

Robert C. Schoonmaker, GVNW Inc./Management

I think that in regards to depreciation rates, I think it's fairly — in my mind it's fairly clear that the rates in the Hatfield Model are too low, that they reflect a historical regulatory basis. I think Ben has done a better job of reflecting the economics, and they're certainly, on individual accounts, are areas of question. And perhaps on the cable side, the question of whether it's 9 years or 15 years or 12 or somewhere in between is one that can be debated and ultimately the Commission will have to made a judgment on it. I think it's very clear it should not be the historical lives that have been used in the past, and the 20 years that Hatfield has in their model. In evaluating those things, I think the Commission also needs to keep aware regulatory requirements that are being imposed by competition, such as number portability which, at least in smaller switches, may have a significant impact on switch replacements and may cause shorter lives than there have been in the past.

Emily Hoffnar, FCC

Thank you. Larry?

Lawrence P. Cole, GTE Laboratories, Inc.

I'm going to wait until we get to Questions 3 and 4 to say something about the depreciation lives used in the models and what we think they ought to be as compared with what's there.

With respect to what we've been talking about, if Ben is right that the states have been doing a pretty good job of — or the commissions in general have been doing a pretty good job of estimating or choosing the right cost of capital, then even in a rate of return regulatory context, there's no incentive for an AJ effect. And, maybe that's why years ago when the studies were done, not much was found, so this evidence of gold-plating, at this point is rhetoric.

Emily Hoffnar, FCC

Thank you. Susan?

Susan Baldwin, Economics and Technology, Inc.

Echoing in part the comments of Labros, as the Joint Board selects the appropriate capital structure to be used in whichever the cost proxy models it endorses, it should not be focusing on the risks of getting into advanced services, into broad band services and to overseas ventures, but it should be focusing on the minimal risk associated with providing basic local exchange service, either through wholesale or through retail, adding up to virtually 100% of the market share.

Emily Hoffnar, FCC

Any last words?

Male Speaker

Can we have some from this side?

Lawrence P. Cole, GTE Laboratories, Inc.

I just would like to point out with respect to what Susan's been saying, I don't think in any of the other competitive efficient entrants would be subject to any restrictions on how they built a multi-purpose network. If a cable TV company chooses to enter on a facilities basis into local telephone service, they're not going to be required to optimize their network to produce the lowest cost for local basic residential service. None of the other entrants, only the LEC would seem to have that obligation. I think it's an empirical question, I don't think any of us know, really, what the answers are in a going-forward basis, whether the cost of a network that's integrated for other things, the cost of producing basic service out of a network that is optimized to produce other things is going to be more or less than one that's optimized for producing just local service. I think there's an assumption that's been made that that's the case.

Emily Hoffnar, FCC

Anyone else? Susan?

Susan Baldwin, Economics and Technology, Inc.

As a point of clarification in the comments that I've been making, I'm not in any way suggesting that ILECs should be constrained in any fashion as to how they actually build out their network. What I'm trying to keep us coming back to is we're talking about public monies here. We're talking about huge sums of money flowing to incumbent carriers. And it's inappropriate for that flow of money to be associated with competitive ventures that ILECs certainly have the opportunity to construct their networks for, but that should not be financed by universal service fund.

James Vander Weide, Financial Strategy Associates

I find it interesting that we talk about the low risk, non-competitive local exchange service when the National Telecommunications Act and the FCC's goal is to introduce competition in the local exchange service. Now that goal is being thwarted by the models that we're introducing. The models are producing costs that are less than the actual costs of building such a new network. And so what we're finding is that the very competitors who were in the field of being facilities-based providers are pulling back, that they're finding that it's less risky and less costly to just lease service from the local exchange company because they can get it at model prices that are less than the cost of what it would cost them to build the network. So for that reason, if we continue to underprice what

it actually costs to build the local network, we will, indeed, have a self-fulfilling prophecy, we will never have competition in the local exchange.

Emily Hoffnar, FCC

Rich?

