

# Humboldt Electronic Village Report

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## Introduction

“A huge but worthy undertaking” was the first entry of a discussion thread on the Humboldt e-village wiki site.

The Redwood Technology Consortium (RTC) organized a focus group, a wiki (collaborative website), and traveled to Blacksburg, VA to gather ideas and thoughts about the form an electronic village would take in Humboldt County. Other recent RTC travels were to Nevada County (CA), Ashland/Medford (OR), Sacramento (CA), Davis (CA), and Bend (OR).

During the trip to Blacksburg, RTC board members were able to talk with many people involved with one of the most successful e-villages in the country. One prize item brought back to Humboldt County was a leadership guidebook from the Governor’s Virginia e-Communities Task Force.

In November, 2005, fourteen people participated in an RTC e-village focus group. It was a diverse group of people involved in technology and community. Stimulating discussion occurred during the meeting, and everyone contributed useful ideas. One thing the group agreed upon was that creating content was the easy part. The tough part would be getting everyone to the table and all working together.

In hopes of keeping the e-village discussion going, a wiki site (<http://humboldt-e-village.wikispaces.com>) was developed to get input and to create a collaborative document. The RTC members and general public were invited to participate as well. Unfortunately, the wiki site has been slow to gain momentum. This could be an indication of the readiness of the community for utilizing a new type of collaborative tool (wikis). It could also be an indication of how busy most people are.

Following are 3 key findings which will determine the success of an e-village project:

1. Full involvement and leadership by an anchor organization is essential
2. Staff is required to sustain; volunteer efforts aren’t enough
3. Education and outreach is as important as adequate infrastructure

This report was generated from a visit to Blacksburg, researching many white papers and online sources, convening the focus group, and reviewing the Virginia e-Communities Guidebook,

## Past and current Humboldt models of e-villages

### Past

**North Coast Electronic Town (NET)**, Started by Larry Goldberg in 1993, it was our first multi-county electronic networking system, based on AppleLink, an early bulletin

board. “It was designed to link individuals, non-profits, local government and private businesses from a three-county region (Del Norte, Humboldt, and Mendocino) together into an electronic community.”

**Redwood Country Online**, started by Larry Goldberg in 1994 (with the help of Bob Morse). The first commercial web portal for North Coast businesses to display their wares on the Internet on the North Coast. Redwood Country Online merged with HumGuide in 1996 to become the region’s primary web portal, which is still running today.

## **Current**

**HumGuide** started by Andrew Jones. HumGuide is many things including an entry point for travel and relocation. The site gets 200,000+ page views per month without doing any real advertising. It is open to anyone to be listed (basic listings are free). Currently, it is the closest thing resembling a portal on the North Coast.

**Trinidad Crier, Trinidad**– a wiki that is used as an organizing website for local community groups in Trinidad, CA. Anyone belonging to the site can add or edit material anytime and anywhere, thus eliminating the need for a webmaster and putting content control into the hands of the users. This wiki site was inspired after the creator, Donna Lin, read an article about wikis in the Eureka Times Standard (article was written by RTC member Daria Topousis).

**Other** - Various Communities of Interest (Bulletin Boards, Users Groups) - Smuggler's BBS, HumLUG.

## **Examples of what other regions have done**

The following are four communities that RTC Board members visited:

Blacksburg, VA, **Blacksburg Electronic Village (BEV – [www.bev.net](http://www.bev.net))**. “Nationally recognized for its early adoption of technology as a tool to empowering communities.” It has a robust offering of information stressing the role of the portal as a convener of communities of interest. BEV is a “quilt of organizations, initiatives, and Virginia Tech.” It is an applications framework built on infrastructure, and a chance for the community to do something together. Content maintenance is important. Keys to success: lots of early education and outreach, working with churches (opinion leaders) and seniors, leadership by Virginia Tech (BEV is under the auspices of VT). There are many white papers archived on the BEV website about the developmental process of the entity.

