



**2009-2010
Building Communities Educational Series**

**Community Development in a Difficult Economy ...
Readying for the Rebound**

Brought to you by the Center for Community & Economic Development
Co-sponsored by the Sustainability and Energy Teams
University of Wisconsin-Extension



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Today's Presenters

Andy Lewis
Community Development Specialist, Center for Community and Economic Development, U.W. Extension




Andy has been with U.W. Extension for 26 years and has served as an Extension specialist in the Center since 2001. Lewis currently focuses on developing educational programs and tools that assist communities in developing strategies for improving jobs, income and quality of life.

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**Broadband and E-Commerce: Putting the "E" in Community and Business,
January 19, 2010**

Andy Lewis
andy.lewis@uwex.edu

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Purpose of Today's Program

- Provide you with an overview of E-Commerce...
For Communities
For Business
- Discuss the Role Communities Can Play in Facilitating an Appropriate E-Commerce Environment
- Provide you with a few resources to assist you with that process

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Name This Technology

Once upon a time.....

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The Road to Prosperity

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Change Is Happening Quickly

From Dial Up Access to.....?

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The Internet has changed our lives

(Especially the way we teach, the way we learn, the way we conduct business, the way we communicate...)

- The Internet service enables applications.
- Broadband (or bandwidth) is required!
- The Internet is a necessity these days, it's not a luxury.
- The change is not over, it has just begun.

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Remember These?

DEC Rainbow (Burnett County UWEX Office, 1983)

Compaq "Portable"
Grant County UWEX Office, 1986

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Don't confuse promising new tools with panaceas

"In short, access to telecommunications technology may be a necessary condition for rural economic growth, but it is far from sufficient." (*Digital Deliverance*, p. xiv)

Dr. Judson Edwards, Director of the Center for International Business, Troy University

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The Digital Divide

"Though economic development benefits are possible for remote areas in the information economy, research studies suggest that rural communities throughout the United States are struggling to adapt and apply information technologies for economic and social development." (*Digital Deliverance*, p. 2)



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Governor Bob Riley, Alabama:

"Rural communities offer so much in quality of life and have so much potential. But without sufficient access to broadband, these communities and their residents will remain technologically isolated, and thus, disadvantaged."

"It only makes sense that if broadband technology enables a person to work anywhere, naturally people will live and work where quality of life is high" (Digital Deliverance, p. 121)

<http://www.timesdaily.com/article/20090123/ARTICLES/012303277?Title=State-wants-high-speed-internet-availability-everywhere-in-Alabama>

Traditional Approach To Economic Development

Economic development strategies have traditionally invested in infrastructure:

- Highways
- Water sources and sewer lines
- Reliable electric and gas services
- Railroads and ports
- Affordable land





New Economic Development Strategies

Our information economy requires new economic development strategies to keep our communities economically viable

Technology planning is an essential element of new economic development strategies





"Digital Deliverance: Dragging Rural America Kicking and Screaming , Into the Information Economy" by Judson Edwards

"From the analysis of state policy, two significant conclusions are recognized with regard to strategies for encouraging broadband access. First, assuring rural access to broadband telecommunications begins with an inventory of existing infrastructure".

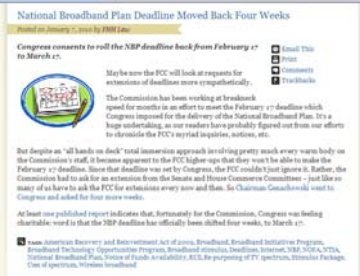





Planning follows infrastructure investments?





National Broadband Plan Delayed until March 17, 2010






2002 U.S. Department of Commerce Study:

Because broadband technologies are so new (and continue to evolve), there are no definitive studies of their actual impact on regional economic growth and tech-led economic development.

Understanding Broadband Demand: a Review of Critical Issues, Technology Administration, Office of Technology Policy, available at: http://www.ta.doc.gov/reports/TechPolicy/Broadband_020921.pdf

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2001: The \$500 Billion Opportunity:

Study prepared for Verizon by Criterion Economics estimated that:

Broadband, acting through changes to consumers' shopping, commuting, home entertainment and health care habits, would contribute an extra \$500 billion in GDP by 2006.

Source: Crandall, R. and C. Jackson (2001), The \$500 Billion Opportunity: The Potential Economic Benefit of Widespread Diffusion of Broadband Internet Access, mimeo, Criterion Economics, Washington, DC.

