Best Practices in Telecommunications Policy
National Association of Regulatory Utility Commissioners
National Regulatory Research Institute

I. Information About You

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II. Type of Suggestion

Primarily regulatory agencies, but also industry

This is *broad policy*.
The suggestion is only briefly outlined. In particular, there are many elements of the policy section that need to be fleshed out in dialogue with legal experts.

The suggestion concerns universal service.

III. Best Practice

Description

Goal: Establish policy for a system of *public transit on the information superhighway*.

Vision: Such a policy would either replace or complement universal service (a household-based narrowband consumer concept) with universal access (a community-based broadband producer/consumer concept). Provide universal access to broadband networks through a system of shared-use, non-profit facilities for public network access. The goal would be to provide by 2020 a public network access center (PNAC) within walking distance (1/2 mile) of each citizen in every metropolitan area (rural populations would have different distance standards).

The initial PNACs would be developed at significant intersections of public transit service such as light/heavy rail stations and multi-modal centers, particularly in low income neighborhoods. The second phase would develop PNACs at centrally located single function centers such as civic centers, shopping centers and office centers, with low income communities getting the highest priority. The third phase would bring PNACs into neighborhoods located in public schools, libraries, community centers, and mini-malls, again giving priority to low income communities. See the first 3 figures in the fax – Basic Backbone Network; Extended Backbone Network; and Extended Backbone and TeleVillages and Neighborhoods.

PNACs would eventually be found everywhere, including wealthy neighborhoods, because their mission will include environmental goals, mobility goals, and economic goals as well as telecommunications market goals.

Mobility: Many potential destinations (work, school, health care) can be functionally transferred to a network and made available at locations closer to the origins of the traveler. In other words, a ubiquitous system of high bandwidth network access centers will allow the spatial reorganization of urban functions. Call this *e-access*.

Environmental: Because of *e-access*, fewer single occupant, fossil fuel vehicle miles will be traveled – less energy expended, less air pollution produced, and less congestion generated.

Economic: A number of positive economic outcomes, too complex to detail here, are likely. Public network access centers will provide every community with universal access to the means of production in an information economy. Specifically, this would provide:

- access points to electronic commerce,
- a linked material-economy marketplace,
- a public facility with "spread effects" for the adjacent real estate,
- a platform for a variety of economic development programs such as small business start-up seminars and computer skills training,
- a way to capitalize community-based non-profit corporations that provide low income communities with housing, health care and job training, and
- a place for diffusion of technological and programmatic innovations that will stimulate the private market for information technologies.

Because this system of universal access serves several broad societal goals, the responsibility for funding it can be shared among several marketplaces. For example, the state government could combine the contributions from the telecommunications industry with the proceeds from a dedicated gasoline tax, a dedicated sales tax (as is done for construction of mass transit systems), exactions from land developers, plus portions of the budgets of each state's environmental protection agency, transportation agency, and economic development department.

As an example of relative costs, a 300 mile high capacity fiber network, including private, government and non-profit components, 50 PNACs, with staff and operational expenses for 3 years would cost approximately $300 million. This is about equal to the cost of 1 mile of underground heavy rail construction or the cost of the 7 mile second deck on the Harbor Freeway south of the Los Angeles central business district. See the figures for the Los Angeles County Rail System, Extended Network and TeleVillages, and Metro Net – Components.

The organizational structure for the system would expand the role of democracy in governing telecommunications provision. Municipal franchising of relatively primitive cable television systems in the 1960s through the 1980s caused virtually every city in the nation to convene an advisory panel of citizens. The best of them provided thoughtful guidance for the role of telecommunications in their communities. Ironically, the much more powerful globally integrated broadband network of tomorrow gets very little public attention as its guidance has been entrusted to the invisible hand of the marketplace. It is important in principle to ensure that some portion of the modern network is subject to direct democratic control.

Each system could be organized at the county level with the formation of a public non-profit telecommunications corporation. The model for such an organization could well be the non-profit public access corporations that each city formed in order to manage its public access studios and channels.

Each PNAC would have its own governing board that would manage the budget and oversee the staff. The county corporation would consist of representatives from these PNAC boards. Representatives from the county corporation would sit on the board of the regional backbone network

The PNACs could purchase bandwidth from the marketplace or, in partnership with local governments, could obtain dedicated transmission facilities to connect the PNACs in the city. For example, the cities of Anaheim, Pasadena, and Los Angeles in this region have acquired- or are in the process of acquiring- extensive networks through joint development partnerships with CLECs. Every transportation authority that operates an urban rail system owns the rights-of-way to construct the regional backbone for connecting the public non-profit WANs that, within each city, would connect the public non-profit LANs that integrate the various equipment pieces in each PNAC.

A typical PNAC would include a wide range of off-the-shelf technologies for *non-commercially* facilitating good quality voice, video and data communications. This could include low cost pay telephones, a mix of Pentium and Pentium II computers (as of February, 1999) with bi-lingual software, an advanced work station with CAD/CAM software, group scale video conferencing and meeting space, and tools for multi-media web page production.

For a nominal expense, these technologies would be open to first come, first served public use during certain hours, and would be programmed to provide different urban

functions during other hours. These additional functions could include dermatological exams conducted by a remote HMO; a live, interactive distance education class in English as a Second Language, a contract education class in Mathematics for the Shop Floor, a contract computer class in new billing software for employees of a local lumber yard, and so forth.

The design of the infrastructure and the development of the programs should specifically reflect the needs and interests of the community, subject to the constraints of the budget.