Richard Clarke, AT&T

Okay, I'm just not completely following the logic there. First, it's not clear to me that all of the cable companies have pulled back from deploying their own networks and instead have decided that no, they're going to buy unbundled elements, or something like that, or enter as resellers. I've not heard that as being their new business plan. That I think the more plausible scenario is to the extent you're seeing pullbacks from this, it is again because there are very creative prices out there that the LECs are proposing for non-recurring costs that people have to pay to enter the market, and other things. It is just a very difficult task, and high prices for the LEC elements is a dissuader to entry, it's not a carrot, because of the various large natural difficulties of entering the market.

Emily Hoffnar, FCC

Thank you. Anyone else?

Labros Pilalis, Pennsylvania Public Utility Commission

Just a couple of quick points in response to Dr. Vander Weide. The Telecommunications Act also is setting up this universal service mechanism so that potential competitive entrants will be able to benefit from universal service type mechanism support payments and they will receive the incentives to enter certain markets which otherwise would not have entered or would not enter including the rural markets. An additional point that I want to make is that in the U.K. we have seen the example of cable companies that have entered the telephony business and are in direct price competition with British Telecom. And, actually, they offered voice telephony services as a mere add-on to the other services that they have.

Emily Hoffnar, FCC

I believe we're finished. Question 3: Please critique the current models' characterization of economic depreciation. Justify or criticize the default choices made in each model. What level of disaggregation of plant is necessary to accurately model forward-looking depreciation expense? How should economic depreciation rates vary by plant, category, density, business/residential status, the conversion to facilities, capable of offering advanced services above and beyond the universal service. Are the models before us capable of capturing such variations? Jim.

James Vander Weide, Financial Strategy Associates

Yes, first, all of the models, as I understand it, model depreciation based on the plant category rather than the market. Marketing categories would include density and business and residential status, and I don't believe any of the models market a model in their default values, or even in the model structure itself, a depreciation based on those characteristics. They do it on plant categories. The biggest critique of the models' characterization of economic depreciation is that both the Hatfield Model, and, well, I'm not familiar with the Johnson Model, but the Hatfield Model, as I understand it, uses regulatory approved depreciation rates as a surrogate for economic depreciation, and especially as a surrogate for the economic depreciation that an efficient new entrant would employ when they entered the market. I just don't find that credible whatsoever. An efficient new entrant would have to use competitive market depreciation rates. Competitors in the telecommunications industry, the cable companies and the interexchange companies, use depreciation lives that are much less than the regulatory approved depreciation lives, and those would be the lives that an efficient new entrant would employ as well.

Emily Hoffnar, FCC

Thank you. Ben.

Ben Johnson, Ben Johnson Associates

The models — in terms of the model structure problem, all the models are disaggregating depreciation to varying degrees in accordance with the type of plant. And I think we've got a reasonable amount of disaggregation in that regard. I doubt much further disaggregation would be useful. As to these other dimensions, the market dimension, one way you could do it with our model to a limited degree right now is by looking at wire centers and you could potentially vary the depreciation for, say, a downtown business district wire center and have to do something maybe shorter or longer, depending upon what your philosophy was, than a rural one. The model structure is flexible enough that relatively easily we could introduce differential economic depreciation rates for specific neighborhoods, or in essence, the mix of business and residential customers. However, I've not heard yet enough of a rationale for doing that to justify the modeling effort because I'm not convinced in my own mind how would we decide whether the lives should be shorter or longer for business or residence. I don't know that we've got any good data to drive that with to the level at which it makes it worth modeling. But certainly as a pure modeling exercise, our structure is such that it would be relatively easy to introduce that issue.

And, again, you could initially get a first cut at it by looking at wire centers that had different characteristics and modeling different depreciation rates for those wire centers.

Emily Hoffnar, FCC

Rich.

Richard Clarke, AT&T

Accounting for economic depreciation consists of two activities. One, which is performed external to all of these models, is the calculation of an appropriate rate by which the LECs capital depreciates. The second is to correctly translate that depreciation rate into an appropriate monthly carrying depreciation component of carrying costs of capital. And I'd like to note now that BCM2 has moved away from its reduced form annual charge factor, so now that it seems to do a method similar to what I believe Ben Johnson's Model does and the Hatfield Model has always done, and to directly, and from the bottom's up, compute the translate depreciation rate into appropriate carrying cost of capital on a monthly basis. But the most significant issue is, well, what is the input into this process? What is the input into this process? What is the economic depreciation rate? Now, the rates that are the default rates in the Hatfield Model are projection lives for newly placed plant adjusted for cost of removal and net salvage. These are determined by three-way meetings between the RBOC, the state regulator and the Federal regulator and indeed we have generally been taking numbers at the low end of those ranges for this. Now the BCPM depreciation rates appear to be coming from a survey that was taken of LECs. We've had some difficulty in reconciling the numbers that they

