Industry Basics White Paper

Sonoma County Wireless Hotspots

[Cotati](#) • [Petaluma](#) • [Rohnert Park](#) • [Santa Rosa](#) • [Windsor](#) • [Other Locations](#) • [Add a Hotspot](#)

[Connectivity](#)

[Infrastructure](#)

[Life Sciences](#)

[Public Awareness](#)

[Workforce/Education](#)

The North Bay Technology Roundtable and the Connectivity Council support the expansion of wireless internet services throughout the North Bay through increased availability of publicly-accessible Wi-fi Internet Hotspots. This list has been compiled to increase public awareness of the available hotspots. If you know of any that aren't on the list, [please let us know on the form below](#).

Find these hotspots on [Yahoo Maps](#).

Petaluma

Deaf Dog Coffee

134 Petaluma Boulevard North
Service by ipass and Boingo Wireless

Rohnert Park

Sonoma County Library

6250 Lynne Conde Way (RP Expressway)
SSID Sonoma County Library

Santa Rosa

Sonoma County Library

545 D Street

Add a Hotspot

Your Name

Your Email

Hotspot Name

Hotspot Location

Hotspot Address

Proposed Hot Spot Signage



View on a light post in downtown Santa Rosa. The signage would be permanently installed on either light posts, buildings, or any other publicly visible area.




welcome

Welcome to Sonoma County Library's wireless network. Connections are provided free of charge. Users must have a library card to use the connection.

Registered Users

Library Barcode

PIN Number

Log In 

- To log in, please type the bar code number from your library card
- Your PIN number is the last 4 digits of your phone number

February 06, 2004



[Security](#)

[About the wireless project](#)

[Service area and features](#)

[Help](#)

Copyright © 2003 Sonoma County Library

Bluesocket Helps Sonoma County Library Deliver Secure, Socially Responsible Wireless Access



Although many people already know Sonoma County for its award winning wineries, this county also includes a regional library system that's a leader in using library automation to deliver top-quality public service. In early 1994, Sonoma County Library became the first public library in California to provide Internet service to its patrons.

In early 2003, a coalition of representatives from local business, county government and technical experts met to see what could be done to provide better broadband Internet access throughout the county. One of the initiatives the group agreed to pursue was creating wireless Internet access in the Sonoma County public libraries.

The Sonoma County Library was very interested in this initiative because they were already faced with the problem of not having enough computers for use by the public. By providing wireless access to the Internet, patrons could come to the library and use their own computers for high speed access. This would free up library computers for users who do not have their own computer.

"Our vision was to make wireless Internet access available in all of our regional branches in the county. It would be available free of charge, and it would permit research and information dissemination that would be consistent with library reference services that we make available in all of our libraries," says Jim Rosaschi, Manager, Technical Services for the library.

According to Rosaschi, the following concerns had to be met before rolling out any wireless service:

It shouldn't create a public nuisance. The library wanted to make sure a patron couldn't become a public nuisance by using the wireless network to send spam e-mail or to eavesdrop on the library's network.

Equal access to all users. The library wanted to prevent the possibility that one person engaged in a high bandwidth activity (such as downloading MP3 files) could create noticeably slower response time for other users.

Robust security was a must. The security of the wireless network had to be as robust as possible without breaking the budget.

Easy, intuitive wireless access. Make wireless access as simple as possible for employees and the public alike.

"We wanted a system that would let users use their library card to authenticate themselves to access the wireless service," says Rosaschi.

Two other Public Libraries that have been "Bluesocketed"

Boston Public Library
(Boston, Massachusetts)

For more than 150 years, the Boston Public Library has pioneered public library service in America with revolutionary ideas and famous firsts. Established in 1848, the BPL was the first publicly supported municipal library in America, the first public library to lend a book, the first to have a branch library and the first to have a children's room. Today, the Boston Public Library provides wireless Internet access in all of its locations. BPL uses Bluesocket to support more than 100 access points in 27 branches.

Provo City Library
(Provo, Utah)

Provo City's Library provides the Provo community with an inviting center for information, learning, instruction, leisure and cultural opportunities. In one year, the library nearly tripled the number of computers it provided, leaping from 30 machines to more than 100. Still, that wasn't enough to feed the need for computer access. The wait at times was as long as two hours. So the library installed a wireless network with Bluesocket Wireless Gateways.

