



Trip Report

Blacksburg, Virginia

10/24-25/2005

Bob Morse and Tina Nerat

Introduction

These meetings were set up and hosted by Jean Plymale of the Virginia Tech IT department. She is involved in several telecommunications projects in southern Virginia. The two days of meetings turned out to be a rural Virginia telecom conference. All the groups in Southside and Southwest Virginia attended as well as a couple telcos (Citizens and Pembroke) to talk about initiatives in progress in their areas.

This report is an outline of information gleaned while there. The trip was funded by the Headwaters Fund in support of developing an RTC business plan and formulating what an “electronic village” might look like in Humboldt County.

Top level take-aways were:

- Virginia has a lot going on in rural areas telecommunications projects.
- Best description we heard of what’s going on is: “quilt of organizations, initiatives, and Virginia Tech”.
- Virginia Tech extension offices are located around the state and are heavily involved in rural economic development.
- The state of Virginia is committed to technology development (<http://www.cit.org/>).
- The IT department at VT is involved in regional technology and telecommunications initiatives (<http://www.it.vt.edu/initiatives/index.html>).
- Some small coop telcos in southside Virginia have services that would knock the socks off bigger telcos.
- Tobacco Commission funds are involved in telecom initiatives in some counties, not in others.
- Churches and senior groups are key in Virginia to electronic village development.
- County Offices of Education were not familiar to them - State of Virginia seems to play larger role with providing infrastructure to school districts. This takes possible anchor tenants out of the mix when planning community networks.
- SBDC did not seem to play a big role there.
- Community portals connect people and businesses.
- We need to look into doing www.cit.org Broadband 101 workshop.
- Blacksburg Electronic Village is under auspices of Virginia Tech.

- Virginia is transitioning from a tobacco, mining, textile, furniture economy.
- Right of way is \$.52 per month on each phone bill so small rural telcos aren't handicapped by large right of way fees to state.
- Virginia has regional multi-county planning districts set up by the state, and telecommunications is part of the planning process.
- Counties, cities, and towns mean different things in Virginia than they do in California – we never did figure out the differences.
- Virginia is a Dillon Rule state versus North Carolina is a Home Rule state. One clear thing came through – any infrastructure change, even adding a stop light, must be legislated.
- County CIOs were important in success of electronic village projects.
- We need to try and create a county-wide telecommunications committee as part of the county government structure. And then look to forming a regional telecommunications committee that includes representatives from Humboldt, Trinity, Mendocino, Del Norte and possibly Southern Oregon.
- The differences and challenges we face are the geographic distances and isolation. VA is smaller and denser, much closer to major urban areas thus infrastructure, technical personnel, etc.

Erv Blythe – Virginia Tech VP of IT

Erv welcomed us and talked about how they have been working since the early 1980's to get involved with NSFnet and the Internet, using technology and telecommunications to level playing field as a competitive tool. Tech and telecom are no longer “nice to have” but needed to keep communities alive. Their Congressman, Rick Boucher, is active in telecommunications initiatives (<http://www.house.gov/boucher/tele.shtml>) and is co-chair on telecom committee. He holds town meetings on a regular basis and telecommunications is a topic discussed at meetings. It was clear that from the inception of the Internet, VT and Erv were very involved in pushing telecommunications services out to the general public. At the beginning when Erv suggested opening up the Internet (then just being used by government and universities) the folks at NSFnet wondered what would the general public do with it? This forward thinking, risk-taking attitude has continued to infuse telecom development in the region.

Karen Jackson – Virginia Center for Innovative Technology

- <http://www.cit.org/>
- Reports to Virginia Secretary of Technology (Trade and Commerce is separate agency).
- This is a state-chartered non-profit.
- Successful beyond anything they expected has been their Broadband 101 “Untangling the Wires” seminars all over the state. For a small fee, half day seminars cover jargon/acronyms, broadband technologies, and how broadband is changing the business and social landscape. They cover how broadband can cut costs and improve productivity, where to look for cost savings, and provide tools to assess broadband readiness.

