

Can I ask Madame Chairman if we can turn the process around and a panel member can ask a question of a member of the audience because I'd like to ask Dr. Kovacks a question.

Emily Hoffnar, FCC

Are we finished with the question on the table? Would anyone else like to respond?

Ben Johnson, Ben Johnson Associates

I want to just be sure it's clear that these runs that I was talking about were assuming the exact same inputs for both the 100% share and the 25%. To the extent those labor savings or other things would occur that would squeeze the gap, and perhaps eliminate the gap that I was describing.

Emily Hoffnar, FCC

Before we do any departing, are there any more questions from the audience? Could you please come up.

Gary Allen, RUS

Nobody expected that this gentleman would ask about losing market share with your model. Almost all of you seemed to assume that the competitor would be an eligible carrier. That's very unlikely. Competitors are probably not going to want to be eligible carriers. They're going to come in, we know the term,

"cream skimming," that's the likely thing. If the support level did rise with falling market share for the eligible provider, it would provide an incentive to a cream skimmer to become a universal service provider. Could you respond to that?

Ben Johnson, Ben Johnson Associates

Just very briefly, that's the kind of question that you can answer very easily with this model. It has this cream skimming function in it where you can do selective entry, very specifically because — (laughter) — well, that's what I call it. We've got it specifically set up to make it very easy to do selective entry into either just the business market or just the downtown business market of a wire center. And, of course, you can look at just selected wire centers. And the pattern is what we would predict, which is we will see initial entry primarily in the most revenue intensive locations. But the potential new entrants are arguing, and I think there's some truth to it, that they will eventually expand out into the other parts of the country as well.

Emily Hoffnar, FCC

Are there any other capital expenses related questions? Was your question capital expense related?

Lawrence P. Cole, GTE Laboratories, Inc.

Yes.

Emily Hoffnar, FCC

Okay. (Laughter)

Male Speaker

Or at least it's claimed to be.

Lawrence P. Cole, GTE Laboratories, Inc.

You've been sitting here through the session. You've had a chance to hear what's been said. My understanding is you follow multiple segments in the telecommunications market and, you know, give us a sanity check in a sense. You know, what you've been hearing.

Ann Marie Kovacks, Janney Montgomery Scott

I guess what's — I've been in and out a little bit for the last couple of days, so my apologies. I guess what's been really interesting to me is that what's least clear that a lot of the disagreements I think come from disagreements about what the model is trying to do. You're modeling at 100%, which is where the LEC is right now, but what you're trying to model is what an incumbent would do to get to that equilibrium. And I guess, it

seems to me, that if the purpose of this model is to be used not only in universal service but as the staff report indicated also in the access charge proceeding and for interconnection, that you really want to go beyond that and try and determine that equilibrium level, which admittedly is going to be different for every market, because it is unfair to assume that a new competitor is going to have the LECs' cost of capital at 100% and if — that's an almost to me an irrelevant assumption. I mean, it's so unrealistic as to be pointless. I mean, at that point, you simply have to assume the LEC is going to have 100% forever. So, to me, it would seem that what you would be trying to do is try and figure out where that meeting point is so that you have some sense of realistically where the market will reach equilibrium and look at what cost of capital would be like at that point for both the incumbent, whose cost of capital is going to go up with market share loss, and for the incoming entrant whose cost of capital is going to go down over time.

And I guess I would postulate that that's not all that complicated. That, while the models are enormously complicated, a fairly good back of the envelope probably can get you there because most of these factors don't have a huge amount of influence and market share does. So, that's my sanity.

Emily Hoffnar, FCC

We've just had a few —

Richard Clarke, AT&T

I'd just like to make a comment about this issue that the purpose of this workshop was to discuss how well the proxy models account for the costs of capital. Now, there is another issue — a set of issues out there as to what are the correct costs of capital, the correct assumptions about the provision of universal service. And these were decisions that were made by the Joint Board in their Order, and I think made correctly so. And just because we have not addressed these, or I have not addressed these in this workshop, does not mean that we think that there's any difficulty with what the Joint Board did. The Joint Board made the decision based on sound economic reasoning. We think they put sound economic criteria for evaluating the models in place. And, if we want to talk about market shares or things like that, then we're talking about a lot more. We're talking about issues of having to deal with what the full extent of what's going on in the market is, the opportunities for customers to buy other items from carriers. We're talking about just whole issues of funding and relative responsibility at the state and Federal level and that that's just a far broader issue than can be dealt with by what the proxy models are trying to do.

