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PUBLIC UTILITIES COMMISSION

STATE OF OHIO

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In the Matter of the Application of Cincinnati Bell Telephone Company for Approval of a Retail Pricing Plan Which May Result in Future Rate Increases and for a New Alternative Regulation Plan.) Case No. 96-899-TP-ALT

- - -

Hearing Room 11-D
Borden Building
180 East Broad Street
Columbus, Ohio 43215
Thursday, March 18, 1999

Met, pursuant to assignment, at 10:00 o'clock a.m.

BEFORE:

Dwight Nodes, Attorney-Examiner.

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VOLUME IX

- - -

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P R O C E E D I N G S

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Thursday, March 18, 1999

Morning Session

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Thereupon, CoreComm Exhibit Nos. 2 and 3 were marked for purposes of identification.

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THE EXAMINER: Let's go on the record.

Mr. Petrilla, you want to call your witness?

MR. PETRILLA: Yes, your Honor. Do you want to swear him?

THE EXAMINER: I will.

MR. PETRILLA: Okay.

(Witness placed under oath.)

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PETER GOSE

of lawful age, being first duly placed under oath, as prescribed by law, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. PETRILLA:

Q. Would you please state your name for the record?

A. Peter Gose.

Q. What is your address, Mr. Gose, business address?

A. Business address is 15938 Ledge Road Drive, Parker, Colorado 80134.

Q. Who is your employer, Mr. Gose?

A. I am employed by Quantitative Solutions.

Q. Okay. And how did you come to be a witness in this case?

A. My former firm that I previously worked for, Competitive Strategies Group, was approached in the summer of 1998 by a law firm here in Columbus, Arter & Hadden I believe the firm was, to see if they could -- to see if Competitive Strategies Group could provide some assistance with respect to cost study review. And Competitive Strategies Group accepted that engagement and assigned me to it.

Q. And Quantitative Solutions is the successor to Competitive Strategies Group?

A. Not necessarily. Competitive Strategies Group is still a going concern. Quantitative Solutions is merely an offshoot of that firm.

Q. Okay. You have before you two pieces of testimony, one marked Exhibit No. 2 and one marked Exhibit No. 3 for CoreComm. Can you please tell us what Exhibit No. 2 is?

A. CoreComm Exhibit No. 2 is a copy of my direct testimony filed in this case, including what appears to be all exhibits.

Q. Okay. Mr. Gose, if I asked you the questions that are in that piece of testimony today, would you give the answers that are reflected in that testimony today?

A. Yes.

Q. All right. Do you have any corrections to make to that testimony?

A. To my direct testimony, Exhibit 2, I have just a few.

Q. Okay. Could you please tell us what those are?

A. Certainly.

I believe we've already touched upon the first correction, which would be my employer on Page 1, should now read "Quantitative Solutions" instead of "Competitive Strategies Group".

The second correction is on Page 11, Footnote 7, the state that this case was issued in was inadvertently omitted, that state is Maryland.

On Page 44, Line 10, it should read, "further adjustments made,". And on Line 21 of that same page the first sentence there should read, "the current CBT rates"; there was a transposition of two words.

Finally on Page 86, there is a section under a question on Line 5 that says, "Do you consider your price squeeze analysis to be conservative", and this was a section that was inadvertently left in the testimony. My price squeeze analysis has nothing to do with services that would require loop conditioning, so that portion of my testimony may be ignored.

THE EXAMINER: Well, which portion? Just to be clear for the record.

THE WITNESS: Certainly, Judge. Line 5 through Line 12.

Those are all the corrections that I have to what's been labelled as CoreComm Exhibit 2.

BY MR. PETRILLA:

Q. All right. Mr. Gose, you also have before you CoreComm Exhibit No. 3. What is that?

A. Exhibit No. 3 is a copy of the supplemental testimony that was filed in this particular case.

Q. Okay. If I asked you the questions that are contained therein, would you give the same answers?

A. No.

Q. All right. Do you have any corrections to make?

A. Yes. During the deposition in this particular instance we noted a few items that were incorrect, and Mr. Hart asked me if I would be making corrections to those items. I have done that and I have filed those corrections, both on ZIP disk with

Mr. Hart and with the staff. And the answers that would be contained in those files on that ZIP disk would be different than the answers listed on Page 3, Line 4.

Q. All right. What would be the answer that you would give to the question on Lines 1 through 3 of that page?

A. On -- The answer that I would give would simply be that the numbers would be different.

Q. Okay. Do you have any other corrections to make?

A. Not to the supplemental testimony, no.

Q. Okay.

THE EXAMINER: Well, for the sake of the record, why don't you give us the numbers since nobody else has the ZIP disk?

THE WITNESS: Certainly. The number for -- that would replace the $7.55 would be $7.12; the number that would replace the $9.63 would be $9.21; and the number that would replace the $10.84 would be the $10.52.

THE EXAMINER: Those are the only changes to your supplemental testimony?

THE WITNESS: That's correct.

THE EXAMINER: Okay.

MR. PETRILLA: All right. I make the witness available for cross.

THE EXAMINER: All right. Mr. Hart.

MR. HART: Thank you, your Honor.

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CROSS-EXAMINATION

BY MR. HART:

Q. Mr. Gose, the firm you work for, Quantitative Solutions, that was a firm -- that firm was formed by Mike Starkey; is that right?

A. That's correct.

Q. And Dr. Gus Ankum also works for that firm?

A. He does.

Q. And I take it your firm is simultaneously providing assistance to MCI and to CoreComm in this proceeding?

A. That would be a fair statement based upon the fact that those three colleagues are associated together.

Q. And not only are you associated together, you have collaborated in your work here, haven't you?

A. To some extent, yes.

Q. And you have largely borrowed from Mr. Starkey's testimony, haven't you?

A. I have borrowed from Mr. Starkey's testimony with respect to certain areas he has discussed regarding DLC, and I have also borrowed in my test- -- or, from his testimony with respect to a Excel-based model to recalculate the loop model of CBT.

Q. Okay. And you frequently even cite to his testimony in yours, don't you?

A. In some instances, yes.

Q. And you occasionally cite to Dr. Ankum, as well, don't you?
A. I believe in one or two instances that would be the case.
Q. Okay.
THE EXAMINER: Let's go off the record a minute.
(Discussion held off the record.)
THE EXAMINER: Back on the record.
MR. HART: Thank you, your Honor.
BY MR. HART:
Q. Am I correct you have also relied upon analysis done by John Hirshleifer and Richard Lee?
A. That's correct.
Q. And that would be in the topic of cost of money and depreciation?
A. Yes.
Q. You have not, yourself, performed any calculation of the cost of money, have you?
A. No, I have not.
Q. Am I correct that there are several issues in this case where MCI and CoreComm have taken different positions?
A. With respect to the recreating a loop model, that may be a fair statement.
Q. Okay. One of those examples is whether or not the West 7th central office should be separated as a band by itself; is that right?
A. That's correct.

Q. CoreComm has performed its analysis as if West 7th Street was still part of Cincinnati Bell's Band 1, hasn't it?
A. That was correct, yes.
Q. And MCI has been advocating that it be broken out separately?
A. That's my understanding.
Q. And I take it from a number of Mr. Petrilla's questions during Cincinnati Bell's case, that CoreComm's primary interest is to serve residential customers; is that correct?
A. That's correct.
Q. And is MCI's focus here to serve the business market?
A. I can't speak to what MCI's focus is.
Q. Are you familiar with the -- the way Cincinnati Bell originally weighted loops between business and residence?
A. In the original loop cost studies we received, there were some original weightings -- and those original weightings, I'm certain we'll have an opportunity to discuss the loop model at some future point today -- but originally Cincinnati Bell provided certain weightings and, in fact, the corrections that I made to my supplemental testimony today, one of those corrections takes into account those original weightings.
Q. Okay. I understood from a letter Mr. Petrilla sent me that you reversed the weightings in Band 3; is that right?
A. I think that was in the original model that was sent out, yes.

Q. Okay. In the numbers you just gave us a moment ago, what loop weightings did you use for those?

A. For Band 1 I used a business weighting of 79.63 percent, and a residence weighting of 20.37 percent. I used a -- for Band 2, business weighting of 22 percent and a residence weighting of 78 percent. And for Band 3 I used a business weighting of 17.06 percent and a residence weighting of 82.94 percent.

I would supplement my answer by stating that I received in discovery from CBT current weightings at a future point or at a future period and I contemplated using those weightings in the model, but I thought it more appropriate, since I was drawing information from the loop model at a specific period of time for loop investment and those type of items, to keep the time periods consistent and use the investment data for the loops as well as the appropriate weightings at that time period together instead of alternating two different time periods.

Q. Let me show you a letter that Mr. Petrilla sent me, it's dated February 25th, where he discusses how you did the weightings. And tell me if that's accurate as to what you did.

A. That was accurate when the X on the composite sheet -- or let me -- was in the column labelled MCI, which was titled a "Loop is a Loop", and for the original studies, that's correct, that's what I did. But for what was sent out and for the purposes of the rates that I correct in my supplemental

testimony today, I have used the weightings that I just discussed with you.
Q. Do you have a printout of that latest run?
A. No, I do not.
Q. So we're not able to look at it on paper and see exactly what weightings are in there?
A. No. I can provide that at a later date.
Q. Well, let's move on.
So your testimony is the numbers you gave us today are based on the actual weightings that Cincinnati Bell is proposing?
A. They're based upon the actual weightings that Cincinnati Bell originally filed with its loop cost study. And with -- I should clarify that. In the loop cost study, in the back of it there were what they call loop samples and it was based upon the weightings of those loop samples.
Q. Okay. It was not a straight 80/20, it was the actual numbers?
A. That's correct.
Q. Okay. Am I correct you don't have any engineering background?
A. That's correct.
Q. And you've never actually worked for a telephone company, have you?
A. No, I have not.

Q. Could you tell us what your field of expertise is that you claim you have?
A. Certainly. First of all, in order to get your arms around something of this magnitude it would be helpful to know I have a background in regulation. I spent six-and-a-half years with the Missouri Public Service Commission. And in that capacity I was serving in a position entitled federal communications analyst.

And the notices of proposed rulemaking that came out of the Federal Communications Commission, I was responsible for drafting the Commission's position and then taking that to the agenda, getting their changes and getting those comments filed. So from that standpoint, I was required to gain a very general and broad knowledge of the telecommunications industry; which included visits in fieldwork, watching plant be installed, included visiting central offices, those type of things.

Educational background certainly kind of comes into play. I have a Master's degree in business administration. And when you're working with models of this magnitude, it helps just to have some type of a quantitative ability to develop large spreadsheets and integrate all the different pieces together to perform sensitivity analyses, if you will.

And, in fact, by taking the recreated loop model that Mr. Starkey originally developed and augmenting it to be able to look at not only Band 1, but Bands 2 and 3, as well, I would say that's an area of expertise I have with respect to being able to

develop and utilize those type of quantitative models.
Q. Okay. So your expertise is quantitative analysis?
A. With respect to developing spreadsheet models and also with respect to my broad regulatory experience that I gained by working at the Missouri Public Service Commission.
Q. Do you claim any expertise in finance?
A. I have an undergraduate degree in finance.
Q. Are you an expert in determining cost of capital in regulatory proceedings?
A. That's not something I have testified to solely where I came into a proceeding and said the cost of capital should be X" percentage; it's not an area of expertise that I have.
Q. Have you ever done a cost of capital analysis for a telephone company?
A. Not for regulated purposes, I -- as I stated in my deposition, while I was employed at the Missouri Public Utility Commission I took a course designed specifically for employees of the Commission, and that course was taught by the finance faculty at the University of Missouri and it was entitled "Modern Finance Theory for Regulated Firms". And, in fact, as a homework assignment in that particular case, I had to calculate the cost of capital for Southwestern Bell.
Q. That's the extent of what you've done in that field?
A. Yes.
Q. Are you an expert on depreciation?

A. No, I am not.
Q. Are you an expert on network design?
A. No, I do not have specific expertise there.
Q. Are you an expert on construction?
A. No.
Q. Now, in your testimony on Page 2, Line 4, you indicate that CoreComm plans to construct its own facilities in the future; do you see that?
A. Yes.
Q. Wouldn't that make CoreComm a competitor to Cincinnati Bell for facilities?
A. It's my understanding, and the reason why I included that section in my testimony, was because it's my understanding CoreComm intends to provide its own switching facilities. Whether or not CoreComm plans to duplicate loop plant to customers, I do not know. That's -- If that's their plan and intention, that has not been shared with me.
Q. Are you aware that several other new competitors plan to build their own switches, as well?
A. That's my understanding.
Q. In fact, there's at least three switches that have already been built in Cincinnati, aren't there?
A. From your statements in the deposition, I'm aware that Time Warner has one, the other two I'm not familiar with.
Q. Do you know whether MCI has a switch in Cincinnati?

A. I've never inquired of them as to whether ---
Q. Do you know whether TCG has a switch in Cincinnati?
A. No, I do not.
Q. Do you know of anybody else that has a switch in Cincinnati?
A. No.
Q. Do you know of any telephone company that plans to buy switching from Cincinnati Bell?
A. On an unbundled or resale basis?
Q. Unbundled.
A. Not at this time.
Q. Are you aware of Time Warner's plans to use its cable system for loops?
A. Only from what I have read in the newspapers.
Q. And you're aware from the newspapers that AT&T is a partner with Time Warner now?
A. That's correct.
Q. Would that provide facilities-based unbundled network element competition to Cincinnati Bell?
A. That could possibly be, although it would be based upon an entirely different type of technology.
Q. It's a different technology, but it provides the same service, doesn't it?
A. It could, yes.
Q. In fact, through the course of history, different

technologies have come along and replaced older technologies, haven't they?

A. That's fair.

Q. And coaxial cable fiber networks are one of those types of technologies that have emerged, aren't they?

A. While those are the types of technologies that are emerging and replacing, say, for instance, telecommunications provisioning of voice-grade service, new technologies are also emerging with respect to telecommunications-type plant replacing that same coaxial cable.

I cite an example, U.S. West has a project in Phoenix, Arizona which they call VDSL, or very high digital subscriber line, where they can provide television service over the twisted pair right into your home. So it cuts both ways.

Q. Now, CoreComm's not totally a residential company, are they?

A. In terms of your question, do you mean do they provide service to business customers, as well?

Q. Right.

A. That was my understanding in speaking with the folks from CoreComm, that if a business customer requests service, they will accommodate them if they can, but their primary focus, once again, is to serve the residential market, who are, in the competitive world, what I see as a vastly underserved segment of the market.

Q. Let me show you a document.

MR. HART: If we could mark this as CBT 15, I believe.

THE EXAMINER: That sounds right.

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Thereupon, CBT Exhibit No. 15 was marked
for purposes of identification.

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BY MR. HART:

Q. Mr. Gose, this is a printout that I made on Saturday from CoreComm's Internet site. Have you ever seen this before?

A. I have neither seen this document nor their Internet site, in fact. At the time I produced my testimony, I attempted to visit their Internet site and they didn't have one at that time.

Q. Okay. When did you try to do that?

A. Back in December.

Q. Okay. Now, you see the first sentence there, it says, "CoreComm is a full-service telecommunications company that offers local residential and business telephone service"?

A. Yes.

Q. And third question, the answer says, "CoreComm offers residential and business service throughout Ameritech Ohio territory and is activity pursuing all markets in Ohio"; is that right?

A. That's correct.

Q. Now, if CoreComm did choose to focus its marketing towards

residential customers, that's its own business choice, isn't it?
A. Yes, it is.
Q. Now, you mention on Line -- starting on Line 7 of Page 2 that CoreComm has an interconnection agreement with CBT.
A. Yes.
Q. Have you read that yet?
A. No, I have not.
Q. Do you think it would be helpful to read that to understand the relationship between CoreComm and CBT?
A. Quite frankly, no, because -- and that's the reason why I have not bothered to take the time to gather that document and read it, because focus at this proceeding is to look at costing and pricing of TELRIC rate elements for a future period. It wasn't my intention to go back and determine what we're operating underneath today because obviously at the conclusion in this matter, that's going to change.
Q. Do you think the terms of that agreement will change because of this case?
A. Once again --
MR. PETRILLA: Objection, your Honor. He just said he doesn't -- he's never read the agreement. How can he -- the would be speculating to answer that question.
THE EXAMINER: Well, it's kind of a mixed bag. It does somewhat call for a legal conclusion, but on the other hand, the witness, in his prior answer, seemed to indicate that

that was going to be the result; so I'm going to overrule the objection.

MR. PETRILLA: All right.

THE EXAMINER: You can answer if you can.

THE WITNESS: Could I have the question read back, please?

(Question read back as requested.)

THE WITNESS: With respect to every term in that agreement, once again, not having seen the interconnection agreement, I can't speak knowledgeably to every -- or, any of the terms in it, but I would be extremely surprised if at the conclusion of this matter that every cost and price -- or, every price in the interconnection agreement as it presently exists will be precisely the same to the penny at the conclusion of this matter.

As an example, collocation. If that's within the agreement, if a foot of collocation space is 2 bucks per square foot in the interconnection agreement -- once again, I do not know what it is -- I would be very surprised even based upon the cost studies that I have seen submitted from CBT in this instance if it were to remain at that particular price.

BY MR. HART:

Q. Well, let's not talk about prices. I'm asking you whether you expect the business terms between the parties to be different as a result of this case.

A. It's certainly possible that some of them may change.
Q. Now, you made a correction during your direct testimony to your -- a section of your testimony that talked about a price squeeze analysis; do you recall that?
A. Yes.
Q. Now, your price squeeze analysis makes a comparison between retail revenues and the expected costs of providing service; is that fair?
A. That's correct.
Q. Now, isn't the retail price of telephone service irrelevant to determining the TELRIC cost?
MR. PETRILLA: Your Honor, objection. Is he calling for a legal conclusion or whether or not it is legally irrelevant?
MR. HART: He claims to be an economist and an expert in TELRIC. I'd like to see what he thinks TELRIC means.
MR. PETRILLA: Your Honor, having seen the debates a week and a half ago about whether retail rates are relevant or not, all of those debates were conducted on a legal level. And I need to know, is he asking a legal -- for the witness to make a legal conclusion about the relevance of retail rates?
THE EXAMINER: Well, as I recall, I think all of those objections were overruled, weren't they? I'll overrule the objection.
THE WITNESS: Once again, after that, I apologize, can

I have that question read back?

(Question read back as requested.)

THE WITNESS: When I'm determining the TELRIC cost, say the local loop for instance, the present retail price is not an input into those cost studies to make that determination. However, I think it's exceedingly relevant with respect to a competitive firm attempting to gauge whether or not they will have success in entering the market and to compare the retail revenues of an incumbent local exchange company and use those retail revenues as a surrogate for what the competitive company thinks it will be able to earn is, I think, certainly a very worthwhile calculation to go through.

BY MR. HART:

Q. It may be worthwhile for one purpose, but it's not worthwhile for actually setting the TELRIC costs, is it?

A. While it's not worthwhile for using as an input in setting TELRIC costs, I think it is a good sanity check, for lack of a better term, to see if the sum of the TELRIC costs are substantially higher than the retail rate, especially the retail rate that the incumbent presently charges.

Q. And, in fact, what you might have proven is that residential service standing by itself is not a profitable proposition; is that right?

A. That's possible, yes.

Q. So if CoreComm would choose to limit its revenue stream to its residential customers, that might just be a bad business plan; isn't that right?

A. At the present level of TELRIC costs and prices as proposed by CBT, that could certainly be the case.

Q. Let's turn to the topic of cost of capital. At the top of Page 5 you cite some language out of the Local Service Guidelines about how cost of capital is determined; do you see that?

A. Yes, I do.

Q. And that indicates that the currently authorized rate of return should be the starting point?

A. That's correct.

Q. Did you start there?

A. I think earlier today I testified that I did not perform a calculation to estimate the cost of capital; I merely reviewed what Mr. Hirshleifer did.

Q. Did he begin there?

A. With respect to whether or not he began there, I do not know; all I can say is what I read in his testimony.

Q. If Mr. Hirshleifer's analysis had resulted in a cost of capital of 12 percent, would you go along with that?

A. If I found all the inputs to look logical, say for instance if Mr. Hirshleifer, in calculating that 12 percent cost of capital, used a cost of equity of 8 percent, I would think, wait a minute, in today's current market environment is that a reasonable estimate -- I'm sorry, a -- let me back up, strike that -- cost of debt, say, of 8 percent, and I said, "In today's market conditions is 8 percent reasonable?" I would do much the same as I did in this instance. I would go get a copy of some financial record, in this instance I got copies of Moody's Bond Record to see if the cost of debt as advocated by Mr. Vander Weide in the neighborhood of 7.8 was within the realm of reason.

And as of November of '98, the average for, I think it was, Aa bonded indebtedness for telecommunications companies was in the range of 6.8 percent.

So if, having looked at Mr. Hirshleifer's hypothetical analysis as you have proposed and it came up to be 12 percent, and I looked at all those components and by virtue of using those components 12 percent looked reasonable, then, yes, I would agree. But I presently agree with his cost of capital that he has presently calculated.

Q. Have you verified all the steps he took?

A. No, I have not.

Q. How do you know if he did it right?

A. I am relying upon his expertise. I would be surprised if the firms that use him would continue to employ him if he was of the habit of making miscalculations.

Q. What are you adding to the value of his analysis in your testimony?

A. I am, by and large, simply just concurring that I think the methodology that he has used is correct. I support it, once again, via different information, that Moody's Bond Record information that I just discussed, he used a different source; so to that extent I am corroborating that, perhaps, he did use the right -- or, a very reasonable figure in his cost of debt component of his calculation.
Q. Would you agree that a smaller firm would have more risk and, therefore, a higher cost of capital than a larger firm?
A. Are the two firms serving precisely in the same field, offering the exact same menu of goods and services?
Q. You tell me whether that makes a difference. If it does, give it to me both ways.
A. The original question, as I recall it, was whether or not the size of the firm being large or small would make a difference in the cost of capital. And I will say that if they are offering the exact same menu of goods and services, size would matter.
Q. It would?
A. Yes, it would.
Q. Okay.
A. And if they were offering a different menu of goods and services where a small firm -- let's say a small firm only offers plain old telephone service, whereas the large firm offers telephone service, plus Internet service, plus

long-distance service, plus cellular service, plus directory services and an entire panoply of other services, then they can diversify the risk of one of those components across the entire gamut of all those goods and services that they offer.

So that would also certainly be a factor in looking at risk, which ultimately would play a role in estimating the cost of capital.

Q. But if both those firms were that panoply of services, you think the smaller firm would have a higher risk?

A. Yes. I would say that could potentially have a higher risk because if the smaller firm were to lose 10 percent of its customers, that could have a far greater impact on overall revenue to the company than the large firm.

Q. Now, did Mr. Hirshleifer's analysis add any kind of a premium for the size of the firm?

A. If it did, I don't recall it.

Q. And what types of comparable firms did Mr. Hirshleifer use when he estimated the DCF cost of capital for Cincinnati Bell?

A. It's my recollection that he used other regional Bell operating company or holding companies.

Q. And what's the relative size between a regional Bell operating company and Cincinnati Bell?

A. I'd say the preponderance of them in terms of access lines are substantially bigger. I think, though, in his analysis he also used Southern New England Telephone Company, which while yet probably bigger than CBT, is more in line with the same size.

Q. Isn't that part of SBC now?

A. Today it is, but -- Yes.

Q. Okay. So did Mr. Hirshleifer make a mistake when he used RBOCs as his proxy group but made no adjustment for the size of Cincinnati Bell?

A. I wouldn't say so because I would consider what -- I would consider Cincinnati Bell to be what you traditionally consider a tier one local exchange company, substantially high revenues; and I'm hard pressed to think of many services that any of those regional Bell operating companies offer that Cincinnati Bell doesn't.

In fact, Cincinnati Bell offers, I think in many instances, some more progressive services; the ZoomTown, the asynchronous digital subscriber line product, that's a service that not many -- or, few of the RBOCs really offer, especially as CBT has made claims on their web site that they will be offering that to the entire subscribership in the very near future. I'm hard pressed to think that many of the regional Bell operating companies can make that same claim.

Q. Is the risk of a firm different depending on the geographic market it serves?

A. I hesitate here for just a moment because I'm trying to picture in my mind CBT's geographic market in comparison to other firms, if you'll bear with me for just a moment.

