

CIAC - Our Year in Review -2006

By Galen Updike – Manager, Telecommunication Development - GITA

Background

Broadband availability has become as essential as access to power and water for citizens of our State. Over the last 15 years, multiple studies have described the public benefits associated with deployment of “broadband” telecommunications infrastructure. The increasing reliance on electronic communication and transactions for every thing from commerce and public safety to education and health care makes this infrastructure increasingly important to ensure that the benefits of the information age are widely available across the State’s geography.

While broadband has become increasingly available and affordable in many larger communities, smaller communities still remain largely left behind. It is estimated that as many as 50% of Arizona citizens living in rural settings (about 10% of the State’s population) do not have access to broadband connections (connection to the internet at speeds above 200Kbps). Some communities in Arizona are completely devoid of such connectivity. Likewise, Arizona’s rural businesses, rural School Districts, rural Government institutions, rural Health facilities, all struggle with especially high costs for broadband access, or worse, its non-availability. The fact is, too many of Arizona’s citizens are thus prevented from entering into, or receiving the benefits of the Information Age.

Unfortunately, Arizona is not alone in this digital divide. Within the U.S. it is manifest in many forms, with unique geopolitical and demography as a basis, from a shrinking population in the “rust belt” States, to “hyper growth” in parts of the West and South. Add in the natural disaster of Katrina, and a massive federal refocus on Security after 9/11, including a war in the Middle East, and maintaining a consistent focus on broadband issues becomes a daunting challenge. In 2005, the United States fell from 13th to 16th amongst the industrialized countries of the World in Broadband deployment, dropping behind Norway, Finland and Israel.

Unlike other critical infrastructures such as Water, Power and Roads, the private sector, not government, provides the vast majority of Broadband infrastructure now extant. But the private sector has shown a continuing reluctance to invest in rural broadband where the ROI (Return on Investment) is poor. Finally, contrary to popular understanding, most Broadband issues, per federal law, are outside of the domain of the tradition telecommunication regulators (Arizona Corporation Commission and FCC), so we are neither constrained nor instructed by those institutions

Because Arizona’s exponential growth is projected to continue over the decade, it is vital that Broadband infrastructure catch up and keep up with that growth, especially in Arizona’s rural areas, where an increasing percentage of that growth is projected to take place.

Mission of CIAC

It is the Mission of the Communications Infrastructure Advisory Committee (CIAC), as a committee of the Governor’s Council on Innovation & Technology (GCIT), to advise the Governor’s Council as to methods, processes and policies which will enable Arizona to close

the so called Digital Divide as it exists in Arizona. In 2006, CIAC advanced toward its goals to chart a long-range roadmap and strategic plan for State-wide Telecommunications and to assist in overcoming barriers to Broadband deployment, especially in the rural areas of the State.

Actions and Accomplishments.

At the end of 2005, the GCIT approved an agenda to advance a formalized list of recommendations into actionable priorities. These Eleven Recommendations were developed over a year of study and public discussion by industry leaders, economic development groups, and various Telecom stakeholders from all parts of Arizona. Thought leadership was provided by GCIT's Telecom Infrastructure Sub-Committee (TISC), the predecessor of CIAC, and by the Arizona Telecommunications and Information Council (ATIC).

The Recommendations were categorized and summarized as follows:

Leadership

- Establish a Telecommunications Infrastructure Advisory Group or Committee
- Consider Establishing a Broadband Authority
- Provide Support for the Development of a Statewide Telecommunications Strategic Plan
- Convene a Series of Telecommunications Roundtable
- Encourage the Arizona Corporation Commissions to Modify the Current Arizona Universal Service Fund; or Establish an Arizona Broadband Universal Service Fund Investment
- Provide State Support to Identify Potential Funding Sources and Grant Writing
- Implement a Strategy to Facilitate increased use of Federal E-Rate Subsidies
- Provide Ongoing Funding for Community Telecommunications Assessments Policy Development
- Adopt an Arizona Definition of Broadband to be 1Mbps
- Encourage Access to Local, State, Federal, and Tribal Rights-of-way
- Monitor Legislative Actions to ensure that Explicit or De Facto Barriers to Municipal Participation in Broadband Deployment are eliminated.

Certain of these recommendations became an early reality, including:

- TISC transformed into a full committee of GCIT and renamed CIAC,
- E-rate successfully infused into State Contracts,
- CEDC becoming a source of funding of Broadband studies and of Grants (Superior, ABDA efforts)

Regarding the remaining recommendations, good progress was made in identifying respective issues, next steps, and a more detailed focus.

Most significantly, in 2006, CIAC was divided into three Task Groups related to the recommendations, and additional members from various outside stakeholder groups were infused into the Task Groups, to subdivide the work and add strength to the advisory process.

The three Task Groups were Strategic Planning, Arizona Broadband Authority (ABDA) and Right-of-Way. All remaining recommendations were assimilated into their logical groups. The Strategic Plan Group was tasked to account for additional Roundtables, the adoption of a minimum 1Mbps standard for Broadband into policy, and plans and structure for

incorporating new regional telecom assessments within a Statewide Plan. The ABDA Task Group was tasked with defining issues and solutions related to setting up Arizona Broadband Authority and incorporating a new Arizona Broadband Universal Service Fund (ABUSF) as part of funding solution for deficit areas of the State. The Right of Way Task Group began to look at how Broadband deployment was impacted by Arizona Right of Way policies, and defining best practices and uses of Right of Way in implementing broadband infrastructure. Specific progress in each Task Groups will be discussed below.