Emily Hoffnar, FCC

If there are no more questions from the audience on capital expenses — I believe we've completed this panel. We will resume at the scheduled time. That gives us a little more time for

lunch, we'll start promptly at 1:15. Thank you again for attending. Hope to see you this afternoon.

(Lunch Break)

Panel 4: Validation of the Models

David Krech, FCC

Okay, we're going to get started now. We have an empty spot at the moment, but I'm sure that Jules is probably waiting for an elevator downstairs. So, we'll get started. This is our fourth panel, and our last panel. It's on Validation of the Models. We've been having so much success with the format up to now, there's no reason to change at this point. So, we will start out by having the panelists introduce themselves. We will then go to the questions. We'll have two minutes for comments, one minute for rebuttal. We'll start with the proponents of the three models and then open it up to the other panelists. I will start out, again, I'm David Krech with the Universal Service Branch at the FCC, and if we can start on this end.

Self-Introductions

I'm Trevor Roycroft, I'm with Ohio University and I'm also formerly of the Indiana Office of Consumer Counselor. I'm Jeff Rohlfs from Strategic Policy Research. I'm Vin Callahan from NYNEX. I'm Ben Johnson, I'm a consulting economist. Dan Kelley

with Hatfield Associates. I'm Rick Emmerson, an economist with INDETEC International. I'm Joel Shifman with the Maine PUC. I'm John Schrottenboer, I'm Paul Cooper's proxy today for Southwestern Bell. I'm Page Montgomery, I'm here for the Association for Local Telephone Services. Lisa Hanselman, GVNW, also representing the Rural Telephone Association. I'm Laurits Christensen, I'm a consulting economist and I'm Chairman of Christensen Associates, an economic consulting firm based in Madison, Wisconsin. I'm one of the authors of a paper that was referred to this morning that did evaluation of the Hatfield Model and Benchmark Cost Models. My paper was filed along with the USTA filing last Friday, but I gathered from conversations I've had with people that there's so much paper floating around that many of you have not seen the paper. I brought 50 copies of the paper with me and one of my co-authors, Mark Miteson back here, has copies of the paper available if anybody would like to get one. Raise your hand, Mark, so everybody can see where you are.

David Krech, FCC

Okay, that would be great. We appreciate that. Yes, we've had lots and lots of pieces of paper filed in this proceeding. I believe we've had somewhere in the neighborhood of around 90 reply comments filed last Friday. So, if people haven't been able to track them all down yet or read every piece, that's quite understandable. Let's move to the first question, and again, we will follow the same procedure. We will deal with the first

three questions, take a break, come back for the fourth question and then open it up to the questions from the audience.

The first question: Have comparisons of the results of embedded cost models and economic cost models exposed any errors or biases in the economic cost models? If so, how should the economic cost models be changed to eliminate the errors or biases? Let's start with Dan Kelley.

Daniel Kelley, Hatfield Associates

Thank you. The heart of the question is, have comparisons of the results of embedded cost models and economic cost models exposed any errors or biases. And my answer is kind of indirect. My answer is that those comparisons of embedded costs with proxy model results are really not very helpful for two major reasons. One, embedded cost models are by definition, and by their very nature, backward looking and our model is forward looking. That means we're using forward-looking technology, not embedded technology, and that means we're looking at basic universal service, not the array of services that are produced by companies today and reflected in their embedded networks. The second reason is that the book costs of telephone companies often do not mean very much because all of the telephone companies book costs in different ways. In looking at the ARMIS data which collects and reports these book costs, we see a lot of anomalous results among companies. When I started looking at expense factors for the Hatfield Model, I looked at embedded switching maintenance

numbers hoping to find that I would see lower maintenance expenses for companies that had more digital switches, which are more efficient, and I found the opposite result. As a consequence, we didn't use that, we used some forward-looking cost numbers for switch maintenance from the New England Tel Incremental Cost Study. There are other examples of anomalies in this kind of data. The real issue here is the sharing of forward-looking data and information that's in the possession of the LECs. This Commission, the FCC, noted in the Interconnection Order that there's an asymmetry of information in this industry. The telephone companies have a lot of that information. And the best answer to the question here of validating the models it's to get more of that information on the public record. Thanks.

