

Telecommunications and
Economic Development in
the New York-New England
Region

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Telecommunications and Economic Development for the New York - New England Region

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A. The Future

In the past, the three classic economic factors of production used to be land, labor, and capital, each also associated with a social class. But in the twenty-first century, they will be eclipsed by another factor of production, information, and by the people and regions associated with it. Information becomes the key to economic development. And the challenge to a nation, a state, and a community, is how to produce information, move information, commercialize information, and use information skillfully.

In this environment, communications networks are the shipping lanes. Capital travels as encrypted electronic bits, and the bit-economy is vastly outdistancing the physical economy. For example, just the foreign exchange trading volume in London on a slow week now exceeds the total British annual GNP. Labor is becoming economically valuable especially in its capacity as information processor. The number of information workers has tripled in 50 years. In 1940, 17% of the national workforce was employed in information industry, in 1990, over 60%. Firms become virtual organizations. Workers become ad-hoc free lancers. And communities become electronic tele-communities that will no doubt be politically organized. In this environment, the glue that holds things together are communications networks, the nervous system of an information based economy.

We used to have a closed system one telephone company, one telegraph company, three TV networks. (All headquartered in NY.) That system is gone, and Congress, in its new legislation, is just now busy cleaning up some anachronisms. But it is also creating a few new anachronisms. Opening the system is the right way to go. It has contributed to America's having the most effective and dynamic telecommunications environment in the

world. Remember the days when the French Minitel was the model to emulate? Centralized, government-run, with dumb terminals. Today the American Internet model is sweeping the world; it's so successful that it has its users almost giddy.

B. Legislative Efforts

These changes have swept into Washington, and are reflected in the present efforts to change the antiquated Communications Act of '34. A lot of people put in a lot of work. Credit for effort. Good first step. But Congress, unfortunately, is fighting the last war, the war of ending the AT&T monopoly, which has created a mind set and a set of tools, players, and knee-jerks. It's a good war, but it's been long won. It's been won, one should add, without much help from Congress at the time. Quite to the contrary. Now, even while deregulating, Congress is adding hundreds of pages of micro-regulation that will come to haunt us in this dynamic environment. Congress is missing a historic opportunity. It has crafted a document that is a good step ahead. Yet it's method is interest-group pacification, not creating a long-term legal super-structure for the fundamental telecommunications infrastructure. Instead of fine-tuning the details of competition among RBOCS and IXCs, of broadcasters and cable, instead of playing FCC, Congress should use the historical opportunity to craft enduring principles that would be applied in the tumultuous decades to come. Principles about competition, access, universality, common carriage, interconnection, international asymmetry, inter-operability, privacy, and economic development. This would have also permitted some form of national debate, instead of the lobbying free-for-all that has taken place largely outside the public view, because there was no way to make these dense paragraphs intelligible

to the wide public. It would have permitted Congress, and us as a society, to look at the inter-relations. Congress should clearly decide fundamental issues but leave the detail of things like alarm service, set top boxes, interface standards to be fleshed out by the FCC, under tight deadlines and clear instructions.

In fairness, Congress doesn't operate that way. But neither has the rest of the government. The FCC seems lost in a Bermuda triangle, which includes, first, the inspirational speeches from the Vice President - which the FCC echoes while having no clear sense of how to implement them; second, the assertiveness of Congressional leaders--which the agency is eager to please; and third, the crossfire of lobbyists--against whom the FCC has no guiding principles to fall back on. In consequence, while the FCC was certainly busy, busy-ness is not necessarily productivity.

The Administration itself, despite the effective way in which Vice President Gore has put this issue on the political map worldwide, has been mostly talk, little action, and even less money. It would be easy to chalk this up to having to engage in damage control against a Republican Congress. But the fact is that communications are not a particularly partisan matter, outside of cable. And even under the Democratic Congress before last November, the Executive played a curiously secondary role.

Perhaps it's impossible, structurally, for Congress and Washington to solve all of these issues. So maybe one important conclusion is to shift decision-making in this field from the center to the field, just as the industry moved from the centralized monopoly to a centralized system. This, to me, is the primary justification for State role, not jurisdictional sanctity. There is plenty of work for everyone.