In 2006, in addition to the Task Groups, CIAC forged a new formal relationship with ATIC. This was one of the important recommendations which came back from GCIT as part of CIAC's creation. Because ATIC operates in the private sector and has many private sector connections, trying to recreate those relations within CIAC was seen as counter productive. Furthermore, outreach in its many forms is easier in the private sector. Whether sponsoring a Round Table or convening Vendor Advisory Group, or creating an Excellence in Broadband Institute through a University, a government sponsored entity cannot move as freely or fast as private sector entity. Conversely, policy creation is more readily the domain of an authorized government entity, and given credence, when created with a comprehensive inclusion of private sector stakeholders. ATIC's long history as a thought leader for Telecom policy and its vendor and technology neutrality were also part of the decision of formalizing the relationship.

Organizing these issues and assigning them to Task Groups has been helpful in parcing and coming to a greater understanding the issues. However, solutions and answers to problems are interrelated and will not be possible without a comprehensive combination of:

1. Legal or Statutory recognition of Broadband Infrastructure as Critical Infrastructure
2. Creation of an outside funding mechanism (non-taxpayer based but widely assessed and Urban/Rural equalized, to change the ROI equation of provision Broadband assets.
3. Vesting of authority for Broadband decision making and leadership at the State level (Public/Private Entity similar to TSA)
4. Comprehensive changes in State and local Right-of-Way policies.

Below is found a more comprehensive discussion of the issues before the CIAC, and a look at current and proposed activities which will carry CIAC into 2007 and beyond.

Details of Activities and Findings by the Task Groups

1. Strategic Plan Task Group

The Strategic Plan Task Group met twice in mid-2006. Additional discussions were held in conjunction with ATIC events. A formal analysis of various Federal (US Dept of Commerce discussion, National Association of Regulatory and Utilities Commission discussion) and other State documents (Vermont Plan, Michigan Plan, New Hampshire Plan) took place, and many private clarifying discussions were held. In addition, previous studies of Telecom issues, unique to Arizona, were consulted. The Strategic Plan Task Group presented its finding to CIAC at the October 2006 meeting.

The Task Group noted that the first stage of an overall State plan needed to focus on deficits in Arizona's middle-mile, the infrastructure that connects cities and towns to each other and to the Internet. In its draft planning statement to CIAC, the Task Group reported that "*The Goal of this Plan is to facilitate the ubiquitous deployment of a Broadband Infrastructure to all parts of Arizona, with emphasis on rural Arizona. A major goal of this plan will be to facilitate "Middle Mile" deployment, i.e., that infrastructure, sometimes called trunk lines or fiber lines, which connect remote communities to each other and to urban "tier one" sites (major cities).*"

Most of the State's middle-mile, owned by incumbent local exchange carriers (ILEC), is made of Fiber segments, but of necessity, also includes substantial connections through high speed wireless point-to-point links.

An overview map of the fiber coverage shows a tremendous lack of connectivity across the State. Many populated areas are beyond the reach of Fiber. There is scant interconnection between ILEC assigned areas, and too many single shots. Because of such a dearth in the supply of high-speed or high volume connectivity, prices for broadband to the rural end-user at the last mile are high. Internet traffic is also subject to a high number of bottlenecks in reaching Tier One Internet sites. Because of a lack of fiber density, there is reduced ability to cost effectively provision broadband infrastructure locally.

The most impacted areas in Arizona are the tribal populations and those at the extreme edges of the State. Deficit communities include Page Arizona, Duncan Arizona and Parker Arizona. Hardly any Fiber exists north of I-40, with only a few communities on the Navajo Nation reached out of New Mexico.

Southeastern Arizona is an exception to this dearth, with recent fiber installs by the local incumbent, Valley Telecom, financed by a series of USDA loans. Many of the White Mountain communities in eastern Arizona were also recently connected with fiber. However, needed there are more local off-ramps for fiber; i.e., Points of Presence (POPS) and Central Offices (CO's).

The current fiber paths often have serious ramifications for local phone calls and data connections. Sometimes they are very circuitous. For example, a call originating in Phoenix to Marana, Arizona, over Qwest's fiber network doesn't use an I-10 based pathway. The fiber path passes through Mesa and heads south at Florence Junction, then through Oracle, then to Tucson, then back up to Marana. Likewise, a call or email from Marana to Casa Grande, just 55 miles away, would go through Tucson, Oracle, Florence, Apache Junction, Gilbert, Chandler, Coolidge, and then Casa Grande.

In another area of the State, a call from Phoenix to Payson would go from Phoenix to Mayer, to Flagstaff, to Mormon Lake, to Strawberry, to Pinetop, to Payson. A call from Payson to Forest Lakes would first follow the same route back to Flagstaff, but would then route to Winslow, Holbrook, Woodruff (leaving the Qwest system, and getting on Frontier's infrastructure) to Holbrook, to Snowflake, to Heber and finally to Forest Lakes. Payson is about 40 highway miles from Forest Lakes, but since no telecom infrastructure exists along the short route (or for that matter, directly from Mesa to Forest Lakes); the phone connections follow a 260 mile path of Fiber and copper. Such transits are much more costly, and traverse many bottlenecks and switches.