Before I answer a couple questions, when you say "geographic difference", are we talking specifically of population density, or are we talking topography and terrain differences?

Q. Well, let me rephrase it because you're apparently not understanding my question.

Does a company that serves a single metropolitan market face a different risk than a firm that serves, say, 20 metropolitan markets?

A. If it does, I'm hard pressed to think how that would be.

Q. Well, isn't the single-market firm more vulnerable to competition than the one that serves 20 markets?

A. I don't know that I would agree with that because the one that serves 20 markets, and let's use Southwestern Bell as an example, obviously they serve Kansas City and St. Louis, but they also serve Chicago -- or they will upon the completion of a merger with Ameritech -- through their PacTel properties they serve the State of California. And the competitors that may enter in the State of California they may never see in St. Louis, Missouri; the competitors they see in St. Louis, Missouri they may never see in California.

So I would say the multi-population-center firm has a greater chance of seeing more competitors, albeit different ones.

Q. But it's less at risk of losing a large share of its market, isn't it?
A. I don't know if it's any less at risk than any other firm.
Q. Would you agree that one of the purposes for using the TELRIC pricing methodology is to simulate prices that would prevail in a competitive market?
A. I would agree that the purpose of the TELRIC pricing methodology is to develop a forward-looking cost, and if that forward-looking cost was similar to what might be found in a competitive market, then the answer could possibly be yes.
Q. And, in fact, one of the purposes for TELRIC is to provide economic signals to other firms as to whether or not it's rational for them to enter; is that right?
A. That's fair.
Q. And if the TELRIC costs are too low, that would, would it not, discourage firms from building their own facilities?
A. Yes, those -- if the TELRIC costs were, in fact, too low, firms would generally opt to purchase those unbundled network elements that were priced lower than what they could provision -- self-provision themselves. But there's also a converse to that as well, and if the TELRIC costs are priced too high, that's sending a totally different economic signal that uneconomic duplication or bypass of the network is a viable alternative at that point as well.
So that's why the TELRIC methodology, to get exactly to the

proper cost, is extremely important.
Q. So what you're kind of doing is figuring out at what price it makes sense for a firm to build their own facilities?
A. I think -- I don't know that I agree with that. I think the overall -- or, underlying rationale for the TELRIC methodology simply is to determine what would it cost me on a forward-looking incremental basis to provide the total quantity of a particular element.
Q. Okay. And to do that, the long-run aspect of TELRIC makes us assume we're starting from scratch, doesn't it?
A. By and large. There are a couple of items that are mandated -- or, at least one the FCC mandates that you have to maintain, but beyond that, yes.
Q. So if I am trying to determine what the cost would be for me to do that, first what I have to do is design a network that will serve the area I'm wanting to serve, correct?
A. Yes.
Q. And then you have to determine what will that network cost?
A. Yes.
Q. And then you have to determine what it will cost me to raise the capital that I need to finance that, correct?
A. Yes. I think the FCC contemplates a forward-looking cost of capital.
Q. And if this is to be replicative of the costs that a firm would experience to enter, wouldn't it have to reflect the cost

of capital that that firm would experience if it was going to try to build a network?

THE WITNESS: Can you read that back? That was kind of lengthy.

(Question read back as requested.)

THE WITNESS: I think that's a fair statement, and I would preface that by saying that a firm such as CBT, presently there is -- or, can be calculated a cost of capital.

And I don't believe that CBT -- today, if you were to calculate the cost of capital for CBT today -- is no longer in the business of building out or continuing to augment, supplement its network; obviously, today, CBT is constructing new plant.

By virtue of what I saw in the CBT web site, it says, hey, if you want ZoomTown, this ADSL product offering, it's not available to everybody, but we're taking steps to build out our plant to make sure we pass and can provide that service to everybody as quickly as possible. Whatever that takes from a technological, engineering standpoint, I'm not certain, but obviously, CBT today is continuing to improve and augment its network.

BY MR. HART:

Q. Well, but that's not starting from scratch, is it?

A. In many instances, it possibly could be with respect to if you had, old lead unshielded cable that was extremely, you know, loaded with loading coils, et cetera, you had to go out and totally replace that, I'd call that completely starting from scratch.

Q. Well, let's stick with cost of capital. You can talk about ZoomTown when maybe that's relevant to a technical issue.

But what I want to know is whether the TELRIC theory requires us to determine what the cost of capital would be for a competitive firm to enter the network leasing business.

A. Could you rephrase -- or, repeat that?

Q. I'll ask that it be read.

(Question read back as requested.)

THE WITNESS: I can give no better definition of TELRIC theory than what the FCC says, and in Section 51.505 of the rules, Subparagraph (b)(2) -- I'll give you a moment to get there with me.

BY MR. HART:

Q. Go ahead.

A. Okay. It says, "Forward-looking cost of capital. Forward-looking cost of capital shall be used in calculating the total element long-run incremental cost of a network".

Q. Let's explore what that means. Doesn't it mean that I have to cost a network, determine how much money I need to raise to build that, determine how long it's going to be in service so I know how long I have to recover the cost of that, and go seek financing to pay for that?

A. I would agree with everything up until the last segment where you said, "and go seek financing to pay for that" because if we're going to determine what it costs to build this forward-looking network, we might go to Fujitsu and ask, "Today, what does the FACTR system for integrated digital loop carrier cost", and we'd know that in the future. And that's an input into these cost studies.

But it doesn't seem to me that an input into these cost studies is where the firms such as CBT actually go to the capital markets and says, "You know, I was thinking about spending $300 million to totally recreate my network from scratch; what would it cost me?"

Q. Isn't that a forward-looking cost of capital?

A. Well, that could be. I've never seen any analysis where those type forays or inquiries into the market were done.

Q. Well, and TELRIC isn't reality, either, is it; it's an economic theory?

A. Yes, a hypothetical one.

Q. So hypothetically, don't we have to figure out how much it would cost me to raise that money if I was going to do that?

A. Again, I'm hard pressed to think why raising that money would be substantially different than what would -- what it cost to -- for CBT to raise money today.

I think, as I recall in reviewing Mr. Mette's deposition, that he talked about a new central office being constructed somewhere in Kentucky. Obviously, money had to be raised to finance the construction of that office and --

Q. That wasn't the entire network, was it?

A. It was a sizable amount of money, I would think.

Q. Now, you told us earlier that the cost of capital should reflect the cost that an entrant would have to go into this business. If you strictly used Cincinnati Bell's cost of money today, aren't you pricing the cost of money for a monopoly?

A. I wouldn't entirely agree with that because if you were looking at Cincinnati Bell as a whole, there are competitive services, wireless services, Internet services are certainly competitive, directory services, there are alternatives to directories out there. So I wouldn't necessarily agree that it's a monopoly as a whole.

Q. Do you know what competitive circumstances Mr. Hirshleifer considered when he developed his cost of capital?

A. As I think back to my reading of his testimony, that's been quite some time, I don't recall him specifically outlining it. That's not to say he didn't; I just can't recall.

Q. Do you know if he did any kind of analysis of the competition?

A. No, I do not.

Q. Are you familiar with the theory of a discounted cash flow?

A. I have used it as a finance student and also in the course that I took through the University of Missouri to calculate the cost of equity.

Q. Can you tell us what the general formula is?

A. Yes. Cost of equity equals dividends over a certain number of periods, divided by the price, and then you add a growth rate to that.

Q. So it would be the dividend yield plus the growth rate?

A. Yes.

Q. So if a company had a dividend yield, let's say, of 2 percent and a growth rate of 13.4 percent, does that mean the discounted cash flow cost of equity is 15.4?

A. Can you repeat that for me, please?

Q. Sure. Two percent dividend yield plus 13.4 percent growth. What's the discounted cash flow for that?

A. What's the discounted cash flow, or what is the cost of equity that would be calculated based upon that?

Q. Right.

A. Before I accept that hypothetical, I would want to know a couple of things. Number one, how that growth was calculated -- that growth factor was calculated.

Q. Analysts' projections.

A. Ad infinitum, or for a specific period?

Q. How long do analysts give growth projections?

A. Generally, five years.

Q. And then after that, you really don't know what the growth will be, do you?

A. You -- In many instances, it's generally considered the tapered end of growth of the U.S. economy.
Q. Who generally considers that?
A. Again, that was just from the readings that I had in that course from the University of Missouri.
Q. Do you know how the Ohio Commission has traditionally done its DCF analysis?
A. In the Local Service Guidelines, they talk about a five-year study, so I would presume it was on a five-year basis.
Q. Have you reviewed the Staff Report in this case?
A. A long time ago.
Q. Do you recall how they did the DCF analysis there?
A. No, I do not.
Q. Did they taper it down to the economy?
A. I don't recall.
Q. All right. You wanted to know that. Now, what else do you need to know to answer the question?
A. I think that would be sufficient.
So in that instance, if your dividend yield was 2 percent and your growth rate was 13.4, you would add the two together; but, conversely, if your growth rate was 7.5, then you add those two together, as well.
Q. Okay. Now, are you familiar with the capital asset pricing model?
A. Yes.

Q. Tell me how that works.
A. Sure. Let me just....
Capital asset pricing model --
Q. Could you tell me what you're looking at to answer this?
A. Sure. These are just some notes that I had taken when I reviewed Mr. Hirshleifer's testimony.
Q. Okay. Could you answer it without looking at those notes, or are you able to?
A. I could, I just want to make absolutely certain about it.
Q. Okay. Go ahead.
A. But the CAPM model essentially takes a risk-free rate and then adds to that, considers a beta plus, and then they multiply that times what I think is like a market risk premium to come up with the cost of equity.
Q. Okay. Now, in that type of an analysis, which, if any, of those inputs are specific to a company?
A. The beta, the estimate of risk is specific to a company. As I recall, betas are -- and I have never calculated beta, but as I recall, beta is calculated looking at a regression analysis comparing the company to, say, a broad range of companies, perhaps like the S&P 500.
Q. It's a correlation between stock price and the market, isn't it?
A. Yes.
Q. And the higher the beta, the higher the risk?

A. Correct.
Q. And in the capital asset pricing model, isn't the beta the sole measure of risk?
A. There's also the market risk premium that you would add on at the end or you would multiply times the beta.
Q. That's a fixed number, isn't it?
A. Yes, it is.
Q. Okay. So the only thing that varies from company to company is beta?
A. I agree.
Q. And beta, under that theory, is what measures the market risk?
A. Correct.
Q. Okay. Now, do you agree with the capital asset pricing model, that that's an appropriate model?
A. I think that the method that Mr. Hirshleifer has used, and it was certainly the method that was instructed to me by the faculty of the Finance Department of the University of Missouri, is that in calculating the cost of equity such as this, there are -- Let me back up.
In calculating the discounted cash flow methodology and calculating a capital asset pricing cost of equity, CAPM cost, and adding the two together is -- or, average, I'm sorry -- averaging the two together is a good way to go about doing that.
Q. Well, but for you to average those, don't you put some

credence in the cap asset model?
A. You put credence in that, you would put credence in the discounted cash flow model.
Q. So do you agree, then, that beta is an appropriate risk measure?
A. I think if it were deemed to be wholly inappropriate, there wouldn't be a number of firms out there solely in the business -- or, not solely in the business, but in the business of analyzing the relationship of stock price to the market and coming up with those betas.
Q. Now, if beta is an appropriate measure of risk, wouldn't it also be an appropriate screening mechanism to select the comparable firms that you would use in the DCF model?
A. I don't think so because what you -- Say, for instance, if you had a beta of 1.1, and that's where we're kind of looking in that range for screening, and you did a sort of the betas at the S&P 500 and you were trying to get those in that 1.1 range, you might come up with firms that are engaged in wholly different activities than the provision of telecommunications service.
Q. I thought you said earlier that beta was the sole measure of risk in the cap asset model.
A. I'm not sure what that has to do with my answer.
Q. Well, wouldn't it be a good proxy for the risk of companies for discounted cash flow purposes, as well?
A. You've completely lost me there. Using beta for a proxy

for DCF?

Q. Well, it's a measure of risk, right?

A. Where would you apply that beta than in the discounted cash flow model?

Q. Well, in the discounted cash flow model aren't you trying to find firms of comparable risk to see what their cost of capital is and use those to determine the firm that you're looking at?

A. You do want to look at surrogates.

Q. And wouldn't an appropriate surrogate be then to find companies who have similar betas?

A. I would say companies that had similar betas that were also engaged in exactly the same type of service.

Q. Okay. So if we were going to look at comparable companies in the same business, you think the best comparables would be those that had similar betas to the company you're looking at?

A. I would say there would be other items that I would want to factor in as well, such as general size, the method in which the company is owned and operated.

Q. How would size play into that?

A. If you had a publicly traded, very small company, let's say for instance that TDS or Century, a telephone holding company, but the companies that they hold are small, rural, local exchange companies that could have an effect.

Q. Well, small, rural telephone companies aren't very much at

risk for competition, are they?
A. Yes, in many instances they have been.
Q. Are they at risk as much as urban companies are?
A. Some of them. There's some companies in the State of Wyoming that have lost a great deal of their customers to the neighboring ILEC.
Q. To ILECs, not CLECs, though?
A. The ILEC operating as a CLEC in the territory.
Q. Did Mr. Hirshleifer take into account the beta of the comparable companies when he did his DCF analysis?
A. When he did his DCF analysis, I couldn't speak to that. With respect to his CAPM analysis, he did look at betas and he looked at betas from a couple of different sources. One was BARRA, I think, something of that nature. I don't recall the other one.
Q. Now, did the number that he actually recommended, was that based on the BARRA betas, or was that based on some other form of beta?
A. It was based on some other beta, but he did do a sensitivity analysis in his testimony to see what that was.
Q. And the betas he used were historical betas, weren't they?
A. I think so, yes.
Q. And BARRA betas are forward-looking betas, aren't they?
A. That's beyond my knowledge.
Q. Did the BARRA -- The result with the BARRA beta come out

higher?
A. I think so, yes.
Q. Now, you cite in your testimony a couple places where Dr. Vander Weide's analysis has not been accepted. Are you aware that Massachusetts has accepted his analysis?
A. No, I'm not. With respect to that portion of my testimony where I listed five other states that have rejected certain portions of Dr. Vander Weide's analysis, I merely inquired of the staff of Swidler, Berlin, Shereff, Friedman what jurisdictions had rejected that, and in fact, it was my understanding from just doing some support work, I never filed testimony for them, but doing some support work for AT&T in Chicago, in talking to some of their folks who indeed did file the testimony, that they thought that Dr. Vander Weide's analysis had not been accepted anywhere.
So because of that I never inquired as to if you can do some research and provide me any states where it has been accepted. Be very interested to see that Massachusetts decision.
Q. So these citations came from Mr. Petrilla's law firm?
A. That's right. They obviously have access to West Law and those types of thing, they have a better capability to perform searching than I do.
Q. See, that part is their work product not yours?
A. They provided me with that information, yes.

Q. Now, do you understand that Mr. Hirshleifer used what's called a weighted average cost of capital?
A. Yes.
Q. And that's where you take the cost of debt and you merge it with the cost of equity?
A. Yes.
Q. And you have to determine a capital structure to do that, right?
A. That's correct.
Q. Now, would you agree with me that in a forward-looking cost of capital, that the appropriate way to weight debt and equity is according to market values?
A. No, I would not. I would --
Q. Do you disagree with Mr. Hirshleifer on that, then?
MR. PETRILLA: Objection, your Honor, lack of foundation. That question is basically when did you stop beating your wife. If he wants to establish why Mr. Hirshleifer wrote his testimony, let's do that first without asking the question with a premise in it.
THE EXAMINER: Well, I would hope that he's somewhat familiar since he's offering a supporting recommendation regarding the testimony. If he can't answer and he needs a reference, then he can ask for it. Overruled.
BY MR. HART:
Q. Have you read Mr. Hirshleifer's deposition?

A. No, I have not.
Q. So you don't know what his position is on whether market or book structure is the appropriate way in a forward-looking environment; is that fair?
A. My understanding of market or book was his weighting or averaging of the two.
Q. Have you ever asked him which was the appropriate one to use?
A. No, I have not.
Q. Have you ever talked to him before?
A. No, never.
Q. Ever met the man?
A. Never personally.
Q. Can you tell us how the book capital structure is calculated. How do I know what the percentage of debt and equity are?
A. First I would determine what my dollar value of my debt is, provide a listing of all the outstanding debt offerings that I have, and then for the equity component, let's hypothetically say that that was $25 debt, then I would, for the equity component, go to the balance sheet and look at the common equity section of the balance sheet, and if that's expressed on a per share basis, then multiply that times the number of shares to get the book value of the common equity.
And let's say that comes out to be $3 a share and I had 25

shares, so $75.

So at that point then, using those simple numbers, we'd have a debt-to-equity ratio, or a capital structure of 25 percent, 75 percent equity.

Q. Okay. Now, when you say you'd look at the balance sheet, would you look at the financial reporting of the company to get that?

A. You could take their financials and look at that.

Q. Okay. And I take it for a company that's publicly traded, you would look at something like an Annual Report?

A. Yes.

Q. Now, a company like Cincinnati Bell that's in the telephone business, does it keep books differently for regulatory purposes than it does for public financial accounting purposes?

A. Yes, it may.

Q. Okay. And do you know why they are different?

A. Generally because of SEC requirements.

Q. What does the SEC require?

A. That's the extent of my knowledge. With respect to SEC as opposed to generally accepted accounting principles, I would be hard pressed to give you the differences.

Q. Okay. Is there a difference in depreciation treatment between regulatory accounting and public financial accounting?

A. Yes, you would use a tax life convention where another might use a straight line or something.

Q. Well, would you use tax life or would you use economic lives?
A. Again, I've stated with respect to which changes or methodologies you would use, it's not something I do on a regular basis.
Q. Do you know whether Cincinnati Bell uses higher depreciation rates for financial accounting purposes than it does for regulatory purposes?
A. No. No, I don't know one way or the other.
Q. Well, in the next section of your testimony you make recommendations on depreciation, don't you?
A. To use the FCC prescribed lives.
Q. Do you know what Cincinnati Bell uses for its own financial reporting purposes?
A. For its retail operations?
Q. Yeah.
A. No, I do not.
Q. Well, let me ask you to assume that it uses higher depreciation rates for retail purposes, or for financial accounting purposes. Would that yield a different debt-to-equity ratio than if the books were capital and regulatory basis?
A. It could, yes.
Q. For example, if there's a greater depreciation under public accounting, that would yield lower equity, wouldn't it?

A. Yes.

Q. So if I went to Cincinnati Bell's public balance sheet to determine the debt-to-equity ratio, I'm going to get a higher debt ratio than if I looked at regulatory books; is that right?

A. Would you repeat that?

MR. HART: Read it.

(Question read back as requested.)

THE WITNESS: By their public balance sheet, you're referring to the Annual Report? That's possible, yes.

BY MR. HART:

Q. Okay. Now, in this case you're advocating taking the Annual Report book values as an input into the cost of capital, but when we get to depreciation you're advocating that we use regulatory depreciation; is that right?

A. That's partially right.

Q. You see an inconsistency there?

A. Not really. And again, because the FCC specifically, for costing purposes, prescribes economic lives and they consider those economic lives to be forward looking. Personally, I do not.

Q. Why shouldn't we use the FCC's depreciation rates in determining the book capital structure, then?

A. Again, that's -- I don't believe I'm the witness that would best give you that answer.

Q. I should ask Mr. Hirshleifer?

A. Yes.
Q. You understand that using the financial reporting depreciation to determine the book value depresses the amount of equity?
A. If using financial depreciation methods on a more expeditious basis depreciates the assets, then the equity would correspondingly be lower.
Q. So by doing that we have lowered the average cost of capital, haven't we?
A. To some extent, but once again, that's where I see a value in using an amalgam or averaging, if you will, of the market capital structure and book capital structure much the same as Mr. Hirshleifer has done.
Q. But if we use regulatory book structure instead of market book structure, you'd get a higher average, wouldn't you?
A. Possibly.
Q. Now, if one was to do a forward-looking measurement of the cost of capital, what is the calculation of the debt-equity ratio then?
A. We're still talking about the book value?
Q. No, I want to use forward looking now. Book value is embedded; you understand that?
A. I do.
Q. Okay. What's the forward-looking measure?
A. To determine the capital structure?

Q. Yeah.

A. I think it's a combination of both the market value, which is forward looking with respect to where the stock prices are today when calculating the equity component, plus the book value. And I say the book value because a firm such as CBT obviously is in a position to leverage itself to a much greater extent than other types of firms, and to elaborate further, certain firms such as biotech firms, software-type companies, are often very thinly capitalized on the debt side, their present bond transfer of their capital structure is equity. But when you have a firm such as CBT with very regular revenue streams, they obviously can use a larger portion of debt in their capital structure than other types of firms can.

So with respect to what is a forward-looking capital structure, I think you have to factor in two items: Number one, how easily can the firm incorporate debt into its operations; and, secondly, take a look and see where the market is today; and that's why I agree with Mr. Hirshleifer's averaging of the two.

Q. Well, he averaged book with something else, right?

A. With a market capital structure.

Q. And I'm trying to ask you to tell me how we calculate the market structure. You haven't really told me that.

A. I didn't realize that you had asked me that question.

Q. Okay. Can you answer?

A. Sure.

Once again, start out like I did with the book side. Let's say our -- gather a listing of all our outstanding debt issuances, and once again, in this instance let's say it's $25, and the next instance let's say that we have a stock price now instead of $3, the market price is $6, but we still have 25 shares outstanding. Then that would be -- Actually, I didn't do the math quite right.

Let's say that equals 50. I'm just trying to do this so the math is easy. So we have debt issuances of $50 and we have a market stock price of $6 and 25 shares outstanding for $150. Then your capital structure in this instance, once again, would still be 25/75.

Q. Are you making any adjustment to the amount of the debt issuance to reflect market conditions?

A. Not in that instance, no.

Q. Shouldn't you?

A. You could; but once again, as I said before, I think Mr. Hirshleifer is the more appropriate individual to make that decision.

Q. What if the debt was issued at an interest rate of 8 percent and the market is now only paying 6 percent, is that debt worth something different?