So where are we, and where should we be if economic development is what we care about?

We are likely to get a workable bill, of the sort Bismarck thought of when he compared making laws to making sausages. It will generate some progress, and provide long-term employment to communications lawyers. It will accelerate competition a bit. (Although most of that could have been done, and some was, by the states, the Justice Department, and Judge Greene.) If seen only as a first step, it's the right step. If it's seen as the Magna Charta of communications for the next decade and beyond, it falls short in opening, directing, or inspiring.

C. Auctions: a pro-development tool?

Still, it is a bill that many people will take credit for, like in the case of the spectrum auctions, for which this Democratic Administration now takes credit even though it was a Republican idea which the Democrats had blocked in Congress for nearly a decade.

The spectrum auction merits a bit of a close look, because it shows the dangers of focusing ritualistically on one particular market mechanism and equating it with market competition.

I have a problem with auctions. My starting point is that if everyone, from Jesse Helms to Ted Kennedy, from Milton Friedman to Abba Lerner, agrees with the idea of an auction, there is probably something wrong with it. Or, at least, the expectations are too widely divergent to be realistic.

My conclusion is that an auction is not the best way to go, though I know all the

ritualistic counter-arguments. I've chanted them myself, along with most economists: an auction is better than a mindless lottery, or than a comparative hearings with its inevitable political manipulations. Auctions get spectrum resources quickly into the hands of users. It's just a public auction rather than the already existing private one. But the issue is not whether auctions are better than what we used in the past, but rather whether they are better than other alternatives.

But are auctions good telecom or development policy? Here are a few counter-reasons:

- a. The Administration's national goal is to advance the national infrastructure. There seems to be a widespread agreement that this should be done without government money. But we are actually now doing the opposite of making public investments. We are taking money out of the infrastructure, through auctions, and throwing it into the black hole of the budget deficit. For decades America's telecommunications system was superior to that of other countries, often because the latter used telecommunications as a cash-cow for general government expenses. Now we have set out on the same ill-considered road, just as other countries have left it at our urging.
- b. An auction payment is a barrier to entry, especially for small entrants. Therefore, it retards or slows competition and reduced its efficiency gains.
- c. An auction is a tax, a tax on future usage of an advanced technology. In effect, auctions are hidden tax increases on competition through the selling off of access to consumers. It's a double hit on consumers: first, as a tax on

new entrants, and second, because it will leave the market price higher than otherwise, it will lead to less of a competitive price reduction in the incumbent service.

d. It creates a non-level playing field, since cellular companies, at least the wireline carriers, did not have to pay a similar entry fee.

e. And where is this going to end? For all the recent talk in Congress, budget pressures are forever. There is never enough money. This creates expectations for more auctions. In effect, we solve budget problems by selling assets. It's one thing to sell assets for use in investment. But this a situation of pure consumption. Therefore, domestically, everybody will get into auctions, because everybody has a budget deficit. Local governments will start auctioning off cable licenses, but not to the first cable franchise, where renewal is protected, only to its competitors. And internationally, American firms will pay dearly for this auction system abroad. There will be auctions everywhere, in any country in search of hard currency, and our companies will do a major part of the paying.

There is an alternative to the auction system: I call it the *open entry clearinghouse system*. In this system anyone can enter. There are no permanent property rights. Or rather, rights are not allocated by a simplistic property rights approach. We must get away from the real estate, fee simple, model and think about frequency access differently, as acquisition of *temporary rights-of-way*. Frequency users are more like ships on the sea or planes in the sky.

The latter example is Gilder's. Gilder and I are probably the only two people who like competition but dislike spectrum auctions.

If there are multiple entrants and congestion happens first at certain peak periods, a coordination of users is necessary. This would be accomplished by a clearinghouse of users. A user of congested spectrum must get the right of use by the clearinghouse by a bidding process. The clearinghouse is a cooperative of all spectrum users. Think of it as an exchange. In practical terms, it would be a computer that clears markets in allocations. Think of it like a bridge toll that is set dynamically based on congestion. The resource it distributes is the spectrum endowment the government initially puts up for usage, without any restrictions on use or user. Anybody has the right to join the clearinghouse. Inevitably, there would develop both a spot market and a futures market in allocation.