"Such technology is a first for Utah County libraries," said Gery Gagnon, the library's IT manager, "and something that Provo's library needed."

Bluesocket Helps Sonoma County Library Deliver Secure, Socially Responsible Wireless Access

"The problem with a number of solutions we looked at was that they required a periodic copy of the patron library card number file be made on an intermediary server. This meant a new patron wouldn't be able to access the wireless network right away. We couldn't come up with a good way to authenticate that wasn't kludgy or home-made. We wanted a solution that used automation to make it work, not a lot of labor to make the automation work."

"Like most public libraries we don't have a large technical staff. We needed an 'out-of-the-box' solution that wouldn't require a lot of technical programming or piecing together. We learned that Bluesocket was working with Dynix, our library automation system provider, to integrate their Wireless Gateway with our Remote Patron Authentication server. I'm president of the Dynix user group, so I ran the Bluesocket idea past some of my contacts in the user group, and got good reports."

Bluesocket effectively addresses all of the library's original concerns:

Access Control. Bluesocket's easy-to-manage "roles" enables Sonoma County Library to limit access to servers and services to only those who should have them. With Bluesocket the library knows patrons can't easily use the wireless network to be a public nuisance.

Bandwidth Management. Bluesocket's "Traffic Engineering," stops bandwidth hogs in their tracks, allowing library administrators to assign a maximum bandwidth to each role or to each individual patron for incoming and outgoing traffic. Administrators don't have to worry that a patron downloading MP3 files will adversely affect network performance.

Airlink Security. With the Bluesocket Wireless Gateway, the Sonoma County Library can bring the highest level of security directly to its patron's mobile device – without requiring them to install software on their device. The Bluesocket Wireless Gateway support IPsec (Internet Protocol Security), typically used in high-end VPN and firewall products. Because of security concerns, the library originally thought it would have to have a separate ISP connection for its wireless services. Because of Bluesocket's robust security the library can use their existing ISP connection, which means this solution is delivering significant cost savings over its original plan.

Seamless Authentication. Through Bluesocket's integration with Dynix's Remote Patron Authentication server, library patrons can log-in with their library card number and instantly authenticate to the library's wireless network.

"We are excited about rolling out a socially responsible and secure wireless service for our patrons," adds Rosaschi. "Bluesocket lets us implement a public service we can maintain with reasonable effort and that satisfies our need to equalize service to our users and securing our network. Overall, we are very pleased with the Bluesocket solution."

The Press Democrat: Print a Story

© The Press Democrat. For copyright information visit our User Agreement page at <http://www.pressdemocrat.com/services/agreement.html>

COUNTY LIBRARIES GOING WIRELESS

Published on February 24, 2004

© 2004- The Press Democrat

BYLINE: MARY CALLAHAN

THE PRESS DEMOCRAT

PAGE: B1

Seeking to increase public access to the Internet and to its own vast stores of research materials, the Sonoma County Library is equipping its branches for wireless computer connections.

Three branches -- downtown Santa Rosa, Sonoma Valley and Rohnert Park -- already have wireless access, library officials said. The remaining 10 branches will be set up over the next few weeks.

That means patrons with valid library cards and properly outfitted laptop computers or hand-held devices will be able to take as long as they like to browse the Internet or search the library's catalog, archives, subscription databases and other resources.

It also improves the county's ability to connect people in cyberspace, said Santa Rosa attorney Warren Dranit, co-chairman of the Sonoma County Connectivity Council II, a coalition of business, education, government and community service groups seeking to increase Internet access.

Providing wireless service in locations around the county means people don't need to be at home or at work to connect to the Internet.

"Wi-Fi technology is becoming incorporated by default into more and more devices, from laptops to Palm Pilots to cell phones," Dranit said. "So you're building the infrastructure for people to use the technology that's being integrated into their devices."

"The wireless service is something I'm pretty excited about because it's a new direction for us," said Jim Rosaschi, system and technical services manager for the regional library. "It allows the public to use their own machinery, kind of on their own terms."

Library officials also hope that enabling people to use their own equipment will free up some of the library's public-access computers, which are in such demand that even limiting users to one hour each doesn't satisfy the need, they said.

