

BOOK OUTLINE

tracks 32 - 35

September 6, 2006

Track 32

The book will be about the development of electronic communications and its growth over the 20th century: How did it come into being, how did it get where it is and some sort of epilogue to understand what's going on and what drives electronic communications so that people have some idea of how to think about new developments.

For example, at this conference I went to, the new media people really had no concept that what they were doing was riding atop an infrastructure that's highly competitive and allowed a tremendous amount of flexibility in developing new kinds of media, new kinds of services. They had some vague idea that the government regulated all that. We got off onto a discussion of net neutrality - it's complicated, but basically the phone companies, the cable companies that are providing internet services have to treat all users of the internet the same. You can't have Cox cable putting on an internet service and giving their own service favorable treatment compared to someone else, i.e., saying you can't use Vonage or Skype for telephone b/c we provide the telephone. The term for that has come to be net neutrality. Sounds like a good thing, but if you know something of the history of the regulation of television / telecom, you become very worried that that simple minded idea is the camel's nose under the tent for the government to regulate the content - what is a telephone service, who does what, what is a television service....if you're going to be neutral, the government has to tell you how to be neutral, and it just cascades. The people at this internet conference thought that, yeah, the government ought to regulate net neutrality without realizing that it has an adverse impact for their business.

Our audience is the journalists, hill staffers, FCC people, academics who think about and deal with communications policy related things. It's not the engineers, telecom policy researchers, economists, law school professors. It's a broader audience.

The book is about the development of telecommunications over the course of the 20th century and what that means for us today.

I'll generally use telecom in two ways - sometimes to mean internet and phone, but sometimes I'll also use it to include radio and TV.... In the book we'll have to develop consistent terminology.

I. Pre-Office of Telecommunications Policy

The basic premise of the book is that these technologies first evolved over the early part of the 20th century. During that development phase, there was a lot of competition, a lot of confusion and debate about what these technologies made possible, what they meant - that was a period of intense innovation as well as confusion and there was a lot of excitement about it.

The telephone side of that: at the opening of the 20th century, the Bell patents had expired. There were just about as many Bell and non-Bell (independent) telephones. There was more innovation and growth in independents. In some ways they had better access to capital because they could sell in small local chunks whereas AT&T was set up at that time as a national entity that raised its capital for its entire industry in one place.

In any event, at the beginning of the 20th century, the telephone industry was very competitive. During the next 20 years, Bell substantially consolidated its monopoly position. And there's a discussion to be had about how that happened that centers principally on JP Morgan and Theodore Vail.

Radio as we know it didn't happen until 1920. There was a lot of innovation in wireless, a lot of excitement about wireless – first wireless telegraphy and then to some extent wireless voice – but wireless voice was thought of as wireless telephony. Everybody saw it as a way to provide telephone service without wires. For unexplained reasons no one really thought of radio as a broadcast medium. The thought of radio as a conduit for information and entertainment really just came out of the blue in 1920 and took off in a big, big way across the country starting in 1921.

[Tom digresses – I don't want to write the book as a history. It will follow a chronological path, but he doesn't want it to be a history. So what will it be? It'll be a series of stories about the people who made things happen. Most of the books write about this subject in the passive voice – it happened. Some focus on people, but they tend to talk about the inventors. When you get to corporations, they tend to be written about actively, but the executives are invisible. I want to write about the people who started things, who oversaw things from one industry state to the next.]

The telephone business in the first 20 years – is mostly about Theodore Vail, who became CEO of AT&T in 1937 and structured the Bell system. He was a systematizer. He believed in tight organization – every engineer had the same training materials and equipment everywhere across the country. Decisions to expand were done in light of consistency. Theodore Vail created the Bell system and made it a bureaucracy run by bureaucrats and enabled the company to deliver good service very well and become a very powerful entity. They basically provided better telephone service. They used that position to get the government to grant it preferential powers, which lead to the consolidation of their monopoly. So the telephone business is for the first 20 years substantially T. Vail.

The radio story is more complex – there are a lot more actors. The first actor I think is the guy who I think really made radio – HP Davis at Westinghouse. Davis is the first story, along with the development of broadcasting and consumer electronics business.

The second story is the development of the networks. I think the primary actor there is Bill Paley. The characters are Owen Young at GE, Robert Sarnoff at RCA, and Bill Paley at CBS. The three stories here – there's radio, the development of the networks (not sure who the actors are there), and there's the development of advertising and the networks as we know it -

that's Bill Paley - and that carries up to the early '30s, when the '34 Telecom Act which consolidates the structure of the radio broadcast business.

But we can't forget Herbert Hoover - he is one of the most important guys. provided the regulatory mechanism, which is in large part why there are three television networks.

Theodore Vail is the telephone story.

So the three characters are HP Davis, Herbert Hoover and Bill Paley. They're the radio broadcasting story.

The stories come together in the 20s when AT&T tried to use its economic and patent position to create a radio / telephone monopoly, but for reasons that need researching, they failed. That will be an original piece of research - the fact they tried, how they tried is in the books. But why they didn't succeed is not there. Tom thinks it's a story of politics, and it's probably part of the radio network story.

None of these stories are pure, but I'd like readers to go away remembering that it was this guy Davis who invented radio, there was Hoover who created the regulatory mechanism for it, which in large part explains why we have three television networks, and that Bill Paley really created the mold for advertisers in broadcasting.

[Tom wants his readers to say: Now I know why we have three networks; why we have advertising; why we have the regulatory structure we do; how this competitive business got monopolized.]

Those four stories and the interconnection between telephone and broadcasting through AT&T takes us up to the 1934 Telecom Act. The structure of the phone industry - a monopoly phone company, three networks, and the FCC framework of the '34 Act substantially did not change for 50 years. Which is not to say there wasn't a lot of change - was invented, television broadcasting came about after WWII, FM came about, AT&T built its microwave network. But if you look at it and say what were the big innovations over that 50 years, you'd say: the soap opera, television, color television, which isn't a hell of a lot of innovation. The story there is that these four organizations - three networks and one phone company - did a good job for a very long time at what they did and the regulatory structure was very stable and allowed them to do what they did. And it worked for a very long time.

[We need two or three stories from this period - one of these is the introduction of television, which is substantially Robert Sarnoff, the introduction of color tv, which was substantially Robert Sarnoff. It's hard to find good stories from this period.]

There were two advertising agency executives who played an important role. One was Albert Lasker and the other was at BBDO - they are probably the same story b/c they worked for competing ad agencies. As advertising came in, People like Paley tried to create programming that was appealing to listeners so that they could sell advertising time. What the ad agencies did

was to develop the idea of sponsorships of specific shows and specific kinds of shows. They would in essence pre-sell and be a broker between the advertiser and network. One case study I read was about Lasker who saw radio as a way to develop a brand. He took the brand Lucky Strike cigarettes - I can't tell you now the programs he used, but he specifically developed it for the female smoker. His logic was that we're only selling cigarettes to half the population. If we can get women to smoke, we can double our consumer base. Lucky Strike became the cigarette. The first ads for Lucky Strike were a female opera singer saying smoking makes her voice smoother and more appealing. It was the ability of the ad executives to package brands and programs - now we take it for granted, but then it was novel

[Also, Lew Wasserman and some other people that Tom has to think about in the 50s that shifted the production of television programs from networks to Hollywood.]

This covers creation, consolidation, and now we're up to competition, the late 60s - and introduction of competition

What was going on there was that this monopoly structure, with both the industry and regulation, the two fed on each other - the industry structure created and fed the regulatory model, but the regulatory structure defined what was possible in the industry. It became focused on (both in broadcasting but more so in phone) as the government making these monopoly organizations do things that people thought they ought to do. I.e., cost of long distance calls was going down but local calls not changing much. State regulators / politicians came to realize that if you charged more than the cost for LD, that would subsidize the lowering of price for LD service, so you'd lose money on local but you'd recover it on LD which let them say that they were keeping phone costs down for the people. So for political reasons it was appealing to keep cost of local service down. (Presumption was the only rich and businesses used LD and thus could bear higher prices.) So it was a Robin Hood scheme. Disparity between cost and price in LD grew and business users of LD realized that if they could put in their own microwave systems they could save money. Regulators were making the monopoly do things that were perceived to be socially beneficial. Introduction of VHF television another example; fairness doctrine; equal access to politicians; children's programming requirements. The structure presumed that the monopoly existed and the role of the regulators was to get monopolies to do something socially beneficial.