**Ashland, OR: the Southern Oregon Telecommunications and Technology Council (SOTTC – [www.sottc.org](http://www.sottc.org)) and Ashland Fiber Network (AFN - [www.ashlandfiber.net](http://www.ashlandfiber.net))**. SOTTC is a tech-based advocacy and education organization, very similar to RTC. They have been instrumental in pulling together a diverse group of people to create a Telecom Strategic Planning Team. The group is working on

Telecommunication Strategic Plans for Josephine, Douglas and Klamath counties. They also have been active in identifying and filling the gaps in the Ashland Community Operating System (the primary pieces needed to create dependable & robust telecom structure and a tech savvy citizenry). See the Appendix for a pictorial representation of the Ashland Community Operating System (COS), showing how multiple organizations are integrated in Southern Oregon and strategically plan for the region.

The Ashland Fiber Network was developed with public funds. The intent was to provide a fiber connection and to provide access to multiple Internet Service Providers (ISPs) in the area. Access is free for non-profits and schools; fees are charged for others. AFN is one of the only open networks in the country. Deployment cost creep has been an issue leading to financial problems. The take rate of customers using AFN is low partially because competitors are providing broadband products at a much lower price. Though the competitors' services are of slower speed, but most clients don't realize the difference between services. The misinformation strategy so far has been successful. With loans coming due, the AFN may be dismantled by a public vote. The "build it and they will come" strategy didn't work.

**Davis, CA, Davis Community Network (DCN) and Davis Wiki.** DCN is primarily a community education network, they also manage and ISP. They stated with funds for an environmental study. The **Davis Wiki** was developed and is maintained by a small group of people. The site is community centric and constantly changing. A great example of how grassroots efforts can grow into something with wide appeal. A team manages content for accuracy and effectively encourages contributions. The site runs on advertising revenues and many volunteers. During the mid-90s, Davis deployed a V-shaped electronic village that went from Davis to the Nevada state line. It was bordered by I-80 to the north and Highway 50 to the south. Major White papers were written about it. The e-village is no longer in existence.

**Nevada County, CA** – Under the aegis of the Nevada County Economic Resource Council, a telecom team has been formed to work on broadband coverage in the county. They have teamed up with the County GIS department to map broadband in the county. A local SBC engineer has helped with providing information. The team has also partnered with Wireless Internet Service Providers (WISPs) to bring service to unserved regions of the county. They recounted multiple experiences with publicizing upcoming WISP service in rural areas, then SBC immediately went in and installed DSL in those areas. This is success in getting coverage, though in a backhanded way.

### **Other regions and initiatives:**

There are all sorts of communities, large and small, in the news lately who are spearheading efforts to install community-based WiFi deployments, particularly in downtown areas. Temecula, CA, is an example of a community using redevelopment funds to revitalize their old town area. Philadelphia and San Francisco have been in the news with their efforts.

Many rural regions are deeply involved in infrastructure improvements and concentrating less on content and collaborations. However, it is use of applications that drives the demand for broadband infrastructure.

**Smart Communities** – This is a state-wide program launched in 1996 by the State of California to improve the economic competitiveness of municipalities. The program was developed and managed by San Diego State University. They define a smart community as “a geographical area ranging in size from a neighborhood to a multi-county region whose residents, organizations, and governing institutions are using information technology to transform their region in significant, even fundamental ways.”

The fundamental premise was that smart communities used technology to promote economic development, job growth and overall increased quality of life. Technological deployment wasn't the end goal but the means to a larger community benefit. The Appendix Resources list has links to Smart Communities Guidebook.

Doing research online, it's difficult to pin down what an e-village is, and the term 'e-village' means different things to different people. If one Googles “electronic village”, community network portals tend to be the result, led by the Blacksburg Electronic Village.

## **What would an e-village look like on the North Coast?**

In November, 2005, a focus group was held to discuss the e-village concept for Humboldt County. Attendees represented business, education, economic development, the arts, and technology. They offered ideas and insight. One discussion question “What is an electronic village?” proved difficult to narrow down. On the surface, this appeared to be a simple question, but there were a wide variety of responses. Perhaps the most insightful response was: **“It could be anything we want it to be”**. Following is an attempt at a more focused answer.