It took Ronald Coase almost fifty years to see the idea implemented. So I don't expect to see my proposal adopted anytime soon. But I can wait. In the meantime, what should we do about economic development and telecommunications?

D. Investing in Information

Let's start by acknowledging that we in the Mid Atlantic, New England, and the Midwest, have a serious problem, and that we need to solve it ourselves.

Fifteen years ago, the New York to Boston to Chicago to Washington, DC region was the undisputed information and communications capital of the world. Instead of the rust-belt, we were becoming the info-belt. But here, too, we've got problems.

Today, many of the major information companies headquartered in the region are

weakened. The region's role as media capital is imperiled in the age of multi-media interactivity. Some have to do with the accumulated unfavorable climate for high technology business. Most are also the result of general trends. But some of the trends could be reversed. This is both an opportunity and a responsibility for leadership.

It can be accomplished by a positive vision and initiative on INFORMATION CAPITAL. It focuses on two meanings of the word "capital".

- a) strengthening the region's global role as the world's central producer, processor, and distributor of information-- broadly defined to include media, entertainment, consulting, legal and financial services, software, education, medical services, etc-- and of the information technology associated with it.
- b) strengthening the region's "information capital": its people and infrastructure used to produce, process, and distribute information.

For the state of New York, during more than a century, economic pre-eminence was based on a major infrastructure project, the Erie Canal, which made New York's harbor and rivers the gateway to the new land. The other contenders, Philadelphia, Baltimore, and Boston, were left forever as regional also-rans. Today we are in a similar situation, with worldwide leadership in today's major economic activity--information--up for grabs. The region can be the information provider to the world. It is the region's most logical economic foundation and destiny. Alternatively, we can lose leadership, irretrievably, to other regions and countries. The electronic highways can become avenues for exports of information activities-- or they can become exit lanes for business activities.

We have in the region an abundance of the major ingredients: an active high tech industry; a strong science and technology base; major media firms; a large creative community; leading-edge users and financiers; an internationally oriented work force; an entrepreneurial business community; dynamic information service industries such as law, accounting, consulting, advertising, marketing. And it's not just in the big cities. Take New York. The information sector is spread across the state-- Computers in the mid-Hudson and Capital regions; optical and imaging in the Rochester/ Finger Lakes regions; ceramics and fiber in the lower tier; photonics in Rome/Utica; radio/mobile communications in Buffalo; electronic services in Westchester and Long Island; and much of everything in New York City (Just its publishing industry claims to be the largest industry in the state; and the aggregate of software programmers is probably the world's largest).

Now it's not as if there has been no economic development efforts. In New York, they were spearheaded under Nelson Rockefeller. For example, we had the first state Science and Technology Foundation. But are we getting the most bang for the buck?

The problem with many of these efforts is that while they often started out as a model to the nation, they fell behind current thinking and experience. They tend to be civil-service bureaucracies oriented to brick-and-mortar, manufacturing, real-estate type development deals. It made public officials into retail deal-makers rather than wholesale policy makers. Their instrument of choice are loans, loan guarantees by commercial banks, or tax abatements. This is fine as long as the deal involves, say, getting GM to manufacture in Tarrytown. But it is not the right approach for a start-up software firm or information provider which have no hard assets or inventory that banks require for collateral; and which has no profits against

which a credit or deduction would be useful. Similarly, money for training programs has largely gone to established universities and community colleges, and much less to companies for, e.g., employee apprenticeship programs. Some innovative states have "re-invented" economic development, centering it instead in private, business-like but non-profit corporations which combine public and private venture capital to make equity investments in start-up companies. An example is the Ben Franklin Corporation in Pennsylvania. They have also helped apprenticeship programs, or used universities for hands-on "industrial extension programs", like Michigan.

What might the INFORMATION CAPITAL initiative consist of, as part of a market-oriented framework? There is no single magic policy, but an aggregate: creating an atmosphere, removing barriers, providing incentives, setting examples, investing in human resources, and acting globally.

**** CREATING AN ATMOSPHERE**

Here, the elements are:

* **Vision and visibility from the top.** There are limits to what government can and should do. But one thing it can do is to signal to the world that we are serious about being the information capital.