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2002 New Millennium Research Council:

Estimated 1.2 million jobs would be created from the construction and use of a nationwide broadband network.

Source: Pociask, S. (2002), Building a Nationwide Broadband Network: Speeding Job Growth, white paper prepared for New Millennium Research Council by TeleNomic Research, available at <http://www.newmillenniumresearch.org/event-02-25-2002/jobpaper.pdf>

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2002 Brookings Institution report

Estimated that failing to improve broadband performance could reduce U.S. productivity growth by 1% per year or more.

Source: Ferguson, C. (2002), The United States Broadband Problem: Analysis and Recommendations. Brookings Institution Working Paper at http://www.brookings.edu/views/papers/ferguson/working_paper_2002_0531.pdf

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Community Studies began to filter in around 2003....

- South Dundas Ontario municipal fiber system
- Cedar Falls Municipal Broadband Network
- Lake County Florida Municipal Broadband Network

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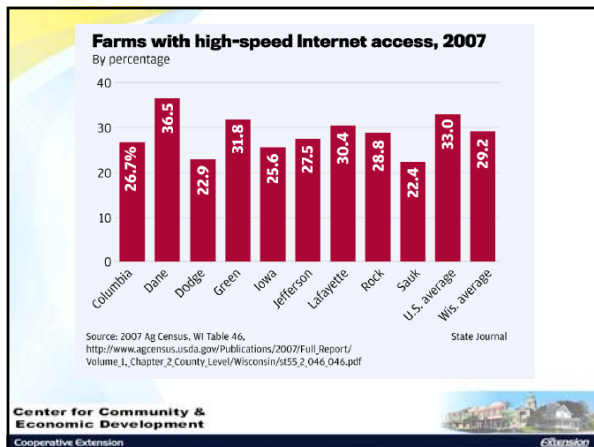
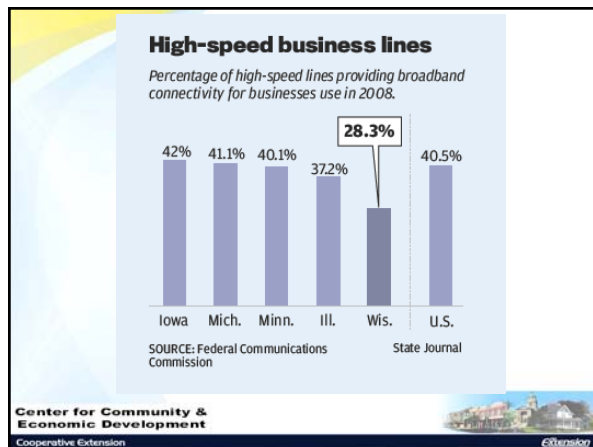
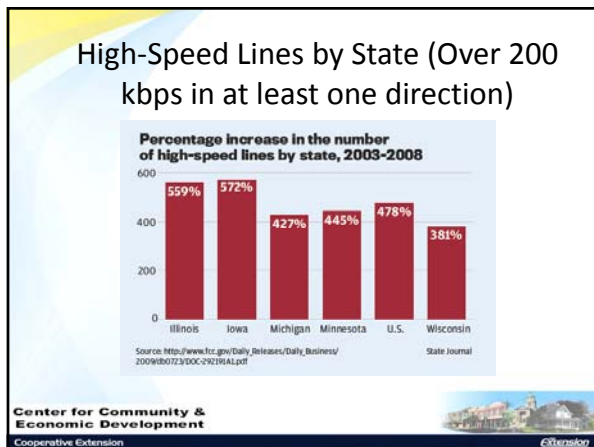
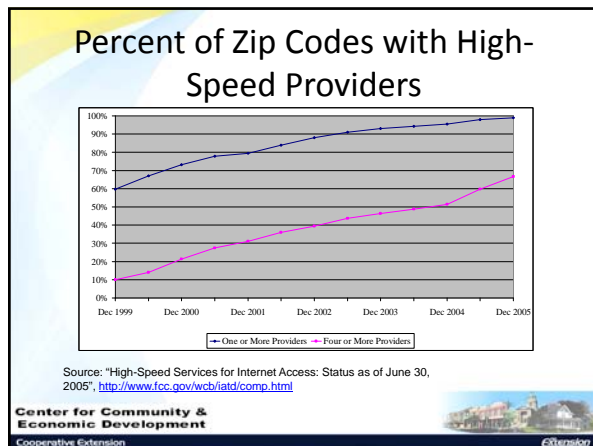
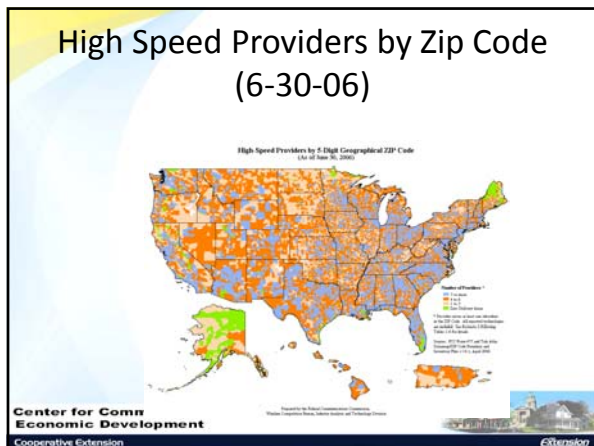
Does Deployment of Information Communications Technology Promote Economic Development Success?

