

El Dorado County: Broadband or Backwater? Nothing happens unless first a dream...

--Carl Sandburg

***EDC Board of Supervisors
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Carol Anne Ogdin
Deep Woods Technology
caogdin@gmail.com
530/295-3657

Intention: Double EDC Income

- Ø Broadband Yields 4%/year Growth
– Supported by numerous studies
- Ø EDC Household Income Potential



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Principle: Move Bits, Not Bodies

ØField Working (Low speed)

- Cell phones, radios, "smart" phones

ØHome Work (Moderate speed)

- eMail, Internet access, file transfers

ØTelecommuting (High speed)

- Webinars, shared desktop, secure access

ØTelepresence (Very High speed)

- "PicturePhone", two-way television
- Telemedicine (live monitors, robotics)

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Roads As Analogy

ØPaved Roads in EDC

1910	0 mi	
1948	328 mi	0.86 mi/yr
2010	2,395 mi	33.34 mi/yr

ØWhy? Capital Investment

- We base roads on *rights* (*not* ROI/BE)
- Benefits accrue to citizens and County

ØEDC Falls Behind Without Investment

- Status: Permanent Backwater
- EDC future decided by TelCos, not citizens

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Where Roadway Analogy Fails

- Ø Private TelCos/ISPs Are ROI/BE-Driven
 - The Mantra: “Shareholder Return”
- Ø Population Density Drives Deployment
 - Which would a Public Company pick?
 - \$20 MM to serve 100,000 in West Sacramento
 - or
 - \$20 MM to serve 1,000 in El Dorado County
- Ø Even IF “El Dorado County” Got The Nod
 - There are 2,000 more rural counties!

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What’s It Worth To Us?

- Ø Double Household Income
 - Constant dollars, same population
- Ø Increase Tax Revenue by \pm \$250 MM/yr
 - Constant dollars, same population
- Ø More *Diversity* of Income
 - Lower unemployment
- Ø More Workforce Stays in-County
 - Stop exporting 40% labor force every day
 - Improves neighborhoods & families

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The Current Situation

Ø ~20% of Residents Have Today's BB

- AT&T, Comcast, small ISPs/WISPs
- Vendors eager to reach more customers...
 - ...if they could economically reach them

Ø Sparse Population Density Off US50

- Average, less than 2 adults/acre
(and that excludes the National Forest!)
- Virtually NO incentive for risk capital

Ø Benefits Require Investment

- How *do* we bridge our "capital gap?"

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How It Works #1: "Long Haul"

Ø From EDC to/from The World

GeekAlert!!



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How It Works #2: “Middle Mile”

ØUrban: Telco to Residence

- Common copper wire
- Distances: 100' to 10 miles



ØRural: “Long Haul” to Neighborhood

- Fiber Optic cables buried in County roads
 - Convert back to copper at each intersection
- Distances: 100' to 10,000 miles



ØRequires Public Funding

- A universal rural problem

Needs Public Solution

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How It Works #3: “Last Yard”

ØFrom Intersection to Doorstep

- Local connections at the road
- Goal: 100 *Million* bits/second
 - Residence (Internet, TV, Phone)
 - Business (Commercial users)
 - New data-intensive businesses



ØSolutions Unique To Each Neighborhood

- Flats, valleys and canyons
- Provided by private business partner
- Wired and/or wireless local distribution

Private Vendors

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Who Would Pay, and For What?

- Ø “Long Haul”: Available Today, Low Cost
- Ø “Middle Mile”: Infrastructure Capital Costs
 - Inadequate Return-on-Capital for TelCos
 - ISPs *would* pay for customer access
 - Loans convert future cash flow to capital
- Ø “Last Yard” Capital Costs
 - TelCos, ISPs, WISPs own their gear...
 - ...and run their own “local loop”
- Ø Clear Public/Private Partnership Need

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Rural Broadband as Partnership

- Ø Broadband Infrastructure Costs Money
 - Roughly \$350 MM for “Middle Mile”
 - Infrastructure \approx \$200 MM (in \approx \$15M phases)
 - Operations, 20 years \approx \$150 MM
 - Commercial Lending/Funding, or Grants
- Ø Broadband ROI/BE Longer Than 20 Years
 - TelCos’ ROI needs inhibit rural investment
 - Universal Service Fund (USF) *might* help
- Ø Federal Grants *Might* Be Available
 - Political climate not favorable in near term

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What Are Partner's Resources?

Ø Public Institutions (e.g., County)

- Right-of-way
- Citizens needing Broadband (customers)

Ø Private Entities

- Deliver services for revenue
 - Installation, Technical Support, Billing
 - Customization of services to market
- Pay for use of infrastructure from revenues
 - Converts future cash flow to debt service

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Partner's Unique Roles

Ø Public: Leverage Lending Capacity

- Guarantee debt service with contracts
 - "If we build it they will come"

versus

"If you guarantee it, we will build it"

Ø Private: Leverage Competition

- Nimble players lead with new technology
- Large-scale TelCos & ISPs provide stability
- Deliver ever-expanding range of services

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Next Steps

1. Get the Message Out to County
2. Build "Advisory Council" of Citizens
3. Recruit Founding Management Team
4. Build Business Plan
5. Obtain Grants/Loans for Pilot

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1. Get Message Out to County

- Ø Many Rural Citizens Don't Yet "Get It"
 - With only slo-o-ow dial-up, how could they?
 - Primary uses: eMail, Browsing
- Ø Citizens Are Motive Force for Deployment
 - "If you build it, they will come?" (not likely)
 - "Do you want to be richer?" (who says NO?)
- Ø Grant Funding for Education Available
 - California Emerging Technology Fund (CETF)

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2. Build Advisory Council

Ø Identified in EVERY Successful Grant

- Grantors need to know money used well
- Passionate evangelists for the concept

Ø Participation In Two Tiers

- "General Interested Public"
 - Irrespective of qualifications, skills
- "Leadership"
 - Technologists, Business Management
- Next meeting: October 21st, 2010

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3. Recruit Founding Team

Ø EDC Is Home To Qualified, Retired CxOs

- Silicon Valley émigrés
 - "Eagles don't flock;
you have to find them one at a time."

Ø Key Positions: CEO, CTO, CMO, CFO

Ø Team Responsible For:

- Business Plan
- Establish Funding for Pilot Project

Ø No Team è No Capital è No Broadband

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How You Can Help

**Let's focus, together, on creating
new wealth for all citizens.**

- Ø Pass the "Broadband Support" Resolution
- Ø Commit To Support Broadband
 - Strategic: "Broadband for all in EDC"
 - Tactical: Encourage broad support
 - Among citizens
 - Within EDC Departments and Agencies

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What IS Our Highest Calling...

**...if not enabling and creating
new wealth for all citizens?**

Contact:

Carol Anne Ogdin

caogdin@gmail.com

(o) 530 / 295 - 3657

(c) 530 / 903 - 6011

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