An e-village is:

- a virtual representation of a community
- interactive and transactional, a way to get business done and a way to build community
- streamlined access to local and regional information accessible by anyone, anywhere
- a marketing opportunity and economic development project

The vehicles to implement an e-village include:

- Infrastructure – the pipes, fiber optic cable, routers and power lines
- Content – the text and multimedia images one sees and hears on the screen

- Content management systems (CMS)- the software that organizes all of the content and allows for information exchange
- Portal – the public access point to the content
- People – those using it and those keeping it all working
- Policy – government policies that facilitate an e-village

## **Benefits of an e-village include:**

- Economic Competitiveness – Fast and dependable telecommunications are no longer just an option, they are essential for rural communities to survive. An e-village will depend upon a robust telecommunications infrastructure so that businesses can communicate with the world at speeds that the rest of the world is using.
- Streamlined functioning of governments - For citizens: downloading necessary documents instead of driving to the office, commenting on plans on your own timeline instead of waiting all evening to offer your comments at a public meeting, and easier access to government officials. For the governments: eliminating archaic processes (e.g. applications that need to be completed by hand, files overflowing with papers, hardcopy maps vs. GIS), quickly updating important and frequently used information (e.g. road closures and repairs, holiday office closures, changes in requirements for building codes, food safety, and voting results).
- Access to education, governments, and businesses - 24/7 versus 9-5 weekdays. People have the option of accessing information when it is most convenient for them.
- Enhanced Quality of Life - Less road congestion – people can telecommute and obtain information and documents without driving. Getting info one wants and needs quickly (e.g. doctors, jobs, entertainment info, places to walk a dog). Participation in communities of interest and meeting new people.
- Content – Anyone can be a content provider, given infrastructure access.
- Informed Citizens and Visitors - People can find the information that they want or become informed about things that they may have missed by using a fast, effective and easy search engine.
- Improved Healthcare – Telemedicine, increased demand for services to an aging population.
- Planning for the future - Comprehensive cross-jurisdictional planning for wireless transmission facilities and e-government.

## Elements needed to create an e-village

- Readiness of community
- Leadership
  - Creates strategic plan
  - Manages project
  - Gets input from community stakeholders
- Collaboration among business, education, government, healthcare, community based organizations, and residents
- Volunteers, paid staff, and professional services
- Content – must be fresh, useful, and pertinent
- Accessibility for everyone – needs to be affordable and publicly available through a variety of means (cell phone, laptop, kiosk, Blackberry, and desktop)
- Broadband connectivity throughout county and redundancy (wires and wireless)
- Education and outreach
- Governance – rules of conduct and who gets to decide those rules; also includes ownership/business models
- Portal – an entry point that facilitates ease of navigation to desired information (people are usually looking for information, not specific websites)
- Policy – regulatory and government policies that don't stand in the way and plan for the future

## **Characteristics of a successful e-village**

### **Pre-village**

- Collaborative
- There was a champion and or anchor organization
- Planning was a community building activity

### **Post-village**

- High usage by residents through all demographics, strong public support
- Increased economic activity
- Attractive to creative or knowledge workers (relocations to area)
- Efficient, transactional, and accessible to anyone who wants it
- Community building
- Strong, adaptive leadership

## **Benefits of planning**

- Cohesiveness of project and public presentation
- Less wasted time and money
- Clear vision – allows others to understand and jump in (or at least not block it)
- Representative of the citizenry
- Can identify potential problems and opportunities further out (not so easily blindsided)
- More funding opportunities
- More collaborations and partnerships

## **What happens if e-village is not planned for?**

- Multiple “official” web sites – Proliferation of dead, stale, seldom-used, and low quality web sites (e.g. 25 separate sites for economic development in Humboldt County). These duplicative efforts draw attention away from existing sites that need help to become better.
- Sprawl – Uncontrolled development of portals leading to chaos and clutter.
- People left out or disenfranchised; people uninterested.
- An expensive, failed project.

## Management/Ownership

There are many possibilities for ownership of an e-village. Ownership will depend on the local definition of what makes up an e-village. Depending upon the vision for the e-village, the choices could be limited to certain business models. The ownership decision needs to happen early and needs to be transparent to everyone participating. Below is a table containing a variety of business models.