David Krech, FCC

Okay, Ben, would you like to go next, please?

Ben Johnson, Ben Johnson Associates

I echo the earlier comments. I'm a little troubled by the idea of trying to validate an economic model by looking at embedded data, particularly when that embedded data is at a highly aggregated level and we don't have a good feel for how comparable it truly is. But certainly at some gross level there are some comparisons you can make. The argument was made the other day by another panelist from one of the incumbent LECs, as I recall, suggesting that, well, if the book depreciation rates

were roughly comparable to the economic depreciation rates, then the net book value ought to be roughly comparable to what these models are producing. I'm not sure I totally agree with that, but that's certainly one way you could start. But, obviously, for example, if you try to compare the wire accounts, you would expect to see substantially less investment in cable in these models if they are being run as they were in these illustrative studies with a lot of fiber, because fiber is less costly to install the cable, but then you have the cost of the electronics. Similarly, you would expect to see a higher investment in the account or in the category in which the fiber electronics are located. And then maybe in the case of the central offices, the switching equipment, there would be no particular reason to see the number that different than the net book value.

But again, I'm not sure that's a valid test. I would rather see the validation be done by concentrating on getting the inputs right, making sure the models are working properly, and then we start studying, if we have discrepancies, do some kind of cross section across the country and try to identify the pattern of that discrepancy and decide if there is some reasonable explanation for that pattern to the extent we see one. The more detailed the data you compare it against, the more likely you're going to get some real insights. If you just look in the aggregate level, I'm not sure you're really going to have an answer of whether there's a problem with the model or a remaining problem with the inputs.

David Krech, FCC

Okay, Rick?

Richard Emmerson, INDETEC International

I think we're sharing a microphone here. This may be the first time in three days that all three representatives of the models agree on something. I, too, agree that it's very risky to use embedded data to make comparisons to forward-looking data. And in particular, I would like to cite some differences one has to be very careful to acknowledge. Obviously, book values and market values differ, market values being emphasized in economic costs, depreciation rates differ. We have a different set of standards; to economists it's less important as to whether an item is expensed or capitalized than it is to an accountant who must adhere to particular accounting conventions. Also, forward-looking costs will contain inflation adjustments, will represent different technologies than are in place today and therefore care has to be taken to match the expense resources to the forward-looking technologies rather than the embedded technologies, and so forth.

I think a more relevant test is to test the models against reality. And by "reality" I don't necessarily mean the embedded network. I mean the possibility to build a network, perhaps from a new entrant's perspective, that works, that provides the sufficient bandwidth, that connects all of the right customers to the network, that has all of the components necessary to build a

network and all of the resources necessary to maintain that network. Comparisons have been made among the models in that regard. In particular, it's well known, for example, that the Hatfield Model failed to provide enough sheath miles of distribution plant to actually reach the homes in a given CBG. It's equally well known that the BCM2 and the Hatfield Model as well misassigned CBGs to wire centers in their earlier versions. Obviously, these issues will come up again as the next generation of models come out. I think it's very important to judge these models with respect to these criteria in mind and judge them against the reality of operating well-engineered networks, rather than embedded cost data, *per se*. I will say embedded cost data is useful. It's a good reality check and if there are substantial deviations from embedded cost, one should be advised to at least to explain those within some acceptable order of magnitude. Thank you.

David Krech, FCC

Thank you. I think we'll start on this side of the table, and Vin, would you like to start off please?

Vincent Callahan, NYNEX

We've spent hundreds of hours analyzing the models that are currently on the record and my comments today are going to be focused on the current models that are on the record, such as block group oriented, Hatfield 2.2 Release 2 and the Benchmark

Cost Model 2. In order to do a calculation of any bias in my view, you've got to first establish a level of support. So, what I've done is I, in one of our modeling, decided to take a 30 dial life support level, and in so doing I wanted to determine what would be the ultimate output of the two models when contrasted with each other. The outputs basically say that in BCM2 the support level would be about \$7.4 billion in the country, contrasted to Hatfield which is about \$2.6 billion. Now on the surface you say there's something wrong with that, that maybe there really isn't, because keep in mind that the BCM Model is designed to give the support over the entire country whereas the Hatfield Model focuses predominantly on RBOCs. So now you have to make another calculation to take away, if you will, to support that those non-RBOCs would get so you can compare apples to apples. And when you do that you land up with a BCM total of \$3.3 billion versus \$2.6 billion.