One of the things that allowed the telephone company in the phone business and cost of long distance was the development of technology that came out of World War II.

[We have to deal with World War I in early part of book. World War I and World War II were in different ways very important]

There were new technologies - the computer was invented, which created demand for different types of communication - digital communications so computers could talk to each other. The cost of a lot of communication services began to decline; price got out of kilter with cost.

Computer people wanted to build long distance digital communications systems but couldn't do it b/c of regulatory structure; there were people who wanted to build private long distance phone lines; the RR and gas pipe line companies wanted to do that private microwaves, but the regulatory structure that had evolved from this consolidation gave all the microwave frequencies to AT&T.

So over the 50s and 60s, there was increasing demand for using new technologies that were available, but weren't usable b/c of regulatory impediments.

So the idea of competition shifted from a theoretical idea over the 50s and 60s so that it wasn't a game for kooks anymore there was a real underlying potential for competing with the Bell system and to some extent with the networks. Motorola was developing cellular - they had a strong position in two-way radios for taxicabs and military use and they came up with the idea of cellular telephones, which was a direct threat to AT&T.

Cable television began to use the new microwave technologies to import distance signals so if you lived in Richmond your cable station could bring a D.C. station to Richmond and that could be used to sell more cable subscribers. Broadcasters didn't like that - there are only three stations that carry the networks there and you don't want a cable guy bringing in additional options. Siphons off audience which means you can charge your advertisers as much.

These became real competitive alternatives to the monopoly structure:

LD
digital
cellular
cable

There were real customers, real entrepreneurs, real equipment manufacturers. They introduced these new things that were not only a direct threat to the monopoly industry structure but a direct threat to the monopoly regulatory structure.

And at that point OTP enters the scene. You can't tell the OTP story well unless you have the framework behind it.

September 8, 2006
Tracks 33 - 38

II. Pre-Office of Telecommunications Policy

[Shift to first person]

I went to White House the first day of the Nixon Administration. I knew I was going; I think the way most Presidential transitions work is that people are identified by the incoming President who are going to be on his staff and who are going to handle things; those people start

interacting with people from the agencies, in congress, and in industry well before the President is sworn in. So I can't tell you now when - I think it was early Jan - I got the official invitation to join the White House staff - that was from Bob Ellsberg who had been selected by Nixon to be one of his top aides, and Bob asked me to join the staff and I naively asked him "as what?" and remember Bob looking at me incredulously and saying, "does it matter?" To which after a moment of reflection, I said, "No." That question of what I'd be doing turned out to be an interesting question. Because I'd been on the Nixon economic and budget transition team, I thought I was going to the White House to work on budget policy matters. There was an early meeting of the new White House staff which I think took place just before Jan. 20 and one of the first orders of business was parceling out who was responsible for which agencies. It sorted out fairly quickly - Ehrlichman wanted the domestic agencies; Kissinger wanted state & defense; and Ellsworth was given all of the non-cabinet agencies, which he then turned around and parceled out to me and John Rose, being his two assistants. And during that discussion there was the question of who would do NASA, atomic energy, FCC, Federal Power Commission, and apparently no one had a good answer except Bob Haldeman. He said, "Hell, Whitehead went to MIT, he understands all that technology shit, give it to him." So with that remark, I was suddenly the White House person for NASA, atomic energy, FCC, Federal Power Commission, National Science Foundation and the CIA. And since I had a lot of clearances from my work at RAND it was pretty easy for me to move into the national security parts of all that. I had the CIA reporting to me for about a week and then Henry Kissinger realized he wanted it to report to him, which he should've realized at the outset and Henry took over CIA. So here I am basically being a Ph.D. economic policy wonk labeled by Haldeman as knowing about all this technology shit, and so I made contact with the various agency heads and industry people started figuring out that I had some responsibilities. Washington is a small town so word gets around and pretty quickly I was being besieged by Hill staffers, industry people, all of that.

Several of the important issues were communications. The Johnson administration had not wanted to deal with communications. The commonly accepted rationale for that was that Lyndon and Ladybird had their television stations down in Texas and didn't want to get their administration involved in anything that would give the appearance that they were playing favorites with their own television properties so they just stayed away from it. Probably not a bad idea for them personally, but it resulted in a number of issues in the FCC and industry that ended up being bottled up because there was no one to deal with them. The FCC Chairman was Rosell (sp?) Hyde. Rosell was widely viewed as a very nice man. He was a Republican. He was a Mormon. He pretty much didn't do anything.

Quickly I found himself dealing with a lot of people from these various agencies and the Hill and the industries that were represented. For example, in NASA, the big issue was what does the country do after the Apollo moon landings. So NASA had its schemes for building a shuttle, building a space station, going to Mars, and there were all sorts of contractors that had ideas about how to implement those schemes, so they came in and found me. The whole communications industry found me, from AT&T to Motorola to the broadcast networks and so forth. So I was quickly taken up with meetings with lots of people. One of the first issues...I think in part to delay things, Johnson had commissioned a study of telecom industry and a report was produced by a task force - it's commonly referred to as the Rostel report because Eugene

Rostel was chairman of the task force. Everyone wanted to know where the Rostel report was, and we were accused of bottling it up. The truth of the matter was that I couldn't find it and no one would admit to having a copy because it had been kept under such tight secrecy. Finally, I found a guy in the budget bureau who had it and immediately released it.

Some of the communications there in the communications sector were public broadcasting. Congress had passed an Act setting up the Corporation for Public Broadcasting, which grew out of the Killian report, which was funded by, I guess, and run out of the Carnegie Endowment. So there was this vision for a major public television network that would rival the three commercial networks and be a counterbalance to the commercialism to the three commercial networks, all paid for by the federal government with huge budget implications. So there was the question of the new administration's position on that - did we support it? How much money were we going to put in the budget, etc. There was the subject of communications satellites. The Communications Satellite Act of 1962 created Comsat and established international satellite communications as a monopoly of Intelsat. This was sort of John Kennedy's gift to the world - America's space technology. And it more or less worked. Intelsat and Comsat had gotten underway under interim agreements in '62 / '63 and there was a large international conference of a hundred and some countries negotiating the final agreements for intelsat system. The Chairman of the U.S. delegation was Leonard Marks - there was the question of what the new administration's position on was on that, who was going to oversee that, would we replace Marks as ambassador. The answer was I'd oversee that and, yes, we'd replace Marks - we replaced him with Bill Scranton.

There was the question of the use of satellites for communication within the United States. The presumption in '62 was that satellites were only useful for communications across oceans so they were inherently international and the idea of satellite use for short distances within the country really didn't occur to anyone, but as the technology developed, it became more and more feasible to think of using satellites within the states. The three television networks for example, were very unhappy with the charges AT&T was levying on them for their microwave connections for their networks. And it was clear that if they could use satellite communications, they could connect all of their stations together for a fraction of the cost for what AT&T was charging them.

Some of the communications carriers, like AT&T, RCA, Western Union, wanted to put up satellite systems for communications within the united states which would have competed with AT&T. Comsat argued that they'd compete with Intelsat, not that Intelsat was useful for communications within the U.S.. Comsat was arguing strongly that the 1962 Communications Act had given them a monopoly over all communications, but others said no, it just gave them the monopoly for international, and that issue was unresolved

Motorolla had developed a cellular phone technology and wanted permission to use certain frequencies for cellular telephone service. The FCC wasn't acting on that, AT&T was vehemently opposed that this would fragment the telephone business and result in poor service and no doubt cause measles and mumps among a large fraction of the population.