The Strategic Plan also recommends that "... expansion [of the Middle Mile] to provide "redundancy" should be a secondary priority".

Because fiber deficits in the rural areas of the State cause much higher prices for rural end-users, connection issues, current bottle-neck based shortages of bandwidth, and future inabilities to supply broadband connections at the local or last-mile community level, the Task Group concludes:

"If we focus on Arizona's rural Middle Mile build out, the cost for the private sector to provide last mile will be dramatically reduced and will enable the private sector vendors to leverage a positive Rate of Return (ROR) and Return on their Investments (ROI). Thus the Middle Mile build out provides the necessary basis for rural communities to encourage economically feasible broadband build out within their communities."

Other Aspects of the Plan

The Strategic Plan incorporates specific community outreach through a series of Round Tables or Telecom Summits. The plan also recommends funding of a new round of Regional Telecom Assessments, with standards for assessment formats, assessment questions, and both formative and summative analysis. Conclusions from the assessments would then provide a basis for more precise regional planning.

Obviously "The Plan" also reiterates policy issues and objectives of the other Task Groups as indicated by the following Policy and Action statements excerpted from the presentation document made to CIAC:

Policy Statement

In the State of Arizona "Broadband Infrastructure" must be recognized as "Critical Infrastructure" for purposes which include but not limited to: Homeland Security, Fire Safety /Fire Fighting, Medical Health and Welfare, Law Enforcement, Education, and Economic Development.

Actions:

Legislative

Legislative action to declare the Policy Statement above

Legislative action to form the Authority to fund and oversee the structure described below.

Authority Structure and Funding

The State of Arizona needs methods to fund the "Broadband Middle Mile Infrastructure". Funding structure should follow the principal of "urban subsidy funding to support rural development," as has been successfully utilized to deploy many other critical infrastructure

in rural Arizona. This is critical for “Middle Mile” extensions and filling the current gaps in the state. This is similar to the current state structure for water, roads, natural gas, etc.

The Funding structure should come under a framework similar to Greater Arizona Development Authority (GADA) and the Water Infrastructure Authority (WIFA) to allow for “Public to Private” Governance of Funds in an Arizona Broadband Development Authority (ABDA).

The ABDA could be administratively placed in the Arizona Department of Commerce or other critical established state agency/department to speed implementation.

Funding should include but not be limited to the following:

1. Broadband supplier’s user fees (suggest \$.50/user/mo.)
(This recommendation is currently before the Arizona Corporation Commission as a docket item, and is supported by the Vendor community, with range of fee from \$.10 to \$.50. All broadband users in the State of Arizona would be collected from via an additional line item on broadband user invoices.)
2. Grants from all sources: federal, state, foundations, private sector
3. Loans from all sources
4. Bonding managed by GADA (or through ABDA)
5. Gifts from foundations and the private sector

Funding Guidelines:

- No tax payer’s dollars should be used for “Broadband Middle Mile Infrastructure” build out. *(This is a “gift clause” related requirement, allowing subsidy from a private sector source, i.e. the Broadband Universal Service Fund, for a private purpose)*
- Lottery dollars could be used as a funding source *(Again, “private” funds)*
- Gaming dollars could also be considered to assist in developing the Broadband Infrastructure serving the State’s Native American Indian lands.
- The Arizona Corporation Commission (ACC) should NOT expand their domain to this “Middle Mile” focused build out. *(Because Broadband is currently an unregulated infrastructure and because time frames associated with ACC decision making are so long, it could be years before the ACC could actually act or provide meaningful guidance for the required build-outs)*
- The state should request, and if necessary, require the Arizona Department of Transportation (ADOT) to provide ‘Longitudinal’ Right of Way along all state roads in the state. *(Such “right-of-way” is already paid for by the citizens of the State. Currently citizens pay for the same “right-of-way” over and over again, by Telco’s covering their “right of way” costs in their billing rates. Use policies need strategic alignment with the goal of expanding broadband infrastructure)*

Other Overall Strategic Plan Goals:

- The Broadband services in the state of Arizona should remain un-regulated as much as possible.
- The goal is to complete the initial build out of the states “Middle Mile” Broadband Infrastructure in 5 years before the state’s centennial in 2012.
- The ABDA should sunset after a reasonable period of time (5-7 years).

2. Findings and Activities of Arizona Broadband Authority Task Group

The Arizona Broadband Authority Task Group priority was tasked to provide details and, if possible, actionable plans necessary to create an Arizona Broadband Authority (now Arizona Broadband Development Authority or ABDA) with the authority to setup and govern the disbursements from an Arizona Broadband Universal Service Fund (ABUSF).

The Task Group formally met a number of times, and informally met in subgroups or via one-on-one conversations and through emails and online discussions. The Task group leadership also met with Department of Commerce and GITA and arranged for a grant from those agencies, which will pay for a formal Study of the issues before the Task Group. The scope of the Study was developed over a two month period. The actual Study is due back to CIAC in mid-February, 2007. The major emphasis of the Study will be to determine the methods and requirements of funding Broadband infrastructure, including industry and government best practices. This could lead to the creation of a Broadband Authority and a Broadband Universal Service Fund. The following assumptions and findings were identified by the Task Group as a basis for further analysis.