<b>Business Model</b>	<b>Description</b>	<b>Funding Sources</b>
Community Portal I	Community or Non-profit built & maintained	Taxpayer funds, foundation grants, donations, advertising revenues, fee-for-services
Community Portal II (outsourced)	Non-profit or government obtains funding to educate business owners encouraging an organic development	Same as above (cost are significantly lower because the actual project is not being funded by the non-profit)
Government	Local government developed and maintained	General or enterprise funds. The design, implementation and maintenance can be outsourced to private enterprise
Private Consortium	One or many private sector providers develop and maintain	Private investment

## Financial

Cost is entirely variable and depends on what the e-village vision becomes. There are a range of approaches from an organic e-village creation to a fully scripted and planned vision. All cost must include planning, implementation, and long term maintenance.

Most resources agree that good telecommunications infrastructure with a active citizen use of the infrastructure is a good thing for local economies, job growth, and overall improved quality of life. The evidence suggests that with careful planning and management, e-villages are feasible as an economic development projects.

## What is possible?

Services that an e-village could provide (From the Virginia Connected Guidebook):

## ***Government***

**Citizen help desk** – Many localities have a special phone number to handle general questions, complaints or requests. Often there is a centralized information kiosk as well. The community portal (and its underlying databases) integrates these functions, making the same services available via online. Communities have to establish and clearly communicate how this system will be staffed – when the information can be retrieved only from existing databases, for example, vs. having staff to handle phone, web, or in-person requests.

**Tax assessment search and payment** – Searchable public tax records, online payment of taxes and other assessments.

**Court services** - Daily publication of dockets and schedules, jury duty, payment of parking tickets.

**Public works** - Notices and updates on scheduled projects in county, accommodation of citizen inquiries and complaints, scheduling of special trash hauling or other services.

**Emergency services** - Links to fire & rescue, reporting unsafe or unsanitary conditions, earthquake and tsunami evacuation routes, other safety information.

**Online business permitting** – Online access to building permits as well as provide integrated service that enables contractors/citizens to apply for permits and receive notification of approval online.

**Constituent notification service** – Through automated e-mail lists, this would enable citizens to request e-mail notification from local government officials (mayor, city manager, county manager, etc) of local government announcements and news items (e.g. updates on proposed ordinances, public meeting announcements, and new procurements).

**Parks and recreation** - General information about local, regional, state and federal facilities; reserve and pay for the use of facilities, classes, sports teams, leagues, etc.

**Animal control** - Info about animal health, register complaints, report wildlife problems, pay for dog licenses.

## ***Community Services***

**Community calendar** – Authorized entities would post public meeting and event announcements via a publicly accessible, Web-based calendar. Announcements should include location, directions, description, agenda and contact information with

an e-mail address as well as hyperlinks to any relevant website. This service also should be searchable by neighborhood.

**Culture and tourism** – Information from local tourism centers. Interested parties could submit requests for additional information and/or schedule tours, purchase tickets, etc. Other capabilities might include reservations or links for local motels, B&Bs and restaurants.

**Community media** – Users could find information on local community media, including locations, times, workshops and availability of facilities and equipment.

**Health** – Searchable database of local health care practitioners (with hours and locations), facilities, organizations, consumer resources (support/advocacy groups) and events. Transactional applications could include payment processing and appointment scheduling. Online access to health records would be possible via a secure site. Users also could get notifications for check-ups, vaccines, etc.

**Entertainment and shopping** – Searchable database of local merchants, restaurants and entertainment events. It could provide for online ticket sales, reservations and “buy local” coupons and specials.

**Transportation** – Schedule and ticket purchase options for public transportation as well as links to other options, such as taxis, ride-share programs, courtesy shuttles. Links to local transportation projects and allow for public comment and problem reporting as well as provide maps of bike paths and trails.

**Public utilities** – Information on local utilities, including cable, gas, electricity and water. Applications might include appointment scheduling, account inquiries, online payments and problem reporting.

## ***Business***

**General information on owning/starting a business** – Information on required permits, taxes, licensing, etc., plus links to small business development centers, zoning departments, and utilities.

**Business listing** – Searchable database of all local companies, including website links where applicable, legal and appropriate.