There were people who wanted to build microwave systems for private and shared use - the pipeline companies, the railroads, MCI wanted to build its system (MCI had in fact built a system between Chicago and St Louis and were trying to get the FCC to let them interconnect that microwave system to the phone network so that the microwave could be shared among corporate users), Sam Wyly was trying to get permission to build his digital microwave system for connecting computer communications centers; cable television was trying to grow - cable operators had figured out that they could use microwaves links to import television stations from outside markets and that would give them additional programming that they could then use to attract additional customers; the broadcast industry was vehemently opposed to that because it would fragment the local audience, potentially leading to a reduction in advertising revenues. Hollywood was vehemently opposed to it because they said that they hadn't sold their rights under the copyright statute for that purpose so that the importation of a distant signal and putting it on a cable system was a new public performance under the copyright laws which the cable operator didn't have a right to do. Some broadcasters like WGN in Chicago recognized that if their station was imported into a number of distant markets on cable that would greatly increase their viewership and they could sell their advertising for more, so it wasn't monolithic broadcast position.

There were a number of other cats and dogs of communications issues - the issue of how much of an interest in a television show a network could retain was a big issue because the Hollywood people were doing the financing and there was a question of who would get what part of the profits from a television series - and that became known under the rubric of financial interest in syndication rules - FinSyn - which was a hot issue between Hollywood and the networks. They were both trying to use the FCC to set rules for that. There was the prime time access rule - (Tom forgets what that was - thinks it was that networks can't program between 7-8 at night, so the local stations retained the right to program that themselves and get programming from other sources, which is why we have wheel of fortune, price is right, jeopardy, etc.) There were issues of children's programming - how many hours of time the networks had to devote to children's programming, what was a bona fide children's program? There were fairness doctrine issues, rights of politicians to get time. Some of these things had just been bubbling along. A lot of them had been bottled up because there was no leadership from the administration and Rosell Hyde wasn't providing any leadership at FCC.

Those were some of the communications issues that I immediately faced in Jan / Feb 1969. In addition to that we had questions like do we build a space station, do we build a space shuttle? What are the Russians going to do? Can we build more atomic energy nuclear power plants?

The two areas that interested me most and what I spent most of my time on were NASA and FCC in part because those were the two areas that had the biggest set of issues, biggest in terms of impact on the country - biggest political impact; in the case of NASA, the biggest budget impact - they were both pretty high profile issues. So, partly because they were interesting and partly because I had so many people knocking on my door - Tom has a calendar from the early days somewhere and it's just a who's who of telecommunications walking in my door telling me how things ought to be and why the other guy is screwed up.

One of the early pivotal moments was Rosell Hyde asked for a private meeting and came over to my office and said, you know, this domestic satellite issue has really had us wrapped in circles. We've had a really difficult time because we just don't know how to deal with it. We have all these powerful companies – ABC, NBC, CBS, AT&T – want to put up satellites and we've just had a really hard time figuring out how to do it. However, he said, I've come up with an idea that I think works. We don't think we ought to give it to Comsat because we have all these other companies that want to get involved, too. Here's the idea, we have 8 applicants as I recall - about half of them are communications carriers and the other half are users, television networks. So here's the idea - we create a monopoly corporation for domestic satellite operations and it's owned equally by the 8 current applicants - and they each own an equal share in the company and each have seat on board of directors. They decide what's going to be built and how the rates are going to be charged. So everyone's involved, everyone's an owner, and everybody's happy. But if for some reason they can't work things out themselves, then the FCC would cast the deciding vote on the Board of Directors. And I remember thinking to myself, as my father would say, Jesus H. Christ. This creates another monopoly. It's a monopoly that, by definition, the competing interests of the competing communications companies and the users – there's no way that those people will reach agreement on much of anything. So we've got a communications monopoly that is in effect largely run by the FCC through heaven knows what kind of mechanism. So the Congress will get involved, it's going to be politicized, and the likelihood of it doing much of anything is remote. And furthermore, if we're going to have competition, it was clear to me from the outset that we needed competition in the communications business – we needed competition between the networks and between AT&T. And I said, still thinking to myself, if we can't create a competitive regulatory environment in a brand new technology like satellites, then we'll never have competition.

So I said, thank you very much, Rosell, please don't do anything. I'll get back to you. So I had succeeded in putting anything on hold, but even though I was still wet behind the ears, I knew I had to have something to replace what he was suggesting. And I knew it ought to be a competitive regime. So I created a task force of people from various agencies, Justice, what was then the Office of Telecommunications and Management, Commerce, council of economic advisors (Chaired by Paul McCracken, who urged me on as did antitrust people in Justice), and the office of science & technology in addition to some outside consultants, in part people I thought would be useful and in part people I thought should be involved politically. And we set out to develop a policy for domestic communications satellites that would create from the get-go a competitive, relatively unregulated industry structure. And we did it, and we communicated that to the FCC. (By that time Rosell Hyde had been replaced as chairman by Dean Burch) And that was communicated in a letter to Dean Burch which became the first of many Dear Dean letters, suggesting to the FCC what the White House thought would be good policy directions for them to go in.

One of the other hot issues was public broadcasting. There was this Carnegie Commission Report that had been chaired by the President of MIT, my alma mater. I had gotten my Ph.D. from MIT in 1967 and two years later, I was in the White House meeting with the President of MIT explaining to him why we were not going to support his grand scheme for public television. The reason at the outset was that it goes back to my presumption that what we

needed to do in communications was get the government role reduced so that in television and telecom we needed to substitute competition for highly detailed regulation - not that we should completely eliminate regulation, but that the regulation in television and telecommunications had gotten too complex, too detailed, too politicized, so we needed to change that. So just as I had kind of closed my eyelids and rolled my eyes when Rosell came in with his suggestion for communications satellites, I had the same reaction when Mack Bundy and Jim Killian came in to talk about public television because what they were proposing was in essence a federally funded fourth television network. They thought this was wonderful that it would provide all kinds of high quality programming that would do wonders for children, schools, education, culture, etc. that would provide counterbalance to the crass commercialism of three television networks and give the country the type of programming it wasn't getting, but deserved. My view was that they were setting up a government-funded television network that would have the White House and congress constantly telling them what they should and shouldn't put on, manipulating the budget to reflect whatever political strains of the moment about what was good programming, what was bad programming and it would create a political nightmare. I also felt strongly that the idea of just adding one network to the monopoly of three networks, that four networks, particularly with one of them funded by the federal government, wasn't a big change from three networks in terms of allowing the country to reduce the monopoly power in television and to reduce the need for government regulation and that the only long term answer to the monopoly position of the three television networks was to get more channels into the home, and that the only way to get more channels into the home (you couldn't add more stations because there weren't any more frequencies to add more stations) so realistically the only way we had to get a lot of television channels into the home was through cable tv and to use satellites to bypass the AT&T microwave to get the programming out to the cable systems. So to me, creating a huge government funded network was a step in the wrong direction in terms of long term competition strategy and in terms of sound public policy in terms of how this would inevitably be politicized.

That takes us back to satellites being a key element both in getting competition into the telecommunications business, because I thought that if we could successfully get a competitive model for the new technology of satellites, we could use that policy to create a competitive model for these specialized common carriers like MCI and Datran and we could begin to carve out a largely unregulated sector of telecommunications services. Then, by using satellites to carry television programs like HBO to cable systems, which had the capacity to (at that time they could carry something like 15 - 30 channels) there was a possibility very quickly of having 15-30 television networks, and then in time maybe having 50 - 60 television networks, maybe 100. So satellites became very important to both of those visions: of replacing the monopoly with a range of new providers, new services that didn't need to be regulated as tightly and could innovate free of the kind of type of government regulation that we historically had on AT&T and the three television networks.

So that in short became over the course of 1969 the guiding framework for OTP.

That set of new policy directions became the guiding principles of OTP and for the remainder of the time I was at the White House and for the years I was at OTP, that was the concept we were pushing and the issues and battles we took on were guided by that basic

framework of replacing the monopoly structure with a more deregulated, more innovative structure.

The story of Rosell Hyde and the satellites was one of the pivotal incidents in OTP and what we did.

There are a couple of other stories that stand out. (I'll need to go back and revisit them to make sure they're right.) They're both about AT&T - the chief ATT lobbyist in town was Ed Crossland. Ed was a regulatory lawyer from North Carolina. He was smooth as glass. He had that smooth North Carolina way of talking - a gentleman's gentleman - bright as hell, sharp as hell. He was probably more influential in Washington communications policy things than any FCC commissioner. Knew how to work the Hill, knew how to work the FCC. When my role became clear, Ed cultivated me like I was his newest and most important girlfriend. He was all over me. Anyway, Ed was influential.