Preliminary Discussion and Findings

Such a Broadband Authority and such a Fund are not new concepts. Currently existing within the Arizona Department of Commerce are two funding Authorities, the Commerce and Economic Development Commission (CEDC) and Greater Arizona Development Authority (GADA). Each body is authorized by legislation to provide specific funding or support respectively for economic development projects and publicly owned critical infrastructure. Funding mechanisms are also legislatively authorized for each Commission or Authority. The CEDC uses revenue generated from Arizona's lottery and GADA uses a corpus of funds appropriated by the Legislature at its creation and repayments back into the fund.

Other precedence for a funding mechanism like an ABUSF comes from the State's Arizona Corporation Commission (ACC) and from the Federal Communications Commission (FCC). Both have Universal Service Funds derived from revenues stemming from fees or surcharges on Telecom users' bills. In the case of ACC, every monthly telephone bill originating in Arizona includes a 1 cent surcharge collected by the Incumbent telephone companies and forwarded to the ACC fund. At the federal level, Incumbents and other phone service providers collect an approximate 9.5% surcharge on basic telephone services (Dial tone, Long Distance, etc) and forward the collected amounts to FCC Universal Service Funds accounts. Other States also have universal service funds dedicated for telecom uses.

Such Funds are typically not considered as taxpayer dollars, but as User-Fee dollars. This is an important distinction, because such dollars can therefore go directly back to rate-payers or to private sector phone companies, without needing Congressional or Arizona Legislative appropriations. In Arizona, such fund usage is also exempt from constitutional "Gift Clause" constraints (Article 9 Section 7) which States:

"Neither the state, nor any county, city, town, municipality, or other subdivision of the state shall ever give or loan its credit in the aid of, or make any donation or grant, by subsidy or otherwise, to any individual, association, or corporation, or become a subscriber to, or a shareholder in, any company or corporation, or become a joint owner with any person, company, or corporation, except as to such ownerships as may accrue to the state by operation

or provision of law or as authorized by law solely for investment of the monies in the various funds of the state.”

In Arizona, this Clause effectively prohibits the use of Public Dollars for a private benefit or purpose without an associated “quid pro quo” and an associated valuation of the benefit at “fair market value”.

Therefore, in Arizona, Grants sourced from public dollars are not useful to upgrade private sector infrastructure such as Fiber or middle-mile assets, because to transfer ownership of those assets back to the private sector a “quid pro quo” valuation and purchase is required. Furthermore, maintaining publicly owned Telecom infrastructure is generally untenable because the public sector is woefully unprepared to own such assets. The technology depreciates too fast. Its technical obsolescence comes too quickly and its useful life is too short compared to other capital assets like roads, dams, sewer systems, etc. Telecom asset management requires efficiencies and administration processes better suited to the private sector. Finally, migrating too many Telecom assets from the private to the public sector through public investment would require a paradigm shift in the underlying regulatory policies now governing the telecommunications industry.

The dilemma for Arizona citizens is the Economic transformation now taking place in a world-wide market is based on Information exchange and intellectual property. To keep pace, Arizona businesses must have access to upgraded and expanded Broadband infrastructure. Not acting quickly could easily relegate Arizona’s rural (and many Urban) businesses to 2nd Tier status by obstructing their ability to compete unless they move to more telecom friendly venues. Asian Rim countries have already expanded their Broadband capacities. They are accelerating away from us in their underlying communication capabilities to adapt new methods and telecom applications such as; Just-in-time inventory transfers, instantaneous quality control responses in manufacturing, high quality virtual meetings across long distances, e-learning suited to individual needs, and rich-media based work place training, etc.

Arizonans can’t wait for normal market forces to justify the required broadband build-outs. But even now the Return on Investment models just don’t support such investment. It could be years before sufficient population densities exist in rural Arizona to justify the appropriate levels of middle mile. One goal of the ABDA would be to provide funding which will improve the ROI ratios without ownership transferring infrastructure assets from the private to the public sector. Plans and methods to change the equation are required now.

It should be noted that current Universal Service funds activities from the ACC and FCC only subsidize high costs, but do not build infrastructure. And they only available for voice/dial-up based telecom. Broadband subsidy is not provided for. Therefore, it is proposed that ABUSF funding would only build infrastructure, and would not be used for end-user high cost or low-income programs.

Besides a Broadband Universal Service Fund, the ABDA would also seek out and help secure for Arizona citizens, other funding sources. These include grant and loan programs from the USDA, DHS, and other FCC based funds (Universal Service Administration Company – USAC administers many such programs, including Rural Health, Telemedicine and indigent Health programs). Some private foundations also provide subsidy grants which ABDA could

help secure. ABDA would become a center of influence to help smaller communities and institutions apply for such grants or aggregate their needs. The emphasis will be Economic Development based, thus separating ABDA from schools, libraries and other public institutions which already have clearly defined programs in place.

ABDA would assist communities or regions in their efforts to obtain special bonding financing. ABDA would also be a center of influence in developing methods or programs to use Right-of-way assets to lower the costs of Broadband deployment. Finally, ABDA can help identify or certify the use of Tax deferments or Tax credits as incentives for investment in broadband assets. Such programs exist for other high-tech investment arenas, producing increased private sector expenditures toward a particular economic or regional goal.