"...It appeared **unlikely** that a 'build it and they will come' strategy regarding ICT deployment had much effect on economic development in these communities"

Source: *Do Information Communication Technologies Promote Rural Economic Development?* Kenneth Pigg & Laura Crank, *Journal of the Community Development Society*, Vol. 36, No. 1, 2005

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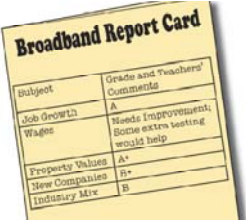
High-Speed Subscription by Population Density

Persons per Square Mile ¹	Percentage of Zip Codes with at Least One High-Speed Subscriber						
	Jun 2000	Jun 2001	Jun 2002	Jun 2003	Jun 2004	Jun 2005	Jun 2006
More Than 3,147	97.3 %	98.1 %	98.7 %	98.9 %	98.9 %	99.3 %	99.4 %
947-3,147	95.8	97.1	98.2	98.2	98.5	99.0	99.5
268-947	93.4	95.6	97.5	98.4	98.5	99.2	99.4
118-268	86.7	92.3	95.2	96.9	97.7	98.8	99.2
67-118	77.9	87.5	93.0	96.4	97.6	98.6	98.8
41-67	65.4	80.9	88.0	93.8	96.4	98.2	98.9
25-41	54.5	72.8	81.0	90.4	94.3	97.6	98.4
15-25	39.2	58.9	70.0	83.3	88.5	95.7	97.1
6-15	31.3	51.1	60.9	77.3	83.5	93.7	96.5
Fewer Than 6	23.0	36.8	49.6	68.5	73.4	84.3	89.3

http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/hspd0107.xls

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From 1999 to 2002, American Communities with broadband access did significantly better than those without



Source: *Measuring Broadband's Economic Impact*, Lehr, Osorio, Gillett, Sirbu, 1-17-06, http://cfp.mit.edu/groups/broadband/docs/2005/MeasuringBB_EconImpact.pdf

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Employment Impacts from Broadband Deployment



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Summary...

- For every one percentage point increase in broadband penetration in a state, non-farm employment is projected to increase by 0.2 to 0.3 percent per year
- The relationship between state output of goods and services and broadband use is positive, but the results are not statistically significant
- U.S.: +300,000 jobs
- WI: +6,912*
- Green County: +38 jobs*

*Estimates based on 2006 annual average employment

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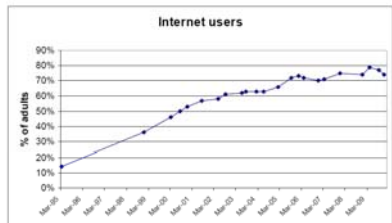
Projected increase in employment for a one-percent increase in broadband penetration

	Employment ('07)	Increase in Employment
Illinois	6,616,322	16,541
Indiana	3,208,336	8,021
Iowa	1,667,781	4,169
Michigan	4,711,671	11,779
Minnesota	3,465,374	8,663
Wisconsin	3,067,420	7,669

Source: *The Effects of Broadband Deployment on Output and Employment: A Cross-sectional Analysis of U.S. Data*, July 2007, The Brookings Institution.

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Internet Use Slows

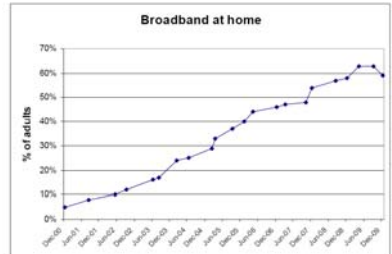


Source: Surveys by The Pew Research Center's Internet & American Life Project and The Pew Research Center for The People & The Press.