A. It could be, yes.

Q. How would I figure that out?

A. Again, that's not a calculation I'm accustomed to making.
Q. I should ask Mr. Hirshleifer?
A. Yes.
THE WITNESS: Can we take just a one-minute restroom break?
THE EXAMINER: Let's go off the record.
(Discussion held off the record.)
THE EXAMINER: Back on the record.
BY MR. HART:
Q. Mr. Gose, on Page 16 of your testimony, you refer to Dr. Vander Weide's cost of debt proposal of 6.94 percent. Do you see that?
A. Correct.
Q. Is that a reasonable figure?
A. It's very much in line with the 6.88 percent that I gathered from the Moody's Bond Record of November 1998.
Q. Does that mean it's a reasonable figure?
A. It means it's in line.
Q. It's not unreasonable, then, is it?
A. No.
Q. Now, would you agree that most companies that pay dividends pay them quarterly?
A. Yes.
Q. And that in order to model the company's cost of capital, wouldn't you most accurately do that if you assumed the

dividends are paid quarterly?
A. Again, my criticism in my testimony of the quarterly discounted cash flow model stem from the fact that wherever I had used it I had always used the annual method.
Q. And you mentioned the one homework assignment you had from your course in Missouri. When else have you done this?
A. Once again, just in academic pursuits, quite some time ago.
Q. Okay. My question to you originally was to most accurately model the way companies pay dividends should the model reflect quarterly dividends as well?
A. Personally, I believe that the annual DCF model is an appropriate method; but, once again, I'm not an expert and this is not something I do on a daily basis, coming up with an actual true number for the cost of capital. If I were, I would have calculated a number, and that's something I would defer to Mr. Hirshleifer.
Q. Well, your testimony specifically criticizes Dr. Vander Weide's use of the quarterly model, and I guess I'd like to have you tell us what your expertise is to say which is more accurate.
A. Once again, I think that my previous answer would be the same, that the annual discounted cash flow model that I've used in the past appears to do an adequate job.
Q. Let's assume a company pays a dividend of 25 cents each quarter for a total of a dollar. Does it cost more present

value for that company to pay the dividend quarterly than if it held its money and paid the dollar at the end of the year?
A. Well, the dollar at the end of the year, would potentially be less than the three quarterly payments.
Q. Because if it waits and pays the dollar at the end of the year it has the use of all that money for the whole year, doesn't it?
A. That's correct.
Q. And if it pays dividends quarterly, it has the use of that money for shorter periods of time, doesn't it?
A. Agreed.
Q. And the quarterly model will yield a higher cost of capital, won't it?
A. Likely, yes.
Q. Now, under a TELRIC theory which says everything is avoidable, wouldn't a company that was going to build and finance a network have to go to the capital markets and raise capital?
A. In reality, yes, but as you, I think, correctly pointed out some time ago, that TELRIC really is hypothetical or theoretical in nature.
Q. And when a company goes to the market to raise capital, it has flotation costs, doesn't it?
A. On initial offerings.
Q. You have to pay lawyers and accountants and financial

analysts and investment bankers, there's a whole bunch of people standing in line to be paid?
A. Underwriting-type personnel, yes.
Q. And to properly calculate a forward-looking long-run cost of capital we need to take those into account, don't we?
A. Again, as I've stated in my testimony, I don't believe that flotation costs are appropriately included in the cost of capital.
Q. Do you know how the staff report treated that issue?
A. Again, it's been a long time since I've reviewed that, so I'm hard pressed to recall. I seem to recall that they thought it might be appropriate to include them.
Q. Now, if a stock is issued at, say, $100 a share but $5 of those proceeds go out as expenses, hasn't the company only received $95?
A. That's correct.
Q. So isn't the cost of receiving that $95 higher than if I had gotten the whole $100?
A. That presumes two things. That presumes, number one, that stocks may, in fact, trade in a commission-free environment at some point in the future, and that assumes that we will be financing the -- using the initial offering only, whereas that might not, in fact, be true. There may be some equity capital available to do construction, whereas equity capital that presently trades on the market today --

trading today at $100. There's no such thing that I've discovered, I'd like to know if there is, of a commission-free trading environment, and let's presume that you have to pay 3 percent on all your initial commissions you transact. If I want to go and buy a share of CBT, hypothetically trading at $100, what I'm saying is that I'm willing to pay $97 for that share of CBT, paying $3 essentially for my commission.
Q. You're actually paying 103, aren't you?
A. That's one way to look at it, but you could also look at it --
Q. Well, I'm sorry. The person who is selling the stock has to receive the $100, don't they?
A. Correct.
Q. And the person buying it has to pay the $100 plus the $3, in your example?
A. But in my example on a personal basis, what I would be valuing is, okay, I've paid 103, but essentially I bought the stock for 100, but I'm paying $97 for it and the $3 is my commission. That's the way I would look at it.
Q. Not if the trading price is 100, is it?
A. If I want to factor out that commission, that $3 that I've paid, then I am going to personally value that at $97.
Q. How much do you have invested?
A. 103.
Q. So the 103 is only worth 97?

A. As it relates to the share of CBT stock, if I go back and I can transact it -- trade it without a fee and I get the same $100 for it, but I paid $3 to transact the trade initially, I have a net of $97.

Q. Where does the extra $3 come from? You pay 103, right?

A. That's right.

Q. Why is it only worth 97?

A. Because when I sell it, if I can sell it without a commission, then I'm saying my net personally is I paid 103 for it, but I only get 100 for it, so I need to factor out that $3. So from that 100 that I got for it I would factor out the $3.

Q. Do you know of any financial analyst who takes into account brokerage commissions in determining cost of capital?

A. Presently, no.

Q. Is this something you just came up by yourself -- came up with by yourself?

A. Once again, I, in asking the staff of Swidler, Berlin, Shereff and Friedman, asked them if they were aware of any jurisdictions that had not allowed flotation costs to be included.

Q. What's that got to do with brokerage commissions?

A. Again, I equate the two in my personal analysis.

Q. I understand you do. I'm asking you if you know of anybody else who does this for a living who says we need to take into account brokerage commissions when we determine the cost of

Q. Well, that would be embedded equity capital, wouldn't it?
A. Actually, I would say it would be forward looking because it would be trading at the market price.
Q. It's not long run, is it?
A. I don't know.
Q. Well, in long run, everything is avoidable, isn't it?
A. Either avoidable or a future business decision.
Q. Now, isn't it also true that when we determine the cost of capital we need to do that from the company's viewpoint?
A. You do it from the company's viewpoint, but a number of the inputs require market inputs that are largely driven by investors, not the company.
Q. Well, a company doesn't pay brokerage commissions when the public trades its stock, does it?
A. The public pays those brokerage commissions.
Q. So if we're to look at the cost of capital to the company, those brokerage commissions are irrelevant, aren't they?
A. For looking at the cost of capital for the company, let's say we're using the discounted cash flow method, and we're going to take the stock price and divide it by the dividends and add the growth component, we would be looking, in my estimation, on a forward-looking basis of what's the stock trading at today, and that -- the price that the stock is trading at today is dependent upon what investors in the market are willing to pay.
Let's say, using your example, that the stock price is

capital.
A. I think I previously answered I'm not presently -- No, I don't know of any.
Q. Okay. Now, don't different brokers charge different rates?
A. Yes, they do.
Q. I can go on the Internet and trade as much stock as I want for $10, right?
A. 10, 25, right.
Q. Or I go to Merrill-Lynch, I might pay a higher commission?
A. Three percent, something like that.
Q. How does the stock market take that into account, that different people are paying different commissions?
A. I think the market takes that into account by what each personal investor is willing to pay, those type of analyses like I just said I would personally go through.
Q. So the price goes up and down depending on which brokers are buying that day?
A. That's one of the components.
Q. Where have you read that theory?
A. What's that?
Q. Where have you read that theory, that the price of stock fluctuates depending on which broker is buying?
A. I don't know where I've read that theory, by if Merrill-Lynch goes out into the market and all of a sudden on behalf of someone is going to acquire -- Say, for instance, I

think on behalf of Berkshire Hathaway recently where they went out and acquired a larger portion of American Express, in that instance the stock price is probably going to fluctuate when the market sees a large trade of that nature being transacted.

Q. Is that because of what the commission on that trade cost?

A. It's probably more in the line of the magnitude of the transaction.

Q. Because the public doesn't really know what commission that trade incurred, do they?

A. No, probably not.

Q. Now, on Page 18 in your footnote, you make a note that Cincinnati Bell hasn't issued any stock recently.

A. That was my understanding.

Q. That's irrelevant to TELRIC, too, isn't it?

A. I wouldn't really say so because they -- Cincinnati Bell -- won't have to issue any stock or may likely not have to up and through the conclusion of this particular proceeding.

Q. In TELRIC theory, it won't?

A. I think -- What I'm discussing here is in actuality.

Q. So sometimes we can look at actuality and other times we have to look at the theory?

A. I don't believe I said that.

Q. Well, are we going to do cost of capital according to TELRIC theory or are we going to do it according to actuality?

A. Again, I would say we're going to look at the cost of

capital on a forward-looking basis.
Q. Well, is that theoretically or actually?
A. I think it could be both.
Q. Are both the same number?
A. Again, not having calculated those numbers, I wouldn't be able to say.
Q. Now, you're familiar with the Telecommunications Act where it says that the incumbent is entitled to a reasonable profit?
A. I don't have my copy of the Act with me. Could you point me to what --
Q. Well, I think it's in Section 252, I believe, in the pricing section.
A. If you could show it to me.
Q. Maybe I can find it in the rules. Well, let's not waste the time looking for it, but are you familiar with that concept, that the TELRIC rates may include a reasonable profit?
A. I believe the TELRIC rates do include a reasonable profit through the inclusion of the cost of capital as it flows through the annual charge factors.
Q. Now, is that profit in the cost of debt or is it in the cost of equity?
A. Well, let's hypothetically say that profit is 10 percent. That 10 percent is going to be determined based upon a weighted average of the cost of debt and the cost of equity.
Q. Well, who receives the profit, if there is one; do the debt

holders get that or the equity holders?
A. The equity holders would. The debt holders, of course, would hope to see the payments on the bond indebtedness issuance they hold from the earning of the company and the remainder of those earnings considered profit would be distributed to the equity holders.
Q. In fact, the payments to the bond holders are fixed.
A. Correct.
Q. So if the company has a bigger profit, it goes to the equity holders, and if it doesn't earn a profit, the loss goes to the equity holders, right?
A. That's correct.
Q. Would you agree with me then that the reasonable profit is determined at the equity level?
A. I think what we just discussed is a correct method in which the earnings of the company flow through, but that reasonable profit, in all likelihood, might not be a reasonable profit at all if it weren't for the debt component of that 10 percent.
Q. Let me ask you a hypothetical. Let's assume I have a firm that I own all the shares of that firm but I didn't invest any money, just formed it and put a dollar in as minimum capitalization, and I'm able to find a bank that's willing to loan me money to finance everything, a hundred percent debt financed. How do I determine my reasonable profit?
A. You would first factor in the revenues that you earned

while running that enterprise, and then remove all your fixed and variable expenses, one of which would be the debt payment, or the debt service to the bank, and anything remaining when you subtract from the revenues that you had earned would be your profit.

Q. Now, when I'm setting my cost of capital in a proceeding such as this, and I have no equity but I am the equity owner, what rate of return should be set to set my cost of capital?

A. Again, it would need to be a rate that would recover all your expenses.

Q. Okay. So I've got debt?

A. Any taxes you have, and your reasonable return on investment.

Q. And what is that reasonable return on investment?

A. That would be very largely dependent upon the type of enterprise you have and however you -- through that bank loan, what your interest rate might have been.

Q. Let's assume I go into a proceeding like this and I have my bank loan that's 8 percent, so my debt component is 8 percent, when I do my weighted average cost of capital, what do I put in as my cost of equity?

A. To determine your weighted average cost of capital?

Q. Right.

A. What I would advocate in this proceeding is, once again, the averaging of the discounted cash flow model and the capital asset pricing model to determine that cost of equity component and install that.

Q. With zero dollars of equity invested in the business, how do I use either one of those models?

A. I thought you said in this proceeding here.

Q. Well, in a proceeding like this. In a proceeding like this, if I had a firm with that kind of a capital structure, how would I value the equity? If you don't know, just tell me that, we'll go on.

A. This is not something I've contemplated.

Q. Let's go on to the topic of depreciation.

Would you agree with me that the same depreciation rates should be used for retail and wholesale purposes?

A. I've previously testified that I don't even know what depreciation rates are used on CBT's retail operations, but for purposes of this proceeding, once again, if we go to 51.505 of the FCC rules, specifically tells you what depreciation rates you should use. Paragraph B, subParagraph B3, it says, "Depreciation rates used in calculating forward-looking economic costs of elements shall be economic depreciation rates".

And I think that's what's relevant in this proceeding.

Q. My question is whether they ought to be the same at wholesale and retail. Can you answer that question?

A. I would think they should be.

Q. Okay. In fact, that's what you told me at your deposition,

isn't it?
A. Right.
Q. Now, does Cincinnati Bell use economic lives for its retail purposes?
A. My deposition, I think I told you I didn't know.
Q. Well, in your testimony on Page 20, Line 4, you claim to know that it uses the prescribed lives in retail operations. Do you see that?
A. Yes, I see that.
Q. Now, you don't really know one way or the other, do you?
A. Perhaps made a presumption on Line 4 there.
Q. Okay. If I were to tell you that, in fact, Cincinnati Bell uses the economic lives it's proposing in this proceeding for its retail cost studies, you wouldn't have any basis to contradict that, would you?
A. Not at all.
Q. Now, on Page 20 at the top of that page, you say that CBT seeks to use depreciation lives developed by Dr. Larry Vanston. Is that really true?
A. That was what I understood from Mr. Coogan's testimony.
Q. Have you been following the hearing, reading transcripts?
A. Just a couple of them; Mr. Mette's and Mr. Meier.
Q. You didn't read Mr. Bolte's testimony?
A. No, I have not.
Q. So you're not aware that Mr. Bolte actually deviated from

Dr. Vanston's lives?
A. No, I'm not.
Q. And in many cases the lives he proposed were longer than those in Dr. Vanston's studies?
A. I'm not aware of that, but if that's the case, then in many instances that would move them closer to the recommendation that I made in my testimony with respect to using the FCC's prescribed lives.
Q. Okay. So again, at the top of Page 20 where were you presumptive in your conclusion that CBT used Dr. Vanston's lives?
A. I would think not at the time that the -- I wrote the testimony, because at the time I wrote the testimony all I had was Mr. Coogan's testimony; I wasn't even aware that Mr. Bolte would be a party to the proceeding.
Q. Well, have you looked at Cincinnati Bell's depreciation study that's been made an exhibit in this case?
A. Yes, I have a copy of that.
Q. Did you ever compare the lives that Dr. Vanston recommends?
A. In fact, I believe I did do that.
Q. Are they identical?
A. I don't recall, but I did go through the -- I did go through virtually every account type of that study.
Q. Do you have any idea what the FCC based its decision on when it prescribed lives?

A. In my deposition, we, I think, discussed this same issue, and at that time I said that I had had an opportunity to sit in on some depreciation meetings as a member of the Missouri Public Service Commission when one of the chief depreciation personnel from the FCC, Miss Fatina Franklin, F-a-t-i-n-a, gave some presentations.

But with respect to these forward-looking lives, I was -- obviously wasn't privy to exactly how these were developed.

Q. So you really don't know how the FCC developed the lives that it prescribed in 1997, do you?

A. No. But the reason why I once again advanced those as being correct was based upon Section 51.505 of the FCC rules which state that you will use forward-looking economic depreciation rates, and if the FCC developed that rule and they developed what they consider to be forward-looking depreciation rates, I would accept those.

Q. You're accepting a lot at face value there, aren't you?

A. It's a large acceptation, yes.

Q. In fact, it did that two years ago, right?

A. The -- In the represcription?

Q. Yes.

A. Yes.

Q. So things might even be shorter now?

A. They could be shorter or longer.

Q. Has the FCC ever lengthened one of Cincinnati Bell's

depreciation lives?
A. Not having, you know, a series of prescriptions, I couldn't say.
Q. Well, you reviewed Mr. Coogan's testimony that Mr. Bolte adopted, haven't you?
A. Yes.
Q. And didn't he have a chart in there that showed that?
A. You refresh my recollection, yes, but I'm hard pressed to recall the numbers on it.
Q. In fact, historically, doesn't Cincinnati Bell have an account on the books called a reserve deficiency amortization?
A. Likely they do.
Q. And what's the purpose of that?
A. As lives may be lengthened or shortened, the excess would be, as I understand it, recorded in that particular account.
Q. So you've got to make up lost time for when depreciation lives were longer?
A. Sure.
Q. Now, on Page 23, you say, "CBT has not offered any empirical evidence to demonstrate its lives are justified". Do you see that?
A. Yes.
Q. What about the 1997 depreciation study?
A. Again, I did review that study, but with respect to a side-by-side formal documentation of that study to

Mr. Vanston's, I didn't perform that type of an analysis.
Q. Well, wasn't that a form of empirical evidence to demonstrate the proposed lives were justified?
A. To that, I'd have to say I don't know.
Q. You didn't even mention that study in your testimony, did you?
A. I don't believe I did.
Q. And you haven't given us any basis in your testimony to dispute anything that was claimed in that study, have you?
A. With respect to why depreciation lives would be different for certain types of plant, I really haven't, but I think certain examples could be cited.
Q. But you didn't put anything in the testimony?
A. That's correct.
Q. Let's go on to the next topic of ACF.
I take it here you're relying upon Mr. Behounek's expertise to review the ACF?
A. Not only Mr. Behounek, but also Dr. Ankum, as far as he traveled to Cincinnati to sit with the CBT personnel to physically rerun the studies with different inputs.
Q. Have you personally done anything to review the annual charge factors?
A. I had happened to, but as I understood, there were problems with respect to license agreements of the ECONCOST MODEL with its creator and so that's why it was not until very late in the

proceeding that, in fact, Dr. Ankum was able to go down to Cincinnati to look at that. If that could have been provided to me electronically, I would have certainly been more than willing to take the opportunity to sit down and review that model, but again, not having it available, I couldn't do it. And to make an additional trip to Cincinnati just to do that wasn't deemed cost effective, that's why Dr. Ankum was the only one that went there.

Q. Now, did your counsel provide you with a copy of Cincinnati Bell's answer to Staff Data Request 52?

A. Yes, I think I have a copy of that.

Q. And doesn't that explain in detail the various components of the annual charge factors?

A. While it might explain those in detail, finding it valuable to always maintain an air of professional skepticism to want to look at something other than just explanations on paper and see the inner workings and how that works, that would have been very desirable.

Q. Well, you understand that the ECONCOST model only provides a portion of the annual charge factor?

A. I do now, and I learned that just prior to and after my -- just prior to and after the deposition of Dr. Ankum.

Q. And if you'd have studied the answer to Data Request 52, wouldn't you have understood that?

A. Once again, I don't know, that was a long time ago, and it

was such a voluminous document.
Q. Well, you understand that there is a capital cost portion that the ECONCOST model calculates?
A. That's right.
Q. That's based on cost of money, depreciation and taxes?
A. Yes.
Q. And in that data request response was a description of exactly what the inputs of ECONCOST are, wasn't there?
A. Once again, I'll accept subject to check that there was. It's been a very long time since I've reviewed that document.
Q. And there's another component to the ACF totally separate from ECONCOST for maintenance expense, right?
A. That's -- I now understand that, yes.
Q. And that's what Mr. Behounek was looking at, isn't it?
A. That's correct.
Q. He wasn't looking at ECONCOST, he was looking at maintenance expense?
A. Correct.
Q. And in addition to ECONCOST and maintenance expense, do you understand there's a third component for direct administrative expense?
A. Yes.
Q. And you haven't even commented on that part, have you?
A. No, I have not.
Q. And there's a fourth part beyond that?

A. For OSS.
Q. Yes. Now, when you went back and recalculated ACFs, you totally ignored direct administration and OSS, didn't you?
A. Correct.
Q. So the ACFs that you put into your revised loop model only included revised ECONCOST runs and Mr. Behounek's maintenance expense factors?
A. That's correct. As I stated in the deposition, I thought the OSS cost would more cleanly and logically be recovered elsewhere.
Q. Did you show us where they should be recovered?
A. I think I -- in the deposition I stated in just a separate element.
Q. Did you show us where we should recover direct administrative expense?
A. No, I didn't. The reason why I did not include that is I presumed that that could be recovered in the shared and common cost factors.
Q. Well, you didn't even know about it at the time you did your runs, did you?
A. Not at the time I did my runs, no, but that's why I did not include it when I did the revised.
Q. Well, it needs to be accounted for, doesn't it?
A. Direct administrative?
Q. Yes.

A. Again, I wouldn't deny that it needs to be accounted for, but it's more appropriate accounted for in the shared and common factor that would be --
Q. Well, is anyone in this case recommending that direct administrative expenses be moved from annual charge factors into common costs?
A. Not to my knowledge.
Q. In fact, isn't the common costs are set by stipulation in this case?
A. At 13 percent.
Q. And that didn't include any direct administrative expense, did it?
A. With respect to the -- what the initial 20 percent included, or that 13 percent included, I've never seen any analyses to show what that does include.
Q. Okay. Now, do you know what Mr. Behounek did?
A. With respect to his regression analysis to look at over time, the maintenance expenses and trend those into what he considered to be a forward-looking maintenance expense.
Q. Did he do it correctly?
A. Again, that's not something that I, with respect to maintenance expenses, calculate on a daily basis, so I accepted Mr. Behounek's analyses. And the reason why I accepted it is because Mr. Behounek is very well respected with respect to looking at common costs and annual charge factors across a

number of states and that, in fact, he's even in orders in TELRIC proceedings received praise for -- he's been singled out for the work he's gone in those areas.

Q. Did you review any of his work just as a check?

A. I followed the math across the columns, but with respect to the regression analysis, that would have taken a substantial amount of time, and as I mentioned in the deposition, you asked me how much time I had devoted to this case, and as I stated to you then, my involvement has been very limited with respect to as long as this case has transpired, I, perhaps more than anyone else, been involved in it the shortest period of time and have not had an extremely large amount of resources to spend upon this.

Q. So you're adopting Mr. Behounek's work without verifying whether it's accurate yourself?

A. That's correct.

Q. Do you know if he used the appropriate data to do his regression analysis?

A. I would presume that he did, but I couldn't speak to say "yes" or "no".

Q. Do you agree with his averaging together of the trends on the various accounts that he trended?

A. Once again, I just accept that. That's something that I'm not familiar with.

Q. Would you recommend straight averaging accounts that have

varying amounts of investment or would you weight those by the amount of investment in each account?
A. I don't know.
Q. You don't know one way or the other?
A. How would I do it?
Q. Right.
A. No, because I've never performed that type of analysis.
Q. Should the data that's used in the regression analysis be stated on the same terms?
A. I think in the deposition I said that you perhaps want to state in constant, like 1998 dollars, or something of that nature.
Q. What about making sure that the same nature of expenses are included from year to year?
A. That would appear to be reasonable. Once again, though, obviously, Mr. Behounek had a lot of time invested in this. That wasn't a luxury I had to be able to do that.
Q. So you don't know whether he normalized his data on the same terms or not?
A. Correct.
Q. Now, on Page 24 of your testimony you cite to the FCC's productivity factor. Do you see that?
A. Yes.
Q. Has the FCC ever recommended that productivity factors be used in TELRIC proceedings?

A. Not specifically, to my knowledge. As I peruse the FCC rules, I don't see where they say precisely, especially this particular 6.5 productivity factor, but the price cap as it relates to interstate access charges, if you will, however those interstate access, how do you provide that, do you provide it via the loop to the interexchange carrier? I think the answer is yes.

So if the FCC states that a 6.5 percent productivity factor is appropriate in that instance, I think it would also be appropriate in a forward-looking economic model.

Q. Didn't the FCC reject price cap concepts in TELRIC?

A. Once again, if they did, I'm not familiar with where that is in the rules.

Q. Okay. So you don't know whether your recommendation is consistent with the FCC order or not?

A. I presume it to be, but I can't say for certain.

Q. Now, do you know if the FCC has ever determined that Cincinnati Bell has had a 6-1/2 percent productivity gain?

A. To this point, I don't think so. In fact, I think I attached as an exhibit to my testimony some correspondence between Cincinnati Bell and the FCC with respect to how that was eventually to be played out.

Q. Well, it's not actually correspondence, it's a motion for reconsideration, wasn't it?

A. I think that's correct, yes.

Q. And that's something that your counsel gave to you to include in your testimony?
A. They did, yes.
Q. Do you understand why it's there?
A. It was of a legal nature that they just asked me to include.
Q. So you don't know what point it's trying to make?
A. Other than CBT has an objection to the 6-1/2 percent productivity factor.
Q. Do you know if any CBT data was considered by the FCC when it established a productivity factor for access price caps?
A. No, I was obviously not involved in that.
Q. Now, when Mr. Behounek did his regression analysis, was that a form of productivity analysis?
A. I would say it could be because over time he was looking to see if maintenance expenses were static or whether they were going up or down.
Q. Now, you wouldn't apply both Mr. Behounek's recommendations and a productivity factor, would you?
A. If at some point in the future it was deemed that the 6-1/2 productivity factor was applicable to CBT and they were able to apply that, those maintenance expenses that would be trended into the future might even be, to some extent, smaller, so I think you could.
Q. You would add them together?

