

Chuck Manto Background

- Information technology inventor and entrepreneur, 5 issued patents
- Sr broadband CLEC telecom operations manager
- Rural economic development executive director
- Proposed regional telecom policies (GLCG)
- Led rural strategic broadband studies, 12 counties
- See <http://www.marylandtedco.org/broadbandinmd/westernmd.cfm> for more information on broadband studies
- IT and telecom due-diligence manager
- Thanks to RSA and Policy Studies Org for opportunity

Secure Sponsored Services by Charles Manto

New class of communications service covered by 4 issued patents and others pending

- Gives free on-demand telco/network provisioning, services, applications paid by those with financial motivation (insurers, donors, relatives, etc.)
- Includes use of ID verification service
- Can white list users, services, applications, QOS, location, time
- Includes all security features (bio/video/encryption)
- Manages communications, patients, environments interactively or by business rules

Pat#3: United States Patent 6,788,771 Manto
September 7, 2004 System and method for providing sponsored or universal telecommunications service and third party payer services

See: www.stop-EMP.com

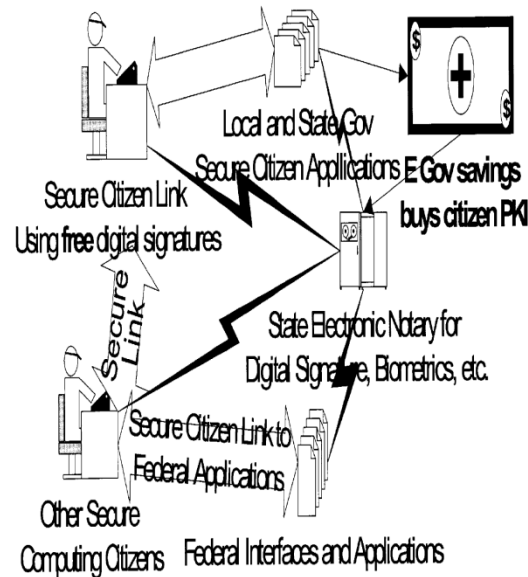


Fig. 11

Universal Broadband Impact

FCC slide 7

Detailed list of impact include:

- Education
- Jobs
- Small business sustainability and growth
- Health care
- Economic development
- Consumer choice

FCC on broadband from www.fcc.gov/broadband/

Congress recognized the importance of broadband in [Section 706 of the 1996 Telecommunications Act](#), which directs the FCC to “encourage the deployment on a reasonable and timely basis of advanced telecommunications capability **to all Americans.**”

The Commission’s goals are to:

- Broaden the deployment of broadband technologies
- Encourage and facilitate an environment that stimulates investment and innovation in broadband technologies and services.

Universal Service Challenges and Definition Change to Include Broadband

- Even voice services not yet universal (the stubborn 7%)
- Underserved by broadband is much larger depending on how broadband is defined
- FCC definition of broadband: “advanced communications systems capable of providing high-speed transmission of services such as data, voice, and video over the Internet and other networks. “
- Technology advances will continue to change cost models for broadband
- Costs will vary depending on definition of broadband
- Need > \$350B for infrastructure

Universal Broadband Plan Goals

FCC Broadband Plan pp. 9 ff.

- 100 million US homes
- 100 Mbps down, 50 Mbps up
- Lead world in mobile innovation and service (e.g. e-books...)
- Affordable access to every American
- Every community access to 1 Gbps to institutions (HUGs)
- Every first responder has interoperable comm's
- Smart grid: Each tracks and manages energy use

Broadband Potential

from National Broadband Plan p.3-5

Problems

- Now US is in bottom half of comparable countries
- 16% have connectivity as research universities
 - many universities don't have it,
 - lucky to have a backup generator for their data centers
- Emergency communications not interoperable across all technology (barely getting mobile and not yet video, data)

Potential

- Could save \$500 B in health records costs over 15 yrs
- Could save 10X health costs or poor outcomes
- Could eliminate 360 metric tons of carbon emissions by 2030
- Reduce course learning time and increase completion

Broadband Deployment Costs

FCC slide 51

- Conservative deployment costs for infrastructure
- Costs do not include telecom services
- Costs do not include additional services and goods ordered by the telecom service (e.g. education, telemedicine, products)
- Current goal in Korea is 1 Gbps to home

Bandwidth	New Housing Units	Cost for Infrastructure Build
.768-3 Mbps	3-6 million	\$20M
3-10 Mbps	7-10 million	\$35M
10-30 Mbps	33-37 million	\$50M
100+ Mbps	111-116 million	\$350M

Funding Universal Service

- Transportation (railroads, canals, highways)
- Postal service
- Power
- Communications (phone, broadcast, cable)
- **Public money subsidizes up to 90% of highway costs**
- How much of broadband infrastructure?
- **What do we do if we run low on funds?**
- Goal of FCC is to “Encourage and facilitate an environment that stimulates **investment and innovation** in broadband technologies and services”

Incremental Costs Lower

FCC slide #50

Fiber costs ratio:

- Material: \$5000
- Splicing: \$8,000
- Placement: \$45,000
(78% of cost)

Doubling the fiber would only cost another 25% in a given deployment. Sponsors could pay.

