

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

SPECIAL PROJECT  
NO. 980000A-SP

In re: Undocketed Special )  
Project No. 980000A-SP, Fair )  
and Reasonable Residential Basic )  
Local Telecommunications Rates. )

DAY 1  
MORNING SESSION

IN RE: Staff Workshop  
CONDUCTED BY: Anne Marsh  
DATE: Thursday, October 8, 1998  
TIME: Commenced at 8:30 a.m.  
Adjourned at 4:35 p.m.  
PLACE: Betty Easley Conference Center  
4075 Esplanade Way  
Room 148  
Tallahassee, Florida  
REPORTED BY: RAY D. CONVERY, Court Reporter

BUREAU OF REPORTING

RECEIVED 10/26/98

RECEIVED  
11091 OCT 26 1998

## P R E S E N T

## COMMISSIONERS PARTICIPATING:

JULIA L. JOHNSON, Commissioner  
J. TERRY DEASON, Commissioner  
SUSAN F. CLARK, Commissioner  
JOE GARCIA, Commissioner  
E. LEON JACOBS, JR., Commissioner

## STAFF PARTICIPATING:

MELINDA BUTLER, Aide to Commissioner Jacobs  
BETH KEATING, PSC Staff, Legal  
WILLIAM B. McNULTY, PSC Staff, AFAD  
DAVID DOWDS, PSC Staff, CMU  
SALLY SIMMONS, PSC Staff, CMU

## OTHERS PARTICIPATING:

WILLIAM DUNKEL, Office of the Attorney General  
TOM REGAN, Office of the Attorney General  
CHARLES BECK, Office of Public Counsel  
MARVIN H. KAHN, Office of Public Counsel  
MARK COOPER, AARP  
JOSEPH GILLAN, FCCA  
BEN OCHSHORN, Florida Legal Services  
KENT DICKERSON, Sprint  
CHARLES REHWINKEL, Sprint  
F. BEN POAG, Sprint  
DAONNE CALDWELL, BellSouth  
NANCY WHITE, BellSouth  
BERT STEELE, GTE  
KIM CASWELL, GTE

## P R O C E E D I N G S

1  
2 MS. MARSH: We don't have any preliminary matters  
3 today and we have a very full schedule, so we're going  
4 to start, and I want to remind everybody we need to  
5 stick as closely as we can to the schedule today  
6 because we do have a lot of speakers.

7 I also want to remind you that -- can we get  
8 ready, folks? We're trying to start here.

9 I also need to remind you to come up to the mike  
10 if you have a question and state your name for the  
11 court reporter, and you do need to really lean into the  
12 mike or it won't pick you up.

13 With that, I think we're ready to start, and our  
14 first speaker is Robert Harris.

15 DR. HARRIS: Good morning. Since I wasn't at the  
16 workshop last week, I'm not sure how you've been  
17 proceeding. As a preference, and I realize these  
18 aren't absolute choices, but between pretty much giving  
19 my presentation and then taking Q and A's afterwards,  
20 or taking questions along the way, which would be the  
21 preference on that?

22 MS. MARSH: We left it up to the speaker last week  
23 if they had a preference, but it mostly went on with Q  
24 and A going as the presentation went. If you have a --  
25 yeah, go ahead.

1 DR. HARRIS: All right. Let me at least then  
2 pause periodically, but people should feel free to  
3 raise questions, and if you need to wave your hand to  
4 get me to slow down and allow time for that, please  
5 feel free to do so.

6 So just a brief word about my own background,  
7 where do I come from in all of this. I've been a  
8 professor at U.C.-Berkeley for the past 20 years  
9 teaching in the business school, teaching economics,  
10 regulatory policy in both transportation industries and  
11 telecommunications industries, and during the early  
12 1980s served as the deputy director for cost, economic  
13 and financial analysis in the Interstate Commerce  
14 Commission during what you'll remember now was a  
15 crucial period of regulatory reform in the surface  
16 transportation industries, and helped write a lot of  
17 the fundamental rulemakings that deregulated that  
18 industry.

19 In addition, though, to doing work in regulated  
20 industries, I do a good deal of consulting, business  
21 consulting, in the area of costing and pricing, working  
22 for a wide variety of clients across many industries,  
23 including companies like Sun Microsystems, IBM, UPS and  
24 the like.

25 So it's with that perspective, a perspective that



1 includes a great deal of work and experience in  
2 regulated industries, but also a great deal of  
3 experience outside of regulated industries, and I must  
4 say, I'm never failed to be surprised by the very  
5 substantial differences between the two, and in my  
6 mind, it is imperative that we move toward a fully  
7 competitive and ultimately unregulated  
8 telecommunications sector, that rather than looking for  
9 answers within the industry, that we look for answers  
10 outside the industry, because, after all, we don't want  
11 the industry to look in the future as much as it's  
12 looked in the past as how it's ought to look, how we  
13 want it to look in the future.

14 With that, a brief overview of my presentation --  
15 hold on a second. I seem to have a -- excuse me just a  
16 minute while I try to get this thing going. I'm  
17 getting no movement in the slide show, so -- a brief  
18 overview of my presentation this morning:

19 First, I'd like to talk about the regulatory and  
20 competitive environment, mostly on public policy  
21 factors that I think ought to be -- serve as kind of  
22 both the foundation and also the guidepost for  
23 addressing the issues now before the Commission in the  
24 state of Florida, and then secondly I'd like to talk  
25 about various measures of affordability and various

1 ways in which we ought to think about affordability,  
2 including relative to income, prices relative to cost,  
3 prices relative to value, and the issue of creating  
4 long-run incentives, both -- both, by the way,  
5 incentives for providing telecommunications services,  
6 but also from a user's point of view, for using  
7 telecommunications services.

8 The idea that there's significant change occurring  
9 in telecommunications is hardly new or original. I  
10 think, though, having said that, that it's more common  
11 than not to actually understate or underappreciate the  
12 magnitude of the changes that are in the process of  
13 occurring right here as we sit.

14 It took a hundred years to build the wire line  
15 telephone network we have today. It took a hundred  
16 years, or most of a hundred years to get to a  
17 ubiquitous network where almost all households, almost  
18 all businesses are on the network.

19 In contrast, it's going to take two decades for  
20 that to occur with wireless industries. We have gone  
21 from one million wireless subscribers in 1992 to over  
22 60 million subscribers today, increasing at the rate of  
23 more than one million new subscribers or new subscriber  
24 lines per month. We now are adding new wireless loops  
25 at a much faster rate than we're adding wireline

1 loops. Inconceivable only a few years ago. After all,  
2 AT&T decided deliberately not to even go into the  
3 wireless business some 15 years ago because the market  
4 forecast was, for the very top end, ultimate full  
5 market penetration, was no more than a million total  
6 customers. As a consequence, AT&T was able to buy  
7 McCall Cellular, which already had more than a million  
8 customers, for about \$16 billion.

9 Likewise, the Internet. Starting virtually from  
10 scratch only a few years ago, there are now an  
11 estimated 70 million Internet users. While many of  
12 them have access today over telephone lines, that will  
13 be quite short-lived in many cases, especially at the  
14 very high end of the market. The households who have  
15 fast computers and want fast access, the estimates now  
16 are that by the year 2002, there will be about 16  
17 million households with broad band Internet access,  
18 about 80 percent of those using cable modems. I can  
19 tell you, because I've seen it done, once you have a  
20 cable modem for Internet access, it is the easiest  
21 thing in the world to plug your telephone or even your  
22 whole inside telephone wiring into the port which  
23 exists on the back of every single cable modem  
24 manufactured for exactly that purpose, and convert over  
25 those customers, those who use their telephone and

1 telephone services most intensively with literally the  
2 unplugging and replugging of their telephone.

3 These changes require us to fundamentally rethink  
4 our public policies towards telephones, from telephone  
5 to telecommunications, with a multiplicity of  
6 telecommunications products, devices, applications  
7 within households and businesses, and likewise a  
8 multiplicity of networks, of communications networks  
9 for providing connection and interconnection,  
10 communications, information and related services. Will  
11 each household, will every household have all of these  
12 things? Will every household be connected in all these  
13 multiple ways? No, surely not. But in many, many  
14 cases many households will have multiple connections  
15 and be using them in multiple ways. In fact, I've even  
16 left one off here.

17 This chart I actually did about three months ago,  
18 and since then I've now read about the market test in  
19 the U.K. where the electrical company is using its  
20 electrical distribution network and providing one  
21 megabit per second Internet access over the electrical  
22 distribution system and the electrical wiring inside  
23 the household. So there's one more communications  
24 network.

25 Wireless in the air, wireless on the ground,

1 several types of wireless on the ground, between  
2 P.C.S., L.M.D.S., M.M.D.S. The decisions to invest in  
3 R&D to develop these technologies, the decisions to  
4 invest in the capital equipment to adopt and deploy  
5 these technologies, the decisions by end users which of  
6 these technologies is the best for me, for us, for our  
7 household, for our business, they will be significantly  
8 affected by the prices in the marketplace.

9 What is most noteworthy is that with virtually --  
10 with respect to virtually everything else on this  
11 diagram except telephone service, the prices are not  
12 regulated, the prices are set in the marketplace.  
13 Cable arguably may be a little bit regulated, but only  
14 basic cable. Cable modem service is not being  
15 regulated. Price it to the marketplace, price it to  
16 value, price it to recover costs, including the risk-  
17 taking of deploying a whole new technology, which while  
18 we think it will be successful, of course, no one can  
19 be sure. Although, frankly, we went from 150,000 cable  
20 modem subscribers last year, we're already at 700,000  
21 this year. So we're going to hit the million mark in  
22 about half the time it was forecast only a year ago.