3. Findings and Activities of Right of Way Task Group

During the second half of 2006 the Right of Way Task Group met a number of times, both as a CIAC committee of the whole and at several separate Group discussions. Much documentation of the issues was provided to the Group, both from Federal and State sources. Thoughts, issues and conclusions from those discussions are presented here

August 2006 Meeting

In August the CIAC Task Group looked at a number of ROW and permitting issues related to Broadband. A study from National Association of Regulatory Utility Commissioners (NARUC) was referred to.

It outlined the various government jurisdictions common within the Federal Government. The Federal Government owns about 42% of the acreage, Tribes control or own 28%, and the State (and Political subdivisions) owns the final 13%. Private sector ROW issues are much more infrequent obstacles, in part because only about 17% of Arizona land is in private hands. So as Broadband assets are deployed across the State, there is a four to one chance that a ROW discussion will be with a Government agency at some level. The following table illustrates, more completely, the percentages of ownership.

Owner	Acreage	% of state
Federal	30,675,000	42.1%
Forest Service	11,225,000	15.4%
BLM	14,251,000	19.6%
DOD	3,743,505	5.1%
Park Service*	4,479,577	6.2%
USFWS**	1,725,611	2.4%
State of Arizona	9,318,000	12.8%
Private	12,526,000	17.2%
Indian Trust	20,212,000	27.8%

Lueck 2006 Agribusiness Forum

The NARUC document noted that each Government jurisdiction, including sub-divisions of the Federal Government and State government (Agencies, Counties, Cities, and Towns),

handles ROW issues differently, in relation to Broadband deployment. This creates problems at the outset because the policy and processes regarding right-of-way, which are well established in law and precedence for other industries, have not caught up to the realities of Broadband technology deployment requirements. Because of Broadband's recent advent within the Telecom industry (1990-91), matching precedence or law hasn't matured. Broadband, for example can be initiated over wireless medium, so ROW models suited for the phone industry, even though both are Telecommunication related, don't fit.

From NARUC Study

A more in depth discussion of NARUC ensued.

Four broad areas of contention that may arise when service providers interact with local or municipal governments over right-of-way access issues.

Those four areas are:

- (1) The timeliness of the process for securing a permit,
- (2) Fees,
- (3) "Third tier" regulation that duplicates the jurisdictional oversight of federal and state agencies, and
- (4) Regulatory treatment that favors some right-of-way users over others

From NARUC Page 2

"Most state legislation enacted contemporaneously with the federal Telecommunications Act of 1996 contain standards that, in broad terms, require local permitting and fee assessment functions to be reasonable, competitively neutral, and nondiscriminatory. Most also impose generalized prohibitions against unreasonable fees, delay, and entry barriers.

As a number of states can attest, it is often not enough to enact as standards worthy policy objectives that do not prescribe or proscribe more specific conduct. Attempts to enforce standards stated only in general terms often mean protracted litigation that, by itself, deters competitive entry and the introduction of advanced services."

From NARUC Page 3

The majority view of the Committee is that the status quo has shortcomings. In many instances, right-of-way access is not as available as it should be.

NARUC Page 8 - Centralization of authority in a state agency.

One approach is to create a state agency or authority to collect the fees, disburse a share of the fee revenues to local governments, and displace or preempt fee collection as a local governmental function.

Arizona's status was discussed. (Ariz. Rev. Stat. § 9-583, subsec. B.)

"Arizona provides an exclusive list of matters that may be the basis for permit conditions:

As a condition of issuing a license or franchise to use the public highways to construct, install, operate and maintain telecommunications facilities, or a renewal thereof, a political subdivision may impose reasonable, competitively neutral and nondiscriminatory requirements on applicants which may include only:

- "1. Proof that the applicant has received a certificate of convenience and necessity from the Arizona corporation commission.
- "2. Public highway use requirements.

- “3. Mapping requirements.
- “4. Insurance, performance bonds, indemnification or similar requirements.
- “5. Enforcement and administrative provisions, consistent with this section.”

From NARUC Page 9

Discriminatory Treatment

In keeping with 47 U.S.C. § 253, most recent state enactments contain a general prohibition against discrimination and mandate competitive neutrality. it is somewhat less clear what has been done to equalize the treatment of various right-of-way users, particularly in light of the differences in regulation accorded to different technology sectors under federal law.

Examples:

a. Wireless services.

Several state statutes exempt wireless service from permit or fee obligations or otherwise differentiate wireless carriers from wireline providers on the ground that they do not physically occupy or use public rights-of-way.

Several statutes exclude the airwaves, as used for wireless or cellular services, from the definition of public right-of-way.

b. Cable services. Ariz. Rev. Stat. § 9-581, para. 4.

Some states exempt cable television franchises from regulatory statutes relating to right-of-way access.

The following exempt cable services or operators by excluding them from the definitions of “telecommunications” or similar terms that trigger the statutes:

From NARUC (Pages 15-25) DISCUSSION OF MICHIGAN POLICY

Michigan’s Legislation was touted as model legislation for Broadband ROW Policy, including the following points:

- Telecommunications receives a special designation for Right of Way and the legislation incorporates the ideas below.
- The following "Best Practices" guidelines are intended to provide greater certainty to units of government and industry of the meaning of fair and reasonable access to and use of the public rights-of way (PROW).
- Access to public rights-of-way should be extended to all telecommunications providers, as long as they receive authorization from the appropriate unit of government, given that such authorization shall not be unreasonably denied.
- Government entities should act on a request for authorization to operate and place equipment in the PROW within a reasonable and fixed period of time from the date that the request for such access is submitted.
- Authorized providers shall apply for construction permits to place equipment in the PROW with the proper unit of government. Such permits shall be processed within a reasonable and fixed period of time from the date that the request for construction is submitted.
- Fees charged for PROW access shall be published in writing.
- All providers should be subject to equivalent terms and conditions of access to the PROW, subject to reasonable alternatives in particular cases, such as overcrowding and/or alternate route planning.