- Some people “get it” with broadband; others are untapped – don’t know what they don’t know and have no idea why they’d want broadband.
- They provide tech business support around the state and provide communities assistance with infrastructure development. Also support is provided with access to capital and federal funding.
- They have a loose relationship with SBDC.
- They want to accelerate socioeconomic growth of rural areas through applications and use of broadband.
- Infrastructure is necessity, not an option. Seed funding from government to get infrastructure going. Set course for self-sufficiency at local level. Act as a safety net/oversight for attaining goals.
- Value comes from applications, not infrastructure; infrastructure is a means, not end.
- Look at infrastructure to help existing businesses, not attracting new.
- Methodology is to identify leadership, identify stakeholders, do needs assessment, training, RFI/RFP for design, look at funding options, then build and deploy community portal.
- Without Tobacco Commission funding, broadband coverage would be less.
- Do an on-line survey to ask whether people want service in an area – prioritize by response – these are *connected* people.
- VT wanted information on how we do Times-Standard Tech Beats once a week – rules, editing, rotation, etc.

Ann Moore and Max Stephenson – Virginia Tech

- They are looking at human development that needs to accompany technology deployment if a region hopes to succeed in strengthening economy.
- Developing leadership in communities to get grassroots efforts going is hardest.
- Teacher and faculty development is provided. 13% trained is considered critical mass. Get critical mass in each school.
- Provide home computers if necessary to teachers to get them trained.
- Future of the Piedmont Foundation has taken leadership in the Danville area.
- Use self-selected leaders and invite Virginia Tech into community (two way engagement instead of pushing initiatives on community).
- Community development and change versus economic development was discussed.
- Churches establish attitudes and values; use them in technology initiatives.
- Issues they are dealing with are: 1) endemic racism, 2) inherited economy and classism (eg men as wage earners), and 3) jurisdictional particularize (areas vary widely across state in culture).
- Technology can be catalyzing role.
- Arts organizations had Ford Foundation grant and could ask questions and start conversations that might not occur otherwise to get beyond issues above. Design of community projects that endure. Cultural regeneration through the arts.
- For communities, it’s not just broadband; it’s what do you want to be in this changing world.

- New term: FIT (fluency in technology).
- Another new term: Spiritual Capital (vs Social Capital or Economic Capital).

Jeff Crowder - Network Virginia/VORTEX

- <http://www.vita.virginia.gov/>
- They provide infrastructure for community networks and 70% of school districts at the state level.
- OC3 (155mbps) is provided at affordable price.
- VORTEX, new statewide fiber optic network to rebuild Network Virginia to connect Virginia's six research universities using DWDM. K-12 schools can buy 10-100mbps connections.
- http://www.ecorridors.vt.edu/news/topic/?article_id=138&cat_type=topic&cat_id=11
- 1995 fiber network was planned and that got Verizon's attention.
- VT operates network operations center (NOC).
- VT is class A member of National LambdaRail.
- 19 telcos are involved.
- Large water and sewer projects have conduit installed so fiber can be blown in later.
- Power companies are working with them for pole access. They are paying 95% of cost because they will be able to install metering applications.
- New term: fiber=missiles in the ground.

Dave Rundgren – New River Valley

- <http://www.nrvpdc.org/>
- New River Valley is multiple counties, and is planning an open access network, with 280 miles of fiber backbone and 127 points of interconnect for wholesale distribution to the last mile by retailers. Citizens, Pembroke, ISPs, and wireless companies will be retailers. Government, schools, and ISP's are anchor tenants.
- We're not sure if this kind of quasi-government agency is even possible in CA. Need to talk with Gregg. (See chart).
- This is an economic development network, not for residential use.
- Wireless will be part of network.
- Want to provide greater bandwidth and service necessary for retention, attraction, and development of companies.

Carl Epley – Pulaski County Wireless Authority

- Pulaski County has a company which provides all the pigment to crayon companies. They are on dial-up Internet service because there are no alternatives. Trying to build wireless service to county.
- Used to have spread spectrum (unlicensed), but other services came in so interference stopped that service.
- Digital divide in county where river/lake runs.

Leon Law - Pembroke Telephone Cooperative

- Have 3000 lines to 2600 customers.
- 13 employees, all local
- Subscribers are members of the co-op and get dividends.
- Provide video to customers.
- Used RUS funds to build communication center, but said strings attached were not worth it.
- Niche player, not looking to expand.
- Provide DSL, but it's not a moneymaker.

Greg Sapp and Robert Weeks – Citizens Coop Telephone Co.