23 The potential benefits of these developments to  
24 society are not merely unmeasurable, they are  
25 unfathomable, because they are going to change society

1 as profoundly as electrical distribution systems,  
2 automobiles and trucks and highways and the like  
3 changed our 19th century, largely agrarian society into  
4 the world-leading industrial power it is today. This  
5 is a picture, just one picture of the information  
6 society of the next millenium.

7 Still, having said all that, there are certain  
8 public policy objectives which remain in their essence  
9 unchanged. So I am not here to suggest -- I think it  
10 would be a serious mistake to simply say, well, with  
11 all that coming on line, let's just forget about  
12 regulation. I'm not advocating that we do that.

13 I'm suggesting, though, that we do this, that  
14 while we keep firmly in mind what are the public policy  
15 objectives we're trying to serve with our  
16 telecommunications policies, that we recognize the  
17 following undeniable fact: Given the amount of changes  
18 in the marketplace, it is not possible that the same  
19 policies that worked well to achieve those objectives  
20 in the past will work well to achieve them in the  
21 future. This is the most basic principle of public  
22 policy design. It is contingent upon the environment  
23 in which you're regulating.

24 You cannot regulate the railroads in the 1970s the  
25 way you regulated them in the 1950s. Why not? Because

1 we built an interstate highway system, and the  
2 development of trucking technology proceeded at a far  
3 faster rate than the development of railroad  
4 technology, and so by continuing to regulate the  
5 railroads into the 1970s the way we had in the 1950s,  
6 we literally drove a whole industry into the ground.  
7 At the time of deregulation, 50 percent of the total  
8 assets of all rail carriers were being administered by  
9 bankruptcy trustees, a simple matter of not changing  
10 with the times.

11 What are our objectives? I believe they are  
12 these: We want to both enable, allow, encourage firms  
13 to respond to customer needs. That is the most  
14 powerful engine of a market economy. That is why we  
15 believe, as a people, in a market economy. That is why  
16 around the world economies that did not allow firms to  
17 do this have failed and they are moving, not easily to  
18 be sure, they are moving to adopt the same kind of  
19 market principles of which this is the first order in  
20 their economies, whether it's the former Soviet Union,  
21 eastern Europe or even China. That means, by the way,  
22 that we also need to encourage and enable or empower  
23 the incumbent firms to respond to market-based  
24 incentives and customer needs.

25 I somehow observed the idea that, well, this

1 competition thing, this freedom to compete thing, this  
2 pricing to market thing, well, that's for the -- only  
3 the new players. This doesn't just go to a matter of  
4 fairness, treating firms with some kind of symmetry.  
5 It goes to the matter of customer interest. If you do  
6 that, and the entrants haven't yet built facilities to  
7 serve certain kinds of customers, that kind of policy  
8 basically denies the power of the marketplace except  
9 where the customer has the choice of a new entrant. I  
10 don't think we want to limit the benefits of emerging  
11 competition, of developing competition in that way.

12 Third, align the prices of services with their  
13 costs. This doesn't mean at their costs, it means  
14 based upon their costs, covering at least all of the  
15 long-run costs of providing the services. This is a  
16 very hard proposition to accept. We deeply wish it  
17 weren't true, but it's true. In every single case  
18 where we have deregulated, some prices have come down  
19 and some prices have gone up. It is simply not true  
20 that competition brings all prices down. If we try to  
21 manage that result, we will fail. We will not only  
22 fail in achieving that result, we will fail to develop  
23 the kind of healthy, balanced competition which is our  
24 objective.

25 I'll talk a little bit later about how one can



1 delude oneself into thinking, oh, yeah, prices do cover  
2 costs. If you like where the prices are and you don't  
3 want them to change, let's just redefine costs so that  
4 we can comply with this economic dictum. It doesn't  
5 work. Costs are what costs are, and us calling them  
6 something else, saying they're lower, doesn't make it  
7 so.

8 Create incentives for efficiency. Efficiency,  
9 sometimes economists rightfully are criticized for  
10 putting sole emphasis upon efficiency. Of course other  
11 things matter greatly, like equity, distributional  
12 concerns, but so too must efficiency be on the ledger  
13 sheet as we modify policies. Because, after all, it is  
14 a simple principle of economics that the more efficient  
15 our policies are, the greater efficiency they cause or  
16 incentive to happen in the marketplace, the more, the  
17 better able we are to use our scarce social, economic,  
18 political resources to meet other objectives.

19 And finally, since we are trying to promote  
20 competition, we should promote competition.  
21 Competition is a fundamentally different proposition  
22 than promoting the interests of competitors. There are  
23 many policies we have in telecommunications which  
24 clearly do the latter, but at the expense of the  
25 former. Any policy which arbitrarily or differentially

1 advantages an entrant simply because they're an  
2 entrant, clearly benefits that competitor or that class  
3 of competitors, but that is also directly contrary to  
4 promoting competition over the long run.

5 These policy goals that ought to serve as the  
6 foundation and guidelines for pricing policies are  
7 interlocking. We can't sort of pick this one and pick  
8 that one and say, well, we don't worry so much about  
9 the others. Whether the effects, the negative effects  
10 of policies that don't take into account each and every  
11 one, which is to say all of these objectives, will  
12 nevertheless have unintended effects, and the mere fact  
13 that we don't want to admit to that won't make it any  
14 less true.

15 The pattern we're seeing right now in the  
16 development of competition is highly instructive as to  
17 where things now stand. Billions of dollars have been  
18 and are being invested to provide competitive  
19 communications services in this country, even of the  
20 most direct kind. Put aside the wireless for now, put  
21 aside the satellites, put aside the cable modems, I'm  
22 talking about wireline telecommunications networks that  
23 look pretty much like the incumbents.

24 Where and which customers and why? Ask yourself  
25 those questions. Where are they building their

1 networks? In the downtown and now peripheral business  
2 districts.

3 Which customers? High-end business customers.  
4 Residential customers, no. By and large, no. Why  
5 not? Entrants enter markets to make money. Given the  
6 prevailing prices of the incumbents for business  
7 services, there is money to be made and people are  
8 making it hand over fist. One dollar invested in World  
9 Com stock five years ago is worth \$21,000 today.  
10 That's how a World Com, which was a tiny fraction of  
11 the size of MCI five years ago, bought MCI and MFS and  
12 Brooks and UU Net, the world's largest Internet service  
13 provider, and over 400 other companies, by targeting  
14 the markets where there's money to be made.

15 Why not residential? Because the ILECs have kept  
16 them out? The ILECs haven't kept them out of the  
17 business market. This operational support system, I  
18 know there's a lot of controversy over that. It hasn't  
19 kept them out of the business market. It hasn't kept  
20 them from pouring billions of dollars into state-of-  
21 the-art fiber networks. It hasn't prevented them from  
22 offering an incredible portfolio. Look at the Wall  
23 Street Journal 12-page advertising supplement last  
24 Thursday by MCI/World Com. Incredible range of voice,  
25 data, video, wireline, wireless, Internet, on net, end

1 to end, city to city in the 90 major cities of the  
2 world, not merely the United States. How do they do  
3 that and yet they can't get into the residential  
4 market?

5 MR. DUNKEL: Sir, I have a question.

6 DR. HARRIS: Yes.

7 MR. DUNKEL: Isn't it true World Com is in the  
8 residential market in a big way?

9 MS. MARSH: Will you please state your name for  
10 the court reporter?

11 MR. DUNKEL: Yes. This is William Dunkel.

12 DR. HARRIS: With long distance services.

13 MR. DUNKEL: Fine.

14 DR. HARRIS: My point, long distance services.  
15 Why? Because the price of long distance services  
16 greatly exceeds its cost. That is why there are so  
17 many companies --

18 MR. DUNKEL: That's what World Com was, a long  
19 distance company.

20 DR. HARRIS: Of course it is, but World Com also  
21 has substantial investments in local networks. It  
22 bought MCI Metro, it bought MFS, it bought Brooks, it  
23 bought UU Net, which has extensive local fiber  
24 facilities. It is in the local service business.  
25 That's the point of that 12-page advertising

1 supplement. That was not a promotion for long distance  
2 service, that was a promotion for end to end, premises  
3 to premises, local, long distance, local on the other  
4 end, but for business customers only. Why is that?  
5 Because the price of residential service is so low that  
6 it's not attractive to entrants.

7 MR. BECK: I have a question.

8 DR. HARRIS: There's no money to be made there.

9 MR. BECK: Could I have a question?

10 DR. HARRIS: Yes.

11 MR. BECK: When a competitor looks -- my name is  
12 Charlie Beck with the Office of Public Counsel.

13 When a competitor is looking at serving a  
14 potential market, do you think they look at just the  
15 flat local rate, or would they look at the total  
16 revenues they expect to get from customers in that  
17 market?

18 DR. HARRIS: They would look and they will look at  
19 the total customers, which is why they're going to come  
20 in and pick off exactly those customers at the high end  
21 of the market. That's the market Bill Gates is going  
22 after. That's why he's invested a billion dollars in  
23 At Home, the company that's rolling out cable modem  
24 technology, which is targeting the very high usage  
25 customers. Yes, it will give them free local telephone

1 service because it wants to be the provider of all of  
2 those services that are priced far enough above cost to  
3 serve as a source of profit margin.