"A person with a library card can get to dozens of online databases that the library provides to the people of Sonoma County -- resources for homework help, for personal research, for

business research, for medical information," library Director Tom Trice said.

"We have hundreds of newspapers from across the United States that are full-text online -- and these databases are not on the Web -- free of charge."

There also are "literally hundreds" of magazines and journals, the World Book encyclopedia, business directories and the like, Trice said.

The same material is available for Internet users with library cards who connect to the library from computers at home or work.

There are some restrictions on the new service.

Only Web-based e-mail accounts -- such as those provided through Yahoo, Hotmail or AOL -- will be accessible, for instance.

Users also will have limited bandwidth at their disposal in an effort to eliminate or at least reduce downloading of music, films and other large files.

Inspiration for the new service, Rosaschi said, came from the Connectivity Council, which has identified expansion of wireless service as a key priority for the county.

The library, with branches in all nine Sonoma County cities as well as several rural outposts, figured one way to meet the need was to use its existing infrastructure and multiple locations -- 13 in all.

Concerns about controlling the system and keeping the library's computer network secure prompted delays.

"We've not wanted to be the drive-by spam center of Northern California" or an avenue for other cyber-mischief, he said.

"We've wanted to provide service that we had control over."

Sonoma County Internet provider Sonic.net provided substantial help to library technicians who worked through the various problems and settled on individual servers that will segregate each library branch's wireless traffic from all other network use.

"That's why this works," Rosaschi said.

You can reach Staff Writer Mary Callahan at 521-5249 or mcallahan@pressdemocrat.com.

PHOTO: 1 by CHRISTOPHER CHUNG / The Press Democrat

John Ward of Mill Valley browses the Internet wirelessly on his laptop late last week at Sonoma County's Central Library in Santa Rosa.

Infobox: .

WIRELESS ACCESS

According to the library, most newer laptops equipped with Wi-Fi hardware will find the library's network. If settings must be entered manually, they need to be as follows.

* Network name or SSID: Sonoma County Library

* Wireless Mode or Network Type: Access Point or Infrastructure (not "Ad Hoc")

* Network properties: DHCP

* WEP: Off

Once on the network, you'll have to enter your library barcode (the number from your library card) and PIN (the last four digits of your phone number).

Keywords: INTERNET



You are here: [Home](#) > [Stories](#) > [Special Re](#)

Call Us: 707-579-2900

WHAT'S INSIDE

Business Journal Article - Issue Number: 146

- [Home](#)
- [Advertising](#)
- [Subscriptions](#)
- [Book of Lists](#)
- [News](#)
- [News Tips](#)
- [Events](#)
- [Resources](#)
- [How-To Guides](#)
- [Telecom Valley](#)
- [Contact Us](#)

BACK TO SEARCH

Telecom Valley

All Sonoma County libraries to become WiFi hot spots

<http://www.northbaybusinessjournal.com>
© 2003 North Bay Business Journal

A key part of the Sonoma County Connectivity Council's plan includes establishing WiFi hot spots in all of the county's 11 public libraries and two extensions to allow patrons to use their own computers while at each facility.

"Our WiFi build-out will be significantly different from other installations," says Jim Rosaschi, IT services manager for the Sonoma County Library system. "This network will be secure and free from abuse from potential attackers and drive-by spammers."

Users will have to obtain a library card, verified with a California driver's license or ID, to access the system. The special authentication process activated by this card will enable verified users to login and interface with the database.

"We have about 200 computers in all of our facilities," notes Mr. Rosaschi. "But when this new WiFi network is in place, a small radio transmitter with an effective range of 100 to 200 feet will be set up at each branch enabling authorized users to come in with their own laptops and access the Internet and our other online resources."

The county's 11 library branches are set up in a hub-and-spoke configuration using T1 lines to connect them with the Santa Rosa main library at the center. User requests come over the network to the hub and go out to the Internet over another T1.

"This real-time system will be easy to manage," Mr. Rosaschi says.

"The required equipment at each location will cost roughly \$5,000, and we are looking for community support in helping us defray these costs as we extend the service to each branch."

According to Mr. Rosaschi, the Santa Rosa main library WiFi system will go into operation during the fourth quarter of this year, with other branches added to the network as funds allow.

Send me a link to this page!