give for net salvage and depreciation life and to compute an actual depreciation rate. But the results of this is that they have some very aggressively fast depreciation rates. If you take the Willy Sutton method of analysis, which for me is to just look at the cable and wire account in these things, that for cable and wire, the BCPM appears to have a net depreciation rate of between 8 and 15 years, where 8 is for copper and 15 is for fiber. None of these things seem to be supported by the external literature and it seems to all be running off of some assumption that not the things that wear out over that time, but there's going to be something that causes this stuff to be ripped out well before its useful life and that that's the issue that probably needs to be investigated.

Emily Hoffnar, FCC

Thank you. Susan.

Susan Baldwin, Economics and Technology, Inc.

Depreciation rates in the cost proxy model consistent with decisions about capital structure should be consistent, should correspond with the services that are being subsidized. They should not correspond with the overall integrated network that's being deployed with lots of common plant to provide not only monopoly services, but also competitive services. The BCPM default values, not surprisingly, are very, very short lives, lives that may well be consistent with ILECs' strategic interest

in providing a full array of services. Those are not the appropriate lives in a universal service cost proxy model.

Certainly, and again reiterating a point I made earlier, ILECs are not in any way being constrained in when and how and where they replace plant. This is not a question of getting in the way of business decisions being made by the ILECs. But when they look forward and they see a menu of advanced services, that doesn't mean that they should be using short lives in a cost proxy model. Forward looking, yes, that's one important criterion, but it's not the only one. We can't only look forward, we have to look forward and also see whether the depreciation rates are economically efficient for the services in question. The level of high cost support that's getting ultimately going to be churned out of a cost proxy model after the Joint Board makes recommendations on 400-odd inputs, that high-cost support is going to be the same, whether it's a CLEC or an ILEC. And that fact, in and of itself, suggests that there's competitive neutrality in selecting depreciation rates that correspond to the basic local exchange service that's being subsidized.

Emily Hoffnar, FCC

(inaudible)

Lawrence P. Cole, GTE Laboratories, Inc.

Yes, the Hatfield Model heretofore has argued that the appropriate depreciation lives are those that are prescribed by commissions and the HM 3 doesn't make any change in that regard, as I understand. What they've changed is from going with respect to depreciation calculations, they've gone from a year-end to mid-year methods. The BCM, I think, in previous versions had also used essentially prescribed lives, but have now switched to forward looking. GTE is requesting the following lives in jurisdiction where it's involved in proceedings on a going-forward basis, 10 years for digital switching equipment; that compares with 14.3 in Hatfield and 9.8 in the BCPM, I don't regard that as a big difference there; 8 for circuit equipment as compared with 8.46, I don't know why there aren't 3 or 4 more decimal places there, in BCPM; and 10.4 in Hatfield, 15 for metallic cable. In Hatfield that's 20.2, BCPM, I guess has a range of 11.37 to 14.1, and for non-metallic cable, 20, and Hatfield has 20.1 and BCPM is 18.94. Our numbers are based on studies that are done by Technology Futures, Inc., and I understand what their methodology is to try to estimate remaining lives and then to work back from there as to what the overall lives would be. And they produce numbers that are in ranges, for example, for switches 9 to 11, we've chosen the midpoint.

With respect to the disaggregation of plant, it seems to me there's enough categories in both models — oh, I'm sorry. Oh, okay. I think as long as most of the investment is accounted

for, I think Jim's got a point with respect to market versus — would look at some different categories. I'll stop for now.

Emily Hoffnar, FCC

Thank you. Bob.