Policy: One of the central questions facing telecommunications regulators is the level of support that should be required for "public benefits." The regulated telephone industry traditionally cross-subsidized local network access-and-use in order to maximize the number of network subscribers.

The cable television industry was more concerned with the ability of citizens and institutions to produce than to consume. As a result, public benefits in the cable industry typically involved a package that included channels for PEG access, PEG production facilities, a 5% franchise fee paid to the city's general fund, and 3% of gross revenues paid to support a non-profit corporation that managed public access.

Compared to the previous models, the current contributions to universal service are very disappointing. $2.5 billion is barely 1% of the annual gross revenues of the common carrier segment of the total telecommunications market.

In broad outline, state regulators would:

- *Endorse the vision of shared-use, non-commercial, first come-first served access to good quality network services and access devices within walking distance of every urban-based citizen as the definition of public transit for the information superhighway.*

- Establish a Telecommunications Trust Fund for each county (initially under the direction of the county's MPO since the MPO is experienced brokering federal transportation funds).

- Fund the TTF with a 3% (or x%) tax on the annual gross revenues of every wireline telecommunications vendor in the state.

- Enable the formation of public non-profit network access corporations in each county.

- Promote the TTF to other state agencies (e.g., argue that some investments in automobility such as high occupancy vehicle lanes on freeways should be diverted to the TTF).

- Phase out municipal franchise agreements and franchise fees (a huge political barrier).

- Convince the federal government that a portion of the proceeds from its spectrum auction should be shared with the states in proportion to the amount of spectrum that will be used in that state (another significant political challenge). This revenue would be added to the TTF.

In the long run, the states and the federal government should harmonize the public benefit requirements that apply to wire line and spectrum vendors. This might entail replacing spectrum auctions with an annual fee based on gross revenues from commercial usage in order to be consistent with states' treatment of wireline vendors. The point would be to create and sustain a level playing field.

Conclusions: This system of public transit for the information superhighway would address three of the most vexing problems in contemporary urban policy – how to provide:

- Effective universal access to broadband networks
- An affordable new urban mobility option
- A system for expanding economic opportunity for everyone, particularly for those most disadvantaged

The resulting system of high bandwidth networks and PNACs within the telecommunications world would also constitute:

- A safety net of non-commercial telecommunications beneath the private telecommunications market.
- A weak form of competition, but a competitive alternative none the less, for the current and probably inevitable telecommunications oligopolies (see also the history of the automobile industry).
- An effective generator of demand for private network access devices and private network services.

Start and Implementation of the Idea

I have been working on the idea since the early 1970s. So far as I am aware, telecommunications have yet to be successfully integrated into urban policy as have, for example, land use, transportation and economic development. See an extended discussion of this oversight in Graham and Marvin's Telecommunications and the City: Electronic Spaces, Urban Places (Routledge, London and New York, 1996).

As former advisor to the League of California Cities, and Co-Director of the Institute for Local Self Government's (the research and education arm of the LCC) Telecommunications Education Project , I authored several articles and reports published by the ILSG in the early 1990's that discussed initial versions of this approach. See for

example, “Telecommunications Issues for Local Government” (1990), and “A Telecommunications Framework for Cities” (1991).

A policy report for the Los Angeles County Transportation Commission entitled “METRO NET Fiber Optics and Metro Rail: Strategies for Development” (12/92) led to the development of the prototype public network access center by the L.A. County Metropolitan Transportation Authority. This was called the Blue Line TeleVillage Demonstration Project (BLTV). I have included two very brief summaries of this project. A 15 page Executive Summary is also available should you want additional details. I also can present an illustrated lecture on the concept and BLTV findings.

How did the best practice improve community access?

The BLTV was located at the Compton Metro Blue Line rail station in the middle of a low income, Hispanic/African American community. The facility provided a computer center with high speed internet access, a small telework center, video conference center, desk-top video conferencing, computer-based kiosks, community meeting room and support staff. Essentially, public network access was well received by citizens, non-profit corporations, government, private businesses, Pacific Bell and the MTA. The project was recognized by the National Information Infrastructure Awards and the International Telework Association.

- Access was reflected in over 6,000 visits in the 9 month demonstration period.

- Economic development benefited with over 2,000 people trained in some subject from computer use to planning for small business. The project also demonstrated how a material marketplace could be formed around a cyber event (video conference).

- Mobility was served by an apparent “mode shift” away from automobiles to public transit and walking. Eleven additional urban functions were electronically introduced.

How transferable is the practice?

Given that care must be taken in planning each PNAC with the participation of the community in the service area, the practice seems completely transferable. Conditions such as high rates of school drop-out and non-English speaking constituents were well handled. More affluent conditions would seem to pose less difficult problems.

Next Steps

Discuss the concept of universal access within the public interest telecommunications community, ***and*** between the telecommunications, transportation, livable cities, and economic equity communities. Sectoral isolation can inhibit effective policy.

Demonstrate and evaluate a system of PNACs in a city of at least 100,000 population.

Start lobbying for the difficult political changes involving cities giving up their franchise authority and benefits, and the federal government sharing its spectrum auction proceeds.

Attached Documents (fax only)

Figures entitled Basic Backbone Network and TeleVillages; Extended Backbone Network and TeleVillages; Extended Backbone and TeleVillages and Neighborhoods, Los Angeles County Rail System, Extended Network and TeleVillages, and Metro Net – Components.

Building TeleCity: Results of the Blue Line TeleVillage Demonstration Project, Walter Siembab, 1999 (2 pages)

The Blue Line TeleVillage, The Technology Model of Communities of the Future, Yvonne Brathwaite Burke, Los Angeles County Board of Supervisors (1 page)