4 MR. GILLAN: Dr. Harris?

5 DR. HARRIS: Yes.

6 MR. GILLAN: Joe Gillan on behalf of the Florida  
7 Competitive Carriers' Association.

8 If what you say is true, then why is SB -- why  
9 does SBC say that it is able to enter the residential  
10 marketplace as soon as it merges with the Ameritech  
11 local exchange monopoly? How does merging with  
12 Ameritech enable SBC to compete in the residential  
13 market in Florida, which is their stated claim?

14 DR. HARRIS: Ameritech/SBC's nationwide entry plan  
15 is focused first and foremost on the business local  
16 exchange market.

17 MR. GILLAN: Their sworn testimony is they'll  
18 enter residential.

19 DR. HARRIS: With residential -- in addition to  
20 serving especially high concentrations of residential  
21 customers.

22 MR. GILLAN: Is that economically rational if what  
23 you say is true, that residential is priced below  
24 cost? Why would they do that?

25 DR. HARRIS: In some cases, residential is not

1 priced below cost. If you can target -- you see, the  
2 fundamental difference between an entrant and an  
3 incumbent is this, this is true in any market: An  
4 incumbent basically has the customers it has. In the  
5 case of an incumbent telephone company, it has  
6 basically all of the customers, the residential  
7 customers. It basically has to continue to serve all  
8 of the customers, the ones that buy a lot of usage  
9 services and generate profits are not subsidized, the  
10 ones that use a medium amount and sort of total bill  
11 effect or break even, and the ones that don't use much  
12 and hence their check doesn't cover the full cost of  
13 providing service to them. An entrant knows exactly  
14 which customers to go after and which customers to  
15 avoid.

16 MR. GILLAN: So you're saying SBC is only going to  
17 go after a few residential customers in Florida when  
18 they come to Tampa, Orlando, Miami --

19 DR. HARRIS: There are many customers in that  
20 first category.

21 MR. GILLAN: There are many residential customers  
22 that are profitable?

23 DR. HARRIS: Yeah, in numbers, yeah.

24 MR. GILLAN: Okay.

25 DR. HARRIS: But it may be on the order of 20 to

1 30 percent that, as of today, are highly profitable.

2 MR. OCHSHORN: Mr. Harris, Ben Ochshorn, Florida  
3 Legal Services.

4 Are you suggesting that telecommunications  
5 companies in Florida who are regulated by the Florida  
6 Public Service Commission can deny service to whoever  
7 they please?

8 DR. HARRIS: No, I'm talking about the adept use  
9 of pricing, sales promotion, marketing and sales  
10 efforts to target so that a much greater percentage of  
11 your customers are in one category rather than  
12 another. That's called vertical marking.

13 MR. OCHSHORN: I would suggest, for your argument  
14 to have some credibility, you would need to show some  
15 specific examples, because you're making some very  
16 global statements about how non-incumbent LECs can --

17 DR. HARRIS: Specific examples. Fine, let me give  
18 you a specific example of how entrants target high  
19 usage customers.

20 We know that long distance carriers spent a couple  
21 billion dollars last year sending out checks to  
22 people, \$75 checks, \$100 checks. To whom do they send  
23 those checks? I guarantee you if you spend \$5, \$10 a  
24 month on long distance services, you didn't get one of  
25 those checks, or if you did, you got it only because



1 the system designed to weed you out made a mistake.  
2 The people that get those checks are the people that  
3 make a lot of calls because they're targeted by a  
4 highly sophisticated computerized data mining operation  
5 that identifies the customers that spend a lot on  
6 communications services. Given that AT&T and MCI knows  
7 that, do you not think they couldn't use exactly that  
8 same database to target you for local services as they  
9 enter that market, which they eventually will?

10 AT&T has now laid out its strategy for entering  
11 the local service market for residential customers by  
12 buying TCI, upgrading their networks to digital,  
13 providing Internet access, and going after the high  
14 income, high telecommunications usage households, which  
15 are, after all, the households in that forecast of 16  
16 million broad band access customers by Forester.  
17 That's not a random sample of the population.

18 MR. OCHSHORN: Well, Mr. Harris, in Florida, at  
19 least, dinnertime calls from companies asking you to  
20 switch your long distance service aren't exactly rare  
21 or uncommon. I don't know of anybody who regularly can  
22 enjoy a peaceful dinner in Florida these days, unless  
23 they register with the State of Florida and say that  
24 they don't want to receive these calls.

25 DR. HARRIS: I'm sorry. Is there a point there?

1 They make a lot of calls. The idea that they randomly  
2 go out to the population and that their mix of  
3 customers is just random is absolutely wrong.

4 MR. OCHSHORN: The point is that, in your specific  
5 example, there does not appear to be that much  
6 targeting or that much selection by any of these  
7 companies.

8 DR. HARRIS: If you'll look at the mix of  
9 customers of the entrants relative to AT&T, there's a  
10 reason why their average usage is a multiple of the  
11 average AT&T customers, because AT&T still suffers  
12 today somewhat from the fact that as the incumbent long  
13 distance carrier, it still has a disproportionate share  
14 of customers that don't make many long distance calls,  
15 which is why AT&T has proposed things like a minimum  
16 monthly bill of \$5 whether you make any calls or not.  
17 It's to recognize there's a fixed cost of maintaining a  
18 customer relationship, billing and the like, and if  
19 people don't use their phones much for long distance  
20 calls, there's no profit in it.

21 MR. DUNKEL: I have one question. Isn't it true  
22 the current LECs actually started in the business  
23 district also when they started?

24 DR. HARRIS: Pardon?

25 MR. DUNKEL: Isn't it true the current LECs

1 started in the business district as well? If you look  
2 at the history of any of the phone companies, they  
3 started --

4 DR. HARRIS: Oh, absolutely.

5 MR. DUNKEL: -- they started downtown business  
6 district --

7 DR. HARRIS: Absolutely.

8 MR. DUNKEL: -- and then they grew from there to,  
9 you know, cover the residential areas as well.

10 DR. HARRIS: Sure. I'm not saying there's  
11 anything wrong with this.

12 MR. DUNKEL: Why would you expect the new entrants  
13 to do anything different?

14 DR. HARRIS: I'm not blaming companies for acting  
15 in an economically rational way. I'm saying, yeah,  
16 they are going to act in an economically rational way  
17 and our public policies better recognize that fact.  
18 Wishing that entrants would just come in and serve  
19 everybody, some serve this part of the market and  
20 others serve other parts of the market. Competitors  
21 enter markets where there's a profit opportunity.

22 In the case of the automobile industry, where did  
23 the competition enter the market and why? It actually  
24 entered at the low end of the market. The Japanese  
25 companies, Volkswagen, early entrant? Why did they

1 enter the low end of the market? Because that's where  
2 the money was to be made. Those cars at the low end of  
3 the market were priced way above cost, and the fact  
4 that they were priced way above cost and the Japanese  
5 manufacturers could make those kinds of cars more  
6 efficiently than American manufacturers, and could  
7 therefore earn a profit, caused a revolutionary change  
8 in the U.S. auto industry.

9           Unfortunately, with residential phone service, we  
10 have largely the opposite situation. This is the  
11 greatest entrepreneurial country in the world. It has  
12 the most highly developed venture capital markets in  
13 the world. Do you mean to tell me, with all those  
14 entrepreneurs starting all those companies, with all  
15 that access to capital, if there was some money to be  
16 made in residential phone service, somebody wouldn't  
17 have done it already? Of course they would have.

18           So this idea that, well, it doesn't cost very much  
19 to provide residential phone service, my answer to the  
20 person that says that, you're in the wrong place. If  
21 you think it only costs \$10 a month to provide service  
22 to residential customers, you ought to be in Wall  
23 Street raising money from venture capitalists and go  
24 out and make yourself a lot of money, and serve the  
25 public interest, too, by the way. Because wouldn't we



1 all like to buy telephone service from the company who  
2 can provide it for \$10 a month? Instead what we  
3 generate is a high degree of inefficiencies, and we  
4 promote not cream skimming in the ordinary sense of the  
5 market term -- a cream skimming in a market sense when  
6 there aren't any regulations means simply that there  
7 are niches, there are entry opportunities that are  
8 generated by market forces. Cream skimming here is  
9 created by regulations that are out of date. We're  
10 continuing to try to use the revenues from the use of  
11 the network to pay for the fixed costs of being  
12 connected to the network.

13 How do these relate to the immediate issue before  
14 us? The current pricing situation is that the cost of  
15 that basic service, of providing that loop which is  
16 dedicated to a particular household -- usage capacity  
17 on the network between switches, that's not dedicated.  
18 While you're not using it, someone else can use it.  
19 That's a fundamental difference between usage and  
20 loops. No one else can use your loop even if you're  
21 not using it, even if you never use it, even if you  
22 never pick up the telephone.

23 That loop, that capacity from the central office  
24 out to your premises -- or possibly from some  
25 intermediate point, because in the cases where we have

1 a digital loop carrier in the outside plant, that is  
2 capacity that is not literally dedicated to a given  
3 user, it's a virtual circuit, in other words, but that  
4 accounts for a fairly small part of outside plant --  
5 that loop providing a dedicated means of access that's  
6 always available to that customer, again, irrespective  
7 of how much they use it, it's really no different than  
8 an automobile. You buy an automobile, it doesn't  
9 matter how many miles you drive it, the cost of  
10 producing that automobile is the same. You can put it  
11 in the garage so you'd have an auto if you needed to  
12 have one to make a trip, you can put 100,000 miles a  
13 year on it, meaning you can use it a lot, the price of  
14 the automobile doesn't change one iota, because that  
15 automobile, like that local loop, is dedicated to a  
16 particular customer.