Robert C. Schoonmaker, GVNW Inc./Management

I'll pick up on the categorization. I think in general all three models have reasonable levels of categorization. I would note that in the Hatfield Model, rather than using categories by plant type, they do it by network element type and I think that leads to some difficulty, at least, in analyzing what the appropriate rates are. For example, their loop feeder category would include plant in underground cable, both copper and fiber, would include buried cable, both copper and fiber, and would include conduit structures. And so what the appropriate mix to come up with that depreciation rate would be, I think, would be a difficult exercise and makes their rates certainly less comparable than doing the disaggregation by individual plant categories. I think both the Ben Johnson and the BCPM do it by plant categories and at a reasonable level.

Emily Hoffnar, FCC

Labros.

Labros Pilalis, Pennsylvania Public Utility Commission

Okay, I don't have very much to add to this debate. Only I want to point out that derivation of depreciation figures, economic or otherwise, must be internally consistent within the various enterprises that derive and utilize these figures. As an example I want to mention for a fact that we have seen incumbent local exchange carriers. When faced with highly competitive situations, especially so-called contract service offerings under individual case basis, all of a sudden the depreciation rates become rather low or the plan to be utilized is assumed that it will be utilized after the end of the particular contract in question and depreciation costs or expense or figures are not even contained in the studies, and it's not even an issue. So, to that extent, I believe that regulatory agencies, the FCC, state regulatory agencies, the FCC and companies have done a reasonable job computing even an established regulatory depreciation rates for the whole telephone carrier enterprises.

One thing that I want to point out is that it is the same equipment, it is a joint type of equipment that serves various service markets of these individual enterprises. And differentiating depreciation rates for the same piece of equipment that serves the local exchange market and the intra-latta toll and the carrier access market is going to be an operationally very difficult task to accomplish.

Emily Hoffnar, FCC

Thank you. Rebuttals? Jim.

James Vander Weide, Financial Strategy Associates

Yes. First, with regard to the three-way meetings, the three-way meetings begin with the LECs' current technology and they begin with the historical records of actual service lives of the current technology. We're in an exercise where we're looking at a future-oriented technology and we're looking at a competitive environment, not the environment that the LECs were in over the past lives of their current equipment. And clearly the depreciation lives would be considerably shorter using future technology in a competitive environment than they were historically in the — with the equipment that the LECs currently have.

Ben Johnson, Ben Johnson Associates

The history suggests that copper lasted 30 or 40 years, and that's not the issue. What we're debating is whether it will last 9 or 10 more years for its economic life or 15 lives as we're suggesting, or perhaps 20 or 25 as some state commissions have concluded on occasion. It's a relatively narrow range of debate and in fact I think you can narrow the range further and suggest the core of the debate is really in a fairly narrow range from about 9 to say 18 years. And it's very difficult to reach a firm conclusion on what the life will be because — let's switch

to a switch for a moment. They're software upgradable, so it's very hard to know whether we'll have enough of a sea change in technology, even after 15 years, that these investments will be obsolete. I think 15 years is a good guess, but I certainly wouldn't quibble with someone who felt strongly that it was 12 or 11 years. You start getting down to 5 or 7 years, and I would strongly disagree. I just don't think that's credible, but we haven't heard those kinds of numbers here today.

Emily Hoffnar, FCC

Rich.

Richard Clarke, AT&T

I'd just like to clarify the Hatfield Model in Release 3 goes through 30 accounts on a plant basis — a depreciation plant basis, so that it is as disaggregated as is possible in this regard. But let's move to the issue of, which is the key one, what is the life. I've heard that we shouldn't take any information out of these three-way meetings, that maybe we should take information out of a consultant report or something like that. But I think there has to be something logical and transparent about this process, and if we're going to assign a very short life to fiber, my question is, what do we know that it's going to replace it? Is there an assumption that any of this fiber is going to be ripped out in 15 years and everything is going to be wireless. We need to get these things clearly on

the table. And, in any event, the issue here is universal service. We know universal service can be reasonably carried on copper, and that maybe there might be a new technology out there that will trump copper cable in a large part of the situations, but either that technology had better be less expensive than copper technology, or even if it's more expensive, if it's going to be able to compete with copper technology, it cannot be assigned a more expensive price than what a competitor could provide on copper.

Emily Hoffnar, FCC

Thank you. Susan.

Susan Baldwin, Economics and Technology, Inc.