- For management purposes, the appropriate state or local authority should be able to identify the owner and the location of all facilities in the PROW.
- PROW construction permits shall not contain terms, qualifications, procedures, or other requirements unrelated to the actual management of the PROW. This does not preclude requirements for proof of authorization, indemnification of liability, insurance bonding, or construction route planning.
- Appropriate unit of government authority may take into account relevant public safety concerns, zoning and planning regulations as long as they do not unreasonably discriminate among service providers.
- Standard engineering practices should be used to manage construction in the PROW and to guide the development of any engineering standards involving placement of facilities and equipment in the PROW. Standard engineering practices should include coordination with adjacent landowners where future road improvements will impact construction in the PROW.

From Oct 24th Meeting (ROW Portion)

Following are the concepts discussed at the Oct 24th CIAC meeting.

Broadband development can be enhanced through application of good Right of Way Policy

It is clearly evident that every broadband deployment project has similar complexities of **Right of Way and permitting issues**, which lead to time delays and costs. In some cases the issues are reported to be the **single biggest cost of Broadband deployment**

Examples

In one reported instance in Arizona, ROW related issues, including permitting, and non-engineering studies (environmental impacts, historical and archeological impacts) required by government, and the associated legal representation, plus the interims of time delay as those activities wound through the various levels of government bureaucracy, represented about 70% of the project's overall cost for a fiber build. The two years of delays to the project meant an additional two years before resulting economic development benefits could be felt by the communities downstream of the fiber connection. Where the fiber projects costs were in the millions of dollars, the prospective economic development opportunity costs were in the hundreds of millions.

In another reported instance, the costs of acquiring vertical right of way and the associated costs related to the permitting process, including redundant engineering studies, time factors, and legal representation, was estimated to represent about 50% of the total cost of a wireless broadband network.

Eliminating or reducing costs associated with Right of Way will have **more impact** on the **rates consumers pay for Broadband** than any other single factor (technology improvements, competition, regulatory relief, etc). As costs for Broadband decreases, use increases. Its use facilitates productivity increases related to time and distance. Accordingly, we see huge benefits from applications like E-Learning, E-Government, E-Health, and E-Commerce, increasing our overall productivity.

A Look at previous State activity

Discussion of 2001-02 efforts (The following press release from 2002 shows continuity in Arizona's efforts. The justifications remain constant)

Using AZ Highways' Right-of-Ways To Build-Out AZ's IT Superhighway

(PHOENIX – December 2002)

Bridging the Digital Divide is a major issue for the State of Arizona. One innovative solution is the State of Arizona's highways could hold the key to Arizona's telecommunications superhighway.

The State of Arizona stands to benefit significantly by using areas along its highway system for installation of broadband telecommunications cables in coming years.

Governor Hull today announced plans for reviewing proposals to form partnerships between the state and telecommunications companies. The partnerships would build-out telecom in exchange for using the Arizona Department of Transportation's (ADOT) highway rights-of-way to extend underground cable systems across the state.

Without the use of these resourceful partnerships, connecting the rural areas in the New Economy could come with a big price tag. The State of Arizona is looking into innovative ways to build-out while reducing the cost substantially.

The State would benefit by receiving a build-out of space for a public telecommunications infrastructure within the underground fiber optic pipelines.

“By using our interstate rights-of-way and leveraging these assets, the state could significantly assist in offsetting the steep costs of connecting AZ,” Governor Hull said.

“This in-kind swap would support a cooperative effort and create partnerships between government and telecommunications companies to build-out the infrastructure to our rural communities.”

Telecommunications pipelines would be placed along our highways, and in exchange, partnerships would provide broadband telecom services for the State of Arizona to expand New Economy opportunities.

"This is without a doubt a win-win situation for both the State and the telecommunications industry," said ADOT Director Mary Peters. "Our highway rights-of-way provide the path to improved broadband telecom services."

The State of Arizona began the process of accepting responses today for the Request for Proposal (RFP) to allow companies to lay fiber optic pipelines in areas along highways while giving Arizona its own space in those pipelines.

“From our perspective, the success of e-government and continued economic development hinge on the availability of citizen and business access to the Internet. To that end, the State is poised to leverage our resources through the use of interstate rights-of-way by long-haul fiber providers,” said Rick Zelznak, the Governor’s policy advisor on technology. “The shared resource project will work toward obtaining the greatest value for the State through the use of rights-of-way.”

It was pointed out that the 2002 effort did not bear fruit, other than to clarify existing law, because only one bidder answered the RFP and no contract ensued.

It was noted that Arizona Department of Transportation **is still waiting** for direction from the Legislature, in the form of updated law, to move forward with a proposed requirement for

Longitudinal deployment of Broadband infrastructure along Arizona's highways. The 2002 effort only impacted Inter-State highways. There is no longitudinal policy regarding ROW along State's highways. That is another matter.