* **Creating an investment climate.** This has to be part of a general policy in taxation and regulation that is supportive of investment and job creation.

* **Formation** of private task forces to recommend and implement ways in which industry can operate and compete in this area.

***Inter-state Collaboration**

****REMOVING BARRIERS**

* **Substituting real actions for Public Relations.** An example for the latter, in New York, was a blue-ribbon panel largely composed of interest-group representatives (the "Telephone Exchange") whose innocuous recommendations --primarily to permit more competition and lower taxes on telecommunications) have languished.

* **Creation of a competitive and largely deregulated telecommunications market,** including in local communications. This would accelerate the opening trend of recent years, in Washington and by the New York, Vermont, Maine, Maryland, Illinois, Michigan, and New Jersey public utility commissions. To accomplish this goal requires a set of concrete reforms, including those of how to pay for universal service (by all providers), how to assure interconnection among networks, how to set the payment of access charges to networks, how to protect consumers from fraud and competitors from market power, and how to protect rural and poor customers.

* **Regulatory policies that encourage competition within and among telephone and cable television companies for phone and video services.** Any infrastructure policy should

not be centered on a particular type of carriers, but on the multi-media "network of networks".

* **Procedural reforms.** Streamline the ponderous regulatory decision process. Just as we are about to reform the tort system, we should radically tackle the federal Administrative Procedure Act and its state equivalents.

* **Rates to encourage electronic information services and electronic publishing.** At present such services are charged by regulation extra-high rates. This makes as much sense as if Detroit would have a special tax on the automobiles it exports.

****PROVIDING INCENTIVES**

* Creation of specialized public/private venture capital funds to make equity investments in start-up companies.

* Encouragement of small software development firms in some of the cities by creation of specialized software loft buildings with security and support services.
Encouragement of the formation of larger software firms by reduction in their payroll taxes.

* Urban and rural Economic Development Zones with special technical and communications infrastructure for information-intensive activities, and especially favorable regulatory rate treatment.

* Assistance for small business to obtain Washington grants from National Science Foundation; Defense Department; Small Business Innovation Research program; NASA; Dept of Commerce; etc.

*Collaboration rather than competition with other states in the region.

****SETTING EXAMPLES**

* Use of the states as major users of communications and information by encouraging their agencies to develop demonstration projects in the delivery of health, education, law enforcement, tax administration, social services, and privacy protection. Successful projects would be incorporated by other State offices as part of modernization and efficiency promotion. Indianapolis, for example, has Civiclink, an on-line info access system allowing anyone with PC and modem to obtain public records over telephone network.

* **Creation of non-profit Corporations for Public Networks**, to assist local government and non-profit organizations in their modernization efforts, and in spreading successful demonstration projects.

* **Availability of state** documents and information over the Internet.

***INVESTING IN HUMAN RESOURCES**

Focus on educating, at all levels, so that we produce a workplace which is adept at manipulating information over communications networks. Allowing a fluid movement of employment between diverse industries: workers who know how to manipulate and analyze information should be able to do so regardless of whether they work for Ford Motors, Microsoft, or a state government.

*** Encouragement of business apprentice and training programs by permitting to dedicate part of the payroll tax to such programs.**

*** Aggressive introduction of computer training into the school curriculum.**

*** Encouragement of business donations of used desk-top computers for disadvantaged children.**

*** Engineering and science teaching scholarships**

*** Apprentice programs in computer applications**

*** university/industry partnerships with a strong requirement of practical applications and technology transfer.**

*** Encouragement of the educational and research jewels of the region.**

****ACTING GLOBALLY**

*** creation of NY - New England - Midwest-Canadian** communications free trade zones, extending NAFTA to regional telecom collaboration that would make cross-border calls as cheap as domestic ones.

E. Conclusion

To conclude: Congress is opening the door, not as much as necessary, but it's a step. But as we walk through that door, that is now opened a bit more, we must have a direction to go to. The economic future of the region is at stake. Moving along at the regular speed means falling behind, for the trends of the information sector are accelerating. Change is within our grasp. This demands leadership. You -- in the audience, in Congress, and in the states -- must provide it. For if you fail, the rest of us will fail with you.