Source: Pew Internet and American Life Project
<http://www.pewinternet.org/Reports/2010/Internet-broadband-and-cell-phone-statistics.aspx>

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Broadband Use at Home Slows/Declines



Source: Pew Internet and American Life Project
<http://www.pewinternet.org/Reports/2010/Internet-broadband-and-cell-phone-statistics.aspx>

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Former U.S. Secretary of Commerce William Daley:

“...to realize the full potential of this digital economy, every person and every business must be able to participate fully and make their own unique contribution to its development (1999)”.

Source: *Digital Deliverance*, Judson Edwards, p. 23

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Total adults		100%
Male	49	
Female	51	
Ethnicity		
White, Non-Hispanic	93%	
Black, Non-Hispanic	3%	
Hispanic (English and Spanish speaking)	4%	
Age		
18-29	29%	
30-49	37%	
50-64	26%	
65+	8%	
Household income		
Less than \$20,000*	42%	
\$20,000-\$49,999	32%	
\$50,000-\$74,999	13%	
\$75,000+	13%	
Educational attainment		
Less than High School	24%	
High School	46%	
Some College	23%	
College+	6%	
Marital status		
Unltd	51%	
Suburban	64%	
Rural	47%	

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Community Economic Preparedness

www.uwex.edu/ces/cced/cedpi.htm

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What is Broadband?

Federal Communication Commission (FCC) definition:

- Any connection that transfers data at speeds greater than 200 kbps
- Problem: Quality video-over-Internet pay-for-view needs 700kbps

Alternative definition:

- Connection that does not limit application (i.e. VoIP, web-based video streaming)

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How Does a Community Prepare for Broadband

- Do Your Home Work:**
 - Research the needs of residents and businesses (does the "digital divide" exist in your community?)
- Organize**
 - Get the community involved (technology planning committee)
- Lobby**
 - Leverage relationships with local telephone, cable, and Internet services (make sure you are getting your fair share of their capital budgets)
- Take Action**
 - Put together a plan of attack, then implement the plan

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What is Technology Planning? Our Definition

Inventory: check out what you have now:

- An inventory (a survey) of the telephone (wire line and wireless), cable television, data, video, and Internet access (collectively know as "connectivity") available in your community now

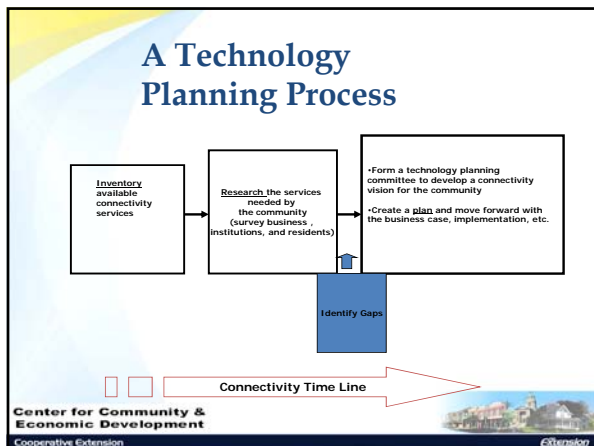
Compare: look for gaps:

- What your citizens, businesses, and institutions need now and what connectivity they will require in the future (gaps)

Create: a plan to fill any connectivity gaps and address future needs

Have now	Will need
	<input checked="" type="checkbox"/>

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Vision & Objectives

What do you desire to accomplish?
 What are the measurements of success?
 What user groups do you want to support?
 What issues & opportunities do you want to address?
 What are decision points to move forward?
 (Don't overlook the obvious things like training, education, and access to computers and the Internet for the disadvantaged!)

Caution: be aware of "silver bullet" consultants, attorneys, equipment vendors, and others promising revenues and other riches from technology deployment. Remember, every community is unique and cookie cutter approaches don't work.

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Questions

What is the role (catalyst, enabler, provider) of your city or county government?

Who are the existing providers and what services do they offer?

Who is using connectivity services?

What is the appropriate level of involvement?

What are the service gaps?

What are the risks (doing nothing or becoming proactive)?

What are the regulatory and legal restrictions?

What customer segments are underserved?

How can we future proof any investments?

What set of parameters should be used to gauge the progress?

What technologies are appropriate to meet our unique community needs?