Let me respond to a comment of Lawrence's. He referred to Technology Futures, Inc. analysis. I've read some of their work. And as TFI comes up with justifications for really short lives in filings before various public utility commissions around the country on behalf of ILECs, they make explicit references to broad band and advanced services. First, let me recommend as reading a decision rendered by the Utah Public Service Commission in a depreciation case where they considered the evidence of TFI and they said, "no, we do not think that depreciation rates should be being used to subsidize pursuits of competitive services." Second, let's remember that ILECs are not offering to

share the revenue stream associated with these competitive services that are the cause of the request for short lives.

Emily Hoffnar, FCC

Thank you. Larry.

Lawrence P. Cole, GTE Laboratories, Inc.

The issue is not when the stuff is going to get ripped out of the ground. We're talking about economic lives, how much longer will they continue to be revenue producing, not how long with they physically last and still be capable of working. I find it odd that Mr. Clarke singles out fiber. I just cited the numbers, the BCPM is recommending 18.94, we're recommending 20, and the Hatfield Model says it should be 20.1. I don't think there's a difference there. That's all at this point.

Emily Hoffnar, FCC

Thank you. Bob.

Robert C. Schoonmaker, GVNW Inc./Management

Two comments, first in regards to — now I forgot my comment on that, I'll pass. In regards to Ben Johnson's comments on switches, and he thinks 15 years is a reasonably good life. I think we need to remember that although switches are computers, and although software upgrades can do so much, eventually

computer equipment gets replaced by faster, better technology, and 15 years is a long life for a computer. Even with software upgrades, we're finding many switches have to be replaced in the 8- to 11-year time frame because the cost of the software upgrades to bring them to regulatory and customer service expectations for local service are such that it's cheaper to replace the switch than it is to do the upgrades.

Emily Hoffnar, FCC

Thank you. Labros.

Labros Pilalis, Pennsylvania Public Utility Commission

Yes. Going back to using historical records for judging or estimating depreciation costs and expenses. Well, the fact of the matter is that we cannot avoid the historical records. Whether we do a forward-looking economic analysis and we like to call it as such, we will definitely be tempted to go back into the accounting records and see what the numbers are. And we don't want to be fools and not doing that. I mean, it's an operative characteristic. And in doing so, we will find out that we are dealing with equipment that is, essentially, especially for digital central offices, is of the nomenclature of the Nortel DMS 100/200 and Lucent Technologies 4-ESS and 5-ESS. And so we do have records and estimations of how soon that equipment depreciates. Do we want to accelerate the depreciation lives for

those types of equipment? It depends on what we are trying to accomplish.

Emily Hoffnar, FCC

Thank you. Any last words?

Ben Johnson, Ben Johnson Associates

Just one thought. If, in fact, you lower the life on switching along the lines that Mr. Schoonmaker was suggesting, it might be appropriate to also lower our plant-specific charge because we have a pretty hefty allowance in there for software upgrades, so the two factors might cancel out.

Emily Hoffnar, FCC

I'd like to get started on Question 4. We may not be able to — do you want to stop? Break? All right, we will reconvene at 10:30.

(Break)

David Krech, FCC

If we could ask everybody to please take your seats. Before we continue on with Panel 3 and go on to the fourth question, Commissioner Susan Ness from the FCC has asked to say a few words. Ms. Ness.

Commissioner Ness, FCC

Good morning. It's a pleasure to join you here today at the Common Carrier Bureau's Workshop on Proxy Cost Models. Although I was out of town yesterday, I wanted to make sure that I stopped by to thank you all for your participation in these workshops. It's especially gratifying to see the wide attendance by state staff. We've worked hard to ensure that the states are full partners to implement the Telecommunications Act. We've learned much from your participation in the Joint Board and will continue to learn from you as this process continues. So again, my thanks very much, sincere thanks to the members of the state staff.

I'm also happy to see strong industry representation on the panels that are taking place today. Several months ago my senior advisor, Jim Casserly, had raised the idea of a workshop on proxy models and I shared that idea with my colleagues on the Federal-State Joint Board. At the time I was troubled by the wide disparities between what we were hearing from the proponents of one model and what we were hearing from the proponents of another model. It seemed to me that face-to-face discussions among the proponents with participation by other interested parties in Federal and state staff ought to be able to help us illuminate the issues, narrow the differences, and move us closer toward adoption of a model in which policymakers and industry alike can have confidence. And I understand that the discussions so far have been very productive.