To link to this page from any outside source, right-click the following link

BOOK OF LISTS
Your Local Business Resource
[Find Software/Web resource \(consulting/programming\)](#)

- Ad agencies
- Accounting firms
- Apartments
- Banks
- Business parks

Wine Industry
Business Journal

E-MAIL EXPRESS

Hot News As It Happens

Name

Company

E-mail

Phone

Copyright ©1998-2001
Sloan Publications
1464 Skylane Blvd. Suite B
Santa Rosa, CA 95403
Phone: 707-579-2900
news@busjrn1.com



You are here: [Home](#) > [Stories](#) > [Special Re](#)

Call Us: 707-579-2900

WHAT'S INSIDE

Business Journal Article - Issue Number: 146.

- [Home](#)
- [Advertising](#)
- [Subscriptions](#)
- [Book of Lists](#)
- [News](#)
- [News Tips](#)
- [Events](#)
- [Resources](#)
- [How-To Guides](#)
- [Telecom Valley](#)
- [Contact Us](#)

Telecom Valley

Sonoma County Connectivity Council works to increase access

<http://www.northbaybusinessjournal.com>
© 2003 North Bay Business Journal

BOOK OF LISTS

Your Local Business Resource
[Find Credit unions](#)

- Ad agencies
- Accounting firms
- Apartments
- Banks
- Business parks

Go

Wine Industry Business Journal

E-MAIL EXPRESS

Hot News As It Happens

Name

Company

E-mail

Phone

Subscribe Now!

Copyright ©1998-2001
Loan Publications
1464 Skylane Blvd, Suite B
Santa Rosa, CA 95403
Phone: 707-579-2900
ews@busjrn.com

Three years ago, community leaders in Sonoma County were becoming concerned about a new phenomenon, the so-called "digital divide." The term refers to the perceived growing difference between those with access to state-of-the-art broadband information resources and computing equipment and those without due to socioeconomic and other factors, such as by residing in areas of the county lacking telephone or cable high-speed Internet access.

In the fall of 2000, the Sonoma County Board of Supervisors – spearheaded by supervisors Paul Kelley and Mike Reilly – authorized the formation of a broad-based taskforce to consider how communications connectivity topics were affecting the county.

The Connectivity Council was comprised of 10 representatives from business, education, government, and nonprofits; staffed by the Sonoma County Economic Development Board (EDB); and affiliated with the North Bay Technology Roundtable, public library system, and others. It was charged with formulating policy recommendations that would result in the expansion of quality, high-speed broadband and Internet access to the greatest number of people.

Between October and December of this year, many of the council's recommendations for demonstrable projects will start to take form.

According to Ben Stone of the EDB, the Connectivity Council's agenda includes serving as a sounding board and catalyst as well as helping to coordinate a number of major projects. Among the projects are:

- Completing the KRCB-TV digital Internet broadband beta trial;
- Establishing WiFi hot spots in all Sonoma County public libraries and some other likely WiFi locations;
- Encouraging the development of guidelines for the broad dispersion of maps showing towers and other public broadband facilities throughout the county;
- Identifying available resources to make Sonoma County more broadband-friendly.

Send me a link to this page!

Get Link

WHAT'S INSIDE

Business Journal Article - Issue Number: 146

- [Home](#)
- [Advertising](#)
- [Subscriptions](#)
- [Book of Lists](#)
- [News](#)
- [News Tips](#)
- [Events](#)
- [Resources](#)
- [How-To Guides](#)
- [Telecom Valley](#)
- [Contact Us](#)

Telecom Valley

Bold plan to connect North Bay to high-speed Internet

<http://www.northbaybusinessjournal.com>
© 2003 North Bay Business Journal

BY GARY QUACKENBUSH
SPECIAL TO THE BUSINESS JOURNAL

SONOMA COUNTY -- In a series of moves that could thrust the North Bay into the national spotlight, the Sonoma County Connectivity Council is coordinating discussions surrounding the development of a bold public and private program to bring broadband Internet access to much of Sonoma County as well as substantial portions of Napa and Marin counties.

One of the most innovative aspects of the plan involves using a digital television signal to broadcast the downlink portion of an Internet connection to residents located beyond the reach of traditional wireline telephone or cable TV digital subscriber line (DSL) service providers.