A. No, you would probably take the effect of the 6-1/2 percent as it applies to the maintenance expenses on a going-forward basis.
Q. Now, that's if the FCC some day says it applies?
A. That would be my understanding.
Q. Which it hasn't done yet, has it?
A. I don't believe so.
Q. Okay. Now, if we were to assume that Mr. Behounek's analysis was correct, wouldn't that be a better measure of Cincinnati Bell's actual productivity gain?
A. It could be, yes.
Q. More accurate be using a standard based on the entire industry, wouldn't it?
A. I think that's fair, but if that standard based upon the entire industry was deemed applicable to a firm and was applied then, what Mr. Behounek did, if he was to do it several years into the future and look back, those numbers could change to some extent.
Q. Okay. Now, I think the last data Mr. Behounek used was 1995; is that right?
A. I'm trying to picture in my mind his chart. I think that's correct.
Q. You would recommend, wouldn't you, that that chart be updated with more current data?
A. I think -- Yes, and I think I recommended that in the

deposition as well.
Q. And hasn't Mr. Mette testified that that is what he proposed to do when the compliance runs are done for these cost studies?
A. I believe.
Q. And have you seen in Mr. Mette's testimony where he actually showed such a calculation?
A. I may have. Right now, I don't recall it.
Q. Have you ever studied his calculation?
A. Probably not. I've probably not tried to recreate it.
Q. Can you tell me whether his approach is correct or not?
A. Once again, I said -- I testified that I can't recall it.
Q. So you don't know whether Mr. Behounek or Mr. Mette are more accurate, do you?
A. Once again, using Mr. Behounek's information, feeling very comfortable with the accolades that he's received from other state commissions with respect to this type of work, I felt very comfortable using his numbers.
Q. And you don't have a clue as to what Mr. Mette did?
A. I don't recall it.
Q. When the trendings are redone, should the 1995 data remain in the database?
A. In my deposition I stated that there could be certain anomalies in one year or another that could in one way or the other impact that trending, and so as I recall, I believe, and I

would continue to recommend, that perhaps ten years of data would be a viable alternative. So if we were to rerun those at the end of this year, 1990 through 1999 information, if that's what was available and deemed appropriate, then you would leave the '95 in.

Q. Okay. I'm curious, on Page 25, Lines 9 and 10, you seem to recommend eliminating 1995 data. I'd like you to clarify what you mean by that.

A. I believe what I meant by that was if that was all we had to go on, then that should be eliminated and just going -- information on a going-forward basis, but if we are going to use a regression analysis as Mr. Behounek has done, then additional information, I believe, strengthens the result that you would receive from that regression analysis.

Q. So we should leave '95 in and add even more years to that database, right?

A. If we can get currently available information.

Q. Okay. Now, in the next question and answer you state here that "CBT uses a single maintenance ACF for all elements". Could you tell me what the basis is for that statement?

A. Again, this was produced prior to my knowledge that the maintenance ACF was not in the ECONCOST model, so that was perhaps erroneously based upon my assumption that there was one maintenance factor in the ECONCOST model.

Q. Well, there's not even a -- the ECONCOST factor isn't even

the same for each element, is it?
A. No, it's not; but once again, I mistakenly understood that that was all taken care of in the ECONCOST model, which I now know to be incorrect.
Q. Well, the ECONCOST model has a different capital factor for different unbundled elements. What was the basis for your statement that there was a single maintenance ACF?
A. Once again, just in discussions I had had respecting what we presumed to be in the ECONCOST model.
Q. Did you ever talk to Mr. Behounek about his analysis?
A. No, I have not.
Q. Would you agree now that you have had an opportunity to review this further, that Cincinnati Bell actually does have individual maintenance factors for different plant accounts?
A. It would appear that way, yes.
Q. And those aren't calculated by ECONCOST at all, right?
A. That's what I now understand.
Q. Okay. Now, on Page 26 you recommend that OSS costs should be recovered in a competitively neutral manner. Is there anything in the FCC order that says OSS costs should be recovered in a competitively neutral manner?
MR. PETRILLA: Objection. It sounds like it's calling for a legal conclusion.
THE EXAMINER: Overruled. If you know.
THE WITNESS: I think I know where the paragraph is.

Paragraph 525 of the FCC Local Competition Order states that, "In all cases, however, we conclude that in order to fully comply with Section 251(c)(3), an incumbent LEC must provide upon request nondiscriminatory access to operation support systems functions for preordering, ordering, provisioning, maintenance, repair and billing of unbundled network elements under Section 251(c)(3) and resold services under 251(c)(4)".

BY MR. HART:

Q. Were you finished?

A. Yes. I thought there was something in that paragraph with respect to the competitive neutrality, but I don't find it there.

Q. There's not even anything about cost recovery, is there?

A. Not directly, no.

Q. Okay. Anything else that you're aware of where either the FCC or the Ohio Commission has stated that OSS costs should be recovered in a competitively neutral manner?

A. That's my personal opinion.

Q. Okay. And am I also correct that your personal opinion on what a competitive neutral manner is, is that everybody bear their own costs?

A. Correct.

Q. Even if the incumbent carrier has enormous costs compared to the new entrant carrier?

A. Yes. And, once again, the section that I just read from, Paragraph 525 clearly states incumbent LECs that currently do not comply with this requirement must do so as expeditiously as possible, but in any event no later than January 1, 1997.

What that says to me is that whether CBT had one user of a OSS, or 10, or zero, they still had to provide that service.

Q. Well, it doesn't tell us how they recover the cost, does it?

A. No, it does not.

Q. What I'm asking you is if CBT has to spend millions of dollars to comply with this requirement, and the new entrant could get by with a few thousand dollars, is it competitively neutral that CBT absorb all of those costs itself and that the competitors pay none of that?

A. In the deposition we went over an example where CBT has a million access lines and the cost to develop that OSS system was a million dollars and the competitor in this case, CoreComm, presumed it could through marketing activities gain 5 percent or about 15,000 access lines, and their cost to develop an interface into CBT's system was $15,000, then that would be a dollar per line for CBT or a dollar per line for the competitive local exchange company, so that in my mind would be competitively neutral.

You went further in the deposition then to state, well, what if CBT's costs were $40 million as opposed to $1 million? And in that instance, then CBT would be forced to recover a little bit more, but what we didn't cover is what if the competitive local exchange company's costs, say, are a hundred thousand dollars and they only have 15,000. If they want to get in the business and they have agreed to recover -- or, they agree to cover those costs for development of OSS and interface to CBT, then they agree to cover their costs.

My reading of Paragraph 525 of the Local Competition Order states that -- and that's not a legal opinion, it's just my personal reading of that, that CBT had to provide that OSS whether or not anybody came to use it. So if nobody did come to the party to use it, then would you still have to recover those costs.

Q. Isn't 5 percent of a million, 50,000?

A. Yeah, that would be correct. But I think I am correct in the deposition, we did use the example of 50,000 access lines.

Q. Doesn't the FCC order say that costs should be recovered in the manner in which they are incurred?

A. Could you point me to where it says that?

Q. I'm just asking you if that's a general understanding of one of the principles the FCC has set forth?

A. I'd have to see that in the order to be able to say.

Q. Well, does TELRIC follow the principle that costs should be recovered from those who cause them?

A. Under the general section of the description of forward-looking economic costs in the FCC rules with respect to

cost causer.
Q. Where are you?
A. 51.505.
Q. Where in particular?
A. I was going to say I searched for it, but I don't find any notation of the cost causer.
Q. Okay. What about 507(a)?
A. Yes, that states, "Element rates shall be structured consistently with the manner in which the costs of providing that elements are incurred".
Q. What causes the costs of OSS systems?
A. I would say the FCC order caused the costs of the OSS systems because it mandated that it be developed.
Q. And it mandated it be developed so that competitors could gain access to Cincinnati Bell's systems?
A. For interconnection.
Q. And so the competitive LECs have received a benefit by virtue of that FCC order, correct?
A. Yes; but, once again, I would stress that according to my reading of that, by January 1 of 1997 CBT was to have provided that whether or not any competitive new entrant came.
Q. It doesn't say that when new competitive entrants come we can't recover the cost from them, does it?
A. I don't believe it says that.
Q. So are you proposing any kind of a rate element that would

allow Cincinnati Bell to recover any part of its OSS costs?

A. Well, I haven't specifically proposed a rate element with respect to the annual charge factor discussion that we just had. My exclusion of the OSS costs in the annual charge factors, I believe in my deposition I stated that an element that might be applied -- I believe in deposition I said on perhaps a per query basis, could be appropriate. But I haven't developed a crafty name for that or developed a method on how you would cost that.

Q. Well, if the OSS costs are built into the annual charge factors, doesn't that spread the cost of making unbundled elements available over the elements?

A. It would do that, but if it spread that across the elements equally, and I -- Say, for instance, I'm a new entrant carrier and all I want to buy is a loop, but you have another new entrant carrier who wants to buy a loop and a switch port and a lot of other, you know, additional collocation rate elements such as additional power lead, core drills, those type of things, then that particular user might be covering, in fact, even more than a proportionate share. So that's why I think that it's more clean and simplified if it happens external to the annual charge factors.

Q. So every time somebody uses the preorder gateway to look at something, they should be charged?

A. If you are making a query into that system, that could be a possibility.

Q. And every time somebody places an order they should be charged for OSS?

A. That's a possibility that such a rate element could contemplate.

Q. And every time a repair order is put in there should be a charge for that to use the OSS?

A. Once again, with respect to the frequency and the application of the element that we're talking about, I haven't given a great deal of thought as to how that would be structured at all.

MR. HART: Your Honor, this is probably a good lunch break time.

THE EXAMINER: All right. Sounds good.

(Discussion held off the record.)

(Luncheon recess taken.)

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P R O C E E D I N G S

- - -

Thursday, March 18, 1999

Afternoon Session

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THE EXAMINER: Let's go back on the record.

MR. HART: Thank you, your Honor.

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CROSS-EXAMINATION (continued)

BY MR. HART:

Q. Mr. Goes, I want to clarify a couple of things from this morning.

I may have misheard you, but I thought you said when you reran the loop model for Band 1, you used 80 percent business and 20 percent residence; is that right?

A. Actually, I think the number was 79-point-something. That's right. If you give me a moment, I'll get you the exact number. It's in my supplemental. 79.63 for business and 20.37 for residence.

Q. Okay. Now, that's the loop mix in West 7th Street, isn't it?

A. That was what was provided in those loop samples at the end of the study that I used.

Q. Do you have that page handy?

A. No, I don't. It's back in Colorado.

Q. Okay. Isn't the loop makeup in Band 1 more like 30 percent business and 70 percent residence?
A. There was, in response to a data request, a --
THE EXAMINER: I thought that's what he said, for Band 1 he had the -- I thought that's what he said, it was almost reversed between -- and then Band 2 was switched to the 80 business and 20 residence. I'm almost certain that's what he said. You have it written down differently?
MR. HART: Well, he's referring to -- he now has Band 1 at 79 percent business.
THE EXAMINER: Is that what you're showing?
THE WITNESS: Yes.
THE EXAMINER: Okay. Because I thought this morning -- Okay.
MR. HART: That's why I misheard, as well.
BY MR. HART:
Q. So what did you use for Band 2?
A. Twenty-two percent business and 78 percent residence.
Q. Okay. Now, is that Cincinnati Bell's Band 1 and Band 2, or is that MCI's Band 1 and Band 2?
A. That was using the CB- -- X in the CBT column in the model.
Q. Okay. But, I mean, those mixes, are those the actual loop mixes in those bands, as far as you know?
A. Those were the actual loop mixes in those bands as pulled from the loop samples.

Q. Okay. And do you have that sample with you anywhere?
A. No, I don't.
Q. Maybe I'll find that and show it to you later.
A. I have it in Colorado.
Q. I've got them here, I just don't have them out right at this minute.

The other thing I wanted to ask you about was we talked about there being four components to the annual charge factor; the ECONCOST, the maintenance, the direct admin. and what you called the OSS?
A. Yes.
Q. Isn't that fourth category actually broader than OSS?
A. If it is, I'm unaware of it. I thought it was predominantly just the costs associated with operator systems.
Q. Have you done anything to analyze the data that's contained in that fourth component?
A. No, I have not.
Q. Is it your recommendation that all of the fourth component be eliminated?
A. From the annual charge factors, and looked at elsewhere.
Q. How can you say that if you never looked at the data?
A. Because I can say that. As I stated earlier, I think that would be a cleaner and more simplified application.
Q. Well, aren't you assuming that all the costs that are in that category are related to access to OSS when you say that?

A. Yes, I am.

Q. So if they're not related to OSS, should they be excluded or not?

A. I would continue to argue that the OSS costs should be excluded, and if there is anything else left in those costs, whatever that may be, they may be appropriately included. I don't know without seeing them.

Q. Okay. And you didn't leave any of those in when you ran the model?

A. No, that's correct.

Q. On Page 28, the question at Line 11 and your answer on Lines 12 through 16, you talk about the concept of long run; do you see that?

A. Correct.

Q. Does long run include the cost of capital the way you're defining it there?

A. Can you point me to where I reference the cost of capital there?

Q. Well, you say in Line 13, "all costs" and you emphasize the word "all".

Are there any costs that you exclude from the word "all"?

A. No. I believe that to be -- to incorporate everything.

Q. Which would include the cost of capital?

A. Yes.

Q. If we could look at Page 29. You recommend that pole and

conduit investment for Kentucky and Indiana be excluded, correct?
A. That's correct.
Q. Was that based on Mr. Starkey's review of the pole and conduit account?
A. He and I discussed how the pole and conduit factors were applied to the investment and he had expressed concern that it wasn't Ohio-specific data. And so he told me that he would take it upon himself to determine what those pole and conduit factors would be without Indiana and Kentucky information.
He subsequently performed that analysis and gave me the numbers, and they weren't substantially different, they were -- the changes essentially were out at the third decimal place. But in my run of the model that I discussed the output today, those new figures were used.
Q. Okay. And you used his work, you didn't do it yourself?
A. That's correct.
Q. Now, on the next page you begin a discussion of digital loop carrier; do you see that?
A. Yes.
Q. And I take it you're advocating that unbundled loops should be provided on an integrated digital loop carrier?
A. That's correct.
Q. Now, do you recognize that the integrated digital loop carrier equipment that Cincinnati Bell proposes to use does not

present a DS0 interface at the switch?
A. That's my understanding.
Q. Would you agree, then, that for a DS0 interface to be provided in the central office, something needs to be done in addition to the digital loop carrier system?
A. Yes.
Q. And that could be through demultiplexing?
A. Through demultiplexing or there is another alternative, what is referred to as side-door grooming or hairpinning.
Q. And hairpinning sends the T1 into the switch and then uses the switch to pull out a DS0?
A. DS0. That's correct.
Q. And that uses switch resources, doesn't it?
A. Yes, it would.
Q. Now, when you reran the loop cost model, did you add anything into the cost of the loop to reflect the switch resources that would be used to groom out DS0s?
A. No. And in the deposition we discussed what investments were used if you selected either the integrated or digital loop carrier assumption in the model. And I knew that it occurred in there, but I wasn't able to determine where in the investment tables there are different amounts with respect to what is used on the universal digital loop carrier side that includes the central office terminal.

And then there are amounts that include what it would be if you used the digital loop carrier. And if you do that, it removes those costs associated with the central office terminal, but it includes or keeps in the costs associated with a -- the multiplexer, the FLM 150, if you will.

Q. Let's try to be a little clearer so we know we're talking about the same thing.

I have a drawing we were working with yesterday I want to leave up here, and I want to add a little bit to it.

You recognize the lower half of this drawing to be kind of a graphical depiction of a digital loop carrier system?

A. Yes.

Q. And when you said the remote terminal doesn't change between universal and integrated, you're referring to what's labelled as the DLC RT here (indicating)?

A. That's correct.

Q. Okay. And in the central office on the integrated system, there's something called an FLM 150?

A. That's correct.

Q. And the way Cincinnati Bell would use this, that would feed DS1 signals into its switch; is that right?

A. If --

MR. PETRILLA: Your Honor, I would like to object just from the point of view there are other things on that diagram that he's gesturing at. Unless he takes the witness through them to establish what they are, I don't think the witness can just take a piece of a diagram and say, "Oh, yes, I agree with that". He's got to lay a foundation for this line of questioning or draw the diagram that he wants the witness to look at and talk about.

THE EXAMINER: If the witness disagrees with the diagram, he can so indicate. I mean, it's, I think, a pretty basic outline of the system. I would assume that he can make any corrections as he feels it necessary. So the objection is overruled.

BY MR. HART:

Q. Do you remember the question?

A. No. Could we have it read back, please?

Q. Well, I can restate it.

A. Sure.

Q. The way Cincinnati Bell uses integrated digital loop carrier in its retail operations, would you agree that the FLM feeds a DS1 signal directly into the switch?

A. I'll answer the question, but first let me say that requires me to presume that CBT does use integrated digital loop carrier in their retail operations, and I don't know if they do or they do not.

Q. Okay.

A. But accepting that as fact, subject to check, then it's correct that from the FLM 150 you would go directly to the switch.

Q. Okay. And that's your understanding of the typical way an integrated digital loop carrier system is used, isn't it?
A. Yes, and actually -- Yes, that's correct.
Q. Okay. Now, you mentioned hairpinning. Let me try to clean this up a little bit so there's room to write.
This is my switch (indicating). When you say "hairpinning", that means this DS1 signal goes into the switch and something happens in there and at another place out comes a DS0; is that right?
A. Yes, which would then be taken over to the collocator's presence.
Q. Okay. And let's say the collocator's over here (drawing).
A. Okay.
Q. Now, what you didn't put into your revised cost study was whatever is going on inside the switch to make that happen; is that right?
A. Yes. When you choose to use the integrated digital loop carrier option, it does leave in the cost for the FLM 150.
Q. Oh, it does?
A. Yes, for the FLM 150 you use IDLC.
Q. Where is that in your -- in your cost study?
A. It's in the logic in the model under the DLC tab.
Q. Could you show me a page that that's on?
A. I can show you a page, but with respect to the underlying logic, that's the -- it's like a logical condition statement; if

X is chosen in that instance, then this amount is used.
Q. Why don't you go to the electronics investment page for the digital loop carrier system.
A. Sure.
Yes, it's right here (indicating).
Q. Okay. And there's a chart there at the upper right-hand side that shows the different investments for integrated versus universal?
A. Correct.
Q. And on the integrated line, does it have any investment for electronics in the central office at all?
A. Yes. It would be on this line right here (indicating), fiber and multiplexing equipment.
Q. Central office multiplexing?
A. Yes, which is -- Essentially, the FLM 150 is a multiplexer.
Q. Okay. When you pull that down into the actual chart, where does that number show up?
First, I guess we better establish whether the page you're looking at is the one that prices the integrated or the universal system.
A. Right. This should be pricing the integrated system.
Q. Okay. What does the line at the top that's labelled "Integrated DLC Equipment Investment, Central Office Multiplexing" represent?
A. It was my understanding that that was also a portion of the

FLM 150, as well.
Q. And that shows zeros there, doesn't it?
A. Yes.
Q. So you haven't included all of the FLM 150 in the integrated mode, have you?
A. That's possible. I will have to go back and go through the formula to make absolutely certain.
Q. Okay. Now, the universal --
A. I'll make a note of that.
Q. -- system, let's just do a different fiber line coming in here. Am I correct that that goes into something called a common shelf and then a narrow band shelf?
A. Yes, a D4 channel bank type, if you will.
Q. And the common shelf converts the optical signal into an electrical signal?
A. Yes.
Q. And there the narrow band shelf converts that into a DS0?
A. Correct.
Q. So you're actually feeding a DS0 into the switch; is that right?
A. In universal mode?
Q. Right.
A. Yes; and that's sometimes often commonly referred to as the central office terminal that does that.
Q. Okay. Now, in order to perform the function that the

narrow band shelf performs in universal mode, am I correct you would either have to use the switch with hairpinning, as you have described, or you would have to put one of these D4 multiplexers after the FLM?
A. Yes. I think the concept of hairpinning generally presumes that the MUXing down of the DS0 occurs in the switch itself.
Q. Okay. Which have you ever priced how much that costs, to use the switch to do that?
A. No.
Q. Do you know how it compares to using universal mode?
A. No, I do not.
Q. Do you know how it compares to using the FLM 150 and a D4 channel bank?
A. I would have to perform that analysis. I haven't done so to date.
Q. Okay. Would a proper cost study look at the three of those and determine which was the cheapest?
A. The cost study would want to look at which is the least expensive, but it would also want to factor in what is the most efficient and forward looking, as well. And if for some reason the universal mode was not as efficient, then that would be a factor.
I can think of reasons why that may be. I'm trying to think back to something I read in Mr. Meier's deposition transcript with respect to universal mode not providing the same

quality of service as integrated mode does. I believe in his testimony he said that with respect to data speeds on a POTS line, you cannot get the same throughput or same speeds with UDLC as you can with integrated.

Q. Wasn't he comparing any kind of DLC to copper?

MR. PETRILLA: Objection, your Honor. That question misstates the testimony that Mr. Meier gave.

THE EXAMINER: Well, he's expressed familiarity with the testimony. If he believes that that's the case, then he can so indicate.

BY MR. HART:

Q. Do you know which ones of the two he was comparing?

A. As I stated earlier before the objection, I thought it was a comparison between integrated and universal mode.

Q. Do you know of any technical reason why the speed on the digital loop carrier system would be different in integrated mode and universal mode?

A. That would require some engineering background, which I would presume that Mr. Meier would have.

Q. And you don't have?

A. Correct.

Q. Do you know if there are technical reasons why the band width on the digital loop carrier system would be different than that on the copper?

A. Again, that calls for engineering knowledge.

Q. Okay. Now back to where we were. If you want a DS0 signal, would you agree with me that we've outlined the three ways that a DS0 signal can be provisioned off of a digital loop carrier?

A. Can we review those or just write them 1, 2 and 3?

Q. Sure. No. 1 would be I use the universal mode; No. 2 would be hairpin; No. 3 would be demultiplexing on an integrated.

A. And could I trouble you to explain your conception of demultiplexing as it goes through again?

Q. The FLM 150 and a D4 channel bank.

A. This is to provide a DS0?

Q. Yes.

A. Yes, that's correct.

Q. Okay. Do you know which of those three is the most efficient, least cost method?

A. I think I testified just a moment ago that maybe I haven't performed that analysis.

Q. Okay. Now, when you say you want the unbundled loops to all be provisioned on integrated mode, which of the three methods are you proposing we use?

A. Well, first of all, you couldn't use it, method No. 1, if I was asking for an integrated mode.

Q. Which of methods 2 and 3 are you recommending, then?

A. Possibly method 2, but there may not be an instance where I always want that at a DS0 level. I may have an instance where I have an entire DS1 of capacity and in that instance I'm willing to buy a DS1 of capacity.

Q. In that case you're not buying individual DS0 loops, are you?

A. Well, you might buy both in the same central office.

Q. Okay.

A. And in that instance, there is a fourth method. Let's go ahead and write that on the board, if you will, the fourth method. Turn --

Q. Well, you're talking about now going to a DS1 level; is that right?

A. Buying them at the DS1 level and this is -- Sure.

Q. If we can label these, 1, 2 and 3 are to a DS0?

A. Yes.

Q. And now you want to go to the DS1.

A. Right.

Q. Okay. What's your method there?

A. That's what they commonly refer to as multi-hosting.

Q. Okay.

A. And it's my understanding from reading certain materials produced by MCI's Law and Public Policy Group that they've recently filed with the FCC, that in a multi-hosting environment, if you have digital loop carrier equipment that is GR303 compliant, that once you come into the FLM 150, they can take that signal over to a DSX cross-connect and then take that directly to the collocator's cage. So --

Q. So you want to take a DS1?

A. To a DSX.

Q. To a DSX, or do you want a DCS; which of those two do you want?

A. I believe it's a DSX because we're not going from DS3 to DS1; we're coming in on a DS1.

Q. Okay.

A. And then you would take that signal over to the collocator's cage.

Q. Okay. We'll see we've got another collo here just to make the drawing neater (drawing).

A. Okay.

Q. And this is DS1, as well?

A. That's correct.

Q. So this is a jumper wire here that connects those two?

A. Apparent- -- That DSX would be a -- the digital cross-connect system in the central office, so you may not even have --

Q. Well, is it an automated system or a manual system?

A. It's my understanding that the DSX is a software-controlled manual -- I'm sorry, automatic system.

Q. And you want the DCS, then, don't you?

A. I think the DCS would provide more in terms of ramping up the -- ramping up or down the signal from DS3 to DS1 or the other way around.

Q. How is the DSX software controlled?

A. Again, I'm not an engineer, that's just my understanding.

Q. And this is based on something you read that MCI filed somewhere?

A. That's correct.

Q. Okay. You don't have any personal knowledge of this yourself?

A. Right.

Q. Okay. Now, if we were to do this and a carrier wanted one loop, is that very cost effective to buy a DS1?

A. First of all, let me say I don't agree with your hypothesis or hypothetical here that a carrier wants one loop because I think it would be foolhardy for a carrier to collocate, to go through all the expense of having a cage constructed, having power leads brought in, all those expenses, to provide service for one person. You simply wouldn't do it.

Q. Do you have any forecasts for CoreComm, for example, of how many loops they've told Cincinnati Bell they'd like to buy in any given central office?