17 MR. DUNKEL: Are you claiming the cost of one loop  
18 is \$25, or does that include, for example, the  
19 spreading of the ditching cost, the trenching cost?

20 DR. HARRIS: It includes a proportion of the  
21 trenching cost, yes.

22 MR. DUNKEL: Okay. For example, if a company was  
23 going to spend \$10,000 to dig a trench down a street  
24 anyway, couldn't they pick up an additional customer by  
25 perhaps a \$2 drop?

1 DR. HARRIS: Absolutely. Absolutely you can do  
2 that. We can play this game in any industry you want  
3 to play it. We can add one more seat onto an airplane,  
4 let's configure, let's do an engineering cost study,  
5 what is the cost of a 99-passenger airplane? Now let's  
6 do the study with a hundred-passenger airplane. Let's  
7 say that the difference in the cost of that airplane is  
8 the cost of a seat, let's charge everybody on the plane  
9 that cost. At least I want to pay that price for an  
10 airline ticket. What do I want all the other 99 people  
11 to pay? Well, I don't know, that's their business.

12 MR. DUNKEL: How about a fair share of the --

13 DR. HARRIS: If you charged -- if you charge all  
14 100 passengers, which is the definition of long-run  
15 incremental cost, the length of time in which all costs  
16 can be varied optimally to the expected level of  
17 output, then you design a hundred-passenger plane  
18 because you decide that's the plane size you'll need to  
19 meet demand, and the incremental cost per passenger is  
20 1/100th of that. That's the correct economic  
21 definition of incremental cost. It is not marginal  
22 cost. Marginal cost is a fundamentally different  
23 concept. No business that wants to survive can price  
24 at marginal cost, unless, unless they can do so in a  
25 highly discriminating way, which is what the airlines



1 do. They charge prices in a highly discriminating  
2 way. So some passengers pay \$1,000 for a flight and  
3 other passengers can pay \$300 for the same flight.

4 MR. DUNKEL: Okay, let me --

5 DR. HARRIS: I don't think we want to go down that  
6 road in local service pricing.

7 MR. DUNKEL: Okay. Let me get this clear. If a  
8 subdivision was profitable, or a road was profitable  
9 overall, counting tolls, switched access, whatever, so  
10 you are going to --

11 DR. HARRIS: Excuse me. Who gets to provide all  
12 of those services that are profitable? Are you going  
13 to guarantee that the company that builds the local  
14 network gets 100 percent over the life of that plant,  
15 gets 100 percent of all those revenues, or maybe are  
16 you going to say, oh, no, no, we want competition, we  
17 want some other companies to come in and maybe pick off  
18 some of those customers?

19 MR. DUNKEL: I am going to guarantee that whoever  
20 uses that loop for those services, that the owner of  
21 the loop will get the money for the use of that loop.  
22 That I would guarantee. If you want to use the loop,  
23 you should pay for the use of the loop.

24 DR. HARRIS: So there's no loop unbundling, then,  
25 I guess, in your hypothetical world?

1 MR. DUNKEL: Sure, there's loop unbundling.

2 DR. HARRIS: Well, wait a minute. If I buy the  
3 unbundled loop, you built the loop, I buy it, I take  
4 the customer, I run your loop to my switch, I get all  
5 the revenues.

6 MR. DUNKEL: That's right, and --

7 DR. HARRIS: That's the whole point of buying a  
8 loop from you.

9 MR. DUNKEL: Excuse me. You will pay me the full  
10 cost of the loop if you unbundle, and then you will  
11 unbundle it to the customers. You would charge the  
12 customers local rates, switched access. You would then  
13 possess control of the loop and whoever wants to use  
14 that loop pays you.

15 Get back to my original question. If you were  
16 building a loop facility down a street and you were  
17 going to dig a trench that cost you \$10,000, some of  
18 the customers were high revenues, some low. If you  
19 could add a drop for \$2 to pick up a customer that was  
20 going to produce \$15 of revenue, would you do that or  
21 would you skip by them?

22 DR. HARRIS: Over what lifetime, and with what  
23 certainty? Do I know that customer isn't in fact a  
24 year from now going to buy a cable modem and switch off  
25 my network?

1 MR. DUNKEL: Let's assume that these are your  
2 reasonable projections.

3 DR. HARRIS: Over what period of -- it's a  
4 reasonable projection --

5 MR. DUNKEL: Your reasonable projection is this:  
6 It's a low revenue customer, but you'll get \$15 a month  
7 and you're going to dig the trench anyway and it costs  
8 you a \$2 drop. Is that something good to do?

9 DR. HARRIS: Is it a reasonable projection based  
10 upon the past, or is it a reasonable projection based  
11 on that future, because that's --

12 MR. DUNKEL: Let's assume it's a reasonable  
13 projection based on the future. Your reasonable  
14 projection is you can get \$15 revenue, which is very  
15 low -- I mean, the average revenue from residential  
16 customers is about 60.

17 DR. HARRIS: Right.

18 MR. DUNKEL: You're going to dig a trench anyway  
19 to serve everyone in the neighborhood for a \$2 drop,  
20 you can pick up this \$15 customer. Do you do it and  
21 get the \$15 or do you just -- or not do it? That's the  
22 point.

23 DR. HARRIS: It would depend upon the forecast of  
24 revenues for the future --

25 MR. DUNKEL: Let's assume you think it's accurate.

1 DR. HARRIS: -- not for the past. You're using  
2 historical numbers.

3 MS. MARSH: Gentleman, please talk one at a time.

4 MR. DUNKEL: All right. Assuming you think it's  
5 an accurate forecast, that you assume you can get \$15  
6 revenue, which is very low, and the drop would cost you  
7 \$2, do you put the drop in or do you just go by them?

8 DR. HARRIS: In that highly artificial situation,  
9 but given those facts as given, yes, I would.

10 MR. DUNKEL: Thank you.

11 DR. HARRIS: And then I'd do what Pac Bell's going  
12 to find it's done. It came into my street last year at  
13 an incredible expense, had to tear up the street. Now  
14 it has to maintain it for the next five years, that's  
15 part of the deal, to put in additional lines, because  
16 there's lots of people on my street, part of the  
17 university community want Internet access, want  
18 additional lines. They didn't have enough lines in the  
19 plant. So they added lots of lines. This is the era  
20 of -- this is, of course, one of the first streets  
21 targeted by TCI for at-home service. Now, those two  
22 extra lines that I put in and many other extra lines  
23 like them by Pac Bell we've turned off again because  
24 we've gone to cable modem. That's why you tell me  
25 something about the future.

1 Listen, I guarantee you, if it were going to be  
2 true that local telephone companies will keep all of  
3 the high usage revenues and profits from all or almost  
4 all of their residential customers over the lifetime of  
5 the investments they're making today, we wouldn't be  
6 here. All of this wouldn't matter. The reason we're  
7 here is very simple. We're using the revenues from the  
8 services that are going to be first and foremost opened  
9 up to competition to pay for the fixed costs of a  
10 network, requiring the incumbent to continue to invest  
11 in that network as if, if you build it, they will  
12 come. That's the age-old proposition in the telephone  
13 business. If you build the network, they'll come. Why  
14 will they? Well, because we're going to make sure they  
15 don't have any choices.

16 This was a monopoly franchise. We keep referring  
17 to it as rate of return. That's only half the  
18 picture. The other half is a monopoly franchise. That  
19 is how we can make sure almost no matter what set of  
20 prices you charge, in total you'll make a reasonable  
21 rate of return.

22 Now we've broken that half of the equation, said,  
23 no, no, no, not only is it not only a monopoly  
24 franchise, we're going to do everything we possibly can  
25 to open up your market, only some parts of it are going

1 to open faster than others, and the very fact that some  
2 prices are above cost causes those. We don't have to  
3 have a public policy about this. You don't have to  
4 have a rule that says entrants ought to go in after  
5 high margin services and high margin customers first.  
6 They don't need any directive to do that. That's the  
7 invisible hand at work, it's a very powerful force.

8 And, therefore -- and again, there's no pejorative  
9 here. I'm not criticizing companies for doing that.  
10 If they asked my advice, I'd tell them, that's exactly  
11 what you should do. So long as you think the existing  
12 policies are going to be in effect, you ought to target  
13 business customers and the very high end, the very high  
14 usage residential customers, and let the incumbent  
15 serve everyone else.

16 In retrospect, of course, one of the reasons we  
17 want to keep this system -- this is a very good reason  
18 -- this thing worked extraordinarily well for a long  
19 time. We want to not forget that. It's not like this  
20 is a bad system. This system that we had built was the  
21 best telephone system in the world, without any  
22 comparison. It did deliver phone service to a lot of  
23 people who may not have had it otherwise. It did cause  
24 a more extensive network to be built than probably  
25 would have been otherwise. It did provide the means to

1 attract huge amounts of private capital into an  
2 infrastructure industry wherein almost every other  
3 infrastructure industry we've had to spend public  
4 dollars to build that infrastructure. We don't worry  
5 about the pricing of roads because government pays for  
6 roads. We're worried about the pricing and the  
7 regulation of telephone service because we didn't want  
8 the government to have to spend its scarce capital on a  
9 telephone network.

10 This is not a criticism of those policies that  
11 served us so well. I am simply saying this: You can't  
12 have your cake and eat it, too. You can't have a set  
13 of pricing that made very good public policy sense when  
14 you were deliberately limiting competition and apply it  
15 in an era in which you're deliberately promoting  
16 competition.