Ed called me one day at the office and wanted to talk to me. I told my secretary Eva to tell him that I'm in a meeting and will call him as soon as I get out. Eva comes back and says he really wants to talk to you now. I said, a little bit annoyed, Tell him I'll be through with this shortly and I will get back to him as soon as I get out of the meeting. I swear that 15 minutes later, my White House line rang, and I always answered that line - at that time it was a dedicated line to the White House, people in the White House just called each other directly on that, and the custom was that if someone called you and you were in your office they expected you to pick up, and if you called someone and they were in their office, they expected you to pick up - there was no switching. So I picked it up and it was Howard Baker, who was at that time the minority leader in the senate. He said, Tom, what's going on? I said, what do you mean Howard? He said, are you about to do something about AT&T? I said no, Howard, why do you ask? I'm down here in Nashville giving a speech and Joe Smith, whoever it was, who's the Chairman of the First National Bank of Tennessee came over and got me off the podium and said that it's urgent that I call you. I said, well, Howard, I don't know anything about it. And he said, well, Joe Smith is on the board of the Tennessee phone company, and he said he got call from AT&T headquarters saying that you're about to do something to AT&T. And if you are, then maybe we ought to talk about it. I said, Howard, I'm not about to do anything. And he said, well, okay, I'll tell him that. I said, thank you. Fifteen minutes, Ed Crossland, on the Hill to the Office of the Minority Leader, where is he, well, he's in Nashville giving a speech, who do we know in Nashville on the Board? Well, we have Joe Smith who's chairman of the First National Bank of Tennessee, get him over to wherever that speech is and get him to get Howard to call Tom and make sure that Tom doesn't do something. It just made me realize that if Ed could do that there, he could get to any congressman, any senator in any state of the union - there were phone companies in every state, and all the important people in those states were on the boards of the phone companies. It was a real lesson to me in the power of the political organization that those people had. So, I finished my meeting and I called Ed back and I said, high Ed, calling you back, and I never mentioned anything about it, but it really made me think.

The other story that is important: I was trying to accommodate things like Datran, MCI, and the competitive thing for satellites and cell phones and try to create a sector in telecom that

would be basically not heavily regulated, and would be competitive and would flourish apart from the strictures of the kind of regulation you had to put on the monopoly of AT&T. Through this time DOJ was trying to persuade me that we had to have an antitrust case to break up AT&T. They were never quite satisfied by the consent decree of the '50s. They wanted to break up AT&T by splitting off Bell Labs and Western Electric as the manufacturing arm with the idea that the equipment business could be competitive and the telephone company would be a monopoly. I thought that if they thought AT&T violated the antitrust laws, they could damn well file an antitrust case, but from a public policy point of view, I thought antitrust was a very sledgehammer approach to restructuring the industry and I didn't support it.

One day, which was probably early '74 (need to pin down exact date), my White House line rings again. This time I was in the office by myself and it was George Schultz, who was then Secretary of the Treasury. We were on a first-name basis but it wasn't every day that the Secretary of the Treasury called, and he called. He said, Hi, Tom. And I said, Hi George, blah blah blah. And he said, Tom are you about to do something about AT&T. I said, no, George. And he said, you're not going to do anything? And I said, well, George, we don't have anything scheduled. Nothing's planned immediately. AT&T figures into a lot of the things we're working on, but we don't have any immediate plans. And he said, well, you're not going to be doing anything in the next couple of weeks? And I said, no. Look, George, if that makes you comfortable, I'll just agree not to do anything with AT&T for the next two weeks. And George said, oh, that's great, that's just fine, if you could do that, thank you very much I appreciate it.. And I said, George, if you don't mind my asking, why do you care? He said, this is very confidential, but we're about to put out a major offering of U.S. treasury bonds and the interest rate we pay follows the AT&T rate - so if you were to do something that adversely impacted AT&T, it would drive AT&T bonds down, which would drive up the interest rate, and that would mean we'd have to pay a higher interest rate on the umptyum million dollars we're about to borrow, and that would cost the treasury a lot of money. And I said, it seems to me George that it ought to work the other way around, the treasury rate should drive AT&T's. George told me, It doesn't work that way. This year, (73 or 74) AT&T counted for a third of the new corporate debt in the U.S. so being so big, our interest rate follows their interest rate. So I said, don't worry about it, George, I won't do anything. And I remember hanging up the phone and I remember looking out the window and saying to myself something like, Jesus H. Christ, here you've got an industry - meaning telecommunications -- that's the fastest growing industry in the U.S., that's hugely capital intensive, and you've got one company that already accounts for a third of the total corporate borrowings in the US - this is just not sustainable, it just won't work.

So I, not immediately, I called Bruce Owen who has my chief economist and had been in favor of breaking up AT&T and had an alternate scheme. He persuaded me that if you were to break up AT&T you should do it the way it was finally done, by splitting off long distance from the local. So Bruce and I talked, and I called Don at the Department of Justice and said okay, I'm on board if one of your remedies is this horizontal divestiture rather than just splitting off manufacturing. If you agree to that, then, I'll support you on the policy front, and that was that.

[At this point I'm going to shift more into the historical mode than conceptual mode because '74 was a very eventful year

Having agreed that, we decided that the best thing would be for me to go on the public record putting the administration on the record that there was no policy impediment to a break up of AT&T. It was very important that I not get involved in encouraging Justice to file a suit. It was important that I and the White House not be involved in urging Justice to file a suit because the question of whether AT&T did or did not violate the antitrust laws was a legal question and I didn't have anything to say about that one way or the other and Justice couldn't be seen to be yielding to political pressure to bring a suit where it may not be warranted. The fact of the matter was that they wanted to do it, and I guess behind the scenes I was saying that I would support them. So the question came how do I support them? That was done through the device of hearings held in the Senate. Senator G___ (?) from Michigan, probably Chairman of the Judiciary Committee, was holding hearings on competition and it provided a natural forum for me to address competition in communications business. So I and my staff carefully prepared testimony.

There were two big issues. One was, from an overall telecommunications policy point of view, would the break up of AT&T damage the country's telecommunications system or its ability to compete in world markets? The second question was, would the break up of AT&T be detrimental to national security because communications are so important to our defense capability? Going back to the Eisenhower administration, the first issue had been kind of muddled and I don't think any administration took a clear line about whether the breakup of AT&T would be positive, negative, or zero in regards to domestic telecommunications policy. The national security issue was much more problematic and, indeed, there's pretty strong evidence that the Defense Department was responsible for dropping the first antitrust case - late 40s, early 50s, whenever it was dropped. So, what I did, was, through this testimony, I stated very clearly that competition was the preferred regulatory tool in the U.S. historically, and it could apply in telecommunications as well as any other industry, and that the monopoly in the telephone business was not a necessary structure in the nation's telecommunications industry.

I was careful not to say specifically whether the break up of AT&T would be a good or bad thing, but it was pretty clear what I was saying - I also said that, from the national security view, the AT&T monopoly wasn't necessary. That carried the weight of the White House, which trumped the Defense Department. The success of that testimony was driven home to me because after I finished testifying and I was walking out of the hearing room, Ed Crossland was in the back of the room. I went over there and said, hello Ed, and, he said, through gritted teeth, in his southern accent, Tom, that was the most irresponsible testimony I've ever heard in my entire life in this town or anywhere else that I have worked. And at that point his assistant pulled him along and said, come on, Ed, let's go, Ed. And I said, gee, Ed, I'm sorry you feel that way. And that was it. But I might as well have said, if Justice wants to break up AT&T, there's no national security or policy impediment to that, which is what I said without saying it.

Some weeks later, Henry Goldberg and I went over to Justice and met with Bill Saxby, who was then the attorney general and we talked about it and he said he wanted to hear it from me personal and be sure that what I said meant what he thought it meant. I said, yes, it means what you think it does, and if you file, I'll say very clearly that, while we don't take a position as to the legal merits of case, we see no impediment to the remedies that you're seeking, and I

emphasized that one of the remedies that we wanted was the horizontal divestiture and he agreed that they would include that as one of the remedies that they would seek.