A. No, I don't.

Q. Okay. My question for you is: On a DS0 basis if I want to buy the first loop, do I still have to have a minimum of a DS1 under Item No. 4?

A. In Item No. 4 you would, yes.
Q. Okay. Now, how many DS0 loops do I have to buy off of this same DLC system before it's cheaper to buy the whole DS1 than it would be to use method 1, 2 or 3?
A. You'd have to perform just a kind of benefit/cost analysis to determine where that breakover point is. It could be five or six, it could be 22.
Q. Might be 50, too, mightn't it?
A. When we're comparing a DS1, how could it be 50?
Q. I'm just asking. Do you know?
A. I previously said I have not performed that analysis.
Q. Do you know whether in GR303 one DS1 can work, or do you have to buy two?
A. It's my understanding that with GR303, out of the remote terminal you can field groom numerous DS0s onto one DS1 and bring that back and pull one DS1 out. If you need to, that's news to me, I've never seen anything to state that you have.
Q. Well, you're asking for a DS1 on a GR303 interface?
A. Yes, which the FLM 150 and the FACT- -- Fujitsu FACTR system, as I read the Fujitsu FACTR model, are GR303 compliant.
Q. So the collocator somewhere has a switch which has a GR303 module in it that's going to operate these loops; is that right?
A. From the -- It would operate the loops from the collocation cage to their premise depending upon how they route the traffic to their -- where their switch is located.

Q. Well, what piece of equipment is going to be in the collocation cage that is going to run a GR303 system?

A. It may be another type of -- almost like another remote terminal DLC piece of equipment.

Q. Okay. But where is the DS1 going to be managed from? Is it going to be from that collocation cage or is it going to be back at the switch?

A. Again, that's an engineering assumption I can't provide for you.

Q. Do you know whether that GR303 system can be controlled with one DS1 by itself?

A. Again, that was my understanding from reading the MCI material, that you can pull one DS1 off.

Q. Okay. Now, back to where we started.

I take it you have not done any cost analysis to determine what sort of volume you have to pull off that DS1 to make it cheaper on a DS0 basis than methods 1, 2 or 3?

A. No. But I think you can look and make some hypotheses with respect to the amount of traffic that you would be bringing in. So let's say out here where the serving area interface is you have a house drawn out here that you have 55 customers. And in that particular instance CoreComm or any other NEC might consider, okay, should I buy two DS1s and seven DS0s, or should I just go ahead and buy the third DS1.

And, hopefully, you wouldn't say, "My growth in this neighborhood is going to be static over time". If you have two DS1s filled to capacity and you have a third one out there with seven DS- -- or, the equivalent of seven DS0s on it, you would hope that through marketing activities and just general sales activities you could gather a few more customers to fill up that DS1. It might take you a month or two to do it, but eventually you would try to maximize your....

Q. Now, is Mr. Mette supposed to do his cost studies based on his own projections of how many loops he thinks CoreComm is going to sell on a given DLC system?

A. Mr. Mette should do his cost studies based on a forward-looking, most efficient, least cost network.

Q. Which a loop at a time is 1, 2 or 3, right?

A. Could be, yes.

Q. Now, unless you are able to sell enough loops in the neighborhood served by this particular remote terminal, his method's cheaper, isn't it?

A. To use universal digital loop carrier?

Q. Right.

A. Again, it's my concern that universal digital loop carrier, as I saw Mr. Meier's testimony, has quality concerns.

Q. That's the band width issue you mentioned?

A. Yes.

Q. Okay.

A. Okay. So if that's the case, I wouldn't -- I would think

that the IDLC would be considered more forward looking.
Q. Are there line cards out in this remote terminal?
A. Yes, there are.
Q. Are they any different in universal mode than integrated mode?
A. I really don't know. I wouldn't think so, but --
Q. Well, didn't your cost study assume that everything in the field was exactly the same?
A. In terms of the investment per line --
Q. Right.
A. -- investment per line card, I think it does, yes.
Q. Right. So you didn't assume anything was going to change out there, did you?
A. No. At the remote terminal, nothing would change.
Q. Okay. I think you later on, about Page 50 or so, you testified about using the electronic cross-connect abilities of a digital loop system.
A. Yes.
Q. What benefit do you see by using those?
A. That was kind of when I had just had general discussions with people with respect to capabilities of these type of systems --
Q. And --
A. -- I was --
Q. I'm sorry, go ahead if you weren't finished.

A. That's fine. I had confused those electronic cross-connect systems with what I now understand to be the time slot -- time slot interchanger.
Q. Okay. Those are two different things?
A. In my mind, they were the same at the time, so....
Q. Now, the cost studies that Mr. Mette proposed and which you didn't change at the remote terminal site, did they include the cost of a digital cross-connect system in the field?
A. It's my understanding that the Fujitsu FACTR system has the time slot interchanger, if you will, where I can field groom DS0s onto a particular DS1.
Q. Well, does that include the remote cross-connect capability you're talking about?
A. That is the capability that I was talking about.
Q. And that's in the cost studies now?
A. It's -- I think it would be in the form of the investment in the Fujitsu FACTR.
Q. Okay. Now, am I correct what that allows you to do is to take individual copper pairs of subfeeder and map them onto a given DS1?
A. Yes, but only within the same remote terminal.
Q. Right.
A. So if we had another remote terminal out there, you can't -- obviously, that wouldn't work.
Q. Now, if -- I believe your testimony was on the topic of

avoiding field visits; is that right?

A. Yes.

Q. You thought this system would help avoid field visits?

A. That was my understanding at the time.

Q. Okay. Now, you're aware, aren't you, that the digital loop carrier system converts the signal onto copper subfeeder that goes onto a serving area interface?

A. Yes.

Q. And those may be close to one another and they may not, right?

A. Agreed.

Q. In fact, the same DLC system might feed multiple serving area interfaces?

A. Agreed.

Q. And in the serving area interface, which is labelled as SAI here, is basically a copper cross-connect panel?

A. Yes.

Q. And somebody has to physically go out and attach a feeder pair to a distribution pair?

A. If that's not done when it's installed. And in my mind, I would think that if I was going to build a TELRIC network, while I'm out there installing that SAI to begin with, why not just go ahead and cross-connect all those at the beginning. Obviously, you don't know where every pair has to go.

Q. Uh-huh.

A. But you could do that at the time. And in a forward-looking study, as we talked about, generally we know where the customers are. So perhaps 90 percent of the time if you were going to build this from the ground up, you could go -- actually go out there and get a good deal of the cross-connections made correctly.
Q. Now you're talking about the initial installation, right?
A. That's right.
Q. Okay. Now, aren't field visits incurred in connection with new customers?
A. Yes.
Q. So the field visit isn't going to be a customer who's in our known customer base now, is it?
A. Likely no.
Q. Okay. So if I just kind of randomly match feeder pairs and distribution pairs together, I'm really just kind of guessing as to where those customers might show up at some day, aren't I?
A. For the new customers. For the existing ones, you could get that, correct.
Q. Okay. And the new customer for whom we're making the field visit, when that occurs, we'll know where they are, won't we?
A. Yes.
Q. And somebody can go out and pick the pair in the distribution that actually goes to that customer and attach it to a feeder pair.

A. That's correct.
Q. And we also need an attachment at the drop terminal, don't we?
A. For the -- For the initial attachment, if it's a new facility.
Q. And --
A. But if that individual at the drop terminal moves and somebody else comes in, they have to assign a new line to it, that attachment on a going-forward basis should remain there.
Q. Okay. But say this customer wants a second line. Do you recommend that on our initial installation that we attach two drop wires to every customer?
A. When you say "attach two drop wires to every customer", are you talking about attaching it at the network interface device, or on the house, or at the SAI?
Q. We're at the drop terminal.
A. Okay.
Q. You understand that most houses have a two-pair drop?
A. Understood.
Q. Is that a reasonable thing to do, to put two-pair drops out there?
A. Sometimes two, yes.
Q. Okay. Sometimes more, or --
A. I think sometimes they do two or five.
Q. Okay. So at least two.

Should both of those drops be cross-connected to a distribution pair on initial installation?
A. They could -- They could be. If there's --
Q. Okay. Now --
A. If there's capability in the SAI to permit that, then I wouldn't have a problem with that.
Q. And for there to be capability to do that, I need two distribution pairs for every household, don't I?
A. Yes.
Q. That's what Cincinnati Bell does, isn't it?
A. Two distribution pairs per household?
Q. Right.
A. I know there's two pairs per drop, but with respect to -- I'm trying to -- I'm hard pressed to recall if the distribution has -- I may have it in here somewhere. That sounds right.
Q. Okay. If I'm going to connect both these drops to a distribution pair, then I have to know that I've got enough pairs to do that, don't I?
A. And enough capacity inside the SAI to make all those cross-connects.
Q. Okay. Now, the electronic cross-connect capability in this remote terminal, that doesn't help us at the SAI or the drop terminal, does it?
A. No. That -- What that does is permits you to, once again, field groom those individual DS0s coming from the drop terminal

through the SAI and into the DLC onto a particular DS1.
Q. Okay.
A. And where that would help you in the future, though, is say, for instance, that CoreComm had three customers that were field groomed onto their particular DS1 and now those three customers for some reason decide they prefer to have CBT service instead.

From a node on that network, the node probably meaning somewhere near the FLM in the central office -- this is just my understanding of Mr. Meier's testimony -- you could hook up a laptop PC and actually change that field grooming arrangement either at the remote terminal or at a node in the central office.
Q. Okay. Now, you would agree with me, if I'm going to use this remote terminal to assign pairs, that the pairs also have to have been assigned at the SAI and at the drop terminal?
A. Yes.
Q. And if all three of those things haven't happened, I still need a field visit?
A. That's correct. And that's why I was advocating that, wherever possible, on a forward-looking basis, go ahead and connect that loop all the way through from the NID to the pedestals to the SAI to the remote terminal and all the way back into the central office.
Q. Both pairs to everybody?

A. Where practical.

Q. Okay. Now, this digital cross-connect (indicating) doesn't help me on copper feeder either, does it?

A. No, I don't believe so.

Q. Because those are still all mechanically attached?

A. One to one, right.

Q. Okay. One of the questions about the digital cross-connects, those are all done electronically, right?

A. The -- Where we field groom the DS0s onto -- through the time slot interchange under a DS1.

Q. Uh-huh.

A. Yes.

Q. And those are held in memory somewhere, some electronic piece of equipment that has some memory?

A. I would presume, although I wouldn't know where that would be.

Q. If that memory fails and you reinitialize the system, how do the lines connect themselves?

A. The only thing I can say is that in this instance I don't know. In the central office when you have a digital cross-connect system, generally those systems -- and I have seen this in central offices -- have a floppy -- or, they call a floptical drive, it's an optical small disk that they put in, and on a frequent basis it backs that up so if the system should go down, that it brings it back up with what's recorded on that

particular.... And I would imagine that these systems have some type of capability like that, but specifically what it is, I couldn't tell you.
Q. Okay. But until we can go out and correct the problem, all these loops that are digitally cross-connected are going to suddenly connect straight through and they will be connected to the wrong lines, won't they?
A. I, from an engineering perspective, couldn't say "yes" or "no".
Q. Okay. I guess you're unaware about what the CoreComm agreement actually says about integrated digital loops, aren't you?
A. The -- What, the agreement with CBT?
Q. Right.
A. Again, having testified I've not seen it, I'm unaware, yes.
Q. Okay. Now, one of the other things you advocate on Page 33 of your testimony is that Cincinnati Bell used 17,000 feet as the threshold for universal digital loop carriers, correct?
A. Yes. In the Cincinnati Bell Telephone feeder and technology section of the planning guidelines, on Page 13 of that document, in fact, it does say for -- states, "This study determines the distance thresholds at which digital loop carrier -- integrated and digital loop carrier technologies became more economic than copper. The results were as follows..." And for integrated digital loop carrier they had

17,000 feet or 17 kilofeet.
Q. Is that integrated or universal?
A. That was universal.
Q. Okay. And what year was that study done?
A. That was done in 1991.
Q. Are the economics of universal digital loop carrier the same today as they were in 1991?
A. I have not performed that study; I couldn't say yes or no.
Q. Okay. Well, I'm trying to understand the impact of your recommendation. Would that mean that loops that are shorter than 17,000 feet would be on copper?
A. Under those guidelines, if you were using universal digital loop carrier, then if you had loops shorter than 17,000 feet, they would have been on copper.
Q. Do you think we should do that?
A. On a forward-looking basis, I would, first of all, advocate, once again, not to use universal digital loop carrier; to use integrated. And in that instance then you would -- according to this, you would have no copper loops longer than 12 kilofeet. I think that's more reasonable.
Q. Okay. But if we're going to use universal for some service, you think we should go to 17,000 feet before we put that in?
A. Again, not being an engineer, that's not something I'm able to answer.

Q. Well, you testify to it here, don't you, on Page 33 and the top of 34?

A. If you could point me directly where I say that's what you should do.

Q. Look at Line -- Page 34, Lines 2 through 4.

A. I'm sorry, I thought we were talking integrated. I'm sorry. That was the reason for my confusion. I apologize.

Yes, for universal, that's the recommendation.

Q. Okay. A couple other questions about how you recreated the loop studies. I understand you accepted Cincinnati Bell's bands as the way they were proposed, correct?

A. That is right.

Q. And we've got a question about the loop mix. I'm going to have a document for you a little bit later on.

You also accepted Cincinnati Bell's trenching cost, didn't you?

A. Yes.

Q. I think you testified in your deposition that you reviewed the contracts and found those rates were more appropriate than what Mr. Starkey had recommended?

A. I remember that discussion in my deposition, but if you -- I have a copy of the deposition transcript here if you would kindly point me to the page.

Q. I'll try to.

Well, at the top of Page 167 you say that --

A. Is that of Volume -- I'm sorry to interrupt, is that of Volume I or II?
Q. Volume I.
You say you took no position on the trenching issue, accepting CBT's position there, right?
A. That was Page 167?
Q. Uh-huh.
A. Can you help me out with the line number?
Q. Lines 2 and 3.
A. Yes.
Yes, I'm looking for the rest of your question with respect to Mr. Starkey.
Q. Well, look at the bottom of Page 176 where I asked you, "Well, why did you put it on that side as opposed to the MCI side?" And at the top of Page 177 you say, "The only thing I can say is I saw the contracts for that and I just chose to leave it as CBT. There was not a rationale behind it at all. I wanted to -- I could have put it on the MCI side and that might have, you know -- and again, I don't even know that I ever performed that sensitivity analysis either, but that may be a large factor, it could, might only change the loop cost in a very small fashion as well, I don't know".
Is that what you said?
A. That's a correct reading from the transcript, but you, in your question, made reference to my making reference to

something Mr. Starkey had done with respect to his calculation, and I don't see that there.

Q. Well, you said you read the contracts, right?

A. Yes.

Q. And you recall Mr. Starkey's testimony was that in his review of the contracts, he chose a different number, right?

A. Lower number for trenching.

Q. And you looked at the same contracts he looked at and you left Cincinnati Bell's position alone?

A. Yes.

Q. When the TELRIC study designs this theoretical network, am I correct you should plan for some growth?

A. Yes, that would be fair.

Q. Okay. And how much growth should I plan for?

A. The local service guidelines call for a kind of study or planning horizon of five years, so I would think that growth over that period would be appropriate.

Q. All right. What are you recommending as an initial construction fill? Let's talk about loop distribution.

A. I have recommended a fill of 85 percent.

Q. Okay. When you reviewed the transcript of Mr. Mette's testimony, do you recall discussion about growth rates of 4 percent?

A. It sounds familiar, but in terms of....

Q. How many years will a network built at 85 percent design

fill last at 4 percent growth before you have to reinforce it?
A. Less than four.
Q. Okay. So if I was to plan a network at an 85 percent fill, shouldn't I also take into account what it's going to cost to reinforce that network in the five-year period?
A. As Dr. Ankum has testified, I think you could do a benefit/cost analysis with respect to the fill and the cost of the reinforcement to make certain that you're not carrying so much excess or spare capacity, especially at the annual charge factors as I see them proposed by CBT, that carrying that amount over five years or whatever the planning horizon is, indeed, exceeds the cost of that reinforcement.

But as I argued in my deposition, with respect to an 85 percent fill, we talked here today that TELRIC planning horizon or the TELRIC methodology is theoretical in nature. We're building this network from the ground up. And in the deposition we used the example where we had a neighborhood and we knew that it was fairly constrained, that you couldn't put a whole lot of additional houses in there, we knew that we had pretty good information with respect to the number of customers that take one access line, the number of customers that are taking two, the growth rate in that desire for that second access line.

And so from that standpoint then you can say perhaps I could engineer to an initial 85 percent fill because although growth rates over the entire area may -- in fact, accepting, subject to check, what we talked about, the 4 percent, that with the knowledge of where customers are located, knowledge of how many lines they take, et cetera, we can use that, what I would call good or perfect information, to logically plan where we need to put facilities.

Q. Now, my original question was: Are we supposed to compare the cost of initial placement and reinforcement to the cost of placing a larger capacity up front?

A. I am hard pressed to think of any location in the FCC rules. I think that -- in fact, I don't believe it's there, that says yes, you should make that comparison. But I think that would be a logical comparison that the company would want to go through --

Q. I'm talking about -- I'm sorry, finish.

A. -- with respect to making certain that they're placing plant the most -- in the most efficient manner possible.

Q. And, likewise, before you would recommend building a plant to 85 percent fill, shouldn't you consider what the ramifications of doing that are a few years down the road?

A. If, indeed, the 4 percent growth per year is accurate across the entire network and we're looking at a five-year planning horizon, that's possible.

But if you have good information, once again, with respect to where those customers and access lines are located and you have reasonable forecasting data with respect to how many access lines people take and where growth is likely to occur....

Q. You used word a minute ago, or the term, "perfect knowledge". Is there anywhere in the FCC order where it says TELRIC assumes that the incumbent has perfect knowledge of where the customers will be?

A. I used the term "perfect information" instead of "perfect knowledge", but --

Q. All right. Amend my question, then, to use that.

A. Sure. Using that synonymously.

No, I don't believe there's anything with respect to that precise term, but that's my understanding, that on a forward-looking basis you would have a reasonably accurate idea of where your customers are located and where future growth can possibly occur.

Q. In fact, what we're going to have to do is make reasonable estimates about where we think it is, aren't we?

A. Yes, and I think that could be done.

Q. Now, if I look at two placement scenarios, one that I expect to exhaust in several years and I'll have to reinforce, and another where I can make an initial placement and be fairly certain I'll never have to reinforce, what things do I compare to determine which of those two is the least cost alternative?

A. I think you would want to compare on the side where you're looking at potential reinforcement, what that would cost to go out and actually reinforce a particular cable. And that certainly is -- can be a costly proposition with respect to going out, trenching, digging up streets if necessary, those type of things.

But, on the other hand, if we look and say, okay, let's engineer to a 60 percent factor and for every ten pairs that we put in the ground, four are going unused, and over time if we assume over that same time horizon that we have that 4 percent growth per year, then we would be up to 76 percent growth, you know, with our -- the minuscule effects of compounding each year. Then you're still carrying 25 percent, or almost 25 percent, additional plant.

So of every four pairs that you would put in the ground at the end of that five-year planning horizon, one out of every four of those pairs is going unused. And you would want to look at your carrying charges on that amount of plant and see if that approaches the cost of reinforcement.

Q. Well, would you agree with me that the -- let's use an example -- a 200-pair cable as compared to a 100-pair cable, that is it does not cost twice as much to put a 200-pair cable into service as it does to put a 100-pair cable into service?

A. I would agree with that.

Q. Would you agree that if I put in a 100-pair cable and I come back sometime in the future and put in a second 100-pair cable, that that will cost more than twice what the original cable cost?

A. Possibly, yes.

Q. When you talk about carrying charges, let's talk about first the actual cost of installation. Wouldn't you have to compare the cost of that incremental 100 pair that's in my 200-pair cable against the total cost of placing the second cable to see which was cheaper?

THE WITNESS: Could I have that read back? I'm sorry.

(Question read back as requested.)

THE WITNESS: Is there a way to break that down into a couple parts or --

BY MR. HART:

Q. Maybe I can --

A. Sure.

Q. -- draw on the board. That will help.

Here's the choices we're trying to analyze. We've got a 100-pair cable, we've got a 200-pair cable, and then at some point in the future a second 100-pair cable, right?

A. Right.

Q. You, I believe, already agreed with me that this 200-pair cable does not cost twice what the 100-pair cable does.

A. Right.

Q. And that this 100-pair cable that I'm going to place in the future is probably going to cost more to install than the first 100-pair cable did.

A. I would agree, it would cost every bit as much at least,

probably.
Q. So what I need to compare is what's the incremental difference between a 200-pair cable and 100-pair cable now, against the cost of coming back some day and putting in another 100-pair cable; that's the cost/benefit analysis, right?
A. Right.
Q. Could you define "fill" for me?
A. As I believe in the deposition I defined it as the total working pairs or pairs in service over total pairs.
Q. Okay. So you define it as pairs?
A. Well, in the context of wire.
Q. For distribution?
A. Yes.
Q. Let's stay with the same topic.
A. Yes.
Q. Now I want to ask you a little bit about how the LCAT model works and your re-creation of it.
Does it first start by determining the cost to install cable on a per-pair-foot basis?
A. Yes. It begins by determining for each plant type, feeder or distribution, and the drop's always an assumption, but for feeder and distribution; and then by plant type, aerial, buried and underground, what the cost is to install that cable on a per-pair-foot basis.
Q. In fact, there's some cable design sheets that have

different sizes of cables and different pieces of hardware that need to be installed, all of which lead to a bottom line that's expressed in terms of pair feet, right?

A. Right.

Q. And then the model next takes those costs per pair foot and applies them to what's called an average loop, right?

A. With respect to the re-creation of the LCAT, which is what I have seen because I've never seen an electronic copy of the LCAT itself, with respect to the re-creation, once we get to that investment per pair foot, then the fill is applied to get a fill-adjusted investment per pair foot.

Q. Well, is that the next step, or do we go to the cable design sheet and figure out how many feet of each kind of cable we have? It's the one that has like a schematic diagram of a loop on it.

A. Sure.

On this particular schematic, and I'm looking at the residence copper unbundled page, you take the length of a particular segment of the cable and you multiply that times the fill-adjusted investment per pair foot for that type of cable.

Q. Where does it say "fill adjusted"?

A. I don't know that it does, but if we come over here --

Q. Doesn't the result of that page carry over to the page where the fill is applied?

A. Yes, that's correct.

Q. Okay. Now, on the page you have that shows the cable design --
A. Yes.
Q. -- it has the loop length, the feeder and the distribution piece, are those the lengths that appear in Mr. Mette's samples, the average sample?
A. Those are lengths that were taken directly from the LCAT outpages -- output pages.
Q. And are they the same as the loop lengths in the Cincinnati Bell loop sample?
A. I've not made that comparison.
Q. Is it your understanding that that is intended to represent an average loop?
A. Yes, it is.
Q. Okay. So we take an average loop and multiply its length times the cost of cable per pair foot; is that right?
A. That's correct.
Q. And then we take those numbers and they go over to the next page where they are divided by a fill to develop unitized investment?
A. That's correct.
Q. And then there's another page that takes that unitized investment and applies annual charge factors and divides by 12 to come up with a monthly rate?
A. That's correct. On that second page that you just

described there's also one other portion where the pole and conduit factor is applied.

Q. That's applied to the cable, both fiber and copper, in order to include the cost of poles and conduit?

A. Right.

Q. Okay. But there's not a fill application to those, is there?

A. No. That occurs --

Q. Let's just make a note of those steps so we can keep track of them, if I can erase the other numbers I have here.

First we get the cost per pair foot; is that right?