**Business calendar of events** – Authorized entities would post event announcements, including location, directions, description, agenda, contact information with an e-mail address, hyperlinks to any relevant websites and event registration.

**Business organizations** – Database of local business groups, including general information, contact forms, membership applications and dues processing for groups

such as Chambers. Contact information with e-mail addresses and hyperlinks to relevant website also could be included.

**Business assistance** – General information on local assistance groups and links to federal and state resources such as incubators, the Small Business Development Center (SBDC), and economic development organizations.

**Workforce** – Links to the local Workforce Investment Board and internship programs and learn about public/private vocational schools, community colleges and military outplacement offices.

**Economic Development** – Access to local economic development organizations by providing information on activities, funded initiatives and industry programs. Users also could request an on-site visit by local staff.

## *Education*

### *1. Libraries*

- **General information** – Locations, hours of operation, special collections, programs and events, information and availability of specialized publications.
- **Reservations** – Reserve high-demand books as well as register for special programs and upcoming events.
- **Online applications and payment processing** – Applying for a library card, viewing an individual's borrowing history, paying fines and participating in book sales might all be done through this service.
- **Online browsing and reference information** – Browse the catalog or ask questions of the reference librarian.
- **Donation information and volunteer opportunities** – How to donate books to the library and explain literacy and tutoring opportunities.

### *2. K-12 Schools*

- **Online student enrollment** – This is being done as a statewide initiative in North Carolina. The community of North Lauderdale, Florida, gives another example.
- **Teacher/parent communications** – Confidential student information and e-mail, via a secure site.
- **Student account monitoring and replenishment** – Lunch and activity fees.

- **Access/input to school board and PTA activities** – Posting of meeting schedules and minutes. Public comment would be facilitated via open bulletin boards.
- **Information/enrollment in clubs and sports activities** – View listings and descriptions of local clubs and sports activities or enroll online and pay fees via a secure site.
- **Links to information about California Standards of Learning and other testing** – View the standards that schools are required to teach to. Users could view the testing schedules as well as view tests scores for all local schools.

### ***3. Links to higher education – Two –and four-year institutions***

Users could access links to community education, adult education and two- and four-year higher education institutions.

## **How to Get Started**

Recommendations:

- Identify Leadership
  - Create Telecom Advisory Team - what is this -define the service/product they will produce (e.g. Develop a strategy to grow the community; tech equivalent of the local planning commission or building department)
  - Use self-selected Leaders (advice from Virginia Tech) and invite anchor organizations (e.g. HSU) to partner
- Hire project manager/coordinator
- Conduct Community Assessments
  - Existing Infrastructure- Living in the Networked World identified network architecture, mapped service availability, and wireless, satellite, microwave and other technologies. It also determined Internet penetration for households, schools, businesses, government and non-profits
  - Human Capital – demographics, identify project stakeholders, identify key leaders to include in planning effort
  - Organizational Resources – inventory if key organizations and institutions, identify financial resources available to the project
- Define e-village concept and scope of project

- Ownership models and funding options
- Design, build and deploy
- Ongoing outreach, training and marketing
- Don't get involved in infrastructure
- Build content
- Influence local policy

## Resources

Wiki Site: <http://humboldt-e-village.wikispaces.com>

Tech Beat article about Wikis, by Daria Topousis  
<http://redwoodtech.org/Newsletter/news.cfm?ID=317&pass=yes>

Trinidad Crier Wiki (community calendar and information site)  
<http://trinidad-crier.wikispaces.com/>

Living in a Networked World  
[http://redwoodtech.org/HotTopics/documents/126\\_final\\_report.pdf](http://redwoodtech.org/HotTopics/documents/126_final_report.pdf)