And, so as we were leaving, we sort of shook hands on it and Bill said, And, neither one of us is going to tell the President about this, right? And I said, right. And some weeks later, Justice filed the antitrust case that ultimately led to the break up of AT&T along the lines that Bruce Owen had suggested. Neither Saxby or I told the President; it just happened. There are other stories told by other people who said that Reagan was strongly opposed to it and I think Bush 1, (I don't know the details of those stories) but it happened anyway.

Later in '74 the public broadcasting thing came to a head. I had successfully (not singlehandedly) developed then defended the administration's position that the Corporation for Public Broadcasting should not receive anywhere near the budgets that they wanted. That developed pretty quickly into a partisan issue with the Democrats thinking that it was great to have lots of money for CPB because they controlled the Congress. We thought for policy reasons it shouldn't, but also the rest of the White House thought it shouldn't for political reasons they thought that the public broadcasting crowd was critical of Nixon administration, and they were right, and they didn't want the budget to be very large. We had successfully created PBS as a local station counterweight to the Washington-based CPB and that created a sort of check and balance on how CPB spent its money. So the structure of CPB / PBS was pretty well established - we got a lot of heat on parts of the issue and one of the big issues remaining in '74 was so-called long-range financing. I mentioned earlier that I felt that if you have a federally funded network politicians would try to influence particular programs and that was borne out in a number of instances. One of the proposals developed to counterbalance that was the idea of long-term financing - that is to say that Congress would pass five year financing so that the congressmen and senators wouldn't be tempted year by year to cut a program or fire a producer, and in other words insulate them from the political process somewhat. The CPB crowd thought that even five years was wrong, and they wanted a tax kind of like what the BBC has. We kept trying to tell them that, in the U.S., you don't get public money without some kind of checks and balances, and in this case, what are the right checks and balances given the character of this undertaking.

So we had proposed five-year financing and that called the Democrats' bluff. They immediately said that five years was too long. [We need to check the details to see who suggested long-term financing, who suggested five years....]

I had worked out this deal with the public broadcasting crowd that if they would put in place and accept the PBS structure with the local stations having a significant say about how the money was spent and what programs were going to be carried on the network so that it wasn't all decided by CPB, then I would support long term financing - and I had cleared that deal through the budget bureau and through the White House. Having proposed five year funding and having the Democrats renege on that, the compromise was two-year funding. I accepted (or may even have proposed) that compromise. [We've got to check the details on this]

I recall that Congress passed a one-year budget extension, and I recommended that Nixon

veto it, and he did, the rationale being this is not long range financing. Of course it was interpreted in the press as a veto of any funding, but that's not what it was. But we made our point to the Democrats that were controlling the Hill at that point. And the compromise of two-year funding and the bill was passed providing for two year funding. And that was as I recall roughly in July of '74.

Nixon was in throes of Watergate at the moment, so I wrote memo to the President explaining how things had played out, what the compromise was, how it had been developed and accepted by all parties, and suggesting that he should sign the bill. My memo came back with a handwritten note by Al Hague (Chief of Staff) saying the President does not agree with your request. I went ballistic. I had worked on this damn public broadcasting thing for five years and had been the frontman for the administration on a battle that was very partisan, very bitter politically and I was accused of all kinds of ugly things – being anti-public television, being anti-children – and I thought that I had worked out the best deal I possibly could for everyone involved and Nixon knew – the whole damn White House knew – what I was doing, and the strategy we had been employing, and we'd gotten the PBS thing in place, it was a good compromise. It was working, it was the best that could possibly be done, and I really felt like I had been cut off and hung out to dry. My whole credibility was gone because I told everyone in public broadcasting, I told people on the Hill, I told all the press what we were doing and all of a sudden Nixon was saying no.

So Brian Lamb and Henry and I talked about it. I knew that appealing it back to the President would go absolutely nowhere because the President was essentially dysfunctional. I'd be interested to hear the tapes of the conversation of Haig discussing my memo with Nixon (in the Nixon library?) - my guess always was that he said, here's a memo from Whitehead saying we've got to support two-year funding, and Nixon says, those sons of bitches, they caused all my problems, No. Or Al Haig said, you don't really want to support this do you? I have no idea what the conversation was, but I knew it was not a considered discussion of what was going on....

So Brian Lamb said, well, this could all be on the front page of The New York Times tomorrow, and I said, that's a good idea, and so the next morning, there was a story on the front page of the New York Times. At the press conference that morning (Ron Ziegler was the press secretary), people were saying, what is this, Ron? It says here in the New York Times that the President doesn't support Whitehead and blah blah blah, and Ron lied through his teeth and said, no, no, no, the President never disapproved of Mr. Whitehead's memorandum, that's totally a false story, and the President supports what Mr. Whitehead's done, etc., etc. So, I fairly quickly arranged for some hearings on the Hill [can't remember if they were in the House or the Senate], and I went up and testified for the Administration supporting the two-year funding package, and the next day I submitted my resignation. I wrote the letter, but we didn't release it for some weeks. And I wrote it resigning effective some time in September. When it finally was released, I think it was released on a Friday (check dates), and if you open it on the back page, you'll see a little bitty headline saying "Whitehead resigns." And on the front page in huge letters says "Nixon resigns." And of course I had no idea Nixon was going to resign. And so I announced my resignation on Friday, and I was going to spend a year as a fellow at the Harvard Kennedy

Center, Margaret and I had rented our house, Margaret had driven to Kansas City, all of our bags and clothes had been shipped, we were going to spend two weeks camping in the Rockies, and I don't know why I was still there Monday, but Monday I stayed with my sister and for some reason, I had gotten rid of all my suits and ties and was planning to catch a plane Tuesday morning and about 10:00 at night I got a call from Phil Bukin, who was Gerald Ford's personal attorney, saying Tom I just got a call from Gerry and he's going to be President in less than 72 hours. And at that point, the message had gone from Haig to Ford, who called Bukin, who called me. And at that point, the people who knew were Nixon, Haig, Ford, presumably Mrs. Ford, Phil Bukin, probably Bunny Bukin, and me so I was number 6 or 7 to know that Nixon was resigning.

That was essentially the end of my telecom stuff b/c then I kicked into gear the transition team for Ford that I had been doing clandestinely, and so for the next two months, I was working in the Ford administration putting into play the various contingency plans that we'd developed for him earlier.

[We've missed a lot of the details in the OTP story, but that gets the major outline]

Proposal to do away with Fairness Doctrine

One of major themes in the development of our cable policy was tied to the problem with broadcasting - that was that the people who controlled the conduit for getting television into the home shouldn't have too much control over the content that goes into the conduit. That was the big problem with broadcasting from a public policy point of view - there's an economic argument to be made about advertising rates, but in my point of view the cost of advertising and price people pay for advertising is relatively small potatoes compared to the larger issue of who controls the content of what we view or hear on our tv sets. That's really a cultural and political issue that goes to the core of communications in a democracy. The potential was there in cable as well - a cable operator could control the content if he programmed all the channels himself. You had to have a separation of content and conduit. That was a very important feature of our policy towards both broadcasting and cable. And that separation has largely been achieved. Broadcasters control their content but they're only three of several hundred channels - they're the biggest three, but their influence has been steadily declining. And the cable operators have allocated their channels that they control on their conduit to provide a mix of programming, and I think that's worked pretty well. The cable proposal to the President proposes that cable be a common carrier - in retrospect I think that's a mistake. The basic idea of keeping the conduit owners from keeping the content in an unhealthy way is basically correct, but we didn't really have a model other than common carrier back in the 70s. The model that's evolved in cable, I think is quite sensible.

[Tom has a chart - Nielsen data - Tom knows someone there who can get us raw data. Chart shows that when cable & satellite began to take hold the network share began and is continuing to go down. The three of them together now have 40 percent. Slowly disappearing.]

That's a measure of the success of the undertaking - that premise isn't new, it's the founding fathers. When radio came out, people somehow worked themselves into the idea that

radio and television use the public airwaves and following that were all sorts of stupid half-assed ideas about what was good in radio and television. For some reason people didn't think the First Amendment worked the same way. Can you imagine a fairness doctrine in newspapers? It's stupid. The New York intellectuals didn't understand technology. They didn't understand there was an artificial reason why we only had three television networks. There was this presumption that there should only be three networks - based on the Constitution? Genesis? Science? Otherwise intelligent people in the '50s flowered this idea that it's a good idea to have the same source of information - that it's good to have common culture, and that if we fragment the audience, it's a bad thing.