A. Correct.

Q. And then we take that times the number of feet, right?

A. Yes.

Q. And this will give us the investment per pair, right?

A. Correct.

Q. Then I --

A. I was going to say, it would be more correct to say investment per pair foot.

Q. Well, we have already multiplied times feet?

A. Yes, correct.

Q. So the feet are going to cancel each other out and we're now per pair?

A. That's correct.

Q. And next we're going to divide by fill?

A. Correct.
Q. And last we're going to multiply times ACF and divide by 12?
A. For the monthly cost, yes.
Q. Okay. Now, let's try to model this on a loop. I guess I'm going to have to erase something. Let's get rid of this up here (indicating).
Let's say I have a distribution segment, we're coming from a SAI, and I have a cable that runs out here a thousand feet, okay?
A. All right.
Q. Now, applying this theory, let's just assume my cost per pair foot is 10 cents, just to have a number, okay?
A. Okay.
Q. Now, assuming my customers are evenly distributed on this cable, would you agree with me that the average loop would be about 500 feet on that cable?
A. Correct.
Q. Okay. So I multiply that times 500, and I end up with $50 investment?
A. Yes.
Q. Give me a fill that you'd like to see on this cable.
A. Although I wouldn't advocate this for simplicity, let's use 50 percent.
Q. Okay. 50 percent fill. I'm going to divide by 50; is that

right?
A. Yes.
Q. Now, that means I have 50 customers, doesn't it? Let's assume this is a 100-pair cable, I have 50 customers?
A. Yes.
Q. Dividing by 50 gives me what, a hundred?
A. Yeah.
Q. Okay. Let's skip the ACF piece because we can deal with investments to investments, okay?
A. Sure.
Q. Now, if I have 50 customers, that means to recover my investment I would expect to get $5,000, is that right, multiplying times the number of customers times my investment for unitized pair?
A. Right.
Q. So $5,000 should make me whole?
A. Yes.
Q. Now I've got a thousand feet of cable times 10 cents times a hundred pairs, that's $10,000; isn't it?
A. That math is correct.
Q. Okay. So that means that for my cost study to work out, I need to actually divide by .25 to get up to $200 a loop to get to my 10,000; is that right?
A. I'm troubled by this analysis because we're not taking it through the annual charge factor, and again that's where our

capital recovery is going to come from.
Q. If we did that, wouldn't all these numbers be multiplied by the same thing? Say my annual charge factor is .3, my hundred dollars loop is going to pay $30 a year, right?
A. Take me through the math one more time, starting with cost per pair foot.
Q. Ten cents a foot, got a 500-foot loop on average, so the loop should cost me $50 on average, half my pairs are in use so each customer has to pay for two, right, so each customer is paying a hundred dollars, but those 50 customers are only going to give me $5,000 back. My cable cost me $10,000; right?
A. A thousand feet -- Yes.
Q. So while I may have designed my cable for 50 percent fill, using the LCAT model, that's effectively 25 percent, right?
A. Given this set of math, it is.
Q. Okay. And if I were to accept your 85 percent fill that would yield 42-1/2, right, the same calculation would get me to that result, wouldn't it?
A. Sure.
Q. Where did you come up with 85 percent?
A. As I testified in the deposition, I, while working at AT&T had seen a publication called BOC Notes on the Network, and they talked about a 85 percent trigger point for an instance where would you want to consider or look at reinforcement.
Q. So that's kind of a high-water mark at which you might

consider adding some more loops?

A. That's correct.

Q. That's not where would you start, is it?

A. Well, that was a high-water mark when you would consider adding more loops on a historic embedded basis when you were not constructing a network from the ground up, but were constructing a network on an as-you-go basis.

And when you're constructing a network based on a TELRIC methodology, forward-looking methodology, you have the luxury, if you will, of what I called earlier perfect information. And once again, with that information I know where my customers are located, I know or have a good idea with respect to how many lines each customer takes, do they take one, do they take two, I can sample and find an average.

So in that respect, if I build to, then I can monitor that network and watch to see if reinforcement would be needed. But once again, if you have that good information from the beginning over, say, a five-year planning horizon, and this is not to doubt Mr. Mette's 4 percent, it's just that I haven't seen the information to substantiate that. But if say the growth was 2 percent per year over that five-year planning horizon, then you would be fine.

Q. Okay. Now, when you reran the loop model and you changed the fill assumption, where it said 35 percent in the Cincinnati Bell study, did you just plug in 85 percent?

A. I can tell you for certain.
A. Yes.
Q. Now, that sort of assumes, doesn't it, that 85 percent would be the right number to use in that particular cost model?
A. Correct.
Q. And then didn't we just walk through an example that would indicate that 85 percent won't recover the investment the way that model works?
A. If we presume the average loop length to be 500 feet, then yes.
Q. Okay. And if we even used a hundred percent fill, the cost model would tell us to use 50 percent in that example, wouldn't it?
A. Based upon this math, correct.
Q. Okay. Now, on Page 38 of your testimony you've got a chart that shows some different fills. Do you see that?
A. Yes.
Q. And in the column for distribution you indicate that New York has approved 50 percent and Maryland has approved 50 percent and Georgia has approved 48 percent.
A. Correct.
Q. Can you tell me how the companies that achieved those results used them in cost studies?
A. I think as I testified in the deposition, I haven't seen those particular studies, but I think one could look at that and

make some inferences why perhaps those would be that way. You see Indiana uses 80 percent.

Q. I see that, and you also have New Mexico at 75 to 85, but you corrected your testimony to say they didn't have a distribution --

A. That's correct. I had 75 and 80 for copper feeder and fiber feeder.

Q. Okay. Now, that New York order includes New York Telephone Company that serves New York City, doesn't it?

A. Yes.

Q. Pretty much the densest telephone population in the United States, isn't it?

A. That's fair.

Q. And they approved 50 percent distribution?

A. Yes.

Q. Can you tell us where Ameritech came up with 85 percent?

A. That was, from what I understood, calculated in the Ameritech Cost Resource.

Q. Have you ever seen that?

A. No, as I testified in the deposition, no, I have not.

Q. Have you ever talked to anybody at Ameritech about how it works?

A. No.

Q. Have you ever seen an Ameritech cost study?

A. No, I have not.

Q. What is your --
A. Let me correct that. I have recently seen portions of an Ameritech cost study for their biennial filing in the State of Michigan recently.
Q. Okay.
A. But that would be since my deposition.
Q. Okay. What is your expertise then for coming here and recommending that 85 percent be the right fill for Cincinnati Bell?
A. Sure. Once again, having reviewed or looked at the BOC Notes on the Network and considering the availability of perfect information and constructing a forward-looking TELRIC network, additionally I've talked to AT&T's engineers in cases involving GTE and those engineers believed as well that on a forward-looking basis a 85 percent factor for distribution was not unreasonable.
Q. And those AT&T engineers didn't come here to testify, did they?
A. No, they did not.
Q. So I'm not able to inquire of them as to what their basis was for 85 percent, am I?
A. No, you're not.
Q. Are you familiar with the Commission's order in Ameritech in Ohio? Have you ever read it?
A. No, I've not seen it.

Q. Did you know that Ameritech had been using its ACAR fills in LRSIC studies for retail purposes?
A. For retail purposes? No, I did not.
Q. Do you know whether that influenced the Commission's decision as to what the fills should be for TELRIC cost studies?
A. No, I do not know how that --
Q. Wouldn't anything you would say here about how Ameritech designed its fills be complete speculation?
A. As I've testified before, I have not seen their ACAR.
Q. Remember me asking you, "Now your statement about what Ameritech did is complete speculation, isn't it, and you answered "Yes"?
A. That sounds familiar. I'd like -- Can you just point me to the page?
Q. Page 139, Volume I.
A. Volume II?
Q. Volume I.
A. Volume I or II, though?
Q. Volume I.
A. I'm sorry.
Q. And to be fair, you were talking about the fills on electronics at that point. Do you recall that?
A. Yes.
Q. And do you have anymore information about how Ameritech designed its copper loop fills than you do on its digital loop

carrier systems?

A. Once again, I'd just have to repeat that I have not seen those.

Q. Do you know whether Ameritech has expressed those fills as what it expects to be its maximum usable fill?

A. No, I do not.

Q. Does the TELRIC methodology call for the maximum possible fill?

(Pause.)

A. I don't believe so.

Q. In fact, they require that we estimate the proportion of the facility that will be filled, correct?

A. That's fair.

Q. Let's go on to the subject of structure sharing which begins on Page 38. I want to ask you about the question on Page 39. You state that -- at the bottom of that page, "As more facilities-based NECs enter the Cincinnati market and begin to deploy their own loop and transport plant, the degree of structure sharing will exceed that observed in 1997"; is that right?

A. Yes.

Q. So in your assumptions for structure sharing, you're telling us that you do expect to see loop plant built by competitive NECs in Cincinnati?

A. That's a possibility. In fact, I think we alluded to it earlier this morning when we talked about the Time Warner/AT&T activity with respect to their provisioning of plant via coaxial cable networks, and in instances where there are new locations where coaxial -- or, existing locations where coaxial cable is presently nonexistent, they would likely want to share poles and conduits.

Q. Now, doesn't Time Warner already have a ubiquitous network in Cincinnati?

A. I would presume that it's fairly ubiquitous, yes, although there will be new areas that develop.

Q. And does this mean then you're expecting that someone else in addition to Time Warner will be building loop plant?

A. It's possible, yes.

Q. In fact, in Line -- on Page 40, Line 12, you say, "...emerging local markets in which NECs seriously plan to compete with the ILEC on a facilities basis, (e.g., CoreComm and MCI in Cincinnati", correct?

A. Yes.

Q. So for you to say Cincinnati Bell should recognize additional pole and conduit revenues, you have to agree with me that there is going to be serious competition on a facilities basis in Cincinnati, right?

A. I will agree with you that there will be competition. With respect to adding the term "serious", I am a little more hard pressed to agree with you there, especially when you factor in what I had looked at here.

Once again, I, in my testimony, had indicated that the amount of revenue from structure sharing was $419,000.

Q. Well, you chose the word "seriously", didn't you, Line 12, Page 40?

A. Yes, and I think that word was meant in the context of -- to compete in earnest. I think with respect to the use of "serious" as I understood it -- and correct me if I'm wrong in your question -- you were using that to mean faster, significantly large amounts, please correct me if I'm wrong.

Q. Well, you're using it in the sense that they are so serious that they actually plan to build some facilities and use pole and conduit.

A. Yes.

Q. Okay.

A. But with respect to if there's $419,000, almost $420,000 in in revenue from pole and conduit, we multiply that times 8 percent, that is a figure of 33,000 -- almost $33,600 a year, and with respect to pole attachments, conduit rental, that type of thing, that should not take a substantially large amount of new facilities to be placed on or in those structures to achieve that.

Q. How much is the rent on a pole?

A. That I do not know.

Q. And I believe you said in your testimony that you're going

to use a 8 percent factor; is that right?
A. Yes, that's correct.
Q. And that's in the first year?
A. That's correct.
Q. Now, in the next section, which is numbered 6 at the bottom of that page, you start talking about the 10 percent miscellaneous factor, right?
A. That's correct.
Q. Now, you do agree, don't you, that miscellaneous costs do arise that aren't necessarily planned for?
A. That can happen, yes.
Q. And the types of costs that Mr. Mette has described as going into that 10 percent are, in fact, the kinds of costs that telephone companies incur, aren't they?
A. I would agree with that.
Q. And do you recall reading Mr. Mette's testimony of December 1997?
A. Is that the version of the testimony where -- I'm sorry, it was a deposition transcript, I think, where there was an inquiry as to what was in that 10 percent and at some point sometime back in the past that that was -- nobody knew at that time and it had to be investigated later?
Q. Actually, I'm referring to testimony that was filed in this case to calculate a portion of that 10 percent. Have you read that?

A. Yes, I think I've seen that, yes.
Q. Well, first of all, in your testimony you say that --
A. What they include.
Q. I'm sorry?
A. I'm sorry, in my testimony on Page 41, in fact, I quoted from that testimony what those costs include.
Q. Okay. But you didn't raise any criticism of the calculation that Mr. Mette made in that testimony where he demonstrated part of those costs, did you?
A. No, rather I took issue with the fact that if there are certain miscellaneous costs there could possibly be offset as well.
One of the items he lists are changes in weather and you might have a spring or fall, winter, where the weather is absolutely perfect and you can do much more construction than you otherwise may be able to, even planning for some down time.
So my argument there was that those unexpected occurrences on the flip side should offset that 10 percent.
Q. Well, do the cost studies assume good weather?
A. As I testified in my deposition, I didn't see those parts of the cost studies, or was unfamiliar with what assumptions were made in that 10 percent.
Q. Let me ask you this: If the cost study assumes that the times stated therein would be the time to perform that work in good weather, how does good weather shorten the time?

A. For instance, let's just take one season of the year, winter, and you want to do some construction in the winter, and you presume that due to snow cover, ice conditions, you may have 20 days out of the winter where that's not possible, so you factor that out. That would be considered good weather, that 20 days of down time.

But if you have an exceptionally warm, low precipitation winter, and you can work all but five or ten days of that winter, then that would factor it out.

Q. Well, do the cost studies count the number of days in the year work can be done or do they calculate the number of hours that specific tasks will require?

A. Once again, I've not seen those studies so I couldn't answer that.

Q. Well, you've got the cable makeup sheets in your LCAT study, don't you?

A. I never equated those to the miscellaneous 10 percent factor.

Q. Isn't the 10 percent factor on those sheets?

A. Although the 10 percent factor does occur down at the bottom with respect to the number of hours and down downtime for inclement weather emergencies, I don't recall seeing that at all.

Q. That's because there isn't any, isn't it?

A. I'd have to say I don't know.

Q. Well, aren't there line items on there for splicing and placement, and it has the number of hours stated?
A. Yes.
Q. Okay. And that is what is being added to, isn't it?
A. To come up with the 10 percent?
Q. Right.
A. Yes.
Q. There's nothing in there that says those number of hours assumes I can't work 20 days out of the year, is there?
A. Once again, without being able to have that electronic model in my hands to see the underlying logic, I wouldn't be able to say "yes" or "no".

THE EXAMINER: Let's go off the record for a minute.

(Recess taken.)

THE EXAMINER: Back on the record.

BY MR. HART:
Q. Mr. Gose, on the break, we were looking around and I think we found the sheet that supports your loop breakdown. I think it may be in your study; it's the very last page on the individual loop studies.
A. Yes.
Q. Do you have one of those with you?
A. Well, no -- Perhaps. Yes, I do.
Q. Okay. Now, by our calculation, the first line on that document which shows the West 7th Street office, that that loop

breakdown meets your -- or, matches your 79 percent business figure.

A. Okay.

Q. You want to verify that?

A. Yes. Yes, exactly. I divided the business loops of 57,545 by 72,267 and that came up precisely with the 7,963.

Q. And if you look at the rest of the central offices that are identified in Band 1, would you agree with me that with a few exceptions, by far there are more residential loops than business loops?

A. That's correct.

Q. Would you agree with me then that the 79 percent figure you used for Band 1 is most likely only West 7th Street?

A. Yes, I would.

Q. And would that then mean that the loop rate that you calculated for Band 1 would be in error?

A. It would be slightly lower than it should be.

Q. It ought to be higher then if we use the right mix of business and res?

A. It would be somewhat, yes.

Q. Now, in the model that you ran, I take it you took out the 10 percent miscellaneous cost --

A. Yes, I did.

Q. -- we were just discussing?

A. And in the deposition I mentioned how I did that, and what

I had done was multiplied the investment per pair amounts times .9 and you correctly pointed out to me that that was an error, I should have divided by 1.1.

Q. Have you fixed that?

A. Yes, I have.

Q. Now, one other thing you did, I believe, is apply a discount to the Fujitsu FACTR equipment; is that right?

A. There is a column in there to apply a 11 percent discount, yes.

Q. Does that apply the same discount to all the electronic equipment?

A. I believe so, yes.

Q. Do you know if the contract calls for the same discount on all the electronic equipment?

A. No, I don't. That was a portion of the model that Mr. Starkey developed prior to turning it over to me.

Q. Now, when you substituted the fill factors that you're recommending for those that Cincinnati Bell had used in its model, did you make any adjustments to the design of the cable plant?

A. No, I did not.

Q. Now, if we built the same cable plant and in one study we use a 35 percent fill and in another study we assumed a 85 percent fill, haven't you assumed that I've got a lot more customers on that same plant?

A. Either a lot more customers on that same plant or on a forward-looking network design a smaller amount of plant.
Q. But you didn't change the amount of plant?
A. That's correct.
Q. So implicitly you assumed that instead of, say, 35 customers on that 100-pair cable we now have 85?
A. That would be correct.
Q. And Cincinnati Bell's customer base isn't going to go from 35 to 85 overnight, is it?
A. Likely not.
Q. So in order to use a higher fill, instead of just adjusting the fill, don't you actually have to redesign a smaller plant?
A. That would be one method to do it; and, again, in terms of the design and how the model worked, the overall initial goal that Mr. Starkey had was to recreate the LCAT to see if he could recreate the Band 1 amount, and he had done that, but as you point out, if you do adjust the fill, the cable plant sizing may have to change, and I don't believe the model does that anywhere.
Q. Okay. And would you agree with me that the cost per pair foot of small cables is higher than the cost per pair foot of large cables?
A. I think that's fair, yes.
Q. So there's an influence of the cable size that's going to cause the cost to the plant to go up at the same time the

increased fill is going to cause the cost to the plant to go down?

(Pause.)

A. Generically speaking, that would be correct.

Q. Okay. And simply substituting the fill in this spreadsheet doesn't introduce that countervailing force of the increasing price of the loops, does it?

A. I don't believe so, no.

Q. There are a lot of costs that aren't even dependent on the size of the cable; is that true?

A. Trenching would generally be the same if you're placing a 25-pair or a 1,000-pair cable.

Q. And you still need poles?

A. Yes.

Q. Now, on Page 44, Lines 14 through 17, I take it you're recommending that as interim rates the Commission adopt Ameritech's TELRIC rates.

A. That's correct. We have kind of gone through the discussion of my -- or, Mr. Starkey's and then my subsequent changes to the recreated LCAT model, but nowhere in the testimony have we ever advocated the numbers come out of this model are what should be used. That model was merely used in an illustrative purpose to say if we did make changes to certain of the inputs, here is how things would generally flow.

But you're correct, Mr. Hart, that on Page 44 there, we just recommend it on an interim basis.

Q. Now, did Mr. Starkey inform you that he already made that recommendation in the MCI/Cincinnati Bell arbitration?

A. No. In fact, but for getting the model from him during the entire production of my testimony, I had very little interaction with him at all.

Q. Okay. Well, then, you weren't aware that the Commission has already rejected that proposition that Cincinnati Bell use Ameritech's TELRIC rates as an interim rate?

A. I am aware of that now. I wasn't aware of that at the time this was filed.

Q. Okay. Would you agree with me that if interim rates are adopted, that are the incorrect rates, whether they be high or low, that that could send incorrect economic signals to competitors?

A. Yeah, we discussed this in depth during the deposition, and with respect to if the rates are set too low it could artificially induce or stimulate competition and then when those rates are trued up, should they be higher, it could be of a concern.

My converse was to that if rates are set extremely high, that competition is unlikely to ever come, and personally, I think that's the most deleterious situation because right now there's, from my understanding of people who fund these new entrant carriers, there's a lot of desire right now to get into this market and help to fund or create a competitive local exchange company. But that may disappear in the future, and so if in the interim we have rates that are set too high and it discourages competition, those type of fundings may dry up and go elsewhere.

Q. Now, under your price squeeze analysis, I take it you've concluded that at the rates proposed here, CoreComm would lose at least $19 a line on average?

A. Let me go to Exhibit 34. $19.18, yes.

Q. And if we took the loop from the $19 that's in your analysis down to, say, $8, you're still $8 in hole, aren't you?

A. Yes.

Q. So that would still be an uneconomic proposition for CoreComm, wouldn't it?

A. That would be, yes.

Q. Now, if we were to take rates down another 10 or $12 so that it was a break-even proposition, then CoreComm would enter the market and then the Commission would establish permanent rates that were above what would be economic, would you expect CoreComm to leave the market then?

A. We discussed that in the deposition as well, and it was my first contention that, obviously, CoreComm doesn't want to lose money, and -- but I think I left it at that would be an internal decision they would have to make. Obviously, CoreComm, somehow is finding a way to make money or stay in business in the

Ameritech service territory or they likely wouldn't be there.

Q. Because Ameritech has some unbundled loop rates that are very low, aren't they?

A. Yes.

Q. Now, on Lines 22 and 23 you make the statement that the Ameritech rates should be closer to the ultimate rates than the one Cincinnati Bell is proposing, right?

A. Yes.

Q. You have absolutely no basis for saying that, do you?

A. If we look at a $19 loop rate, for instance, and say we have an Ameritech rate of 5 or $6 in a particular band for a loop, and the rate in this case is set to, say, 10 or $11, then that 10 or $11 rate is closer to the 5 or 6 technician is 19; that's my basis for that statement.

Q. When I asked you in your deposition how do you know that Ameritech's rates are closer to the ultimate rates that will be decided in this case that Cincinnati Bell's interrates are, didn't you answer, "I haven't studied that so I can't say with any certainty"?

A. That's probably correct, yes.

Q. Has CoreComm established an electronic interface with Cincinnati Bell yet?

A. I don't believe so, no.

Q. Do you know why it hasn't done that?

A. No, I do not.

Q. How long has the agreement been in place?
A. I'm trying to think of the date. I'm not -- I don't know exactly the date, so I'll say I don't know.
Q. If I represent to you it was July of 1998, does that sound about right?
A. I was thinking summer of last year.
Q. So that's about nine months ago, or eight months ago?
A. Uh-huh.
Q. Do you know how long MCI has had an interconnection agreement?
A. No, I do not.
Q. Let me represent to you it's the summer of 1997.
A. Okay.
Q. Do you know if they have an electronic interface established?
A. No, I do not. I've never had that discussion with anyone from MCI.
Q. Do you know if anybody has established an electronic interface to Cincinnati Bell's operating services systems?
A. No, I do not.
Q. What's your basis for stating that Cincinnati Bell's nonrecurring charges should assume that everybody is going to use an electronic interface?
A. In talking to the personnel from CoreComm, they told me verbatim that it's their desire to use an electronic interface,

they do not want to use a fax ordering system at all.
Q. Do you know if the orders that Cincinnati Bell has received from CLECs, how many are electronic and how many are by fax?
A. No, I do not.
Q. Do you know if CoreComm has provided Cincinnati Bell with any forecasts of what it expects to purchase from Cincinnati Bell?
A. No, I do not.
Q. I guess since you haven't read the agreement you don't know whether it calls for that?
A. Correct.
Q. How many orders should Cincinnati Bell plan to receive?
A. Once again, without the information of the number of competitors and their desires, that's a number I can't come up with.
Q. And I guess for Cincinnati Bell to come up with that, they would have to have somebody tell them, wouldn't they?
A. As you alluded to it may or may not be there in the agreement with respect to if you're required to provide them a forecast, if they are, that would be one method of having somebody tell them.
Q. Do you know if an electronic interface is available today?
A. Anywhere?
Q. At Cincinnati Bell.
A. No, I do not.

Q. Have you ever investigated that to see if it exists?
A. No, I haven't.
Q. Do you know what a local service request is?
A. Yes.
Q. What is that?
A. That's a form that the style of the form was created by the ordering and billing forum to request local service. The style is much the same as an access service request that an interexchange carrier would send to a local exchange carrier to purchase, say, special access or something of that nature.
Q. And that's a form that can be faxed in, isn't it?
A. Could be. When I worked for the National Exchange Carrier Association, I used to have to interpret access service request forms for the small, little independent companies and they would fax them to me and that was a terrible process.
The OBF, or the Oregon Billing Forum, condensed that on to a small form and people hand write those in, and by the time it gets faxed to you it's especially hard to read, so although that can be faxed in, I would say by faxes that if the LSR is anything like the ASR, it's going to be a real difficult situation.
Q. Do you know there are IXCs that still fax ASRs to Cincinnati Bell?
A. If they fax them to small incumbents, I'm sure they fax them to CBT as well.

Q. Is there anything Cincinnati Bell can do to prevent them from faxing in ASRs, or LSRs?
A. You can try to get them to automate the process. I know US West has a system where you can send in access service requests to them on an automated basis, but even with them they don't always get that as well.
Q. And would you have any reason to doubt that Cincinnati Bell has an automated system for receiving ASRs and LSRs?
A. I would hope they do.
Q. But nevertheless, people do it manually?
A. Yes.
Q. Now, shouldn't Cincinnati Bell be prepared to receive manual orders, then?
A. Yeah, I think if Cincinnati Bell sets the tone from the inception that they want these electronically and if they can prove the reasons why, that a faxed order is difficult to read, it takes a good deal of time to gather that order from the fax machine, transport it to the individual that has to interpret that, key that information in and then respond back. If that can all be done electronically, number one, you're going to save an awful lot of time and hopefully reduce a substantial amount of error, so from that standpoint I would think that Cincinnati Bell would want to work as diligently as they possibly can with any people who are likely to do that to reduce costs and avoid error.