The first beta test of the broadcast Internet service is being conducted by KRCB-TV, in cooperation with Sonic.net and Petaluma's Advanced Projects International (API). It will use new wireless digital television technology being installed at the station along with special wireless receiving devices supplied by API for use at selected customer locations.

"I live just nine miles west of Santa Rosa, and I can't get DSL," complains Phase Seven Laboratories president Curt Wheeling, who along with attorney Warren Dranit of Spaulding, McCullough & Tansil, co-chairs the North Bay Technology Roundtable and advises the Connectivity Council.

"This technology is better than line-of-sight transmission, because, like coastal fog, signals can flow over hills and into all but the most inaccessible areas of the county," he explains. "The KRCB-TV trial broadcast Internet access project is like putting a satellite on the top of a large pole with the capability of broadcasting a signal 30 miles or more in all directions to thousands of customers in remote areas."

If initial trials are successful and the concept is perfected, a user would dial a special number on a standard telephone and be connected to a participating ISP. The ISP adds Internet connectivity data and channels customer addresses over a T1 line to KRCB-TV. This is the uplink portion of the connectivity process.

At the TV station, the signal is converted to IP digital format and relayed by microwave radio to an antenna tower on a nearby mountain. The tower's transceiver then broadcasts a high-speed ultra high frequency (UHF) downlink signal at 900 MHz back to users' special UHF receiver that, in turn, is connected to the computer. This complicated routing process takes only a fraction of a second to complete.

Digital TV mandate

The main exceptions to universal coverage may be in some areas along

BOOK OF LISTS
Your Local Business Resource
[Find Hospitals](#)

- Ad agencies
- Accounting firms
- Apartments
- Banks
- Business parks

Go

Wine Industry Business Journal

E-MAIL EXPRESS
Hot News As It Happens

Name

Company

E-mail

Phone

Subscribe Now!

Copyright ©1998-2001
Sloan Publications
1464 Skylane Blvd. Suite B
Santa Rosa, CA 95403
Phone: 707-579-2900
news@busjrn.com

the coast and in land depressions or low spots. In the future, residents in these areas could also be served with the help of DTV translators or by installing hilltop antennas supporting a local WiFi system.

"The FCC mandated that all TV stations upgrade their facilities to provide digital TV service by May 2003, but we obtained an extension until November," says Nancy Dobbs, president and CEO of KRCB-TV and KRCB-Radio in Rohnert Park.

After the digital conversion, the station will use channels 22 and 23 to simulcast an analog signal and a digital signal until at least 2006, or when digital TV sets reach 85% market penetration, according to Ms. Dobbs.

"Signal propagation maps prepared by engineering consultants show the possibility of covering up to 95% of Sonoma County for our new digital TV service as well as most of Marin County," she says. Residents in lower Napa County and the Up Valley region may also be covered.

"We have already invested \$1.4 million on a new digital transmitter and related equipment needed to make the conversion," she says. "With digital technology, the video picture can be squeezed into a smaller portion of the total bandwidth, enabling us to have two video streams on channel 23. With this added capacity, we have the potential to offer broadcast Internet connectivity on a spare digital stream to thousands of residents throughout the county who do not have wireline or cable access to DSL."

Awaiting test results

The first beta test of this new broadband wireless system will be held in mid November, with additional customer trials scheduled before the end of the year.

"However, we won't know the strength of the proposed service and who will be included inside the coverage area until we turn the system on and monitor signal strength throughout the tri-county area," explains Ms. Dobbs.

The monthly fee for the wireless Internet service offering is yet to be determined, and there would be an additional cost to cover the purchase of customer premises UHF receivers. However, preliminary estimates place suggested rates within the range of other comparable DSL high-speed service offerings.

"KRCB-TV will celebrate its 20th year of continuous television service to the community in 2004 along with its 10th year as a National Public Radio broadcast affiliate," says Ms. Dobbs. "Throughout the years we have taken pride in our ability to embrace new technologies and services that can expand the reach of information into virtually everyone's home in our territory. We are happy to be part of a project designed to fulfill this countywide mission and our ongoing charter."

Send me a link to this page!

To link to this page from any outside source, right-click the following link and choose "Copy Shortcut":

<http://www.busjrnl.com/specialreport.html?story.id=3565>