We get things now like net neutrality that just sound like we're going back to the same battles.

III. Post-Office of Telecommunications Policy

After OTP, I for a year or so just dropped out of the telecom business - I spent a year as a fellow at both Harvard and MIT. I'd pretty much burned my bridges to the telecom industry. I think I had pissed off every segment of the industry, even those like cable that I was trying to help. I think the motto of this town is what have you done for me lately with an emphasis on lately. Not that I was looking for a job in any of those industries, so it didn't particularly bother me. Then I moved to LA, and got involved in helping a friend at Hughes think through some of his business problems in satellites and gave him some ideas, and that led to the classic, okay if you're so smart, then why don't you come do it, which I had never really contemplated or intended to do. But the opportunity that I had developed for them to exploit seemed like a very attractive one, so I spent five years at Hughes developing a satellite business and created the model for television satellite, which was a satellite that was 100% dedicated to cable tv - and that first cable satellite carried HBO, CNN, CSPAN, MTV and helped considerably the growth of cable networks because all cable ___ all around the country could suddenly get 24 hours of cable networks. At that point, I realized I enjoyed entrepreneuring and I never thought of myself in business, much less an entrepreneur, but the idea of creating a business and making it happen seemed very attractive. I came up with a couple other ideas after Galaxy - that was my picture in Fortune magazine. But Hughes was a very conservative aerospace company, and when I proposed my follow-on projects they said we'd love for you to stay here, but no more high-profile projects and further more no more high-profitability projects. I generated so much income on my first project that they had to pay taxes for the first time, and they didn't like that. Hughes back then was a very unusual company in large part b/c of the way Harold Hughes set it up. Margaret and I talked about it and I was forty-five at the time and hanging around for another twenty years so I could collect my retirement didn't seem like the thing to do, so I quit and took my ideas and went on my own. I had two really big ideas - one was a U.S. satellite network that would go roof top to roof top to provide data communications between corporations. Which in a way was a variant of what Sam Wyly proposed ten years before - it made much more sense for satellites. I came very close to making that work, but for a variety of reasons it didn't and indeed, it shouldn't have because fiber optics was just right around the corner, and fiber was a much better way of doing sort of thing than satellites. So in retrospect, we might have made some money, but it never happened.

The other idea was to provide satellite-to-home television in Europe. I came to that through a long chain of events in my working with the satellite and cable tv people in the U.S. here and the networking people like HBO. So off I went to Europe in '83 to develop this direct satellite to home broadcasting which would allow for the first time commercial television programming in large numbers of channels throughout Europe. At that time, most Europeans had access to two or three channels – the only television they could get was through transmitters in their own country and each country had their own government run / owned tv networks, typically two or three per country, and that was it. The reason governments could do that and control that was because in order to do broadcast television, you had to have a license the governments didn't give them, so by controlling the tv transmitters they controlled what their people were able to see on tv. A satellite signal could just completely blanket Europe and carry tens of channels that could be commercial or whatever. It did two things: it opened up the possibility of homes across Europe having access to lots of tv channels instead of just a couple and for commercial television networks to come into being in Europe, which they hadn't been able to do before. It seemed to me a splendid idea and I had been able to figure out the economics of some technologies that made that possible for the first time. I was successful in a way and not successful in a way. I was successful in that the idea I had was a good one and it worked, I was not successful in that I didn't adequately understand the way business in Europe was done and I did not understand the intense opposition to the idea that German and French people could see anything that their government didn't control. So those two governments united to kill our project if they could and, in the final analysis, they couldn't kill it, but what they did do was persuade the Luxemburg government where I had based this to nationalize it and make sure there were no Americans anywhere near it. In particular, that meant that I went and HBO went as the premier investor. So the Luxemburg government in effect nationalized the project, kicked out the Americans, took the business plan, took the technology, took the satellite contracts, took the registration of the orbit positions, they just took everything – and it became SES, which is now the biggest satellite company in the world.

SES stands for the name in French which is Societe Europeane de Satellite. But it's just called SES, which has hundreds of channels throughout Europe. The satellites are called Astra, which is the marketing name of the satellite - it's kind of like direct tv here in the U.S., not exactly the same business model as in the U.S. It's the public face of television in Europe. Astra was designed by me to be a monopoly. It's funny how during my misspent youth in the government trying to undermine monopoly, I then set out to create something that would be nearly a monopoly. My father used to tell me that the secret to success in business is find a need and fill it. I said no, Dad, I learned in the White House that the secret to success is to find a monopoly and keep it. We weren't looking for any governmental sanction of our monopoly, we just wanted to get in their first and get everyone watching us.

That kept me busy for a large chunk of the 80s then I was ceremoniously uninvited from running the project and settled for a small interest in the company. I continued to develop some entrepreneurial ideas. I developed the idea of doing a commercial satellite business in the Pacific and decided that instead of doing it by myself, I would team up with a company called Pan Am Sat. I took the idea to Renee Enselmo who had created Pan Am Sat and he and I together developed this pacific satellite idea. Then I went off into the consulting business.

So, the point of all that, is that I was not following very closely the telecom policy scene here in the U.S. - the antitrust suit and OTP percolated forward. OTP was eventually killed by Jimmy Carter, whose people told him that broadcasters didn't like it, which was partially true, and that getting rid of it would do a favor to the broadcasters and they would do a favor for him. So he broke it up - parts of it went to state, parts to commerce, parts back to the defense department. The antitrust suit dragged ahead. The FCC got more and more assertive about introducing competitive themes into telecommunications. Cable tv was growing. The cable satellite thing that I developed provided the critical mass of programming that the cable industry needed to grow and prosper as an industry.

From the late 70s after OTP and through the 80s it was mostly a drift in the OTP direction. The fairness doctrine was finally abolished during Reagan's presidency in the 80s. More and more of these specialized carriers got started. MCI was able to offer telephone service to compete with AT&T and then Justice and AT&T reached agreement to break up the company. It was broken up the way Bruce and I wanted it done, which was horizontal divestiture as opposed to vertical. The administration of it for reasons I don't know were put under a district judge in Washington by the name of Harold Green. He devoted the last several years of his life to being the czar of the telephone business. Justice and AT&T had to work out mechanisms for this divestiture which resulted in the company being split up into seven local companies and one long distance company, which was AT&T. Judge Green was a plus and a minus. A lot of the stories about the break up of AT&T start with the announcement of the consent decree which was in '92 or '93. They start there and from my point of view, which is perhaps too high a level, from that point on it was just details. Which is being much too dismissive of the people who struggled with a lot of important issues.

So finally, Judge Green died, the structure for the newly partially competitive telephone business, the perception was that the local telephone business was still a monopoly. That was a strong presumption when we recommended the horizontal divestiture that the local phone company was a monopoly. We had the same presumption with a local cable company, but we're finding out now that that's not the case, but this is now 30 years and a lot of technology later.

So there was a period when I was off doing other things and the trends that we put into play at OTP more or less percolated along and got adopted and then we get to the final acceptance that competition was not just something that could exist in part of the business but that competition was the correct model, the correct regime, for regulation of the telecom industry, and that came in the form of the telecom act of 1996, which was the first rewrite of 1934 Act. There had been amendments, but the 1996 Act was the first rewrite and the premise was not monopoly, it was competition.

September 11, 2006
Track 39

One of the big issues during OTP was, do we push for a rewrite of telecom act or do we make what we thought were the necessary changes in telecom policy incrementally? As I recall there were two schools of thought within OTP as to which we should do - I decided I didn't want

to get into a rewrite of the act and instead, as I said before, I thought we would try to make incremental changes in the way these things were done, finally ending up with AT&T antitrust case which was not particularly incremental. So we did not propose a rewrite of the Act. With the break up of AT&T which proved to be more time consuming and complex operationally than I think we thought, eventually the telecom business sort of settled down into a structure, but it was out of sync with the '34 Act and the competition paradigm was so widely accepted that a rewrite of the act made sense. And in fact there were some people that said we needed to have a rewrite, so we had a rewrite of it which took the form of the Telecom Act of 1996. A lot of things didn't change, some things did. I don't know very many of the details of what that act did [we need to research this to educate Tom about it].