- <http://www.citizens.coop/>
- Citizens connects people and communities in rural southwest Virginia.
- They provide triple play. Blacksburg and VT folks said their services would knock the socks off any of the big telcos.
- They have redundant fiber in a 10 county area. Fiber runs 70 miles. Put in lots of fiber (240 strands) for future (made mistake in late 1980s with only 12 strands).
- Provide wireless services, DSL, cable modem, video, and analog cable services from multiple business units under coop umbrella.
- They are providing mobile wireless through Flarion, a company recently bought by Qualcomm. T1 backhaul to POPs. Working on fiber to towers. Wireless is self-funded. 700mhz has good foliage penetration. Use licensed spectrum.
- Provide voice mail, e-mail, VoIP
- 65 employees, all local.
- 20,000 customers.
- Have used RUS funding. Profits have been used for modernizing. Have used some Tobacco Commission funding.
- They do online surveys to ask towns/regions whether they want service. This gives them prioritization.
- Use resellers so they don't need offices all over.
- Trends they see are: home theaters, mobility, single provider/bill, e-commerce, higher speed.

Ken Anderson – Town of Blacksburg

- Town has 20 agreements with telecom vendors, none the same. It's like managing an octopus. Issues with fairness to vendors.
- They have trouble understanding what's out there in terms of infrastructure.
- 10' antennae are allowed on private property without permits.
- Telcos commented they prefer public right of way/lands if possible for more stable relationship that with private parties.

Nancy Franklin, Institute for Advanced Learning and Research

- <http://www.ialr.org/>

- Technology and Rural Prosperity Conference next April sounds very interesting – idea sharing with professionals, economic developers, business owners, and educators. Subject is embracing new technologies and expanding economies to include new, high-tech industries.
- Talked about the Danville area – 40 miles north to south, which includes part of North Carolina. This area used to have textiles, furniture, and tobacco. Education is low and poverty level is high. 40% black.
- Projects with VT are e-DAN (Fiber optic network has 3 access points), educating teachers, and Institute for Advanced Learning and Research (IALR).
- Future of the Piedmont Foundation mentioned again.
- IALR projects are: polymers, horticultural/forestry (esp. high value crops), motor sports (Virginia International Raceway), and unmanned systems development.
- <http://www.southerngrowth.org/> is another organization of interest.
- New slogan = Learning Working Winning.
- IALR is working with K-12 teachers on integration of curriculum into the classroom, especially math, science, and technology.
- Church-based programs with technology training, church tutorial sites.
- Southern Piedmont Tech Council, <http://www.sptc.org/>. has forums and conferences. Also Tech Tuesday, vendor IT briefings.
- Youth development program: 2 week network boot camp with US Dept of Ed grant at low cost (\$200).
- They market “BEV in the Box”.

Bill Saunders – Blacksburg Electronic Village

- <http://www.bev.net/>
- BEV is an applications framework on infrastructure; a chance for a community to do something together.
- Seniors and churches were key.
- Content maintenance is important.
- Social capital is developed online, as well as announcements, meeting notices.
- BEV is under the auspices of VT. Hosting and network services all handled at VT. They developed a LAMP (Linux apache mysql php) hosted application package (BEV in a Box). Content is built and maintained by volunteers in the community.
- VT extension division/offices in most counties were key tool for getting communities and VT together.
- Good site for demographics to help with grant applications is <http://demographicsnow.com/>.
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John Nichols – Virginia Tech

- <http://top.bev.net/new/>
- The TOP project got communities to develop electronic villages. For the counties in the above URL, they took charge and got their counties online. Some counties are very rural, eg King & Queen county, with no water/sewer, just a highway

down the middle. Connections have been made within communities and from outside the area.

- Cost for VT to set up/run these electronic villages in \$12,000 the first year (BEV, Apache server, php), then \$3,000 the second year. VT got \$\$ up front and built. Locals maintain site content. 24/7 support by BEV. They'd like to get out of long term support business. Prefer to prime the pump, then let private sector take over.
- County CIO was key in these projects.

Andrew Cohill

- Build RSS-enabled web sites for community organizations.
- New model for infrastructure providers is to give free access to content providers, who then pay infrastructure owner 5%, much like cable companies do for cities.

Redwood Technology Consortium Participants Oct 24th –25th

Carl L. Epley, epley@vt.edu - Citizen of Pulaski Va., Member of the Pulaski Telecommunication committee, Member of the New River Valley Telecommunication committee

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