Q. You think Cincinnati Bell should charge the people who submit manual orders for the time it takes to process them?
A. I doubt that they do that right now when they receive a manual access service request.
Q. Well, I'm asking whether you think as an economic proposition that's a rational thing to do.
A. I would say the more rational thing to do in my mind is, once again, just through education and trying to work with people who are submitting LSR or access service requests to try to get them to do it in an automated fashion.
Q. Does that mean just refusing to fill the order?
A. I don't think that would be a viable alternative, no.
Q. So what are the alternatives if the other party continues to fax orders?
A. Once again, to encourage the other party to do so on an electronic basis, perhaps go out and provide some training to get them to do that. That's not unusual, and I worked for the National Carrier Exchange Association, used to get five to ten access service requests a month to interpret from a telephone company on an Indian reservation and the interexchange carriers were ordering access service requests for the casinos there, special access service for like quarter mania machines, and in order to try to stem that tide I actually went and did some training with those individuals to help them to determine that, so I think education is a big part of the process.

Q. On Page 54, Lines 6 through 9, I believe you're recommending that Cincinnati Bell only charge dispatch on cases that actually require dispatch; is that right?
A. On Lines 7 through 9?
Q. Yes.
A. Right.
Q. Now, should that be the same charge for everybody who has a dispatch, or should we keep time and materials records and bill them what they actually cause?
A. I think keeping time and materials records wouldn't be TELRIC.
Q. Why not? Why would it not?
A. Because it would be very difficult to in advance try to cost out, you know, different types of dispatches if we had a simple, a moderate, a complex dispatch that took a lot of materials, so from that standpoint --
Q. When you said it wouldn't be TELRIC, I'm trying to understand why it wouldn't be TELRIC.
A. Because I would not consider that to be forward looking.
Q. Why not?
A. Once again, because it would be very difficult to determine what type of dispatches you may have, and in what frequency.
Q. So it would be difficult now to predict what we're going to be doing, right?
A. Yes, that's--

Q. But when I actually go and do the work, isn't it pretty easy to see what I actually did?
A. I would think so, but in terms of time reporting and materials tracking, I think CBT's argued in many instances that certain systems, you know, billing systems, record-keeping systems are not available, and that would just certainly require another one to do it that way.
Q. So I take it you're recommending a form of averaging here so that a group of customers would be charged the same rate even though they take different amounts of work?
A. Sure. In several instances, in all but essentially two instances, I have essentially advocated a form of averaging.
Q. And one of those instances is interoffice dedicated circuits?
A. That's correct.
Q. What's the other one?
A. There was two in there, the actual dedicated circuit itself, and then the entrance facility.
Q. Okay. Why are those different than dispatch costs?
A. Essentially, to me, a dispatch is a dispatch. You go and you do the work. Whereas, on an interoffice facility you may have a two-mile ring, you may have a 12-mile ring and the costs can differ greatly.
Same thing with the entrance facility, whether you have a point to point or a multi-point entrance facility, or like

two-node, two central office entrance facilities, those costs would be substantially greater, as well.

Q. Well, don't Cincinnati Bell's cost studies propose a mileage rate for interim office facilities?

A. Yes.

Q. Wouldn't that account for the distance variations you just described?

A. Yes, but not only would that account for the distance variations, but there are instances where you can, and we talked about this at great length in the deposition as well, to go from a -- and let's in this instance not talk about sector offices, but just talk about a node office to a hub office, so we're going from node A to node Z, we can travel two different paths to get there, we can travel what we'll call Path A through one central office into another, and there will be different costs for the ring electronics on the rings you traverse on that path and you would have Path B down here and there would be different costs there as well.

Q. So you're suggesting that each one of those circuits between any combination of offices should have its own rate?

A. Yes. I think I suggested that in the deposition as well.

Q. And you don't believe that would be cumbersome at all?

A. I believe I testified in the deposition that I think within two hours' time I could develop a pricing schedule on Excel and you asked me -- of course, we talked about billing systems aren't written in Excel, but I think I could do that very quickly to use a look-up table to say here is node A, here is node Z that I'm going to, what's the price of that. That wouldn't take too much time really to do it all.

Q. Do you offer your services to Bellcore to supplement their billing systems?

MR. PETRILLA: Your Honor, that's -- I don't see the point of that question.

THE EXAMINER: Sustained.

BY MR. HART:

Q. Mr. Gose, how many different combinations of routes are there between Cincinnati Bell's central offices?

A. On the DS1 circuit table file, as I recall there was 3,226 rows on or about that listed the different potential circuits.

Q. Should each one of those have its own price?

A. That's what I've advocated in the testimony.

Q. And you believe that's simpler to do that than it would be to bill time and materials on a dispatch?

A. I believe it's the right way to do it.

Q. Is it simpler?

A. It may be somewhat more cumbersome. As I said before, quite frankly, I don't see the difficulty in having to do that, especially since when you bill for that, as you correctly pointed out just a moment ago, that circuit is going to have a mileage component, so you've got a variable component in that service already, so to have two variable components as opposed to one; shouldn't be that much more onerous.

Q. Isn't the way Cincinnati Bell's proposing the rates exactly the rate structure of special access circuits today?

A. Very much where you have the termination and the facility, mileage facility.

Q. Do you know of anyone who charges individual prices for each special access independent of the mileage?

A. I can't think of anyone, no.

Q. Now, on Page 55, the first line, you say, "disconnection costs or a fiction"; see that?

A. Yes.

Q. Now, if Cincinnati Bell has sold an unbundled loop to CoreComm, for example, and has cross-connected that to its cage, if CoreComm informs Cincinnati Bell it no longer is going to pay for that loop, won't Cincinnati Bell go and remove that cross-connect?

A. They might. As we talked about in the deposition, they could also just leave it there as well for the next collocator -- I'm sorry, for the next new entrant carrier or for themselves, if the loop, and let's presume it's -- well, for that loop, if that customer wants to come back to Cincinnati Bell, Cincinnati Bell is going to obviously go and get that loop and reconnect it to their main distribution frame, likely.

Q. Well, say it's a second line that we have wired through to

the house like we talked about this morning, and that customer decides he no longer wants the second line. Should Cincinnati Bell leave that line open?
A. I think they can shut it down in the central office.
Q. By disconnecting the jumper, right?
A. Yes.
Q. And that's a disconnection cost, isn't it?
A. While I would agree that there would be some costs involved, it would be very, very minimal.
Q. It's not a fix, is it?
A. In that instance it's not, but in an instance -- that's just one instance. In another instance where the line is being replaced or taken to a different new entrant carrier or back to Cincinnati Bell, then I would argue, yes, it is.
Q. But you're not distinguishing between those situations, you want to remove all disconnection costs?
A. I don't think that's unreasonable. Once an individual establishes a second line, I would think it would be very infrequent an occurrence when they would want to get rid of that. I think -- I've had a second line for two years now, and --
Q. I'm sorry, go ahead.
A. -- and I would be very hard pressed to give it up, I've come to rely on it for many uses.
Q. So the basis for your opinion is your own personal

experience?
A. Yes. I don't have any studies to say that once a second line is installed it's only removed 90 percent -- or, 10 percent of the time.
Q. Okay. Let's go on to the subject of collocation. Would you agree with me that the FCC does not require local telephone companies to expand their central offices in order to create collocation space?
MR. PETRILLA: Your Honor, I just want to interpose here, when he says would you agree that the FCC does not require ILECs, is he talking about a legal requirement? Is he asking for a legal conclusion about what the FCC's rules require?
THE EXAMINER: His testimony is full of citations to the FCC as well as direct quotations from the FCC order, as well as opinions from other state jurisdictions, and it seems a bit disingenuous that you would object on those grounds.
Objection is overruled.
If you know. If you don't know the answer, you're perfectly free on any of the questions to say, "I don't know".
THE WITNESS: I believe I can cite to it in the FCC order.
THE EXAMINER: That's fine. Go ahead.
BY MR. HART:
Q. Where are you?
A. Paragraph 606 of the Local Competition Order.

Q. Okay.
A. Where it says, "Incumbent LECs are not required to provide collocation at locations where it's not technically feasible to provide virtual collocation, although space constraints are a concern normally associated with physical collocation given our broad reading of the term 'premises' we find that space constraints could preclude virtual collocation at certain LEC premises as well".
Q. Why don't you look at Paragraph 585, about seven lines down. It says, "We further conclude that LECs should not be required to lease or construct additional space to provide physical collocation to interconnectors when existing space has been exhausted"; is that right?
A. Yes.
Q. Now, if a central office has no space available for collocation, what happens if somebody wants to collocate there?
A. When you say "no space", are you talking physical or virtual?
Q. Physical.
A. Then the ILEC could offer them virtual collocation.
Q. All right. Now, if the ILEC was feeling generous and decided that it would expand its building in order to make some collocation space, do you think it would be appropriate for them to charge the collocators what it actually cost to add that space?

A. Once again, I approach this entirely from a TELRIC standpoint where I say I'm not interested in what it would cost or what the incumbent would have to do to provide that. My concern is that costing out what it would cost to provide that space if it's available. And in this instance what I've said is a forward-looking study should presume that. And I was going to say --

Q. Go ahead.

A. -- in the deposition we talked about the likelihood that the R.S. Means data might include information for -- or, might include information about central offices that were designed for collocation.

As I recall in reading some of the transcript from earlier in this proceeding, that R.S. Means data, in fact, may be pretty darn old with respect to central office data, and because of that, I'm trying to think of the cost per square foot that Mr. Mette had for that office in Kentucky, was it around 220 or $-30 a square foot, something like that, as opposed to the 135 that CBT used in its floor space study.

So whatever the case may be, you look at the difference there and say wow, there's a 80 or $90 difference between those two. Well, that, I guess, 80 or $90 difference could be associated with the central office buildout charges or kind of compared to the two.

But what I'm most interested in this entire process is not what CBT would have to do to accommodate the seventh collocator when the sixth one has taken up the sixth spot, but let's cost out what those six spots cost and what we can get them for.

Q. Well, you're way ahead of me here. My question for you is in my example, where I actually do decide to add on to my building, whether economically it's appropriate to charge the people who are going to occupy that space the actual dollar cost that it took to add that space?

A. And again, I'll go back to a portion of my original answer stating that adding that space after the fact is not TELRIC.

Q. I understand that. I'm just asking you economically, in your opinion, what should Cincinnati Bell charge to provide that space?

A. I think that's irrelevant to this proceeding, so I don't have an answer.

Q. Well, how is that different than a situation where we have some space that's not occupied but it's not in a condition for collocators and some construction work needs to be done; why is the construction work in that situation any different than the construction work to add on to my building?

A. Again, I am looking at this from a standpoint of what would you do if you were designing a forward-looking network today, and if I were to design that central office, keep it in the same location where it is and design it today, you would think that you would design that building to accommodate collocators.

Q. How many should I design it to accommodate?
A. We kind of went round and round on this in the deposition with respect to forecasts, querying potential people who we think are there, who may in the future be there, that's a decision that CBT would have to make. I have not ever been involved in determining that type of information.
Q. Well, wouldn't that be pretty important information to know before we would go out and design a building?
A. Yes. In fact, I'd be very interested to know what kind of thought process in this new central office that was constructed in Kentucky was gone -- what type of process was employed to determine what type of additional space and how you would build out that space for potential collocators.
Q. Is one thing you might consider an actual request for collocation?
A. That's one thing you could consider, yes.
Q. Or even a forecast from a competitor as to how many collocation areas they may choose to buy some day?
A. Yes.
Q. Has CoreComm requested any collocation from Cincinnati Bell yet?
A. I don't believe so.
Q. Have they provided Cincinnati Bell with any kind of a forecast of the collocation space they might want?
A. That I do not know.

Q. Do you know if that's covered by the interconnection agreement?
A. No, I do not.
Q. Well, let's say Cincinnati Bell has somehow looked into a crystal ball and decided that it thinks six people will want to collocate in a given office. Is it supposed to use that information then to somehow price the space?
A. If that's deemed by Cincinnati Bell to be an accurate, reasonably reliable figure, and Cincinnati Bell makes other assumptions with respect to the amount of space that those individuals will want and a common space or common factor, if you will, for how much additional space in addition to the cage area they would construct, then in a forward-looking study saying we would build the building today for our central office purposes, for our switches, for our digital cross-connects, DCS, main distribution frame, all the equipment we need X number of square feet, and then they can reasonably presume what the area for collocation would be needed, then they could apply an estimated cost per square foot to that total amount of square footage and use that on a forward-looking basis to determine collocation costs.
Q. Could you walk through the calculation for me; how you would do that?
A. I think I just did.
Q. Put some numbers to it so that we can follow you.

A. For CBT, let's say that they -- and I'm going to use small numbers here just for simplicity -- that they -- well, no, I won't either -- that they need 5,000 square feet of space in a particular central office for all their switch gear, and that 5,000 square feet of space, I'm incorporating that to also include things such as cable vaults, DC power generation, power rectifiers, bus bars, those kind of things, so in totality 5,000 square feet of space.

And we look and say, "Okay, we forecast reasonably that we'll have six collocators and each collocator will need 100 square feet of space", that's 600 square feet of required space for collocators.

But obviously you need ingress and egress capability for those collocators, so you would want to apply a factor, common space factor to that. Let's hypothetically say that's 2.0. So that would say that for that 600 space we actually -- 600 square feet of space for collocators, we actually need 1,200 square feet.

So you would add that to the 5,000 square feet for the entire amount of the rest of the office and construct an office of approximately 6,200 square feet. I'm sure it would be somewhat more complicated than that, but that's a --

Q. And then do I estimate what that total building could cost?

A. Yes, that would be, say for instance, using the R.S. Means data or something similar to it.

Q. Okay. And you've suggested from your statement earlier that the R.S. Means data may be pretty out of date.
A. That was my understanding from reading the transcripts of earlier in this proceeding. I don't know that personally to be true or false.
Q. Should actual experience of Cincinnati Bell be a better guide for the cost of collocation space than the R.S. Means data?
A. It could be, if the R.S. Means data can be shown that, you know, it's the most recent data is the 1991, that could be considered pretty embedded and out of date, so....
Q. Okay. Now, back to real life for a minute. We've got a central office that physically exists and we're not going to tear it down, build a new one. Doesn't Cincinnati Bell have to first identify space that's available for collocation?
A. Yes.
Q. Now, let's say it has enough space to accommodate the six people you say might be collocators. Is that the amount of space it ought to build out for collocation?
A. Once again, you would want to determine -- I think in this discussion we're talking about an embedded basis here. But -- And I'm not talking TELRIC, but on this embedded nature that you're speaking of here, that's one way that they could do it.
Q. Well, at some point they have to actually build space, right?

A. Yes, but that's not the purpose of this proceeding, to cost out what it actually would cost to build out that particular space.
The purpose of this proceeding, as I understand it, is not to look at things on an embedded nature, an emedded central office. The purpose is to use a forward-looking methodology to cost out collocation elements.
Q. Well, isn't TELRIC supposed to replicate the cost that you expect LECs will actually incur in the future?
A. The TELRIC methodology as I understand it -- the forward-looking costs that they would incur in the future -- and when we say "forward looking", once again, we're not saying, "Cincinnati Bell, build out your existing wire center to accommodate collocators". The FCC orders clearly state to use the land that it sits on, but from -- beyond that, construct that network as if you were starting from the ground up.
Q. Let's maybe draw an overhead diagram. Let's say this is my central office right here and I've got an area that is not walled off, but this end of the building is vacant so it's available if somebody wants to use it (indicating).
A. Understood.
Q. And let's say I've done my forecast, or maybe I even got requests for collocation for six people, and you tell me that 100 feet times two, I need 1,200 feet, fair?
A. Sure.

Q. Okay. So I map out 1,200 square feet over in this corner. Don't I have to go ahead and build some walls to segregate that space?
A. Yes, you would, but under your premise that you're talking about here, you're asking us to look at an embedded central office and cost out collocations based upon what is presently there as opposed to looking at the construction of a new, well-designed, forward-looking central office.
I think a good example is what we talked about with the West 7th office where the only space available in the West 7th office is so far away for the collocators that they can't use copper jumpers; and on a forward-looking basis, that might not be considered the least cost, most efficient way of doing that.
Q. Well, on a forward-looking basis, every central office would have space available, wouldn't it?
A. Yes.
Q. But what the FCC has said is if there isn't any space available, physical collocation does not have to be provided, right?
A. Yes.
Q. And essentially is saying that where physical space does exist, that's really the physical space that has to be used for collocation, right?
A. But I'm trying to think, and I'm hard pressed to think where it says that that can be costed based upon the embedded

facility.

Q. I'm not even to cost yet. I'm just talking about practically how do we build the space, okay?

Now, doesn't the FCC order essentially say you identify space that's available and that's the space that you have to make available for collocation?

A. Yes.

Q. Wherever it might happen to be.

A. Sure.

Q. Okay. And I'm asking you to assume in this example that that space was in this end of the building (indicating). Now, isn't it also true that the LEC has to build the space out so that it's fit for collocation?

A. Yes.

Q. Okay. And we've done that according to a forecast that was reasonable at the time it was done?

A. Correct.

Q. Now, let's assume our forecast was wrong and, in fact, ten people wanted to collocate, but I only built room for six. If I go ahead and build another 800 feet for those other people, should I be allowed to recover my actual cost of building that space?

A. When you say should you be allowed to recover it, how do you propose to recover that?

Q. Well, there's -- I get bills from construction companies and they charge me to build walls and to install electricity, to put lights in and so forth. Who's going to pay those bills?

A. Obviously as CBT has its build-out charges presented, the new entrants would pay a certain portion of that.

Q. Okay. And isn't it fair that they do that since they're the ones that want to occupy that space?

A. I think it would be more fair for the central office to be considered on a -- on a forward-looking basis, once again, designed with those folks in mind and priced out accordingly.

Q. Well, it was forward looking when I built my 1,200 feet, right?

A. Right.

Q. Now, as soon as I do that, am I suddenly in embedded cost again so that everything else I do in the future has to ignore that I've already done that?

A. I would personally say that you've, on a forward-looking basis, looked at that 1,200 square feet and you know what it costs -- what a square foot of floor space costs. And if ten new comers want space and CBT builds out that 800 square feet, then they should continue to charge on a per-square-foot basis.

Q. Everybody gets the same rate?

A. Yes.

Q. Now, let's take the contrary example. Let's say I expect six people to come and collocate but only three of them show up. So I've built space that's big enough for six but there's only

A. That's my understanding. In my testimony -- That was merely meant to be illustrative for simpler math in my hypothetical. In my testimony, as you probably know, I recommend a 1.5, and during the deposition we kind of went through the mathematics and drew that up, how I arrived at that 1.5.

Q. Do you have any source for that number?

A. It was just I simply sat down and drew up some cages and tried to determine how much space would be needed.

Q. Did you consult any construction guides or any architects?

A. Not at all.

Q. Now, don't I have to design construction from -- sorry, collocation space office by office?

A. Yes.

Q. On Page 57, you have a problem with ICB pricing. I'm wondering how that -- how you rectify that with the requirement that we have to deal with collocation office by office.

A. My concern with respect to ICB pricing has to do, as I have stated in the deposition, with the delays that ICB pricing can create for the new entrant carrier and the uncertainty that results then in their business plans.

Q. When we say "ICB pricing", what element are you exactly talking about? Is it floor space?

A. Yes. As I understand the floor space study, we have a rate for West 7th, and then a rate for Avondale, Evendale and

three. Do I apply a fill factor then?
A. We talked about this in the deposition. My answer was I don't believe you do.
Q. So Cincinnati Bell has dedicated 1,200 feet to collocation and it's not allowed to recover the cost of that total 1,200 feet, only the 600 feet that's used?
A. That would be my understanding, yes. In this example that you have here, you still have some vacant space in the central office. How's Cincinnati Bell recovering that vacant space, as well?
Q. Well, we're not talking about that space. I'm talking about the space I specifically built for collocation which is now segregated from the rest of my office. Is Cincinnati Bell expected to absorb that cost?
A. I think yes.
Q. And it's expected to absorb the cost of building those walls?
A. The cost of building those walls is serving, at least in your example here, three collocators.
Q. Is that the result the Commission came to in the Ameritech case?
A. I couldn't tell you that.
Q. Now, you mentioned in your hypothetical that a two-to-one ratio for common space might be used. Do you realize that's the ratio that was used in the Ameritech case?

Rossmoyne.
Q. And what's the variable between those different floor space rates?
A. The high and the low?
Q. No. What factor, if any, causes the variation in rates between those offices?
A. The common area factor is one.
Q. Okay. Anything else?
A. It's the building investment per square foot.
Q. Isn't that the R.S. Means $135?
A. No, it's not. It's a different figure for all four.
Q. Where are you looking?
A. (Indicating).
Q. Well, isn't that the multiple of the common area factor and the $135?
A. Yes, that's correct.
Q. Okay. So the variable there is the common area factor, not the square foot charge?
A. That's -- But the square foot charge, consequently, what I was trying to say, does become variable.
Q. So the only thing you would need to know in order to determine the floor space charge in a given office would be to know the common area?
A. Yes.
Q. And since all these offices are, in a sense, unique, that

common area factor is going to vary depending on the configuration of my space, isn't it?

A. If you look at it on an embedded basis and say the FCC said not only keep the land where it is but keep the same central office, too. But if you were to, on a forward-looking basis, keep the land but hypothetically build new central offices and set aside a section, I would think that you could, within a reasonable percentage point or two, come up with a very similar common area factor which thereby then would lead to similar collocation rates across all central offices. In so doing, you wouldn't have to have an individual case basis for many other offices.

Q. Well, according to the rules we were looking at, the collocation space only has to be made available where it exists, right?

A. That's correct.

Q. So before I can even tell you if collocation is available, don't you have to tell me where you want collocation?

A. In the embedded network as it exists today with the -- when I say "embedded", the presently existing central offices, that could be the case, yes.

Q. Well, and that's the central offices that you're going to be collocating in, isn't it?

A. Yes. But, once again, I'm looking at this from a standpoint of I want to cost out what a square foot of floor space costs me, and in the cost studies that I have seen from other incumbent local exchange companies, this is the only cost study that I have ever reviewed that had a different rate for every office for collocation.

Q. All right. Let's go back to my question now. Before I can tell you if you can get collocation, don't you have to tell me where you want to go?

A. Yes.

Q. And then somebody has to survey that building to see if there is space available, correct?

A. Correct.

Q. And they're going to have to plan it and determine where it's going to be, right?

A. Unless it's already there.

Q. And until I do those steps, you're going to have to wait before you can even plan to collocate there, aren't you?

A. Yes, you would. But if you knew in advance at least what the costs were, you could begin to development of -- develop a business plan while you wait to find that out as opposed to determining that you want to be in, say, a Groesbeck central office -- and I don't know what the rate is -- and so I say, hey, I'm curious to know whether or not you have space available in the Groesbeck central office, please let me know.

In the interim, I can't even really begin to develop a reasonable business plan until I know what that's going to cost me. But if we did this on a forward-looking basis and said the cost for this central office floor space across all offices is this, in some instances we may have, in some instances we don't, at least you can begin that process of developing a business plan.

Q. Now, if you had read the CoreComm interconnection agreement, do you think maybe you would see what the parties agreed to as far as the process for requesting and obtaining collocation?

A. Likely that could be in there.

Q. And if CoreComm agreed on a schedule for that, are you suggesting that this proceeding should vary that?

A. I'll have to answer I don't know that because I'm not certain.

Q. All right. Do you know whether CoreComm agreed to pay central office build-out charges?

A. No, I do not.

Q. Am I correct that the FCC rules allow the parties, by agreement, to vary from its own rules?

A. I don't -- If they do, I don't know where that is in the rules.

Q. Have you ever heard anybody doing that?

A. No, I don't believe I have.

Q. On Page 57, your first bullet point suggests that build-out charges would be unnecessary under TELRIC, right?

A. Yes.
Q. TELRIC doesn't do away with the need to build walls and bring electricity to the area and so forth, does it?
A. No. That would be there under an embedded -- if you were looking at it on an embedded basis, that would be there.
Q. And you can't tell us, can you, whether the R.S. Means square foot guide would include money to have built a collocation area and equip it with electrical connections and so forth, can you?
A. I have not contacted R.S. Means, so I don't know that.
Q. And you don't even know if any of the data in the R.S. Means contains a central office that was built for collocation, do you?
A. No, I do not.
Q. So if there are additional costs that would be required to make a building suitable for multiple tenants that aren't captured in R.S. Means, it's still appropriate under TELRIC to recover those costs, isn't it?
A. Could I ask that that question be read back, please?
Q. Sure.