17 Hence, if you look at this on a going-forward  
18 basis, the longer we continue this set of policies, the  
19 longer it takes to change them, and they will change.  
20 They will change. There is no question that they will  
21 change. The question is, how and when will they  
22 change? Will they change because we use our  
23 intelligence and our ability to anticipate, if not the  
24 fine points, the particular details, the exact point at  
25 which we'll hit a hundred million wireless customers?

1 The exact point at which wireless will be a substitute  
2 for 30 percent of households as opposed to today maybe  
3 only ten or 15 percent? If we simply know the  
4 direction of change and the fundamental implications of  
5 that change, the question is, will we change our  
6 policies before we pay a terrible price for not having  
7 changed them?

8 And the lesson in this regard is not a good  
9 lesson, it's a very bad lesson. We've deregulated two  
10 major sectors of the economy, transportation, airlines,  
11 motor carriers, inland waterways, railroads. We did it  
12 way too late. It caused enormous costs, imposed  
13 enormous costs on our society. Even then we only  
14 changed it when we thought our national survival was at  
15 stake. This all started -- transportation deregulation  
16 started with the oil cartel. It's kind of ironic how  
17 we let someone else dictate policies to us. They  
18 effectively did. The price of oil went up so far that  
19 the same economic studies that talked about the  
20 wasteful consequences, the gross inefficiencies  
21 generated by exactly the same kind of pricing in  
22 transportation, forcing railroads to charge high prices  
23 on high valued manufactured commodity movements between  
24 cities in order to subsidize bulk commodities,  
25 agricultural commodities and low density, seldom used



1 branch lines -- sound familiar? The only problem is,  
2 the trucks came in and exploited that very system of  
3 cross-subsidization, drove the railroads into the  
4 ground. And it was the oil cartel, the dramatic  
5 increase in oil prices that basically forced us to deal  
6 with the fact that airplanes were flying at 40 percent  
7 load factors because of regulation. Trucks were  
8 running 40 to 45 percent filled as opposed to 55 to 60  
9 percent empty because of regulations. So we  
10 deregulated the industry because we knew we had to  
11 conserve energy and our regulatory policies in  
12 transportation were wasting gross amounts of energy.

13 Then of course that same external event forced us  
14 to deregulate financial services. How did oil force us  
15 to deregulate financial services? Very simple. Oil,  
16 high oil prices caused a dramatic increase in inflation  
17 which caused a dramatic increase in prevailing market  
18 interest rates, but we had a set of public policies  
19 that were intended to cross-subsidize. We had  
20 regulation Q, which limited the interest rate that  
21 could be paid on deposits held by individuals in  
22 financial depository institutions like banks and  
23 savings and loans. Why would we do that? Because we  
24 wanted to generate a low cost of funds for home  
25 mortgages and consumer loans. And when banks and

1 savings and loans had something like a franchise to do  
2 business, very limited competition from other financial  
3 services companies, the system worked pretty well.

4 I tell you, when the prevailing rate of interest  
5 goes to 13, 14, 15 percent and you're getting six and a  
6 half percent because the government says the bank can't  
7 pay you any more than that, you take your money  
8 elsewhere, just like people will take their  
9 telecommunications services elsewhere because somebody  
10 can offer them a better deal. And the ones that had  
11 the most money were the first to leave. The ones that  
12 used the telecommunications services the most are the  
13 first to leave.

14 Disintermediation was the fancy word for people  
15 taking their money elsewhere. It gutted financial  
16 depository institutions. We are still sorting through  
17 the aftermath. It cost billions of dollars in public  
18 funds to deal with that because we wouldn't face up to  
19 the issue even when it was staring us in the face.

20 I suggest it's staring us in the face in local  
21 telephone pricing today, and we're quite capable of  
22 learning those lessons of history and not making the  
23 same mistake again here. So let's --

24 MS. BUTLER: Excuse me. Can I ask you a question?

25 DR. HARRIS: Sure.

1 MS. BUTLER: My name is Melinda Butler.

2 Sometimes economists have a tendency to look at  
3 things as instantaneously occurring, and I know that  
4 you're aware of that and so in keeping with that, what  
5 I'd like to do is to ask you something about, if the  
6 price were to rise and be allowed to rise in basic  
7 local service, okay?

8 DR. HARRIS: Yes.

9 MS. BUTLER: I'd like to slow it down in terms of  
10 not thinking of it as instantaneously causing  
11 competition to result.

12 DR. HARRIS: I would agree, because competition  
13 won't instantaneously result.

14 MS. BUTLER: Right. What's to prevent the  
15 incumbent LEC from raising the price to the point at  
16 which they would be maximizing the amount of revenue  
17 they would be getting, but minimizing the amount of  
18 competition that would take that away? And in keeping  
19 with that, like we're thinking about this as adding  
20 lines, but in some of these areas in which you're  
21 talking about the higher costs, essentially the trunks  
22 and those kinds of facilities have already been laid --

23 DR. HARRIS: Right.

24 MS. BUTLER: -- and the \$2 that the gentleman was  
25 talking about might actually be what it is that they're

1 facing, and in fact, they might be facing either \$10 a  
2 month or zero dollars a month, and they may have  
3 already put in the equipment. So what prevents them  
4 from then taking the ability to price where they want  
5 to price, to price at a level that would make it so  
6 that they would essentially maximize their situation  
7 but thwart entry?

8 DR. HARRIS: Right. That's a very good question  
9 and a very sophisticated one in terms of the economics.  
10 There's actually a name for that kind of behavior.  
11 It's pretty well developed academic literature on  
12 what's called entry limit pricing. It is the basic  
13 idea that if you had a monopoly, an unregulated  
14 monopoly by the way, you could charge whatever price  
15 you want. You would maximize the long-run profit  
16 stream by not maximizing the short-run profit stream.  
17 In other words, rather than simply saying, "Boy, today,  
18 I'm selling my widgets. I can sell them for a dollar  
19 each because that's what people will pay and there are  
20 no other suppliers of widgets, even though it costs me  
21 25 cents to make them." You'd say, "But, boy, somebody  
22 will come in and start making widgets soon. What if I  
23 price 90 cents? What if I price 80," and look at that  
24 price which will maximize the long-run value. That's  
25 the basic proposition.

1           Now, of course at the other extreme what you're  
2 suggesting also has a title. It's called predatory  
3 pricing, pricing below cost in order to inhibit entry  
4 or even drive an entrant back out once in the  
5 marketplace. Of course, there's a whole body of  
6 antitrust cases on predatory pricing. Pricing down to  
7 marginal cost would constitute predation in any other  
8 case, in an unregulated case. If you did that, that  
9 would be a predatory act.

10           One of the complications for us, of course, is, so  
11 long as states continue to regulate the prices of  
12 telecommunications services, then the service provider  
13 is not subject to the federal or state antitrust laws  
14 under the state action doctrine, which exempts  
15 activities that would otherwise violate the antitrust  
16 laws, because the state's chosen to regulate them.  
17 Nevertheless, if a firm were to price at that level, at  
18 this -- you know, just the short-run additional costs,  
19 that would -- under the economic definition of  
20 predation, that would constitute predation, and you  
21 shouldn't allow it. You should put long-run  
22 incremental costs as a price floor upon the pricing of  
23 basic services, because otherwise -- in fact, let me  
24 say this: If there were no state regulation of  
25 residential prices today, you'd have a massive

1 antitrust suit on your hands, because these prices  
2 today violate the antitrust laws. They are predatory.  
3 They do keep out competition because they're priced  
4 below cost. It's only because we have regulated them,  
5 because a state agency has set them at that level, that  
6 it's not an antitrust violation.

7 MR. DUNKEL: Isn't that true only if you include  
8 the full loop cost in what you're calling the basic  
9 cost?

10 DR. HARRIS: If I include the full cost of  
11 providing the access and the price of the access, yes.

12 MR. DUNKEL: So you're including the full cost of  
13 the loop in basic, but not in toll, for example?

14 DR. HARRIS: That's right.

15 MR. DUNKEL: That's biased.

16 DR. HARRIS: Affordability relative to income.  
17 Let me go through some of the benchmarks of  
18 affordability. Looking historically, I think that's  
19 one way of looking at affordability. In 1983, not that  
20 long ago, 15 years ago, the price of a basic  
21 residential service without any priced usage services  
22 was a little under one percent of a median household  
23 income in Florida at that time. Telephone penetration  
24 was very high, roughly at the level it was today. I  
25 can't say specifically. Frankly, one of the things you

1 have to allow is that the numbers on penetration levels  
2 are not accurate, statistically accurate, within a  
3 percentage point or even two, so anyone who makes a big  
4 deal that, boy, penetration increased from 94.6 to  
5 94.8, that means nothing. Likewise, going from 95.1 to  
6 94.3 means nothing, either, because the statistics  
7 simply aren't reliable to that degree of accuracy.

8 This is what's been happening to telephone prices  
9 over time if you look at it as a percentage of  
10 household income. The simple reason, prices haven't  
11 been going up nearly as fast, that -- the price of  
12 basic service has not been going up as fast as income  
13 has.

14 COMMISSIONER JOHNSON: Mr. Harris?

15 DR. HARRIS: Pardon?

16 COMMISSIONER JOHNSON: Could we go back before you  
17 go forward on this, answering Ms. Butler's question, to  
18 the first question that you asked, or that you  
19 answered? And it was under the scenario where we  
20 deregulated, say, the price of basic residential  
21 service, but there was the issue, and I don't remember  
22 the terminology you used, for a company coming in and  
23 pricing so that --

24 DR. HARRIS: Entry limit pricing.

25 COMMISSIONER JOHNSON: Entry limit pricing. And

1 your answer to that is how do we -- well, first -- I  
2 don't want to put words in your mouth, but you did say  
3 something about through a regulatory process we could  
4 evaluate and control that?

