Regulatory Assignment Series Memorandum

Re: Assessing American Telecom Competitiveness.

## Introduction

In the 1980s, the FCC, the Commerce Department's National Telecommunications & Information Administration (NTIA), the Office of the U.S. Trade Representative, even Congress frequently studied the competitiveness of the American telecommunications business. For decades, after all, America led both the wireline and wireless worlds. AT&T's Bell Labs produced Nobel Prizes, Unix (Linux), cellular radiotelephony, communications satellites. The transistor. Things like that.

## Era of Great Changes

With the breakup of the Bell System in 1982-84, however, the vast license fee revenues which had previously supported AT&T's research effort began to attenuate. AT&T also started to restrict the sale of the latest network products to the Bell companies, their commercial rivals. Those companies, in turn, began shifting their procurement dollars elsewhere. Non-U.S. companies such as Siemens, Nortel, and Ericsson benefited as a result.

The American communications market which had been dominated by just a few companies, moreover, was opened to international competition. Non-U.S.-based companies picked up American market share much faster than U.S.-based companies succeeded abroad. And, one result was the telecommunications R&D expenditures by American companies shrank.

Recently, the Newark Star-Ledger ran a wistful article on Bell Labs's abandoned New Jersey facilities. Of course, northern New Jersey is chock-a-block with similar abandoned "Information Economy" plant. Did you ever see Oregon Public Television's great series, "Accidental Empires -- Revenge of the Nerds"? Starring the mysterious Mr. Cringley, the series shows huge AT&T, Western Electric, IBM, and other facilities which have been shuttered and abandoned. It's all pretty scary, in addition to being sad.

## Professor Thomas Hazlett & the Chamber

In the early years of this decade, the U.S. Chamber of Commerce commissioned a survey of the U.S. telecommunications manufacturing sector by George Mason University Professor Tom Hazlett. The study confirmed the obvious: That once upon a time, telecommunications research, development, and manufacturing were a big and productive thing in America. But today? Well, as your Review notes every month, the United States has a large and growing "advanced technology products" deficit. It runs between $5 and $9 billion a month. We're falling behind in this key "sunrise," high-tech sector.

But this doesn't seem to bother anyone at the FCC, NTIA, or in Congress, does it? The American business community says nothing. Certainly no one in the Bush White House seems even aware of such things. Professor Hazlett said that in the 1990s and thereafter, the focus of Government policy in this field shifted toward consumption, away from production. It's also clear that international telecommunications trade attenuated as a Washington issue. That reflects the fact the two major companies which used to drive telecommunications trade debate -- AT&T and Motorola -- face lots of other challenges. But there's also the fact that foreign-based companies have been growing their North American manufacturing while U.S.-base companies have been outsourcing their jobs increasingly to low wage countries.

The United States used to keep track of how much U.S. telecommunications companies spent on research and development. "Patent analysis" was also commonplace. The Commerce Department would detail the production and sale of central office products, for instance. Additionally, some effort was made to keep track of what the rest of the "Information Economy" was doing.

## What Are the Computer Companies Up To?

Now, it's sometimes said American industry is spending less and less on telecommunications research and development. At the same time, they're spending more heavily on computer and software research. Experts point at IBM and Microsoft especially. But Oracle also claims to be spending in this area.

It's never mentioned, however, that companies like Apple, Microsoft, HP, or even Dell are no longer employing Americans in America. As we said, your Review's just about the only publication in the whole world which regularly reports the "advanced technology products" deficit the United States is incurring.

Silicon Valley's perfected the myth that it's generating "tomorrow's jobs," even if the domestic pig iron, wooden pallets, or carpeting sectors are steadily losing ground. That may be true. But the good jobs with a future that Microsoft is creating are mostly in Bangalore, aren't they? This and other technology companies isn't doing a whole lot to help here.

AT&T and Motorola used to publish regularly reports on what they were doing to help America. But you won't hear a great deal out of California or Texas on that score these days, will you? When was the last time you heard one of the "Information Economy's" billionaires say they were pledging to provide "good jobs with a future for Americans"? What about never?

## First: Assemble the Facts

Well, the biggest problem these days is probably that there's not much rigorous information out there at all. The manufacturing, patents, R&D outlays, and other numbers published by the U.S. Chamber of Commerce are all about a

decade old. Obviously, there've been lots of changes.

Particularly tiresome, moreover, is the fact the FCC has virtually no current numbers or statistics. How much are Verizon, AT&T, Century, Embarq, and other phone companies spending on "basic" or "applied" research? Where are their research facilities? How many patent applications did they file in 2007? If these companies know, they're not telling. And, certainly the FCC doesn't independently know.

Needless to say, moreover, the U.S. Commerce Department has little of this information. Western Electric, remember, is now part of the faltering French equipment company, Alcatel-Lucent. Northern Telecom -- Nortel -- is very much under pressure, isn't it? And, Motorola? Maybe these companies have basic or applied research operations somewhere. But sheer survival is their number one priority, isn't it?

So, wouldn't you think the first steps we need to take in this field entail a systematic census or survey? The Communications Act says the FCC's supposed to promote the wider and more effective use of radio. FCC Chairmen in the past were proud to preside over sectors thought to be the most technologically sophisticated and dynamic in the world. Shouldn't something be done now to law a proper basis for future discussions -- and, possible action?

"Knock and the Door Shall Be Opened... ."

Now, we appreciate there are rules and other considerations regarding Federal agency data requests. But here's a modest suggestion. The FCC, NTIA, and Commerce Department leadership should caucus and decide what information is needed precisely to assess the level of American research and development in the "Information Economy." If gaps are found, the agencies should decide what's the more effective solution.

The Commerce Department's Census Bureau has vast information gathering capabilities. FCC staff have years of experience working in these fields. They bring both "informed perspective" and a knowledge of which persons at what companies would know. All these agencies are also in a good position strongly to encourage the U.S. Chamber and other trade associations to act.

The goal should be to collect the information needed to inform the next Administration -- and, the next Congress -- what the state of play in "Information Economy" research is. And, what needs to be done. All this would be useful, you know, as Congress debates topics like the permanent extension of R&D tax credits, for instance. Important things like that.

## Conclusion

This past week, the American Enterprise Institute in Washington hosted a briefing on the challenges confronting the Japan economy. Starring was Morgan

Stanley's Dr. Robert A. Feldman -- who seems to know more, numbers-wise, about the Japan economy than Dr. Alan Greenspan was said to know regarding the United States's.

Dr. Feldman made the point that coping with demographic and other factors bearing down on Japan is going to require (a) greatly increasing the return on investment in many sectors and (b) boosting productivity, of course. Which, of course, is also true here, isn't it?

Liberty Media's Dr. John Malone has said we need to become a country more interested in producing potatoes than eating them. Dr. Phil Gramm has talked about the difference between those who build and pull the economic wagon -- and, those who just like to ride in it.

Well, as Peggy Lee famously sang, when we look at near-term research, innovation, and other current advances in the American "Information Economy," we "get the sense that something is missing." But the facts and data to sustain an informed judgment aren't really handy and available, are they? The FCC, NTIA, and U.S. Commerce Department need to set the groundwork, so the next Administration can decide what's missing -- and, what we can do to help. So.

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