Let me just show you quickly what this comes down to as far as winners and losers are concerned among RBOCs and states. You'll notice here that depending on which model is chosen, Ameritech, for example, can lose \$105 million and SBC can gain \$242 million. So, to for states. Nebraska, if they pick the Hatfield Model, can make \$57 million more than if they pick the BCM2 Model. However, just the reverse when it comes to Michigan. So there are some biases here. And what I'm saying basically is that not only are there biases, but if you look at the Northeast region of the country and Mid-Atlantic, there will be a vast flow

of money from that area of the country in subsidizing ratepayers in other sides of the country. Thank you.

David Krech, FCC

Okay, I don't know, Vin, do you want to leave that chart up there in case somebody else might want to reference it, at least through this question? Jeffery, do you want to go next?

Jeffery H. Rohlfis, Strategic Policy Research

I want to interpret the question broadly so that it is has analysis of LEC real world operations exposed any errors or biases in the economic cost models. And I think the answer is, it certainly reveals striking anomalies that need to be explained. I was reading the March edition of the Hatfield report last year and, if I read it right, what they were saying is that 40% of LEC revenues are waste and inefficiency of different types. And that's a really startling conclusion when you think that the LEC industry has been privately owned for 100 years, that the LEC industry has fairly strong incentives to improve efficiency through price caps in incentive regulation. When you consider that the U.S. industry scores at the top or near the top in virtually every international comparison of operating efficiency. So, I think you really need to think about whether that result is really right. In particular, the differences — the 40% difference could be explained in several ways. One way is it could be waste and inefficiency of different

types. Another explanation I think that the panelists up to now have talked about is there's a difference between incremental models and full-cost models. And that could explain a substantial part of the difference. But a third possibility it could be model error. And the way to find out whether it's model error is to compare the model to the real world, because I have a feeling that a lot of the discussion so far here has been incestuous. It's just talking about comparing one model to another. And you really need to have interaction with the outside world to get out the recessive genes from the bottom-up cost models. You need to look at how these models actually work in the real world. This is an activity that OffTel has done successfully. And the way they have done it is to look at top-down cost models versus bottom-up models. Top-down models have the big advantage that they estimate the same thing as the bottom-up models, namely forward-looking incremental cost.

David Krech, FCC

Thank you. Trevor.

Trevor Roycroft, Ohio University

I agree generally with the statements made earlier about the inappropriateness of comparing the models with embedded costs. I also read the question generally to think about biases contained in the model within the context of validating the models. And, I've been working with the models in trying to reality check them

as well, and in so doing, some of the reality checks that I've been trying to impose as an economist are, first of all, trying to see if they are theoretically consistent. And one of the limitations or biases that I believe is present with the Hatfield and the BCM Model is their lack of variety of cost measures. It would be nice to be able to generate alternative measures of cost other than average cost to kind of provide a reality check with economic theory. And I have not worked with Ben Johnson's model yet, but I am favorably impressed by the fact that it does produce alternative measures of cost. And I think that the model sponsors would — you know, if their next versions of the models are capable of producing alternative estimates, it would be nice to hear how the model sponsors believe those alternative cost estimates should be calculated.

Another level of validation that I was thinking about in looking at these models was just the fact that we're dealing with very complicated spreadsheets that somebody at some point has to trust the calculations behind. And in analyzing the Hatfield Model, I came across what I believe was a spreadsheet error that is an omission of cells in a calculation in the universal service funding component of the model and those cells ultimately had an impact on the cost of transport that was being factored into the universal service calculation. Another problem that I think may be corrected with the next version of Hatfield would be the tendency for overaggregation of the model. It's nice to be able to take a look at the outputs of these models in a reality check on a more disaggregated basis, and the present incarnation of

Hatfield, I think, is too aggregated to allow that sort of reality checking.

David Krech, FCC

Joel, would you like to go next, please.