5 DR. HARRIS: Right, right.

6 COMMISSIONER JOHNSON: Explain to me what that  
7 regulatory process would be. So we would deregulate  
8 but we'd have to regulate -- we'd have to re-regulate.

9 DR. HARRIS: Thank you.

10 COMMISSIONER JOHNSON: And how would we do that?

11 DR. HARRIS: Thank you, because I didn't even  
12 really complete the thought. So thank for you giving  
13 me the opportunity to complete my thought.

14 These two standards, on the one hand, monopoly  
15 pricing, which is the sin of pricing way above cost,  
16 entry limit pricing monopoly is just pricing a little  
17 below that, but still way above cost, predatory pricing  
18 is pricing below cost, below the relevant cost. I  
19 guarantee, you can go through countless antitrust cases  
20 and the argument suggested that by IBM, they could  
21 justify their predatory pricing because somehow, well,  
22 gee, people buy all these software revenues, too, so  
23 we're throwing the software revenues and including that  
24 in the price of this disc drive that we're selling at a  
25 price that doesn't cover its cost just because it's



1 used to hold the software? Just because it's used for  
2 something else? The disc drive price has to cover the  
3 cost of the disc drive. So there's countless antitrust  
4 cases on this very point, the idea of cost allocation.  
5 That would be used by a defendant trying to justify its  
6 predatory conduct.

7 We're in a situation where the issue is predatory  
8 pricing in a sense, that is, on that end of the  
9 spectrum, pricing below cost. We're a long, long way  
10 from having to worry about the opposite problem of  
11 monopoly, or entry limit monopoly pricing. Still,  
12 that's one of the reasons why I say we shouldn't just  
13 simply deregulate all these prices. We should leave  
14 the regulator in charge of these prices. They're  
15 critically important for social policy reasons. We  
16 need to move them in the right direction over some  
17 reasonable, expeditious, but not overnight,  
18 simultaneous period of time, and we'd have to move  
19 quite a ways down that road before we'd have to really  
20 worry, but if we got there, then we ought to worry  
21 about it, and there would be standards for evaluating  
22 that possibility.

23 COMMISSIONER JOHNSON: So are you envisioning a --  
24 allowing the local rates to go up over time  
25 incrementally and it would be -- and what would be the

1 factors that we'd use to determine the increments of  
2 increase?

3 DR. HARRIS: I think the issue of timing is a  
4 matter of how far are you from where you think you need  
5 to be and what are the costs of getting there sooner  
6 rather than later? What are the -- the term of art I  
7 guess is the rate shock. How much of a rate shock  
8 would it be? People are accustomed to paying higher  
9 prices, although -- and this is the lament. There's no  
10 sense looking backwards, but we really missed a great  
11 opportunity to take care of this problem. If we had  
12 simply raised prices with inflation, the price of basic  
13 local service with the inflation rate, this problem  
14 wouldn't exist. We'd already have taken care of it.  
15 It's because we held it more or less constant or way  
16 below the rate of inflation, even though customers are  
17 used to paying several percent more for everything else  
18 they bought, this was the one thing whose price didn't  
19 go up.

20 Now, of course, we're in the opposite environment.  
21 Prices aren't going up very fast. So we'd have to  
22 factor that into account. This really is a kind of  
23 judgment call. And in the judgment, you know, one  
24 could recognize, gee, we could do this too fast, we  
25 could do it too soon, but also equally give weight to

1 the possibility, well, we're only kidding ourselves if  
2 we think we can just spread it out over seven years and  
3 that will be okay. That may be too long.

4 MS. BUTLER: If you're doing it right or the best  
5 way possible, how long would you expect that it would  
6 take for the competition to start to show up in any  
7 meaningful way?

8 DR. HARRIS: This is really a lovely point, one of  
9 the ways competition really benefits. There's kind of  
10 the really bad side of this timing question, and then  
11 there's the really good side. Let me start with the  
12 bad news before I go to the good news.

13 The bad news is, when you change prices too late,  
14 some of the harm is irreversible. If you change prices  
15 too late and people incur some cost, they don't walk  
16 away from it, they can't, it's not economically  
17 rational for them to walk away from it, even if later  
18 you decide to make the price changes.

19 Now, here's the good news. The good news is  
20 markets respond to signals. Rational people, when  
21 they're making investment decisions to enter markets,  
22 build in expected prices, not the current price, and  
23 certainly not the past price. They don't look  
24 backwards, they look forwards. If they see regulators  
25 who are committed to a course of action which moves

1 prices in the right direction over time with a  
2 sufficient sense of urgency, it need not be  
3 instantaneous to have a powerful market entry appeal.  
4 The wrong prices can kill a business plan just like  
5 that, however.

6 I was doing some work for a couple of cable  
7 companies who were serious about investing in cable  
8 telephony. The business models were built, they had a  
9 variable for loop -- for UNE pricing of loops. When  
10 the FCC order came out on August 8, 1996, we ran the  
11 model, the present value was bad negative, and that was  
12 it. Within weeks, you saw a couple of cable CEOs  
13 saying, gee, we've decided not to go into cable  
14 telephony after all. You cannot justify the billions  
15 of dollars they would have had to spend to go into  
16 cable telephony at that time when the FCC was sending a  
17 signal. We now know through all the courts and all the  
18 rest, they didn't even have the authority necessarily  
19 to set those prices, y'all did, but the harm in the  
20 market was done at that point. And so business plans  
21 of companies that thought about seriously entering the  
22 residential market with their own facilities scrapped  
23 them.

24 Now I'd say we could put those back on the table  
25 if you and other states say, look, this is the way to

1 embodies all -- almost all new technology. In fact,  
2 the thing that keeps the price of computers from  
3 falling even further is the plastic cases and the steel  
4 boxes, because they don't come down very fast.

5 Well, likewise, a very large share of a copper  
6 loop is still a copper loop. The technology for  
7 producing that loop is still pretty much the technology  
8 we've used for a long time. We're beginning to make  
9 inroads on that, but it only goes out basically from  
10 the central office out into the feeder plant, which is  
11 now going to fiber and digital loop carrier. So over  
12 time it will come down, yes. So we don't have to think  
13 -- we certainly don't have to think about moving to  
14 today's costs and then to continuing to move beyond it  
15 forever because the costs will keep going up. I don't  
16 believe that's true.

17 And in other cases, by the way, new service  
18 providers, once we really open this market up by having  
19 prices that because they reflect underlying costs are  
20 attractive to entrants, we'll see some entrants doing  
21 some more innovative things that will provide ways of  
22 at least serving portions of the market with lower cost  
23 technologies. Like I really believe a lot of rural  
24 service will be provided with wireless technology,  
25 because in my mind, as an economist, it's just an

1 inherently superior way compared to running copper  
2 wires over long distances.

3 COMMISSIONER JACOBS: And it would appear to me  
4 that those were some of the factors that would have had  
5 to have been considered by those -- by people who are  
6 considering coming in.

7 DR. HARRIS: Absolutely, absolutely.

8 COMMISSIONER JACOBS: Now, would it not also be  
9 the case that as that evolves, as that becomes real,  
10 that the residential market should become perhaps even  
11 more compartmentalized?

12 DR. HARRIS: Yes, it will.

13 COMMISSIONER JACOBS: Because the more you have  
14 the density -- okay.

15 DR. HARRIS: Right, that's right, absolutely.  
16 That's going to be the big next nut we're going to have  
17 to crack. In fact, you know, even talking about the  
18 average cost of basic service, it would be the  
19 equivalent of saying, what's the basic cost, what's the  
20 cost of an airplane trip? You can say, well, what  
21 airplane trip are you talking about? Are you talking  
22 about Tallahassee to Atlanta, are you talking about  
23 Atlanta to San Francisco, are you talking about a short  
24 route, a long route? We've got short loops, we've got  
25 long loops. Are you talking about in a small plane, 12

1 passengers, are you talking about a 747 with 400?  
2 We've got small cable bindings out there, we've got  
3 great big cable bindings out there. This average thing  
4 is going to get us into the same kind of trouble that  
5 keeping the average price below the average cost is.  
6 So, yeah, we are going to have to deal with that too,  
7 over time.

8 COMMISSIONER JACOBS: Any thoughts about how to  
9 address that?

10 DR. HARRIS: When we think about geographic de-  
11 averaging, we're not thinking -- we're still boxing in  
12 our thinking, because while some of the costs --  
13 geographic areas would capture some of the cost  
14 differences, they won't capture nearly all of them.  
15 And again, because an entrant -- you can say an entrant  
16 has to serve everyone, but the fact is, this Commission  
17 doesn't say to an entrant who builds a fiber into an  
18 apartment building and therefore somebody in the  
19 apartment building has a friend that lives a mile away  
20 in single unit housing says, gee, I'd like to buy phone  
21 service from you, too, say, well, I'm sorry, we don't  
22 serve your neighborhood, I don't think there's any  
23 penalty for that, is there? Do y'all say, no, no, no,  
24 you have to serve everybody, you have to serve  
25 everybody in the apartment building because that's

1 where you have your facilities?

2 Well, let me tell you, the cost of providing  
3 residential phone service in an apartment building is a  
4 lot less than it is out in the single unit dwelling,  
5 for a simple reason. Think about all these wires that  
6 go from a central office into your phone, literally  
7 into your phone. What share of that, if you live in a  
8 house, what share of that do you own? A little tiny  
9 portion, right, from wherever the drop is, your network  
10 interface device into your bedroom or your living room  
11 or wherever you keep your phone, a very short  
12 distance.

