

Seminar Presentation:
"Implementing Computer
III in a Post-Divestiture
Environment"

by Alan Pearce

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SEMINAR PRESENTATION

"IMPLEMENTING COMPUTER III
IN A POST-DIVESTITURE ENVIRONMENT"

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Edited Remarks of Speakers

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Remarks of Alan Pearce

President

Information Age Economics, Inc.

I appreciate the kind introduction, saying I am never dull. I may break that rule tonight because there is nothing more esoteric and dull than Computer__II and Computer__III. One of the challenges this evening will be to make them a little bit interesting.

I went to the Federal Communications Commission (FCC) in 1970 with the idea that a separate subsidiary would be a good idea, in order to allow AT&T and other regulated carriers to compete in the emerging information age services area. But the concept of the separate subsidiary is about to die -- if not in 1986, then certainly in 1987.

By way of background, please focus on the bottom of that slide (see next page). First of all, the Computer__II policy was enunciated in the spring of 1980, and it was implemented on January 1, 1983, exactly twelve months before the modified final judgment was implemented in the AT&T case. So Computer__II policy began twelve

months before the divestiture of AT&T. There are only three elements to Computer__II. A lot of people think it's difficult to comprehend, but it's actually quite easy to understand.

The first element has to do with transmission services, which are divided into two types: basic services and enhanced services. The second element concerns customer premises equipment (CPE). And CPE is again divided into two types: new CPE (which was defined as any CPE installed after January 1, 1983) and embedded CPE (which included old equipment already in the rate base before December 31, 1982). The third element of Computer__II concerned separate subsidiaries. This element was taken from Computer__I which was promulgated in 1971. And separate subsidiaries under Computer__II were applied to the Bell Operating Companies (BOCs) and to AT&T - not to any other business entities in the United States.

The rationale for that discriminatory treatment against the BOCs and AT&T was that they had behaved in naughty ways throughout the 1960's and 1970's. The FCC had concluded through a series of

inquiries that AT&T and the BOCs were likely to commit all kinds of illegal, anti-competitive activities in order to control an emerging and possibly competitive marketplace.

To go back to the first element, basic services were and are regulated, and enhanced services unregulated. One of the reasons why the FCC differentiated between basic and enhanced was to draw a bright line between what would and would not be regulated. One of the topics tonight is whether a bright line was drawn. And the answer is that it wasn't. When you hear the Commission's definition of enhanced telecommunications services, you will realize that it did not draw a bright line.

In order to be enhanced and therefore deregulated, telecommunications services must meet one or more of three criteria: 1) they must change the format, the content, the code, and the protocol of the message; 2) there must be subscriber interaction with stored information; and 3) the content must be restructured. The Bell Operating Companies and AT&T immediately claimed that this definition did not make sense, because as long as you put a piece of

information in one end of a pipeline, regardless of what happens to it in the pipeline, if it comes out on the other end of the pipeline the same way it really is a basic telecommunications service. So the controversy over basic versus enhanced service -- the so-called bright line -- never really existed.

CPE policy is not being revisited. The CPE policy is as follows: all new CPE (again, anything sold after January 1, 1983) is to be deregulated. It cannot be part of a telephone company's rate base. This is because AT&T, the BOCs, and Western Electric had been found responsible by the Commission - long before the AT&T antitrust case - for all kinds of illegal activities. The most outrageous conduct was that the Bell Operating Companies ordered literally millions of units of CPE and put it in the rate base, regardless of the marketplace demand for it. The embedded CPE is to be phased out of the rate base over a five year period for the BOCs and a longer period for the independent telephone companies.

The third aspect of Computer II, separate subsidiaries, provides that if the Bell Operating Companies or AT&T offer deregulated CPE

enhanced telecommunications services, they may do so only via separate subsidiaries. And that also was an enormously controversial policy aspect. The two most controversial policy aspects of Computer II were the separate subsidiary requirements - clearly discriminatory against AT&T and the BOCs - and then the so-called bright line.

Computer II has been in trouble from the start. There have been a number of waivers as a result of Computer II policies. The most important waiver came on September 18, 1985, when the FCC abolished the separate subsidiary concept for CPE, but not for enhanced services. That will come later. The Commission decided to allow AT&T to abolish its separate CPE subsidiary, thus saving it more than \$1 billion annually. One might wonder how they are going to do that except by firing lots of people. But in promoting this policy, the FCC gave us a hint as to the future direction of policy on Computer III. As you see from the slide, there are four major restrictions. (See next page.)