Joel B. Shifman, Maine Public Utilities Commission

Yes. While I agree with some of the other panelists that it may not be an appropriate measure to compare some embedded costs against the model results, that I believe that the comparison produced a relatively valid reality check. Another reality check is experience with other bottom-up models not in this docket. And also looking at experience as to what costs are actually realized recently, either by REA project data, bidding data, etc., that can be — or estimates from REA annual reports, or from state annual reports for new construction projects that have been recently completed. Some of the areas which I've identified are areas where I looked at the model results and realized that those results were contrary to the actual costs that are being experienced or what I know to be the costs in those given CBGs. What I did is identified some of those areas and then tried to analyze the model deficiencies, which led to these anomalous results. And I'll just go through a few of them quickly. One of them I identified was an area on Crystal Mountain, Washington, which is a ski area on the top of a mountain, a concentrated area serving a fairly small number of customers in a concentrated

area. The assumption of uniform distribution throughout the CBG vastly overstated costs throughout that area. Another one I identified with a very similar problem was Snowshoe, West Virginia, which has a similar situation. The assumption of a uniform distribution throughout the CBG vastly overstated costs within that studying area. Another one I identified was Pickins, West Virginia, where fairly simple — not a model error, but a simple data error of the data sources identifying the wrong company and the wrong central office to which that area was being served. Solved to explain that problem. The last example which I identified was Lincolnville, Maine. And in Lincolnville, Maine, the problem that occurred there was also the assumption of uniform distribution where you had an exchange with two wire centers where customers were clustered around the wires — where customers are actually clustered around the wire center, but the model creates an assumption that customers are uniformly distributed along the roads which caused a vast overstatement of costs.

David Krech, FCC

Okay, thank you Joel. John.

John Schrottenboer, Southwestern Bell Telephone Company

I think in answer to the first question, there have been some comparisons made of embedded costs to the cost models. I believe that NECA prepared a comparison in August of last year

and Southwestern Bell prepared a comparison that was provided in ex parte in 9645 in October. In both of those, I think if you look at them you will find that in the cases where the embedded costs were compared to the Hatfield Model, the Hatfield Model showed that the costs that were provided were significantly less, somewhere in the neighborhood of 50% of the embedded cost. While you may not want to rely strictly on that difference, it does appear to me that if you have a difference that is that significant, that in fact as other people have said in preceding me that those type of numbers, those type of differences do warrant an investigation, and some sort of explanation as to why they are different. For whatever the reasons are, they need to be explained in more detail than they have been and there needs to be more analysis done to explain that difference.

The BCM2 doesn't have quite that much difference, but it does also have the difference that exists, in some cases it relates to company size and so forth. So there are some differences that can be looked at and need to be explained, and should be explained when you look at an embedded cost analysis. The embedded data can also be used to look at other aspects of it, whether it's not just the overall cost but investment levels, expense investment relationships, all of those type of things to determine whether or not the numbers that are being used in the proxy models are, in fact, reasonable in some way and comparable to historic data. And since expenses are current expenses, they should be — you could look at information over a period of time to look and see whether or not those are also reasonable.

David Krech, FCC

All right, thank you. Page?

William Page Montgomery, Montgomery Consulting

The sense that I have from all of the Workshop sessions has been that there are many things that could be done to change the way the models have been done as economic models. There are many adjustments in the design assumptions people could consider. We've talked about market shares this morning. The problem, it seems to me, is there is a statutory deadline for determining some sort of system and that deadline is coming very quickly. I don't see what purpose is really served by looking at embedded cost data unless you decided as a matter of policy to use embedded cost data, in which case the models that we've been talking about for the last two days are irrelevant. But, I don't see how you can really marry a consideration of embedded costs with the principles that the Joint Board set forth and that are set forth in the FCC staff paper. From what I've heard so far, there are issues that can be resolved by May 8. There are sometimes policy issues regarding how do you structure certain inputs to the models? They are sometimes empirical issues. What type of structure sharing actually occurs in the field? These kinds of questions can be answered, it seems to me, by May 8 if you're lucky. But to go on beyond the existing structure of the models to add a lot of different considerations which sound very appealing, actually to me, it's very hard to see. At some point,

not only does the best become the enemy of the good, but the whole process itself becomes a retarding factor in the development of local competition. People who want to compete in the marketplace need to know what the rules are going to be, they need to know whether they're going to be looking at a \$7 billion Universal Service Fund or a \$2 billion fund or something else. And, as this process goes forward, a necessary process, we have to understand that that will have an effect on the market itself.

David Krech, FCC

Thank you. Lisa.