(Question read back as requested.)

THE WITNESS: If it could be shown that -- if that 220 or 220 -- or $230 of -- per square foot of investment, if that's the correct figure for the Kentucky central office, was a least cost, most efficient design, and that did include build-out for collocators, then I think the answer to your question is yes.

BY MR. HART:

Q. Let's assume that that Kentucky office did not include any collocation. Should there be even extra expense to allow for multiple tenants?

A. I would not object to, on a forward-looking basis, if you looked at a central office and said this is what it's going to cost to build it and on a least cost, most efficient basis we are going to provide for collocators, and it costs X number of dollars per square foot, then I think that would be appropriate.

Q. Have you reviewed the charges that Cincinnati Bell incurred to make its central offices ready for collocation?

A. By that, are you referring to the large central office build-out?

Q. Yes.

A. I have been through that, yes.

Q. Is there anything in there that you can tell us was an unnecessary expense?

A. With respect to -- You asked me very early today whether I'm an expert or have any expertise in construction, and my answer was no. So from that standpoint, I -- my answers would be speculation; so no.

Q. Okay. And let's assume that the central office was built new today. Can you tell me whether any of the expenses that are in the build-out charge would duplicate something that would have not been -- I'm sorry, something that would have been in the basic building?

A. Possibly. In the basic building, for instance, you have heating, air-conditioning, ventilation, and you -- to provide additional capacity, you might need to add an air-conditioning chiller or something of that nature that has a greater capacity, so that's -- that's an example that I can think of.

Q. So you would need to spend more money on air-conditioning, for example, for collocation than if we just built a single-tenant office?

A. Possibly because the heat generator or the climate needed for the collocators' equipment would likely demand such.

Q. Okay. Anything else?

A. Once again, not being a construction expert, I would be hard pressed to give you a lot of examples.

Q. On bullet point No. 2 you suggested core drilling would be unnecessary. Aren't there going to be more core drills in a multi-tenant building than in a single-tenant building?

A. Yes, but once again, using this as an example, if I knew on a going-forward basis, if I was going to design a central office from the ground up, and I knew where I was going to put my collocators, I would likely form -- and this is, once again, just speculation -- but instead of doing the core drilling, you might form your concrete to provide, as we talked about in the deposition, chases or locations for those cable routes.

And you would potentially look at all the collocation arrangements that the company presently has plus a number of other collocation arrangements from other companies that would share that information to find out how often does a collocator want a diverse route, and factor that in. And, correspondingly, then, price out that new central office or cost it out as if it already had those type of cable routes available.

Q. Well, it would cost something to put those holes in the floor, wouldn't it?

A. Yes, but whether or not it would cost as much as it does to come in and retrofit those, I -- it might or it might not.

Q. Well, let's say we -- we actually built a brand new building and we put holes in the floor and so forth and the collocators came in and asked for some more holes. Should we charge them to drill those holes?

A. You could possibly do that. I think the better situation would be to plan appropriately and make certain that you have enough capacity.

Q. Well, plants aren't always perfect, are they?

A. No, they're not. And they don't always go to the extreme where everything goes wrong; sometimes they go right, you would have more holes than you otherwise need, as well.

Q. Does -- Does TELRIC require perfection from the incumbent LEC?

A. That's not -- That language is not included in the FCC

order.
Q. Now, in number -- bullet No. 3 you discuss the SONET system in the West 7th office. Let me ask you first whether -- Do you have any technical expertise to say that that was an inappropriate system to build?
A. No, I don't, because that system may have been built for other purposes other than strictly for cross-connects.
Q. Now, you said something earlier about the length was too long for a copper cross-connect; is that right?
A. That was my understanding of the explanation of why that's used for cross-connection purposes in that office.
Q. Do you understand that there are copper cross-connects in the West 7th office?
A. That was not my understanding, no.
Q. Well, can you distinguish between a DS0 and a DS1 cross-connect? Are those different things?
A. Oh, yes.
Q. And is there any distance limitation on a DS0 cross-connect?
A. That would be a technical specification I'm not familiar with.
Q. Might there be a distance limitation on a DS1 cross-connect?
A. Yes.
Q. Given the location of that collocation space, do you know

of any other way that would have been more appropriate for Cincinnati Bell to install cross-connects between its mainframe area and the collocation area?

A. I have not studied what other alternatives might have been available.

Q. Okay.

A. But for, I think one could consider that if the OC48 system is not at capacity, and I think we had talked about this in the deposition as well, where that OC48 system provides the equivalent of in excess of 32,000 DS0s, and you only needed 1,500 DS0s of capacity for cross-connects, then an OC3 system may have been equally as viable.

Q. Well, if the system is charged on a per-unit basis, isn't an OC48 cheaper than an OC3?

A. If it's at capacity.

Q. Well, I'm asking if it's charged on a per-unit basis. Aren't there economies of scale to an OC48 that don't exist in an OC3?

A. Likely, but I have not studied that to be able to tell you what they are.

Q. Okay. Now, are you suggesting that Cincinnati Bell should charge something less than the forward-looking cost of that OC48 system?

A. If it could be shown that that OC48 system is the absolute least cost, most efficient method of providing those

cross-connects, then the answer would likely be no. However, if it can be studied that there could be a least cost, more efficient way other than the OC48, especially in a forward-looking environment, then the answer could be yes.
Q. But you don't know of any way right now?
A. No, I don't.
Q. Do you understand that in the local competition proceeding, that AT&T suggested that if collocation space wasn't physically available, that the ILEC should give them free trunking into that central office?
A. While that rings familiar, I'm trying to think, that may be in the local competition order with respect to the interexchange carrier -- or, the comments before the FCC made a ruling; but to be able to tell you precisely where it is, I couldn't tell you that.
Q. Why don't you look at Paragraph 605. Does that refresh your recollection of that issue?
A. Yes, it does.
Q. Okay. Now, if the FCC declined to require free trunking where there was no space available, are you suggesting that for some reason this Commission should refuse to allow Cincinnati Bell to charge something other than the actual cross-connect charge where the circumstances require the collocation space to be at some distance from the mainframe?
A. Once again, I would want to have an absolute assurance that

that solution that was used was, in fact, the least cost, most efficient method.

Q. Now, if someone wanted to collocate at West 7th Street and didn't like the cross-connect charges, they have the option of virtual collocation, don't they?

A. Yes.

Q. Your fourth bullet point talks about the security systems. Would you agree with me that a multi-tenant building needs a different type of security system than a single-tenant building?

A. Yes, I would agree with that, but I would preface that remark by stating that security systems may be able to be lessened if you built the central office from a ground-up standpoint where you could avoid levels of security.

If I have to come through the front door, take up an elevator to the third floor, past the incumbent LECs' equipment and then into my collocation space, that could require a number of levels of security to get in; whereas if I had ingress and egress to an exterior or something of that nature, we could lessen the cost of security.

Q. Finally in your fifth point on Page 58, you indicate that you're objecting to the cost of power delivery systems. Do you have any reason to doubt that Cincinnati Bell had to actually spend money to extend power delivery systems to collocation areas?

A. Likely not.

Q. And even in a brand-new building, wouldn't it still need to build a power delivery system that would go to a collocation area?
A. Yes, but that could be factored in in the design of a forward-looking, brand-new building, and it may be substantially easier to do on that basis than in terms of retrofitting it into an existing building.
Q. But we still need to bring the power cables and common busses and grounds and so forth into the area, don't we?
A. Yes.
Q. And you wouldn't expect to see those in a single-tenant building, would you?
A. Likely in a single-tenant building, those power delivery leads, grounds, bus bars, et cetera, would be primarily just for the incumbent LEC's equipment only.
Q. So if there's more than one company running equipment, we need more than one power delivery system lead?
A. Yes.
Q. Now, I understand on Page 59 that you're recommending that all of Cincinnati Bell's collocation rates be reduced for the interim by a factor of 75 percent.
A. That's correct, but only on an interim basis.
Q. Could you explain to us exactly how you calculated this 75 percent recommendation?
A. I can try.

Q. Go ahead.
A. We went over this two or three times in the deposition.
Q. Well, we have to do it on the record here --
A. I understand.
Q. -- because the deposition isn't the record.
A. I was just make -- forwarding my remarks with that just to...

I looked at a number of the studies, and let me say that there is no -- at the beginning, there is no mathematical formula that gets to 75 percent. I'll just begin my remarks with that.

But I did do an analysis of certain collocation elements, and one of those collocation elements was floor space. And a foot of floor space for the West 7th office was 51 percent less than it was for a higher-priced office, the most expensive of the four offices sampled.
Q. Could you give us the dollar amounts of those two?
A. Sure. This will be a confidential transcript, so I can do that.
Q. Right.
A. Okay. The dollar amount for the West 7th was $6.63, and for the most expensive other office, that office was Avondale, it was $10.04.

So there's quite a difference there. And, of course, in this I have advocated for floor space that I would like to see an average of one square foot charge across the board for all CBT central offices, no individual case basis pricing. That's one example.

Conduit was another example or inner duct. At the other offices it was priced out to be 11 cents -- let me make sure I have got that exactly correct -- and for 10 other offices or 14 data points it was 11 cents. So that's a difference between those two of 254 percent.

Q. I think you said 11 cents both times.

A. I'm sorry. For West 7th this was 39 cents.

Q. Okay.

A. I apologize. And it was 11 cents for -- was developed on an 11-cent basis for 10 other offices and 14 data points for those 10 offices.

And a third item that I looked at was riser space. And riser space was 3 cents a foot in the West 7th office, and 38 cents a foot in what I believe to be four other offices -- or, three other offices. So that's a difference of 1,153 percent.

And what I did simply was look at that and say, okay, if I had this on a graph and I had -- my first variation was at 50 percent, my next one was off the chart at 254 percent, and my third rate element was way, way off the chart at 1,153 percent difference and I wanted just on an interim basis, until we can get through these studies and what -- I believe make some corrections that are necessary on an interim basis, what should we do.

And I just kind of looked at that and said, "Okay, the starting point is 51 percent and then it goes off the chart beyond that". I merely chose the difference between 50 and 100 percent. I said, "Okay, 75 percent", and would apply that; once again, only on an interim basis.

Q. And you're suggesting that that reduction be applied to all of those rates?

A. That's correct.

Q. So instead of $6.63 in the West 7th Street office, you're proposing that we charge about $1.65?

A. That's what I was proposing, although, as I recall in my deposition, I acquiesced somewhat and said if the Commission deems that to be applicable only to the higher ones and not the bottom one, then that's a possibility, as well.

Q. So you were --

A. But obviously, say, for instance, if the $6.63 is deemed to be slightly more than its actual cost because an annual charge factor was potentially a little high for something in that nature, then, obviously, you're not going to just reduce the other three offices and leave that one where it is, especially if that makes the other three offices less than $6.63.

Q. Well, you're suggesting that the -- I believe it was Avondale that was about $10?

A. That's right.

Q. You would reduce that rate to 2.50?
A. On an interim basis, yes.
Q. And how much would that reflect for investment per square foot?
A. I'd have to go back through the calculation that was made for that to determine that.
Q. Be about $34, wouldn't it, if you take the $135 of R.S. Means and divide that by four?
A. That could be.
Q. So you're suggesting that it's more accurate for an interim basis to assume that it costs $34 a square foot to build central office space than to use the R.S. Means number of $135?
A. I can't stress enough that this was absolutely intended to be an interim basis only until new studies with more appropriate inputs could be filed.
Q. Well, have you done any alternate studies to try to determine what you believe would be a TELRIC rate?
A. I have not done that for the central office studies. It would take a little bit of time but not a lot of time, but you could go back through and do that by replacing, say, for instance, in the floor space analysis, you could go in and change the common area factor and change the annual charge factor for land to make those type of adjustments, but I have not done that.
Q. Well, wouldn't that be a more rational approach than to

just slash everything by 75 percent?

A. Well, that's a more rational approach. I think that's the final approach that we'll -- or, that should be taken. And in the interim, instead of asking somebody to go through and do these studies numerous times, this 75 percent recommended discount factor would be easily applicable.

In fact, I don't have a set of prices on what the proposed UNEs would be based upon certain changes, even the 13 percent cost of -- or, 13 percent common cost, there's not, to my knowledge, a new pricing schedule that reflects that. And I accept Mr. Mette's -- or, the CBT explanation that it would be very difficult to go back and rerun all of those studies until that occurs. This gets exactly to that same point.

So from that standpoint, that's why I proposed on an interim basis the 75 percent.

Q. Well, doesn't the Commission have to act on evidence of cost?

A. With respect to where that is in like the Local Service Guidelines, I am --

Q. Well, could you just tell me what evidence you have that the cost of collocation at any of Cincinnati Bell's offices is less than Mr. Mette's study has demonstrated it to be?

A. Again, on a forward-looking basis, if we're going to look at our central offices on a forward-looking basis, I would think you would want to apply a standard common area factor across the board if you're going to redesign your central offices.

It might have to differ a percentage point or two from one office to another based on where you're locating and how you can build, but I would be very surprised if you looked at your -- rebuilt your buildings from a ground-up basis and you had a common area factor of 2.7 percent for one building and the next central office over you had a common area factor of 1.77. On a forward-looking basis, I just don't think that would happen.

Q. Well, if we picked the Ameritech factor of 2, would I be correct that all of Cincinnati Bell's offices, except for one, would actually experience an increase in price?

A. That's correct. But if you chose an annual charge factor that reflected a different cost of capital and different depreciation lives, then it would be correct to say that the costs for all four of these offices would go down, as well.

Q. Well, the cost of capital and the depreciation lives aren't going to make a 50 -- or, 75 percent difference, are they?

A. When you make those changes to the annual charge factors, they could go down substantially.

Q. Seventy-five percent?

A. Perhaps not 75 percent, but perhaps in the neighborhood of 50 percent.

Q. Okay. Let's change the topic of conduit, since you raised the rates, 39 cents at West 7th and 11 cents elsewhere.

What evidence do you have that those are not the costs to install conduit in Cincinnati Bell's offices?

A. I don't have any evidence that that's not the cost to install conduit, but the matter that does concern me is that the costs are likely, on a per-foot basis, substantially different between all those offices.

Q. Is there a difference in characteristics between the West 7th office and the other offices?

A. Yes. It's in a more dense geographic urban area.

Q. It's in the middle of downtown Cincinnati surrounded by streets and concrete sidewalks, isn't it?

A. Yes.

Q. Do you think it costs more to install conduit where everything is concrete and streets than it might where things are grassy?

A. That's possible, yes.

Q. Would that explain the difference, perhaps?

A. While it could explain the difference there, there are 10 other offices with 14 data points, as we mentioned earlier, that appear to have different costs, as well. And on a forward-looking basis in those areas where everything is grassy, and if you were building -- or, installing that conduit on a forward-looking basis, I would think that between -- I don't even know what these -- where this information came from, but I would think that, say, for instance, from the Hamilton to the

Norwood central office locations, that if you had the ground opened to put in concrete conduit, or whatever type of material you were going to place, that it would -- generally, the investment should be the same between those.

And by my looking down at the contractor costs between those, it is different. Obviously, that's because that's embedded data, it's what it did cost based upon each one of those.

What I'm asking for is a forward-looking study where you look and say, "Okay, on average, it costs this much to put in conduit".

Q. Well, do you expect that in the future every construction job is going to cost exactly the same?

A. While it may not cost exactly the same, I would think there would be some relationships with respect to materials and labor to install. Where the differences make -- or, possibly could arise would be with respect to actually opening up the ground to put that -- that plant in service. But as you have contended, out in the areas where it's grassy, I would think even that excavation-type work would be similar.

Q. Well, isn't the best predictor of future construction costs the most recent experience with similar-type jobs?

A. That certainly could be. And that's, I guess, one piece of information that's missing from the conduit study for the ten other offices, is when those jobs were conducted.

Q. Don't the records in that study show you exactly when they were done?

A. The study that I have contains four pages and there's no dates with respect to records.

Q. You have not reviewed the backup material that was supplied in data requests?

A. I don't know that I received that.

Q. Well, whether you saw it or not, can you tell me what data would be more appropriate to consider in predicting what future conduit jobs would cost than the most recent conduit jobs that are typical of what we expect to do?

A. One thing I would want to know from those 14 jobs would be just to know if they were all conducted by the same contractor; and if not, you would look to see which contractors were the least cost.

Q. Have you done anything to try to do that?

A. No, I have not.

Q. Do you have any basis on this record in this hearing for the Commission to act other than upon the evidence that Mr. Mette has presented?

A. But for the cursory analysis I did with respect to the variation among the rates, no.

Q. In your testimony you used the comment that Cincinnati Bell had somehow gerrymandered the data on conduit. Tell me what you mean by "gerrymander".

A. In the deposition we kind of referred to that as a term of political derivation where boundaries or data was selectively gathered to arrive at a skewed result. Is that a fair characterization?

Q. And it's a negative term, isn't it?

A. I didn't consider it to be negative; I just used it in the context of selectively choosing information.

Q. Well, it suggests that somebody selectively did something in order to arrive at a particular result, doesn't it?

A. That's one definition.

Q. And what evidence do you have that Cincinnati Bell selectively chose conduit jobs in order to achieve a particular result?

A. The only evidence that I was concerned with was the fact that for virtually every other collocation study submitted, there were four offices generally looked at; West 7th, Avondale, Evendale and Rossmoyne. And all of a sudden I get to this study and I have ten different central offices, only one of which is one of those four, West 7th. Avondale, Evendale and Rossmoyne don't even appear anywhere and we are using a different study.

So that was my primary concern is, wait a minute, why all of a sudden have we abandoned using Avondale, Evendale and Rossmoyne, which are considered essentially by CBT as good surrogates to perform these collocation cost studies, and all of a sudden, and in one and one study only, we have an entirely

different set of offices. I was --
Q. What if no conduit jobs were done in recent past in those offices at the time the study was done; should Cincinnati Bell make up data for those?
A. I think if that was the case, I would have included a footnote in that study with respect to that was the reason why.
Q. Do you have any reason to believe that the costs of the conduit jobs that are included in the study are inaccurate in any way?
A. I have -- I have no basis to assert their accuracy, no.
Q. Okay. And just briefly, do you have any basis for disputing the evidence that Mr. Mette used in his riser space study?
A. No, I do not.
Q. Now, if the Commission were to adopt your recommendation that all the collocation rates be slashed by 75 percent on an interim basis, and CoreComm decided then it was going to collocate in a number of offices, and then we get final rates, say they go back where Cincinnati Bell proposed them, would CoreComm necessarily find it economical to stay in those spaces?
A. I think my answer would be very much the same as the answer I gave with respect to this same hypothetical with the loop today, is that likely they, under that scenario, would be in a position where they would not be able to make money and --
Q. Now, if they -- if that happened and in the meantime, while

they were occupying a cage, some other new entrant was denied collocation space because there was none available and invested in some other building somewhere, is that fair to that company?

A. While it may not be fair, I would be very interested to see the number of times in which that would actually occur.

Q. Well, we haven't lowered our rates by 75 percent, have we?

A. Not at all.

Q. So we don't know if that's going to occur?

A. Right.

Q. While we're pricing things, where does it say in the FCC's order in TELRIC that we shouldn't use market values of our land; isn't that forward looking?

A. In Section 51.505 under Subparagraph b and Paragraph No. 1 underneath this, it talks about the efficient network configuration, and it simply states that, "The total element long-run incremental cost of an element should be measured based on the use of the most efficient telecommunications technology currently available and the lowest cost network configuration, giving -- given the existing location of the incumbent LEC's wire centers".

So the FCC has constrained these type of analyses to state that you have to use the existing location of the wire center, the existing land.

Q. And that constraint drives lots of different costs, doesn't it?

A. Yes. Once again, we just spoke of conduit costs. If the central office did not have to be in downtown Cincinnati, but on a theoretical, forward-looking basis, you say I can reconstruct my network in a location one or two miles away where I don't have as much concrete to put in those conduits, et cetera, not only that but the piece of land that it would sit on could be less expensive -- now, it might not be less expensive than the historical value of that land, but given rates in urban areas, that potentially could be as well.

Q. Well, I'm looking for where the FCC said that the cost of land is something that we don't price on a forward-looking basis.

A. I don't -- I don't think you'll find that in the order. That's just kind of simply my interpretation of reading that.

Q. Do we have to price the buildings that sit on the land with forward-looking costs?

A. Yes.

Q. But we don't price the land itself?

A. Because -- That's my personal consideration, is that you're being forced to stay there and so you would use that.

I think I gave the analogy in the deposition that if the FCC said you have to use the existing locations of the wire centers and analog switching and you could no longer buy analog switch gear, then you would have to use the embedded nature of what an analog switch did cost you.

Q. Well, the land's still there, we can -- we can have it appraised and value it, can't we?
A. While that's true, once again, you're -- the land is also available at other cheaper or more convenient, forward-looking location.
Q. But the rules don't let us use that other land, do they?
A. No.
Q. One last topic on collocation. On Page 67 you comment on cable pulling and splicing.
A. Yes.
Q. Do you have any evidence that the times used in that study are inappropriate?
A. While I don't have specific evidence that the times used are inappropriate, I would have liked to have seen documentation with respect to a time and motion study to say it takes this long to do a cable pull or a cable splice.
With respect to connection charges for DS1, DS3 or SONET services, there were some fantastically -- fantastically detailed time and motion studies with respect to all of the activities that it takes to perform those connections. But here, instead of a very detailed study, we merely had an estimate of a few individuals, in some cases maybe even one person, just estimating, "Well, yeah, I generally think it takes 'this long'"; and that could be right on target, or it could be substantially off.

So that was my concern there, is that there were no detailed time and motion studies to back up those times.

Q. Well, in order to do a time and motion study on an activity, wouldn't the activity have to take place on at least more than one occasion?

A. I think you could look at other jobs as surrogates, if you needed to, so --

Q. Well, those jobs have to occur for somebody to actually measure them, doesn't it?

A. Yes. But what I'm saying is when you look at other jobs, I'm talking about jobs for CBT. If CBT was going to pull its own cable or do some splicing for itself, it could perform a time and motion study on that and get reasonably close to what it would take to do the same thing for a new entrant carrier. I think I understand where your concern is, that, you know, we don't have many comers with respect to these new entrant carriers to study and do these type of analyses on; and if that's the case, then why not just, with respect to splicing cable, pulling, et cetera, follow some of the CBT craft personnel around while they're doing similar CBT jobs.

Q. Well, you have experience with other companies around the country, don't you?

A. With a few, yes.

Q. Okay. And have you looked at other people's cable pulling and splicing times?

A. In those particular instances, I didn't look at every element or portion of the study, and I don't think I considered those.

Q. Do you know of any telephone companies that have actually done a time and motion study on cable pulling and splicing?

A. No, I don't, but I did see CBT's time and motion studies or work steps and associated time frames with respect to installation of DS1, DS3 and SONET services; and as I said before, those were highly detailed.

Q. Those are also pretty frequent activities, aren't they?

A. Certainly.

MR. HART: Your Honor, you indicated you might want to break for the day. This would be as good a time as any.

THE EXAMINER: Okay. All right. Let's go off the record.

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(Thereupon, the hearing was adjourned at 5:15 o'clock p.m. on Thursday, March 18, 1999, to be reconvened at 9:00 o'clock a.m. on Friday, March 19, 1999.)

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C E R T I F I C A T E

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We, Linda D. Riffle, Registered Diplomate Reporter and Certified Realtime Reporter, and Valerie J. Grubaugh, Registered Merit Reporter, hereby certify that the foregoing is a true and correct transcript of the proceedings before the Public Utilities Commission, State of Ohio, on Thursday, March 18, 1999, as reported in stenotype by us and transcribed by us or under our supervision.

Linda D. Riffle, Registered.
Diplomate Reporter and Certified
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