The Computer III restrictions boil down to using accounting and auditing procedures instead of separate subsidiaries. As an

indicator of that, the accounting and audit division of the FCC's Common Carrier Bureau has increased its personnel in the last three years from 26 professionals in two locations - Washington, D.C., and New York City, to more than 80 accountants and auditors - and, I'm happy to say, only one lawyer. And this gives us an indication of the FCC's future policy directions. It's kind of a lawyer's unemployment act, and an accountants and auditors employment act.

Computer_III was launched in the summer of 1985, and we'll be lucky if it's resolved in the third or fourth quarter of 1986. If it is resolved in 1986, we'll be lucky if it's implemented by January 1, 1987, which, generally speaking, is the date that the Commission is aiming for. The current Commission is in a period of change, however, because there are likely to be three new Commissioners out of five next year, which could change the FCC's policy thrust.

Generally speaking, Computer_III has two parts. One very broad proposal would change the course of regulatory policy quite radically. There are really radical proposals to change regulatory

policy away from the basic/enhanced services dichotomy. Basic services will be very rigidly regulated by the FCC, and enhanced services not quite so much or not at all, if being offered by entities other than AT&T or the Bell Operating Companies. The new emphasis focuses on whether a segment of the telecommunications information industry is subject to "effective competition". A sub-question is whether a particular service is subject to effective competition. If a service or an industry segment is competitive, then there's no regulation. But if it isn't competitive, it is subject to a very confusing regulatory framework.

The second aspect of Computer_III attempts to tackle specific problems with Computer_II, perhaps on an ad hoc basis. That is unclear, because AT&T and the Bell Operating Companies want these specific problems tackled quickly, and their competitors want them to be tackled in this broad-ranging inquiry. In other words, they have a vested interest in procrastination. The second aspect of Computer_III attempts to tackle specific problems that have cropped up in the past five years under Computer_II. But a major flaw of Computer_III

is that it fails to anticipate (as most regulatory policy does) the development of more complex switches, interfaces, protocol conversions, and a whole plethora of software that can be housed in central office equipment and allow the public switched telephone network to perform a lot of services that it couldn't in the 1970's. In order to adopt Computer_II in the spring of 1980, the FCC was collecting data on a 1970's industry. And the industry obviously has developed very rapidly, as a result not only of new technological developments, but also of the divestiture. So, technological developments and the divestiture have enabled common carriers to include a great deal of intelligence in the network so that users can communicate more efficiently.

There are four major problems with Computer_III. First, it rests upon a determination of "effective competition". What is effective competition? And which services are effectively competitive? There are many different views on this issue, and generally they range from "everything is competitive" to "nothing is competitive", depending upon your policy perspective. This explains

why economists and lawyers make tons of money out of Computer_III.

In its Notice, the FCC did not give any guidance as to defining "effective competition". That is up to us.

Second, part of the Computer_III Notice depends on a fairly intimate understanding of network processing and protocol conventions. Again, this is one of the esoteric aspects of Computer II and III. It demands an ability to distinguish those network processing and protocol conversions, and to distinguish them from data processing that can be included in software in a telephone company's central office. This is not an easy distinction, and a future possible regulatory distinction under Computer_III may focus upon different kinds of software. What we may be moving toward is regulation of software, as opposed to regulation of equipment. I see that as a danger, and I don't think this situation is any better than the current situation under Computer_II.

Third, the FCC's Notice depends on an understanding of "bottleneck facilities". A bottleneck is in the eye of the beholder. If you have a bottleneck, you say it isn't a bottleneck. If you

don't and you need access to a bottleneck facility -- usually a local telco's facilities -- you say that it is a bottleneck. So the local telcos say there's no such thing as a local bottleneck. Related to the bottleneck issue is the controversy surrounding comparably efficient interconnection or co-location, which relates to whether or not the BOC's competitors can locate their equipment and software close to, or actually in, the BOC's central offices. Clearly this is tied to the equal access policy embodied in the MEJ.

Fourth, future enforcement of Computer II and III is going to be left to the accountants and the auditors -- not the lawyers. I'm sorry to bring that news to New York, one of the most lawyered cities in the country, but that is the policy trend. This explains why the big eight accounting firms are all developing large telecommunications groups.