Any Legislative intervention should concentrate on conduit and not lit fiber. Also there needs to be a discussion as to what can be outsourced vs. what ADOT does.

A discussion of County and Municipality issues ensued. They have a different need and paradigm, including the desire of Economic Development vs. Franchise fees.

County government is also reluctant to have State policy dictated at County level decision making, but that some policy unification at the State level is desirable.

Finally with the advent of Wireless Broadband connectivity, answers to vertical ROW are becoming more important.

It was also noted that Tribal Co-operation regarding ROW is becoming both likely and workable.

Subsequent to the October 24th meeting, an Executive order was issued by the Governor of California, October 27th, 2006 which detailed a new commitment to build out Broadband in that State. Arizona should carefully study this document and executive order.

For purposes of future discussion and instruction for Arizona, included below is the text of California EXECUTIVE ORDER S-21-06, outlining a host of reasons and orders regarding Broadband deployment. (Attached is the full text of the executive order. Bolded HIGHLIGHTS mainly reference ROW based changes)

Twenty-First Century Government: Expanding Broadband Access and Usage in California

WHEREAS deploying broadband networks and advanced communication services throughout California will enable continued improvements in healthcare, public safety, education, and the economy; and

WHEREAS a technology-neutral approach to removing barriers to broadband deployment will encourage lower prices and creation of more consumer choices; and

WHEREAS advanced communication services have become central to the financial health of our State, as these services have increased individual worker productivity and connected California businesses to international markets; and

WHEREAS California is ahead of all other states in dollar value of high-tech exports (approximately \$50 billion last year alone);[1] and

WHEREAS California boasts more than twice as many high-tech jobs than any other state, and its average high-tech employee wage (\$90,600 in 2004) leads the nation;[2] and

WHEREAS California's Web content, e-commerce, networking, telecommunications, entertainment, broadcasting, and computer software and hardware businesses have placed the State at the forefront of the Internet revolution, but to continue to be a world-class leader, California must adopt next-generation policies and practices that spur on further broadband innovation; and

WHEREAS State action is needed to continue investment in, stimulate adoption of, and remove further barriers to the development of world-class broadband networks; and

WHEREAS it is an executive priority to promote widespread access to, adoption of, and new applications for broadband networks and advanced communication services; and

WHEREAS section 709 of the California Public Utilities Code establishes that it is the State's policy to encourage expanded access to state-of-the-art technologies for rural, inner-city, low-income, and disabled Californians; and

WHEREAS the California Public Utilities Commission (CPUC) issued a report on Broadband Deployment in California that, among other items, (1) specifies how the State can be a leader in promoting the availability and use of broadband services, (2) calls for the creation of

a California Broadband Task Force, (3) endorses increased use of advanced communication services for government operations and public access, and (4) recommends limiting rights-of-way (ROW) fees assessed upon broadband providers; and

WHEREAS the Governor's Cabinet – led by the Business, Transportation and Housing Agency (BTH) – convened seventeen meetings on regional economic vitality, and civic leaders in all of these meetings called for increased broadband deployment; and

WHEREAS in accordance with Executive Order S-5-05, the California Partnership for the San Joaquin Valley has made accelerating the deployment of broadband networks and advanced communication services part of its Work Plan; and

WHEREAS ninety-two percent of California's land contains only fifteen percent of the State's population, and some of the communities in these rural areas lack the multiple telecommunication connections necessary for linking to outside resources during states of emergency, such as catastrophic fires, floods, and earthquakes; and

WHEREAS in accordance with Executive Order S-12-06, broadband networks are needed to create a sustainable eHealth network that connects rural health clinics to other State medical centers; and

WHEREAS the increased State use of broadband networks and advanced communication services will enhance government operations through telemedicine for healthcare, distance learning for education, and better coordination in the areas of public safety.

NOW, THEREFORE, I, ARNOLD SCHWARZENEGGER, Governor of the State of California, by virtue of the power and authority vested in me by the Constitution and statutes of the State of California, do hereby issue this order and direct as follows:

1. The State shall create a California Broadband Task Force. This Task Force will bring together public and private stakeholders to remove barriers to broadband access, identify opportunities for increased broadband adoption, and enable the creation and deployment of new advanced communication technologies.

a. Within thirty days of the date of this Executive Order, the Office of the Governor will name an odd number of members, no less than eleven and no more than nineteen, to the California Broadband Task Force. These members shall include, but are not limited to, representatives from government entities having a role in infrastructure deployment, information technology, and economic development; representatives from California's private sector technology, telecommunication, and investment industries; and representatives of non-profit organizations. Two of the members shall serve as co-chairs of the California Broadband Task Force. One of these two co-chairs shall be the Secretary of BTH; the other will be selected by the Office of the Governor.

b. Within ninety days of the date of this Executive Order, the California Broadband Task Force shall provide a preliminary report to the Office of the Governor that identifies administrative actions that can result in immediate promotion of broadband access and usage within the State.

c. Within one year of the date of this Executive Order, the California Broadband Task Force shall provide a comprehensive report to the Office of the Governor and Legislature. This report shall make specific recommendations for how California can take advantage of opportunities for and eliminate any related barriers to broadband access and adoption.

d. The California Broadband Task Force shall pay particular attention to how broadband can be used to substantially benefit educational institutions, healthcare institutions, community-based organizations, and governmental institutions. It shall coordinate statewide and regional efforts with public and private stakeholders to obtain and maximize grant and loan funding available for broadband deployment and development projects in the State. Discussions with private sector stakeholders will identify further opportunities for increasing investment in state-of-the-art technologies.