The major thing that I focused on was the provision about competition with the RBOCs when Bell was broken up the local service was broken into seven companies with seven service areas, and Verizon was one of them. They've since been consolidated so that there are only three. Going back to OTP and the antitrust case, we really didn't anticipate competition in the local phone service business. We thought it would eventually come, but in the regulatory scheme we came up with it was going to stay a monopoly. But the technology kept improving and the economics of competition kept improving, particularly with fiber going to businesses, so the competition paradigm included local phone service. The question then was what kind of interface with the local companies was there? What were the rules about the local companies competing? Using their own facilities to compete? And what were the rules for their allowing access to their facilities for competitive carriers? For example a company might be able to compete with electronics technology but not run it's own phone wires? The idea was you should be able to lease the copper wires from the phone company since that was a monopoly thing and you could then have competition in services over the wires. Since then both the telco and competing company could make use of the wires. That led to a lot of rules by the FCC about how at what point in the local phone network should competitors be able to get access, what rates could the phone company charge them? And that got into, if the telephone company's plant were a modern plant in a competitive environment, what would the prices be for access to various parts of the telco network, which in my opinion got into the ridiculous how many angels could dance on the head of a pin, extremely complex FCC paradigm that was unworkable and was recognized as unworkable at some point, which led to demise of that scheme and I think a telecom act revision of the 1996 Act to undo some of the provisions. What was going on was, the FCC was saying in part because of the Act and in part because of the FCC economists - let's imagine a perfectly competitive world and figure out what the prices would be - of course that led to ridiculously hypothetical and complex scheme that was unworkable. As to what the current scheme is for the rules for the competition with the telcos, I'm not sure, and the question of the telcos has now shifted to the internet because the whole world has gone IP.

[The telcos are now major ISPs and the issue of net neutrality has come up as probably the most significant issue in regulation of the telcos - so the book will have to deal with all of that.]

[The Telecom Act of 1996, the bubble of fiber optics, which was roughly 2000, and the fixing of the 96 Act brings the book to an end in terms of telecom policy. The issue of net

neutrality I think will be in the epilogue, when we talk about what does all this history means in terms of the major issues and how they should be dealt with going forward.]

BOOK OUTLINE

tracks 32 - 35

September 6, 2006

Track 32

The book will be about the development of electronic communications and its growth over the 20th century: How did it come into being, how did it get where it is and some sort of epilogue to understand what's going on and what drives electronic communications so that people have some idea of how to think about new developments.

For example, at this conference I went to, the new media people really had no concept that what they were doing was riding atop an infrastructure that's highly competitive and allowed a tremendous amount of flexibility in developing new kinds of media, new kinds of services. They had some vague idea that the government regulated all that. We got off onto a discussion of net neutrality - it's complicated, but basically the phone companies, the cable companies that are providing internet services have to treat all users of the internet the same. You can't have Cox cable putting on an internet service and giving their own service favorable treatment compared to someone else, i.e., saying you can't use Vonage or Skype for telephone b/c we provide the telephone. The term for that has come to be net neutrality. Sounds like a good thing, but if you know something of the history of the regulation of television / telecom, you become very worried that that simple minded idea is the camel's nose under the tent for the government to regulate the content - what is a telephone service, who does what, what is a television service....if you're going to be neutral, the government has to tell you how to be neutral, and it just cascades. The people at this internet conference thought that, yeah, the government ought to regulate net neutrality without realizing that it has an adverse impact for their business.

Our audience is the journalists, hill staffers, FCC people, academics who think about and deal with communications policy related things. It's not the engineers, telecom policy researchers, economists, law school professors. It's a broader audience.

The book is about the development of telecommunications over the course of the 20th century and what that means for us today.

I'll generally use telecom in two ways - sometimes to mean internet and phone, but sometimes I'll also use it to include radio and TV.... In the book we'll have to develop consistent terminology.

I. Pre-Office of Telecommunications Policy

The basic premise of the book is that these technologies first evolved over the early part of the 20th century. During that development phase, there was a lot of competition, a lot of confusion and debate about what these technologies made possible, what they meant - that was a

period of intense innovation as well as confusion and there was a lot of excitement about it.

The telephone side of that: at the opening of the 20th century, the Bell patents had expired. There were just about as many Bell and non-Bell (independent) telephones. There was more innovation and growth in independents. In some ways they had better access to capital because they could sell in small local chunks whereas AT&T was set up at that time as a national entity that raised its capital for its entire industry in one place.

In any event, at the beginning of the 20th century, the telephone industry was very competitive. During the next 20 years, Bell substantially consolidated its monopoly position. And there's a discussion to be had about how that happened that centers principally on JP Morgan and Theodore Vail.

Radio as we know it didn't happen until 1920. There was a lot of innovation in wireless, a lot of excitement about wireless – first wireless telegraphy and then to some extent wireless voice – but wireless voice was thought of as wireless telephony. Everybody saw it as a way to provide telephone service without wires. For unexplained reasons no one really thought of radio as a broadcast medium. The thought of radio as a conduit for information and entertainment really just came out of the blue in 1920 and took off in a big, big way across the country starting in 1921.

[Tom digresses – I don't want to write the book as a history. It will follow a chronological path, but he doesn't want it to be a history. So what will it be? It'll be a series of stories about the people who made things happen. Most of the books write about this subject in the passive voice – it happened. Some focus on people, but they tend to talk about the inventors. When you get to corporations, they tend to be written about actively, but the executives are invisible. I want to write about the people who started things, who oversaw things from one industry state to the next.]

The telephone business in the first 20 years – is mostly about Theodore Vail, who became CEO of AT&T in 1937 and structured the Bell system. He was a systematizer. He believed in tight organization – every engineer had the same training materials and equipment everywhere across the country. Decisions to expand were done in light of consistency. Theodore Vail created the Bell system and made it a bureaucracy run by bureaucrats and enabled the company to deliver good service very well and become a very powerful entity. They basically provided better telephone service. They used that position to get the government to grant it preferential powers, which led to the consolidation of their monopoly. So the telephone business is for the first 20 years substantially T. Vail.

The radio story is more complex – there are a lot more actors. The first actor I think is the guy who I think really made radio – HP Davis at Westinghouse. Davis is the first story, along with the development of broadcasting and consumer electronics business.

The second story is the development of the networks. I think the primary actor there is Bill Paley. The characters are Owen Young at GE, Robert Sarnoff at RCA, and Bill Paley at CBS. The three stories here – there's radio, the development of the networks (not sure who the actors are there), and there's the development of advertising and the networks as we know it - that's Bill Paley - and that carries up to the early '30s, when the '34 Telecom Act which consolidates the structure of the radio broadcast business.

But we can't forget Herbert Hoover - he is one of the most important guys. provided the regulatory mechanism, which is in large part why there are three television networks.

Theodore Vail is the telephone story.

So the three characters are HP Davis, Herbert Hoover and Bill Pale. They're the radio broadcasting story.

The stories come together in the 20s when AT&T tried to use its economic and patent position to create a radio / telephone monopoly, but for reasons that need researching, they failed. That will be an original piece of research - the fact they tried, how they tried is in the books. But why they didn't succeed is not there. Tom thinks it's a story of politics, and it's probably part of the radio network story.

None of these stories are pure, but I'd like readers to go away remembering that it was this guy Davis who invented radio, there was Hoover who created the regulatory mechanism for it, which in large part explains why we have three television networks, and that Bill Pale really created the mold for advertisers in broadcasting.

[Tom wants his readers to say: Now I know why we have three networks; why we have advertising; why we have the regulatory structure we do; how this competitive business got monopolized.]