Now, I know developing proxy models requires digesting a large amount of extremely technical information. But the value of creating a truly representative and flexible model will pay dividends later on and I believe that your active participation yesterday and today will enable us to reach a far better resolution of these issues and will help us to ensure successful implementation of the universal service goals of the 1996 Telecom Act. So, again, my sincere thanks for your hard efforts and your participation here yesterday and today. Thank you all very much.
(Applause)

David Krech, FCC

Thank you Commissioner Ness, and without further ado, we will turn to the fourth question to our third panel. Emily.

Emily Hoffnar, FCC

Thank you. So not only are we on the best panel, we also got Commissioner Ness to speak. I'm thrilled. Question number 4: With regard to modeling capital expenses, what component of a model makes the model superior to the other models? Alternatively, what component of a model should be changed to improve the model? Rich.

Richard Clarke, AT&T

There really is no reason why all models can't do a fine job at translating given depreciation rates and costs of capital into

a correct monthly carrying cost of capital. That the mechanisms here are pretty standard and fairly well known so that is — ongoing into the future, I do not expect that to be a big differentiator between the different models. The key issue is the correctness of the depreciation rates and the cost of capital that are imputed into these models. And that without correct ones for these that do reflect the forward-looking cost, then you will not get a good result out of the models. I'd like to emphasize that the cost of capital that should be entered into these models is one that is forward looking for — now, it's been claimed a new entrant, but it is a new entrant that has a 100% market share. That new entrant is not as risky as other smaller new entrants. Now, to the extent that the promise of the Telecommunications Act and the FCC and the State Boards' workings on it is realized and competition actually does develop, then that can be reevaluated if things do become riskier, but right now that's the situation that we face.

In addition, it's very important that depreciation concepts must be consistent with other aspects of the model. Just to take one example, and that is fill factors. That we have heard some people suggest that there should be relatively low fill factors, and at the same time we hear suggestions that there should be a very short depreciation life for something. These assumptions are not consistent. That if you have a technology that you think is going to depreciate away pretty quickly, you do not enter it into your model at a low fill factor. So it is these types of consistency issues and correct depreciation rates and costs of

capital that are the key to making the models produce the correct output.

Emily Hoffnar, FCC

Thank you. Ben.

Ben Johnson, Ben Johnson Associates

Yes, I honestly can't think of any area where in terms of translating investments to capital expenses, we have a comparative advantage. So, I'm going to take this moment to emphasize and reiterate advantages in terms of the underlying investments to which you are then applying these depreciation rates and cost of capital. In our model I think we give the user much better control, we give them more detailed, more flexible user inputs. It has an inherently far more flexible structure that allows the user to answer far more questions. I think it's fair to call it a general purpose model that provides much greater flexibility than the other models which are, to varying degrees, either single purpose or dual purpose models. The best example I can give of this is market structure, and as a market share. As it came out today, we started talking in the context of depreciation and cost of capital. This question of market share is very significant and it's particularly significant in how you use the model for different purposes. I think an argument can legitimately be made that if you're trying to find out at what pricing point for unbundled elements we are

discouraging facilities-based entry, the only way to answer that question is to find out the crossover point between the price that you set for the unbundled element and the cost of installing a smaller network designed to serve a smaller market share. And our model specifically was designed to answer that question because we knew it was of great interest to state regulators. And it's one of the first things you see as a user is what share of the market is this carrier going to serve, and then you scale the plant to fit that appropriately. So I think in general, all I can say is I think all the models do a fairly good job of taking your assumptions about depreciation and cost of capital and applying them to your investment, but I think our model is superior in developing a flexible approach to designing the investment to answer many, many different questions beyond those that are needed for the Joint Board.

Emily Hoffnar, FCC

Thank you. Jim?

James Vander Weide, Financial Strategy Associates

Yes, I think a model has to do two things. First, it has to, as I've mentioned before, pass a consistency test between the assumptions that are used on the investment and expense portion and the assumptions that are used on the capital portion. Even though the assumption is that of an efficient new competitor, it's not one that has a monopoly of the new market, it's one that