What are the next steps towards a technology plan?

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Benefits of Technology Planning

If your community has the "right connectivity stuff" significant economic and social benefits **may** result including:

- New jobs (connectivity availability helps determine where businesses locate)
- New residents (connectivity determines where people live)
- Public safety (new technologies to aid law enforcement and first responders, video surveillance of critical infrastructure, streets, etc.)
- Increased tourism
- Distance learning—share instructional resources
- Telemedicine—tap into remote medical resources
- E-government—connect with your citizens
- New workforce mobility applications—improve efficiency of mobile workers

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Planning for Community Connectivity Resources

<http://www.uwex.edu/ces/cced/economics/broadband/index.cfm>

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Ten Most Significant E-Commerce Developments in The Last Decade...

1. **Google (Sept. 1998)**: Google did more to fundamentally change the way we use the Internet than any other event in the last 10 years. The simple search engine that began with a couple of smart guys is now used by 30% of Internet users to help find precisely what we're looking for online, map the world, create simple yet highly targeted advertisements and much more. Americans conducted 9.9 billion searches online in February 2007 and nearly half of those were on Google.
2. **Broadband Penetration of US Internet Users Reaches 50% (June 2004)**: When the Information Superhighway first opened, it felt more like an old dirt road—until broadband released its full potential. Available and affordable broadband took longer than expected to arrive—but when it finally reached 50% penetration in 2004, a milestone was reached that signaled a dramatic change in how consumers gets online, how consumers use and share content, and how the world communicates. It took broadband roughly 4 years to reach 50%—but it is estimated that it will reach 90% penetration of Internet users by the end of the year.
3. **eBay Auctions (Launched Sept. 1997)**: eBay showed us that the Internet could be used to reach massive national—and even global—markets better and faster than ever before. The launch empowered hundreds of thousands of power sellers to quit their day jobs and work exclusively online. Individuals could also compete directly with each other in ways unimaginable in a physical market.
4. **Amazon.com (IPO May 1997)**: Amazon showed the world what an online store would look like and made online shopping popular through its ease of use and wide selection. Amazon's public offering told the world that online commerce is legitimate and here to stay. It signaled the increasingly important role that e-commerce would play in the American economy.
5. **Google Ad Words (2000)** key word advertising has become the biggest online advertising vehicle, representing 40 percent of that market and \$5 billion in revenue. Keyword ads are the simplest and most cost-effective mechanism to reach targeted audiences, affordable to even the smallest business.

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E-Commerce

- From 1999-2004, manufactured shipments sold using e-commerce technologies rose almost 30%, while overall shipments rose only 1%
- The percentage of farmers using the Internet soared from 13% in 1997 to 50% in 2004 to 57% in 2007
- The wholesale e-commerce sales of raw material farm products jumped 18.5% in 2005 while the sector as a whole grew just 6.5%
- Retail E-Commerce sales have grown over 300% since 2000

Source: The Power of Technological Innovation in Rural America, Federal Reserve Bank of Kansas City, Main Street Economist, 2007
http://www.kansasfed.org/RegionalAffairs/Mainstreet/MSE_0707.pdf

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A Small Slice Of The Pie That Is Getting Bigger!

Estimated Quarterly U.S. Retail E-commerce Sales as a Percent of Total Quarterly Retail Sales:
 4th Quarter 1999 – 3rd Quarter 2009

1st Quart, 2000 = 0.8%
 3rd Quart, 2009 = 3.4% +325% or ~36% per year

<http://www.census.gov/retail/mrts/www/data/pdf/Q9Q3.pdf>

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Recent Retail Sales Trends

- Total Retail sales** for the third quarter of 2009 were estimated to have increased **1.7%** from the second quarter of 2009. **E-Commerce sales** were up **4.5%** for the same time period.
- Total Retail sales** for the third quarter of 2009 were estimated to have **decreased 7.5%** from the third quarter of 2008. **E-Commerce sales** were up **1.8%** over the same period.