I have four predicted outcomes to Computer III. First, unfortunately, the separate subsidiaries will be abolished. Since AT&T has won the abolition of the separate subsidiary for CPE, NYNEX may need to be given the same break. Americans hold two things

dear to us: we don't discriminate, and we don't censor. And at the moment, the Bell Operating Companies are being discriminated against.

Second, the policy shift quite clearly is moving from customer control over service choices. The policy trend that many of us at the FCC tried to encourage in the 1970's, stemming from the 1960's, was to move the choices to the user. Things are too sophisticated today. The central offices and the network are too sophisticated to let the customer decide. That has perhaps Orwellian implications, but it is true. The customer does not know what the hell he or she wants today, or even what a central office can provide. So the policy shift is from the end-user back to the central office or network.

Third, and related to the second factor, because of problems with ISDN and Computer_III, the policy trend, is again getting the transmission network to be all that it can be in the name of efficiency. The policy focus today is on efficiency, not competition. As a quick example of that, when New Jersey Bell filed for a waiver of Computer_II on asynchronous X-25 protocol conversion,

it claimed that it would be inefficient to build an enhanced telecommunications network over the basic network, therefore making it better for one network to do both. The FCC granted a waiver in the interests of efficiency, and democratizing the information age.

Fourth, the new regulatory framework will depend in the future on accountants and auditors, not lawyers. We will have hordes of accountants and auditors looking at our books. A friend at the FCC recently told me: "Alan, Congress is giving us more money for professionals, but no money for travel. I have two offices, one in Washington, D.C. and one in New York City. Who's going to get audited?" So if you work for Bell Atlantic or NYNEX, you should send tax-deductible contributions to the travel fund of the accounting and audits division, because they'd much rather go to San Francisco. On that pragmatic note, I leave the problems with you.

Remarks of Joel Gross

Vice President-Research

Dean Witter Reynolds

My role is to review what happens in Washington and in many other environments, and try to figure out what that means to the regional telephone companies and the independent telco's, as well as to assess what impact that has on those companies in terms of stock prices. Let me break my comments into two parts.

Let me talk a little bit about the Customer Premise Equipment (CPE) market and then about the network market, because the impacts will be felt in both places. The separate subsidiaries are going to disappear and the regionals will be able to market and sell CPE along with dial tone more effectively than through a separate, government imposed organization. All those unnecessary handoffs, unnecessary staffs and overheads will favor the regionals as more effective marketers.

The problem today is that AT&T Communications markets half the product line and AT&T Information Systems the other half - the CPE, PBX's and computers. If you can go to a customer and

give them the whole story like AT&T used to four or five years ago. You'll obviously be much more effective marketers.

What does that mean? I don't know about the \$1 billion savings some observers predict. You may see that number kicked around, but clearly there will be savings to AT&T and the regionals. Their market share should improve, because of these organizational changes and because of improved marketing skills and products. The losers will be the smaller interconnect people, the independent marketers of hardware. The interconnect business has fallen on hard times, and things will get worse and worse. Eventually you'll see a lot of those guys fall by the boards, or find other niches to play in. But that's the price of a competitive market, and a mouse has to be careful when elephants dance. Clearly, the regionals, at \$10-13 billion dollars a company in revenues, are not small entities. So it's obviously a good sign for regionals and AT&T, and not such a good sign for the interconnect market.

On the network service side of the Industry, the Integrated Services Digital Network (ISDN) is on the horizon. In my mind, ISDN in the purest sense is nothing more than a set of standards and protocols. But it's also a great marketing tool -- and a definition that kind of implies a rash of new, enhanced services coming out of the networks because of the new technologies and processing abilities. We will see things like answering services, network voice forwarding, protocol conversions, electronic mail, wakeup services, and all those nice interactive

services that will hopefully one day be available to the residential market. To some degree, the politicians are trying to force this through, to bring the benefits of divestiture and competition to the residential market.

So you will see all those new services. Again, what does that mean? In terms of the regionals, there are very nice implications, because the software investment is relatively small. They're not going to have to make massive investments -- but rather make some changes in the software in the Class 5 machines for the regionals, or the Class 4 machines for AT&T. Software is always a difficult thing to implement, and always has more problems than people expect. It's not a big capital investment, the way it is to put tons and tons of dollars in new switches and transmission. It's really just an enhancement of those things. So the revenue potential is very large compared to a relatively small investment - i.e. it's highly profitable. Once the regionals get into these businesses on the local side and AT&T on the longhaul side, then it will open up some nice new opportunities and profits, and, of course, make their stocks look more attractive.