Gartner Report  
<http://www.cenic.org/gb/pubs/gartner/GartnerFull.pdf>

NW California Analysis  
<http://www.cenic.org/pubs/reports/nwcenicstudy.pdf>

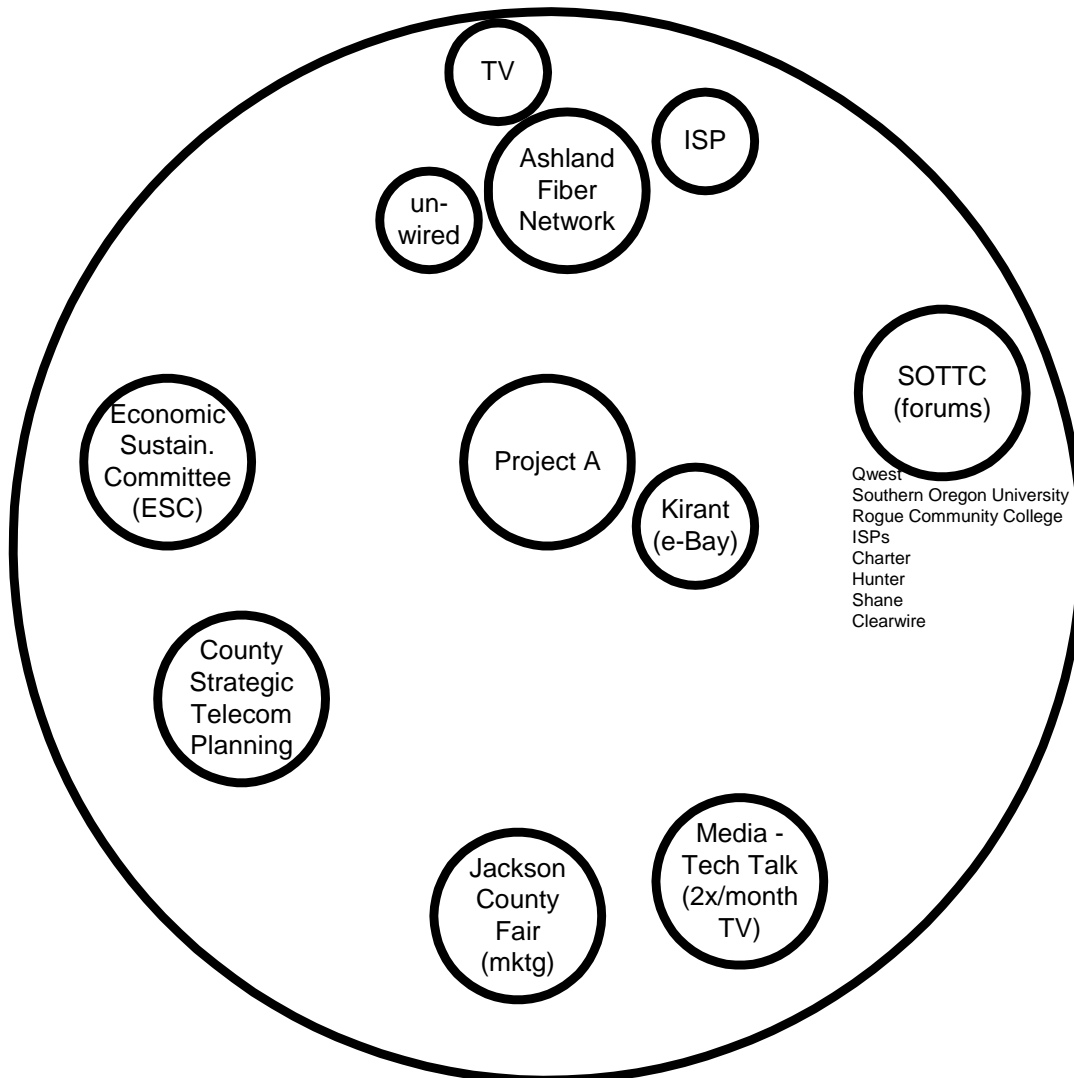
Smart Communities Guidebook  
<http://www.smartcommunities.org/guidebook.html>

### **Items available upon request:**

Focus Group Responses to Questions (also available on wiki site)  
Virginia Connected Guidebook  
Civitium Guidebook

## Appendix

# Ashland Community Operating System (COS)



Key components of the Ashland COS include planning, economic development, business partnerships, marketing and branding, education & outreach, as well as infrastructure. RTC will define the COS for Humboldt County, and the Humboldt COS should be one of the inputs to the e-village visioning.