2. BTH (Business, Transportation & Housing Agency) shall be the Lead Agency for coordinating implementation of policies and practices launched by Sections 1-7 and 9(a) of this Executive Order. Among other responsibilities, BTH shall manage broadband data collection, in consultation with the CPUC, and develop a baseline and metrics for measuring broadband usage and benefits within the State. BTH shall work with other relevant agencies to provide an annual report to the Office of the Governor and Legislature on types and locations of broadband technologies deployed in the State, as well as public agency practices supporting broadband access, adoption, and applications. The first report shall be due within one year of the date of this Executive Order.

3. To encourage public/private partnerships among broadband stakeholders, BTH shall establish a database that identifies current and prospective projects for deploying broadband. A pilot database shall be available for use by broadband providers, State entities, and municipalities within 120 days of the date of this Executive Order.

4. All agencies, departments, boards, commissions, and offices of the executive branch under my supervisory authority (State Agencies) shall place broadband conduit in their infrastructure projects if there is sufficient demand for the conduit. Conduit placed within infrastructure projects shall be designed to be used by multiple government entities and broadband providers.

5. To promote and encourage broadband access, any charge to wired broadband providers for State ROW usage shall be based on the actual costs incurred by the State. The California Department of Transportation (Caltrans) shall propose a new rate structure pursuant to this policy within sixty days of the date of this Executive Order.

6. BTH shall lead a statewide effort to streamline ROW permitting. State Agencies granting ROW access shall adopt policies to standardize and expedite the processing of broadband providers' applications, and within 120 days of the date of this Executive Order, State Agencies shall adopt a uniform application for broadband providers seeking ROW use. State Agencies shall provide BTH annual progress reports on their permitting practices, including how long it takes to process applications. The first progress report shall be submitted to BTH within one year of the date of this Executive Order.

7. BTH shall direct development and use of an interagency best practices guide for resolution of ROW disputes between State Agencies and broadband providers. The dispute resolution process shall be designed in a manner that promotes broadband access, adoption, and applications. State Agencies shall create the best practices guide within 180 days of the date of this Executive Order, and State Agencies shall be in compliance with this guide within 180 days of its creation.

8. To accelerate deployment of wireless broadband, the Department of General Services (DGS) shall enter into a contract with one or more companies that will place, construct, and maintain wireless broadband equipment on top of select State Agency buildings. State Agencies agreeing to the contract terms will avoid time-consuming separate negotiations and will enable faster build out of wireless broadband networks. DGS shall make every effort to complete this contract process within 180 days of the date of this Executive Order.

9. State Agencies shall lead by example and take the following actions to make State government more efficient and effective:

a. In order to plan for future broadband deployment projects, State Agencies shall provide information to BTH that allows the Agency to map existing State infrastructure. These assets include, but are not limited to, the following: ROW owned by the State, ROW subject to State regulation, broadband infrastructure owned by the State,

broadband infrastructure leased by the State, State buildings (owned or leased), and investment projects relating to broadband.

b. DGS and the Department of Technology Services (DTS) shall facilitate State use of streaming video technologies to broadcast public meetings over the Internet, enable remote access to staff training materials, and give widespread emergency notifications. Within 180 days of the date of this Executive Order, DGS shall enter into a contract with one or multiple companies for offering Webcasting services to State Agencies. DTS shall provide technical consulting and training to State Agencies that elect to use Webcasting services.

c. To enable the use of cost-effective videoconferencing, DGS shall identify State Agencies with significant field office operations and provide them information on how video conferencing may increase Agency efficiency.

d. DGS shall encourage the offering of wireless Internet access in State facilities that are most used by the public. DGS shall identify State buildings that may be appropriate for wireless Internet access and provide them information on the benefits of offering this service. In particular, DGS shall pursue deployment of wireless Internet access in the State Capitol Building, which hosts several hundred thousand visitors each year. DGS shall make a proposal to the Legislature and Office of the Governor for wireless access in the Capitol within 180 days of the date of this Executive Order.

e. DGS and DTS shall enable the deployment of Voice over Internet Protocol (VoIP) technologies that meet the business needs of State Agencies and improve quality of service provided to California residents. Within 180 days of the date of this Executive Order, DGS shall enter into a contract with one or multiple companies for offering VoIP services to State Agencies. DTS shall provide technical consulting and training to State Agencies that elect to use this contract.

IT IS FURTHER ORDERED that State Agencies shall cooperate in the implementation of this Order. Other entities of State government not under my direct executive authority, including the CPUC, the University of California, the California State University, California Community Colleges, constitutional officers, and legislative and judicial branches are requested to assist in its implementation.

This order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its departments, agencies, or other entities, its officers or employees, or any other person.

IT IS FURTHER ORDERED that soon as hereafter possible, this Order shall be filed with the Office of the Secretary of State and that widespread publicity and notice shall be given to this Order.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 27th day of October 2006.

Arnold Schwarzenegger
Governor of California

ATTEST:
BRUCE McPHERSON
Secretary of State
Source: California Governor's Office