13 Now think about an apartment building. Huge  
14 amounts of the distribution plant aren't built,  
15 maintained or operated by the telephone company.  
16 They're built, maintained and operated by the building  
17 owner, or the building manager if it's under contract.  
18 So what we've got is, we'll often have, if it's a high  
19 apartment building or a big university campus, we've  
20 got fiber going right to the customer's premises and  
21 the customer does everything else in between. In other  
22 words, a significant part of the diagram we draw for  
23 providing local telephone service is actually not  
24 provided by the telephone company.

25 Well, now, there's two problems with this. First



1 of all, if you only average price, if everybody pays  
2 the same price, no matter these huge cost differences,  
3 where are the entrants going to enter first? Where  
4 they already are, the high-rise apartment buildings,  
5 the university campuses and the like, because given the  
6 price that's an average price that doesn't cover the  
7 average cost, it does more than cover the actual cost  
8 for those particular customers.

9 But then what's the second order effect? As the  
10 incumbent loses those customers, lowest cost to serve,  
11 what happens to its average cost? This is known in  
12 competitive strategy as adverse selection. The  
13 incumbent customers adversely select against staying.  
14 The customers you lose aren't a random sample across  
15 all customers. They're the customers where your costs  
16 are your lowest, given average revenues, or your  
17 revenues are highest, given average costs, or in the  
18 worst case, both, you lose both above average revenue  
19 customers and the lowest cost customers, and I  
20 guarantee -- I've built a model for an entrant that  
21 helps them target those units.

22 It's not a hard thing to do. It's not rocket  
23 science. You know, pretty much fly over an area and  
24 look at the high buildings and you're going to have a  
25 very good starting point.

1 MR. OCHSHORN: Mr. Harris, in your example, I'm  
2 trying to follow it, wouldn't your apartment service  
3 provider, or whatever, have to pay the incumbent LEC  
4 some amount of money for access to its network and  
5 switches and everything?

6 DR. HARRIS: No, because the CLECs are building  
7 fiber into those apartment buildings.

8 MR. OCHSHORN: But then they have to --

9 DR. HARRIS: We have a CLEC -- MFS has come across  
10 under the bay into Emoryville where our offices are.  
11 There's three office towers and there's a big apartment  
12 complex. The wiring -- it's a low-rise apartment  
13 complex, but all of the on-premise wiring is owned by  
14 the apartment development -- it's ironically called  
15 Watergate Apartments -- is now switching over to MFS.  
16 Pac Bell's not going to get any of the revenues.

17 MR. OCHSHORN: So this network is just among  
18 whoever is paying for this service?

19 DR. HARRIS: Right.

20 MR. OCHSHORN: And it's separate from connection  
21 to the local --

22 DR. HARRIS: Exactly.

23 MR. OCHSHORN: -- exchange so that --

24 DR. HARRIS: Right, so my office telephone will be  
25 over MFS and my home telephone up in Russell Street,

1 low density, single home dwellings, Pac Bell will  
2 continue to serve that for some time to come.

3 MR. OCHSHORN: But if from your business you  
4 wanted to call somebody who wasn't connected in your  
5 little network, then you'd have to pay for that service  
6 separately?

7 DR. HARRIS: We started -- it started by wanting  
8 to avoid the high switched access charges for long  
9 distance. So we first bought a T1 from Pac Bell, and  
10 then once MFS built its network, we bought a  
11 fractionalized T1 from MFS. We're running frame  
12 relay. It's a small company, my company is a small  
13 company. We have 350 people in 14 offices, but it's a  
14 frame relay network, in most cases with CLEC connection  
15 to the IXC pop, frame relay network, and this fall  
16 we're going to move all of our voice traffic onto the  
17 frame relay. So we will have moved all of the usage  
18 revenues, which Pac Bell, some people argue, ought to  
19 use to recover the cost of the loops, only there isn't  
20 going to be any usage revenues.

21 MR. OCHSHORN: Because there isn't going to be any  
22 usage of the local loop?

23 DR. HARRIS: That's right.

24 MR. OCHSHORN: This is just an intracompany  
25 network?

1 DR. HARRIS: We're keeping enough local loops for  
2 free local telephone service, of course. Why would you  
3 pay somebody something when you can get it for free?

4 MR. OCHSHORN: Okay. Thank you.

5 MS. BUTLER: I just want to follow up one more  
6 time, and I don't want to bog you down so I'm going to  
7 try to be real brief.

8 DR. HARRIS: I try not to bog myself down.

9 MS. BUTLER: Right. In answer to my question  
10 about the appropriate amount of time that you might  
11 need to wait to see the competition take hold, if you  
12 were doing things properly, I got the understanding  
13 from what you answered that you could see like a pretty  
14 close to immediate effect if you laid out a plan that  
15 gave business planners some assurance that things were  
16 moving in the direction that they needed them to go.  
17 Is that correct?

18 DR. HARRIS: Yeah. By rebalancing the rates, what  
19 you do is you change the incentives for entrants to  
20 concentrate as much as they now are solely on the high  
21 usage end of the market, and instead to look at a more  
22 balanced approach, because in many cases there may be  
23 money to be made in providing access services even to  
24 customers that aren't high usage customers.

25 MS. BUTLER: Well, my question to you then is that

1 relative to the Florida statutes that include -- that  
2 contemplate and plan for the elimination of price caps  
3 on the local exchange rate, how would you take that  
4 into consideration in terms of the fact that we're --  
5 when would you expect that, for instance, to start to  
6 show up in terms of seeing competition? It's a little  
7 bit of a puzzle to me, if the statute already  
8 contemplates the moving away from price caps and  
9 deregulating the price, that we wouldn't see some  
10 effect of that, given what it is that you answered.

11 DR. HARRIS: Yeah, as to exactly when, even as a  
12 theoretical proposition, much less factually do I know  
13 companies as to exactly how it's affected them, I would  
14 think that would have some positive effect, but in  
15 calculating present value or payback period, which is  
16 the two or -- time to break even cash flow, break even  
17 time to total cash flow payback period, those standard  
18 capital budgeting models that firms use, even if you  
19 know something's going to occur in the future, the  
20 further into the future it's going to occur, the less  
21 it's worth to your business plan right now.

22 So in the case of my widgets, I could say, well,  
23 yeah, the price of -- cost of making the widget is 50  
24 cents and the prevailing price today is 25 cents, but  
25 five years from now we're going to let the price go to

1 cost. Well, a widget maker competitor is going to say,  
2 well, then, in about four years I'm going to start  
3 building myself a widget plant. They're not going to  
4 build it today because it would be too long of a period  
5 before they could really compete at compensatory  
6 prices.

7 MS. BUTLER: Thank you.

8 DR. HARRIS: Affordability relative to prices have  
9 gone down since the price has gone down in real terms  
10 significantly, and relative to other states, by the  
11 way, the price in Florida has gone down. Relative to  
12 other prices, we're talking about nearly a 40 percent  
13 drop. That means there are two ways of thinking about  
14 that. If you use 1983 as a base period, in 1983  
15 dollars the price of basic exchange service is now  
16 \$8.49. Alternatively, if you use today's dollars, base  
17 price of basic service of 23.25 in 1983 would --  
18 compares to the actual, nominal, enhanced 1998 dollar  
19 denominated price of 14.15.

20 So here's just a chart of that occurring over  
21 time. It's been more or less a continuous change.  
22 There was a blip, a widely noted blip in the two,  
23 three, four years after the divestiture and so on. The  
24 real price of service actually bumped up a little bit,  
25 even in real terms, and then it's been pretty much,

1 because the rates have changed so little for so long,  
2 while inflation has continued, if at a moderated rate,  
3 they've continued to decline.

4 My staff likes to do graphics for me, so you've  
5 seen the graphics.

6 Price comparison to other states, roughly \$5  
7 below. Here's a chart of that. That's in the  
8 handout. You can have a look at that. Here's the  
9 table with the actual subscribership levels. We tried  
10 to do a statistical analysis. There's no significant  
11 statistical relationship between these price levels and  
12 penetration levels, so in other words, within the range  
13 we're talking about -- we're not talking about doubling  
14 or tripling the price of telephone service or basic  
15 access, we're not talking about something like  
16 electricity service here. The problem with raising, if  
17 you were to raise electricity service prices  
18 significantly, it constitutes a much larger share of  
19 household income, therefore a 20 percent increase in  
20 something you may spend \$70 or \$80 a month on is a much  
21 bigger hit than something you spend \$14 on.

22 MR. McNULTY: Dr. Harris?

23 DR. HARRIS: Oh, yes, sorry.

24 MR. McNULTY: Bill McNulty with Commission staff.  
25 I had a question about that last chart you had up

1           there.

2           DR. HARRIS: Okay.

3           MR. McNULTY: A figure for 1983 showed an 89.9  
4 percent penetration --

5           DR. HARRIS: Right.

6           MR. McNULTY: -- for Florida.

7           DR. HARRIS: Right.

8           MR. McNULTY: I was wondering if you knew what  
9 that was. That's on an available basis. Could you  
10 describe the difference between unit and available and  
11 what that means in this context?

12          DR. HARRIS: No, I can't, I'm sorry. I'll have to  
13 do a little homework on that and get back to you with  
14 an answer on that. I know that there's a -- several  
15 different ways of measuring it, and we chose one rather  
16 than another, but I don't recall what the technical  
17 definitional difference is.