Those four stories and the interconnection between telephone and broadcasting through AT&T takes us up to the 1934 Telecom Act. The structure of the phone industry - a monopoly phone company, three networks, and the FCC framework of the '34 Act substantially did not change for 50 years. Which is not to say there wasn't a lot of change – was invented, television broadcasting came about after WWII, FM came about, AT&T built its microwave network. But if you look at it and say what were the big innovations over that 50 years, you'd say: the soap opera, television, color television, which isn't a hell of a lot of innovation. The story there is that these four organizations - three networks and one phone company - did a good job for a very long time at what they did and the regulatory structure was very stable and allowed them to do what they did. And it worked for a very long time.

[We need two or three stories from this period – one of these is the introduction of television, which is substantially Robert Sarnoff, the introduction of color tv, which was

substantially Robert Sarnoff. It's hard to find good stories from this period.]

There were two advertising agency executives who played an important role. One was Albert Lasker and the other was at BBDO – they are probably the same story b/c they worked for competing ad agencies. As advertising came in, People like Pale tried to create programming that was appealing to listeners so that they could sell advertising time. What the ad agencies did was to develop the idea of sponsorships of specific shows and specific kinds of shows. They would in essence pre-sell and be a broker between the advertiser and network. One case study I read was about Lasker who saw radio as a way to develop a brand. He took the brand Lucky Strike cigarettes - I can't tell you now the programs he used, but he specifically developed it for the female smoker. His logic was that we're only selling cigarettes to half the population. If we can get women to smoke, we can double our consumer base. Lucky Strike became the cigarette. The first ads for Lucky Strike were a female opera singer saying smoking makes her voice smoother and more appealing. It was the ability of the ad executives to package brands and programs - now we take it for granted, but then it was novel

[Also, Lew Wasserman and some other people that Tom has to think about in the 50s that shifted the production of television programs from networks to Hollywood.]

This covers creation, consolidation, and now we're up to competition, the late 60s - and introduction of competition

What was going on there was that this monopoly structure, with both the industry and regulation, the two fed on each other – the industry structure created and fed the regulatory model, but the regulatory structure defined what was possible in the industry. It became focused on (both in broadcasting but more so in phone) as the government making these monopoly organizations do things that people thought they ought to do. I.e., cost of long distance calls was going down but local calls not changing much. State regulators / politicians came to realize that if you charged more than the cost for LD, that would subsidize the lowering of price for LD service, so you'd lose money on local but you'd recover it on LD which let them say that they were keeping phone costs down for the people. So for political reasons it was appealing to keep cost of local service down. (Presumption was the only rich and businesses used LD and thus could bear higher prices.) So it was a Robin Hood scheme. Disparity between cost and price in LD grew and business users of LD realized that if they could put in their own microwave systems they could save money. Regulators were making the monopoly do things that were perceived to be socially beneficial. Introduction of VHF television another example; fairness doctrine; equal access to politicians; children's programming requirements. The structure presumed that the monopoly existed and the role of the regulators was to get monopolies to do something socially beneficial.

One of the things that allowed the telephone company in the phone business and cost of long distance was the development of technology that came out of World War II.

[We have to deal with World War I in early part of book. World War I and World War II were in different ways very important]

There were new technologies – the computer was invented, which created demand for different types of communication – digital communications so computers could talk to each other. The cost of a lot of communication services began to decline; price got out of kilter with cost.

Computer people wanted to build long distance digital communications systems but couldn't do it b/c of regulatory structure; there were people who wanted to build private long distance phone lines; the RR and gas pipe line companies wanted to do that private microwaves, but the regulatory structure that had evolved from this consolidation gave all the microwave frequencies to AT&T.

So over the 50s and 60s, there was increasing demand for using new technologies that were available, but weren't usable b/c of regulatory impediments.

So the idea of competition shifted from a theoretical idea over the 50s and 60s so that it wasn't a game for kooks anymore there was a real underlying potential for competing with the Bell system and to some extent with the networks. Motorola was developing cellular - they had a strong position in two-way radios for taxicabs and military use and they came up with the idea of cellular telephones, which was a direct threat to AT&T.

Cable television began to use the new microwave technologies to import distance signals so if you lived in Richmond your cable station could bring a D.C. station to Richmond and that could be used to sell more cable subscribers. Broadcasters didn't like that - there are only three stations that carry the networks there and you don't want a cable guy bringing in additional options. Siphons off audience which means you can charge your advertisers as much.

These became real competitive alternatives to the monopoly structure:

LD
digital
cellular
cable

There were real customers, real entrepreneurs, real equipment manufacturers. They introduced these new things that were not only a direct threat to the monopoly industry structure but a direct threat to the monopoly regulatory structure.

And at that point OTP enters the scene. You can't tell the OTP story well unless you have the framework behind it.

Questions from Jason's interview of Tom, Brian, and Henry

- (1) Can we track down the OTP files that went to NTIA, of which Henry Geller (who was he?) apparently mostly publicized?

According to the head of the international program of NTIA, NTIA doesn't have any files from 1970s and doesn't have an archiving process apart from what they're required to maintain by law. She said all the OTP files would be in the Presidential archives since OTP was part of the administration, and thus would be at the National Archives.

The interview with Brian and Henry suggests that Henry Geller publicized some of this material, but I couldn't find any mention of that on the internet. Geller didn't become administrator of NTIA until 1978 – if he publicized any NTIA material, perhaps it was from some time after he became administrator?

<http://www.ntia.doc.gov/ntiahome/press/pressindex.htm>
202-482-1890

Henry Geller:

<http://www.museum.tv/archives/etv/G/htmlG/gellerhenry/gellerhenry.htm>

- (2) Does the Johnson Library have oral histories about the Rostow Report?

Rostow participated as an interviewee for the Johnson Library's oral history project, but since the transcript is not available online, they are sending me a copy of it. One of the librarians is also sending me a copy of their holdings that relate to communications policy.

- (3) How old was Rosel Hyde when he met with Tom re domestic satellites?

Rosel was born in 1900 and was probably 69 when he met with Tom re: satellites, presuming that Tom met with Hyde during Hyde's last year as FCC Chairman, 1969.

<http://www.variety.com/article/VR102468.html?categoryid=25&cs=1>

- (4) When did Dean Burch become Chairman of the FCC?

Oct 31, 1969

<http://www.fcc.gov/commissioners/commish-list.html>

- (5) When was Dean Burch Chair of the RNC?

1964-65

(6) When was NPACT created?

According to the University of Maryland, the National Public Affairs Center for Television was set up in 1972 to handle coverage of national public affairs, particularly with *Washington Week in Review*.

<http://www.lib.umd.edu/NPBA/subinfo/npact.html>

(7) Was OTP set up by executive order or legislation?

According to the National Archives, OTP was set up by Executive Order 11556, September 4, 1970, pursuant to Reorganization Plan No. 1 of 1970, effective April 20, 1970, to provide overall supervision of national communications matters, including development of legislation, frequency allocations for federal agencies, and mobilization planning in the area of telecommunications.

<http://www.archives.gov/research/guide-fed-records/groups/417.html>

(8) Can we get Bill Niskanen's bio?

Yes. A media rep from CATO said that he will ask Bill if we can have a copy of his full CV, which can show us what Bill was doing when Tom considered him for the position of OTP Director. Meanwhile, the following is from CATO:

William A. Niskanen has been chairman of the Cato Institute since 1985, following service as a member and acting chairman of President Reagan's Council of Economic Advisers. Niskanen has served as director of economics at the Ford Motor Company, professor of economics at the University of California at Berkeley and Los Angeles, assistant director of the federal Office of Management and Budget, a defense analyst at the Rand Corporation, the director of special studies in the Office of the Secretary of Defense, and the director of the Program Analysis division at the Institute of Defense Analysis. He has written on many public policy issues including corporate governance, defense, federal budget policy, regulation, Social Security, taxes, and trade. Niskanen's 1971 book *Bureaucracy and Representative Government* is considered a classic. His most recent book is *After Enron: the Lessons for Public Policy*. Niskanen holds a B.A. from Harvard and a Ph.D. in economics from the University of Chicago. The University of Chicago recently honored him with a lifetime professional service award.

<http://www.cato.org/people/niskanen.html>

Questions remaining:

(9) Can we get Eva's papers?

- (10) Can Tom call Judy Morton (who was she?) to locate her papers?
- (11) Do Tom's files indicate how it came to be decided that OTP should be established?
- (12) Who was pushing the Rostow Report?