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WebWise Design, John Wells, Fennimore, WI

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Great River Plastics, Pat Obma, Lancaster, WI

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Chisholm, Minnesota 4,701

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RBJ's Spreadable Fruit, Kim Samuelson, Crookston, MN, Population 7,929



Center for Community & Economic Development <http://www.spreadablefruit.com/> Cooperative Extension Extension

Language Line Services, Monterey, CA



Center for Community & Economic Development <http://www.languageline.com/> Cooperative Extension Extension

HomeMovie.com, John Larsen, Winthrop, Washington, pop. 349



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E-Commerce Case Studies:

- University of Minnesota Extension: <http://www.accessinfo.org/CaseStudies>
- Washington State University: <http://cbdd.wsu.edu/projects/rural/ruralbridges/casestudies.html>

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National e-Commerce Extension Initiative

- Complete Curricula
- A Beginner's Guide to e-Commerce [LEARN MORE](#)
 - Connecting Rural Communities [LEARN MORE](#)
 - e-Commerce as a Strategy for Improving Business Vitality [LEARN MORE](#)
 - Helping Artisans Reach Global Markets [LEARN MORE](#)
 - Internet Strategies to Improve Farm Business Management [LEARN MORE](#)
 - Marketing Food Specialty Products Online [LEARN MORE](#)
 - Strengthening Competitive Advantage of Rural Businesses [LEARN MORE](#)
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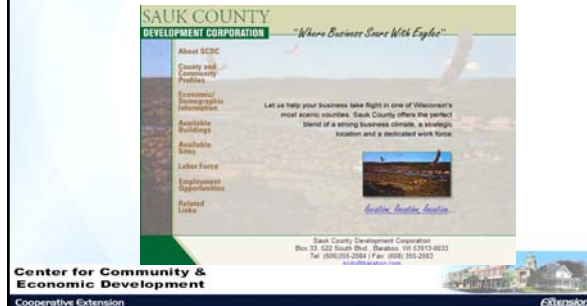
Center for Community & Economic Development http://srdc.msstate.edu/e-commerce/learning_center.html Cooperative Extension Extension

Web-based Entrepreneurs and Inventors Club??



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Economic Development Attraction Strategies Using the Web



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The \$7.2 Billion Dollar Solution??



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Federal Legislation Trends:

“From the federal legislative perspective, policies are directed toward private firms supplying the broadband telecommunications infrastructure to rural Americans....based on the review of legislation, predominantly rural states are not only falling behind in broadband telecommunications service but also in the development of telecommunications related policy.” (Digital Deliverance, P. 60)

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North Carolina: Broadband for all

“North Carolina, through an agreement between the state and its three largest telecommunications companies, BellSouth, Sprint, and GTE, every citizen of North Carolina is guaranteed broadband Internet access by 2003.” (Digital Deliverance, p. 47)

Former Gov. Jim Hunt, Dec 10, 2009:

“Today, more than 80 percent of all North Carolina households, including mine and others rural areas, have access to high-speed Internet service. We still have much more to do until every citizen’s home can have access to affordable broadband access.”

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http://localtechwire.com/business/local_tech_w

Wisconsin: 2005 DOA Contract Awarded to SBC for BCN

“If WBAA is awarded this contract, our companies will provide optical metro Ethernet products **throughout** Wisconsin. As a result of this contract, WBAA will be able to expand the geographic reach of our Ethernet services to **rural** Wisconsin communities and metropolitan areas alike. The deployment of these next-generation Ethernet services will be possible **within 9-12 months** if WBAA is awarded the BCN contract”.

“Wisconsin’s entire local telecommunications industry has agreed to deploy optical Ethernet services throughout Wisconsin as a result of winning the BadgerNet Converged Network contract. CenturyTel is already providing switched Ethernet services in some areas of the state, and the rest of the WBAA **anticipate a very rapid deployment of services throughout Wisconsin**”.

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Next session

February 16, 2010 – Retaining and Attracting People as an Economic Development Strategy

Community Development Educator Will Andresen, University of Wisconsin-Extension Iron County

Did you know that according to Live First, Work Second author Rebecca Ryan 3 out of 4 Americans respond that a cool city is more important than a good job? But that doesn't represent us, right? Michigan's Cool Cities Survey found nearly 7 in 10 recent college graduates agreed as did almost 75% of young people Iron Co. Wisconsin (pop. 6,197) and Gogebic Co. Michigan (pop. 16,043). Learn why a focus on retaining and attracting young professionals may be one of the most important community building strategies you employ—and why being a “cool city” may be even more important in your community than Seattle or St. Paul.

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Archive Access

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<https://www.livemeeting.com/cc/wislineweb/view>

- Enter Name
- Recording ID: **Bldg Comm-100119**
- Recording Key: (Leave Blank)
- Click View Recording
- Click the ICON for either Microsoft Office Live Meeting High Fidelity Presentation OR Microsoft Office Live Meeting Replay
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