Extra fibers to provide universal service:

- May not be much more
- Could be paid by public
- Could also be paid by sponsors

Sponsored Services Matrix

Comprehensive Sponsored Services Activities	User Roles	Provider Roles	Sponsor/Payer Roles	Application types
Identify Facilitate Contract Pre-arrange Practice, Simulate Document Deliver Audit White list roles White list people White list applications White list time and date White list locations	Individual	Telecom Infrastructure	Individual	Communication Request Provisioning Emergency services Logistics Education/training Telemedicine
	Family	Telecom Services	Family	
	Business	Energy	Business	
	NGO	Water, sanitation	NGO	
	Hospital, clinic	Medical	Insurer	
	Neighborhood	Food	Neighborhood	
	Affinity group	Environmental remediation	Affinity group, VOAD, faith-based	
	Local government agency	Shelter, housing	Local government agency	
	State government agency	Construction	State government agency	
	Federal government agency	Manufacturing	Federal government agency	

Example of Grandmother

- Does not have phone
- Does not have broadband
- Does have medical services costing \$X
- IF had broadband, could:
 - Reduce cost by 50%
 - Improve health outcomes 200%
- Payers of services could save if they pay BB
- On-demand sponsoring in addition to planned

Example of Disaster

- Community becomes suddenly “underserved” and poor (need appeals to even larger group)
- Providers want to provision infrastructure and services
- Payers need to provide sooner to relieve suffering
- Sponsored services could pre-establish links to motivated parties and practice interactions

Emerging Planning Initiatives

Courtesy: Linton Wells II, Director, Center for Technology and National Security Policy (CTNSP), National Defense University

- The TIDES project (Transformative Innovation for Development and Emergency Support) is a research effort at CTNSP updated Nov 2010.
- ***Develop a structured plan and allocate resources to engage systematically with stakeholders. Engage with three regional CoComs, two agencies such as DHS/FEMA or DoS/USAID, plus PVOs (Private Volunteer Organizations) and NGOs, and private entities.***
- Work is beginning with the National Geospatial Intelligence Agency (NGA) on building closer ties in areas such as critical infrastructure protection, disaster preparedness and disaster response.

EMP Planning in NFPA 1600

Disaster/Emergency Management & Business COOP Includes EMP Plans and Mitigation

- CH 1 Business COOP, public & private
- CH 5 Comprehensive program elements
 - 5.3.2 Hazards to be evaluated:
 - Natural (including **geomagnetic storms** in #1b ix)
 - Human caused (accidental and intentional)
 - Includes **EMP** in #2b.ix
 - Technological-caused events
 - 5.3.3 Entity shall conduct an impact analysis
 - **Health and safety**
 - **COOP**
 - **Economic**
- See <http://www.nfpa.org/assets/files//PDF/CodesStandards/1600-2007.pdf>
- Work with public safety, local government groups, VOAD to implement

Health care and environmental monitoring examples

- Initial framework can be sponsored
- Changes to patient or environment can trigger additional sponsored services
- Additional sponsors and applications can be added as needed

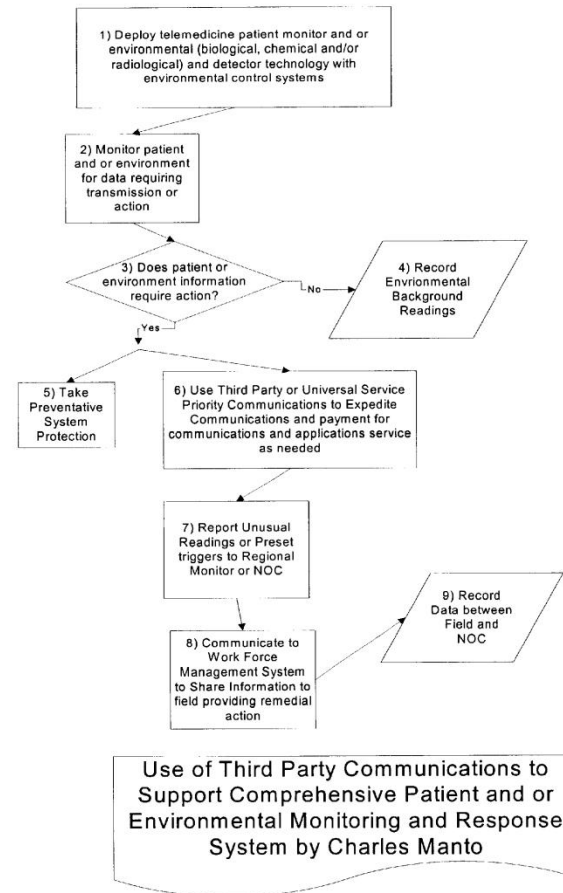


Fig. 9

Discussion Questions

- Are there times when Sponsored Services may provide resources not available from taxes?
- Are there times when Sponsored Services may provide resources sooner than publicly provided resources?
- Which commercial providers could be persuaded to participate as Sponsored Services participants?

More Discussion Questions

- Could volunteer organizations use this technique to raise funds and in-kind resources?
- Could the FCC provide incentives to leverage donations and support from other sources to increase universal service coverage?
- Could health care coverage encourage sponsored services to further coverage at no additional expense to other users or tax payers?
- Could inherent white listing provide more cyber security and audit protection?

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