Lisa K. Hanselman, GVNW Inc./Management

Okay, I actually, I think there is an element of the embedded base that is useful. And if you take away the cost side of it and just look at the physical plant, I think it does provide some usefulness in terms of the validity of the models and that is, we've heard a lot about the number of poles, the number of manholes. Do you extend your cables out far enough? And I think that the embedded network can help to some degree there as a starting point. And just to kind of summarize some of the things, because I do represent the rural community. There are some major problems in terms of access lines. We found a substantial difference, over 50% in 29% of the companies. And just for one example, we have a small company in the mountains, 8,200 USF loops. Proxy came out at 62,500. Now, it's a small

city in the mountains. I don't know where it could have drawn those extra access lines from. As I mentioned before, for small companies, obviously our structures are a little bit different. The loop costs were definitely overestimated by such a large degree that it has to be more than — resulting from embedded costs. I mean, we're talking 200-300% difference. Transport is a much greater factor of the overall investment than the models that I've looked at purport. And switches — the switch algorithms need to be refined. And we want to work with the developers to provide the rural data necessary to make those modifications.

David Krech, FCC

Okay. Thank you.

Laurits R. Christensen, Christensen Associates, Inc.

Opinions will differ, as we've heard, as to how relevant embedded costs are in this exercise that we're involved in. I'd like to emphasize that I think that we might not want to just lump all of what is sometimes called "embedded expenses" together just because they are expenses that are on the books of the company. I'd like to think about it in terms of capital costs versus operating costs. What should we expect? I think we all have in mind that there will some kind of gross check from historical costs. With respect to capital costs, I think given the guidelines that were laid down by the Joint Board, we need to

expect that the costs that — capital costs that the models will be producing will be below what we see embedded. And for a variety of reasons, the two most important are that one, as I understand it, an instantaneously constructed network is being prescribed. And just by its very nature, that is going to be a cost which embodies all of the latest technology, put in all at once it will be below previous costs. But number two, engineering — these are going to be based on engineering considerations. And as was discussed yesterday by Bill Taylor, it's just a fact of life that engineering estimates of cost are by their very nature a lower bound on actual real world costs which you get when you try to produce products. And there's a long literature on that in terms of comparing econometrically estimated costs versus engineering costs. The engineering costs are, with rare exception, realized in practice.

So, I would expect the models giving capital costs would be on the low side relative to experience. On the other hand, as been discussed, I would be much more suspicious of operating costs from these models that were an order of magnitude or a large percentage below what is current best practice, because operating costs are not embedded in the same sense that capital costs are. Companies are experiencing productivity gains year after year and the way they've been cutting staff and implementing new procedures, I think that we should be suspicious of a model which would give operating costs that were substantially below what's currently being incurred.

David Krech, FCC

Thank you. Dan, you get the first shot at rebuttal here.

Daniel Kelley, Hatfield Associates

I guess a quick point on Dr. Christensen — it's freshest in my mind. It is true that operating costs have been falling over time and maybe this is where we can marry the econometric and the engineering approach. Let's forecast that trend over time and see what we end up with. I think what you'll find is as new technology has been put in place in the network, operating expenses have declined. But we're not done yet. This is a forward-looking economic model based on network technologies that would be employed today. That's the standard that the Commission is using here and I think it's the appropriate standard.

Second quick comment, Mr. Callahan talked about the biases in the two models and there's a difference between biases and differences. There are clearly differences and I think Mr. Callahan thinks there's a bias because on both of those charts, NYNEX doesn't do as well under the Hatfield Model as it does in BCM. It's a difference, but not a bias. Finally, in terms of validation of the model, we've heard from several of the speakers here about issues in previous versions of the model that have gotten attention. Many issues have gotten attention and they've been resolved and Version 3 addresses them and that's progress, that's validation.

David Krech, FCC

Thank you. Ben.

Ben Johnson, Ben Johnson Associates

I think, again, to reiterate a point that was made repeatedly yesterday, and I think it ties in to what we're talking today, that we need to keep clear the distinction between the input values and the models themselves. Many of these input values we should be able to agree upon the truth, that's it's not simply a matter of opinion. There are certain labor costs that companies are incurring, and we should be able to find that. It takes a certain amount of time to do these activities; we should be able to find that. There is a certain sharing percentage taking place; we should be able to find that. So, one of the first things we need to do is have the parties commenting, trying to give us the best knowledge they have. The parties have a great deal of money at stake. Giving us accurate input data will close these gaps, I think, and then help us understand whatever remaining discrepancies exist between what all the models will probably be producing at that point and the embedded costs.

David Krech, FCC

Thank you. Rick.