Again, there are always winners and losers. The losers may be the manufacturers which provide adjunct boxes to do things like voice-forward, and the vendors which provide voice or electronic mail. Again, when these large, well-capitalized companies come into a market and are willing to take a loss for a long time to get market share, they're going to put a lot of

pressure on the smaller operators. Again, I think there's going to be a pinch in that particular market.

Co-location is also a kind of interesting issue. It works to the advantage of the regionals and AT&T, and against the other vendors. Even though there theoretically will be a process for other vendors to get their equipment co-located with a telco central office and to have the same access as the telephone company, that's always a very difficult way to operate. I don't think AT&T or any regionals will do anything to intentionally stop the competition. But there will be enough administrative issues there to make it difficult, even with the best intentions, for the other vendors to come into the office.

Overall, Computer III is positive for regionals and AT&T. It will save them money, open up new revenue opportunities for them, and cause other lines of business in the country, such as the CPE market, to get much tighter. Is that good or bad for the American public? I'm not here to make those kinds of judgment calls, but there will be competition. It won't be 2,000 vendors competing with each other. Instead, it will be eight vendors, AT&T and the seven regionals, in particular markets, a handful of OCC's. As markets mature the stronger will survive, and that's the ballgame here.

ROBERT PERRY

Assistant Professor
New York Law School

My comments will be fairly brief, because frankly I do a lot of work in other areas these days. My background was initially in the common carrier area, and I still view it from a distance. So perhaps I can offer some observations.

First, with regard to the Computer III, there is a question of effective competition. I was very interested to hear what Alan said about that, because I currently represent the ACLU in a lawsuit in the D.C Circuit challenging the FCC's decision to deregulate basic cable service rates on the ground that cable systems are subject to "effective competition". The very same issue that's coming up in Computer III has come up in connection with cable rate deregulation. And I suspect that the Commission will proceed in much the same way in Computer III as in the cable area.

In the cable proceeding, the Commission received a filing from the Justice Department's Antitrust Division, suggesting that cable operators had substantial market power in their respective communities, because they each controlled the local bottleneck broadband facilities and could provide a bundle of services that was unavailable from other video delivery systems. The Department of Justice used antitrust market analysis and microeconomic theory. The Commission summarily dismissed the Justice Department's filing, however, and proceeded to deregulate

the rates of over 90% of the cable systems in the country. That's probably what the Commission is going to do here. That may be a bit cynical, but that's the way the Commission is moving. I think they'll probably find that many services and market segments are subject to effective competition. Whether that will be upheld by the courts is up in the air.

The elimination of the separate subsidiary requirements is really unfortunate. I don't believe that an auditing function can replace a separations requirement. Over a number of years, the FCC has attempted to audit AT&T, back when it was formally regulating AT&T around 1960. Prior to 1960, there was a "continuing surveillance" program and relatively informal rate regulation of AT&T. But after 1960 the Commission tried unsuccessfully to develop various cost allocation procedures and finally gave up a few years ago. I see the same kind of cost allocation problems arising after elimination of the separate subsidiary requirement. While it may be better to have less lawyers and more accountants trying to do this kind of regulation, I'm not so sure that even 80 accountants won't be outmanned by AT&T, and finally have to throw in the towel. So I'm not sure that the auditing function will be an adequate substitute for a separate subsidiary. I'm concerned because the enhanced service market has a chance of developing into a highly competitive market. But without the separate subsidiary requirement, there will be cross-subsidy problems with rates, with costs flowing to the monopoly rate payers - - or what's left

of the monopoly rate payers - - as well as with underpricing and perhaps even predatory pricing in the various enhanced services markets. In the long run, we may end up not with a perfectly competitive environment, but rather with perhaps two or three companies. Perhaps they'll have an oligopoly, but I'm not sure that this is the preferable solution.

My only other comment focuses on the quick shift from Computer II to Computer III. I just wonder whether that had so much to do with technological changes or with the fact that Computer II was adopted under an Administration that quickly went out of office. Computer II was adopted in the spring of 1980, and the reconsideration order came down in October of 1980. But a subsequent administration had the chore of implementing Computer III. And although the Carter Administration was very much interested in deregulation, the Reagan Administration is even more interested and has accelerated the pace of deregulation. FCC Chairman Fowler's favorite buzzword is "unregulation," not deregulation. I just wonder whether the present Administration really tried hard enough to implement Computer II, or whether they let things slide and thereby created an excuse for starting Computer III.