18          MR. DUNKEL: I can tell you the difference, if  
19 you'd like.

20          DR. HARRIS: Sure. Thanks.

21          MR. DUNKEL: Yes. The unit avail -- unit  
22 penetration means you have a telephone in the unit, in  
23 your home.

24          DR. HARRIS: Thank you, thank you.

25          MR. DUNKEL: The available means it's either in



1 your home or you have a neighbor that you can call or a  
2 pay phone out in the hallway, something like that.

3 DR. HARRIS: Thank you.

4 MR. DUNKEL: So available means either in your  
5 home or somewhere nearby that someone will let you use.

6 DR. HARRIS: My staff, I want to give them their  
7 credit, they briefed me on that. They said probably  
8 you'll get a question about this, so you need to know  
9 the difference, but old brain cells being what they  
10 are --

11 MR. McNULTY: Right. I was going somewhere with  
12 that. My point was that I think the 1983 data from the  
13 FCC shows that the unit penetration, which is those  
14 people who actually paid for and subscribed to local  
15 telephone service in Florida in 1983, was 85.5 percent,  
16 and I want to put that together with a comment that you  
17 had on an earlier slide which basically said that it  
18 appears as though 1983 local telephone service in  
19 Florida was affordable, and so I guess I want to kind  
20 of get to the basis of what you believe is a good  
21 definition of affordability in the context of local  
22 telephone service.

23 DR. HARRIS: With respect to income is really the  
24 issue we're getting at here. I think we have to face  
25 up to a very difficult problem. What is affordable for

1 one household is not affordable for another household.  
2 If, though, we were to define affordable as affordable  
3 to every household, and if supposing we were to apply  
4 that standard to the pricing of other goods and  
5 services, the economy couldn't function. You couldn't  
6 say to General Motors, you must produce a basic  
7 automobile and price it at a level that's affordable to  
8 every single household. That was the point I made  
9 earlier.

10 If we have households, prices ought to be set to  
11 be affordable to most households. Whatever number that  
12 might be, it's not 100 percent. If it's 90 percent, if  
13 it's 85 percent, I don't know. And then we ought to  
14 target subsidies to the remaining households so that  
15 with that supplement, just like we have rent  
16 supplements and food supplements, with that supplement  
17 even those households can afford it. That's my basic  
18 position.

19 MR. McNULTY: Okay. Well, the thing that we're  
20 struggling with here is, in the notion of  
21 affordability, does it go beyond the concept of the  
22 willingness to pay and does it go so far as to say not  
23 only the willingness to pay, but the ability to pay  
24 without having to adjust other essential goods and  
25 services, important spending that a household might

1 have, so that if you had a penetration rate in 1983 of  
2 85.5 percent and yet there may have been some level of  
3 hardship that some portion of that 85.5 percent  
4 sustained even under those conditions, would, you know,  
5 your definition of affordability -- I mean, at what  
6 point does it become unaffordable for a large enough  
7 percent of the population to be considered affordable  
8 versus unaffordable? That's kind of what I'm getting  
9 at there.

10 DR. HARRIS: I'm with you, and I think it's a very  
11 important problem that we need to deal with, but I'm  
12 saying that however we deal with that, whatever numbers  
13 we come up with, we ought not be looking at the price  
14 of service for everyone as being set at that level.  
15 That's all I'm saying. Because if we do that, what  
16 we're saying is a household with \$100,000 a year income  
17 is basically getting a subsidy that's counter-  
18 productive, causes a lot of inefficiencies, and which  
19 not only do they have the willingness to pay, they  
20 obviously have the ability to pay, too. That's what we  
21 have to move away from.

22 Okay. Efficiency goals, let's see, where are we,  
23 32. Again, what this comes back to for entrants is  
24 pricing at affordable levels for most but not all of  
25 the population provides incentives for companies to

1 invest in entering the marketplace. And by and large,  
2 the entry that's going to be important -- I know we've  
3 gone through this massive unbundling exercise. No  
4 other country in the world has done it. There's  
5 several other countries that have more competition in  
6 local exchange than we have because what they've done  
7 is concentrated on people building competing  
8 facilities. Some of those new facilities I hope will  
9 be new technologies.

10 No better example of that than the airline  
11 industry. The airline industry, there's a whole range  
12 of medium sized aircraft that did not exist at the time  
13 of deregulation. There was no market for the aircraft  
14 so nobody was going to build them because we were using  
15 large aircraft, you know, 737 type aircraft to serve  
16 very, very small towns and cities where average  
17 boardings in Kearney, Nebraska, was two passengers per  
18 day onto a 737. That's extremely wasteful. Now what  
19 you see is this intermediate class of airplanes.

20 The same kind of thing can happen in  
21 telecommunications. People will build design networks  
22 that are simply inherently more efficient ways of  
23 reaching the higher cost portions of the market, and by  
24 setting prices or setting ourselves on a course of  
25 moving toward rationally -- economically rational

1 for the durable good, the camera or the photocopy  
2 machine, did not cover their long-run incremental  
3 cost. What did? The things people had to buy to make  
4 use of them. It's a form of price discriminating. The  
5 more you used your camera, the more rolls of film you  
6 took, the more you had developed, the more photocopies  
7 you made in your office, the more, effectively, you  
8 were paying to Xerox. Why could they do that? They  
9 had a monopoly. How did they have a monopoly? It  
10 happens. Nobody else could make those photocopy  
11 machines. That's why we call them Xerox machines long  
12 thereafter. They had a whole set of patents that made  
13 it virtually impossible. What happened when those  
14 patents expired or became irrelevant due to  
15 generational advances in photocopying technology toward  
16 opto-electronics? What happened? Guess what happened:  
17 The pricing changed. You're not going to buy any  
18 photocopy machines today where the price doesn't cover  
19 the full cost of manufacturing and delivering that  
20 machine to you because the company that makes the copy  
21 machine doesn't know where you're going to buy all  
22 those supplies that you use. Maybe from another  
23 photocopy machine, maybe from your local office supply  
24 who's gotten into that business in a big time way.

25 The same principle here, as long as there's a

1 monopoly provider of all these usage services that are  
2 priced above cost so that some people on the network  
3 who don't use their cameras very much, their  
4 photocopiers very much or their local loop very much  
5 can pay a price below the cost of that dedicated  
6 facility, that's okay, because on the whole, we'll  
7 cover all the costs. It's not okay now because those  
8 are the customers -- the customers are paying the  
9 prices with the subsidies built into them. As  
10 admirable as the goal of subsidizing the basic service  
11 for those who need it is, it's not sustainable, and  
12 hence the fallacy of this loop cost recovery, that  
13 somehow it's a common cost. It is not a common cost  
14 because it is dedicated to a particular customer.

15 The overhead in a grocery store, that's a common  
16 cost. What if a grocery store said, you know, I don't  
17 really like shopping with all those other people. It  
18 makes me nervous. I'm a people-phobe. Build a portion  
19 of the store for me that only I can use. How often are  
20 you going to use it? Well, that's to be seen. I may  
21 use it a little, I may use it a lot. You know,  
22 companies do this all the time. They make customer-  
23 specific investments. They put in a terminal facility  
24 right next to the General Motors manufacturing plant.  
25 General Motors pays for the fixed cost of that facility

1 in its long-term contract.

2 COMMISSIONER GARCIA: How could it not be a fixed  
3 cost if it's essential for the overall service to  
4 distribute -- I could built a network phone system for  
5 Joe Garcia, but if there was no one else on the  
6 network, it would cost a billion dollars, but I could  
7 only speak to myself, so I wouldn't need a phone  
8 system. Clearly part of the usage of that system is  
9 for everyone to use, and if I can't contact someone or  
10 someone can't contact me, so it's a common cost.

11 DR. HARRIS: A common cost by its definition is a  
12 cost that doesn't change with respect to output. If I  
13 have a phone company that's now serving 90,000  
14 customers and I say, ah, but we're putting in 10,000  
15 more homes next year, we want you to build service for  
16 them, too, what happens to their costs? They go up by  
17 about ten percent. The cost is incremental with the  
18 customers served. In the short-run sense, it looks  
19 like it's a fixed cost, but that's why the key letters  
20 in both TSLRIC and in TELRIC are its middle name, long  
21 run. In the short run, things are called -- most  
22 things are fixed.

23 What's a cost? An airline's got 80 seats on a  
24 plane, 70 passengers, why don't they just let you walk  
25 on board? Why don't they charge you a couple of

1 bucks? I mean, that would be an overpayment for the  
2 meal you're going to be served. They don't do that  
3 because if they do do that, they'll be out of  
4 business. Those prices have to recover the full cost  
5 of flying that aircraft.

6 It's a well-known problem in economics.  
7 Economists have struggled with it, but it's a well-  
8 known problem and it has a well-known solution. And it  
9 is that the cost of providing a dedicated facility to a  
10 customer must cover its long-run incremental cost.

11 Here's the cost estimates. You've already seen  
12 those. I don't really want to run through those.

13 I want to just talk a little bit about the  
14 increases in the value of the network, because I know I  
15 don't have much time left. Now, again, this is not to  
16 suggest every customer's doing these things, but many  
17 customers are doing this, and when you think about  
18 affordability, recognizing this very real social issue  
19 we have about households who might not be able to  
20 afford telephone service, and as a matter of social  
21 policy because we want those people on the network for  
22 their good and for our good, we want to subsidize it,  
23 really, then, the question is how, by bringing the  
24 price to everyone down or by raising the price to an  
25 affordable level? When you think about affordable, you



1 have to think about what good is the service.

2 Well, frankly, 15 years ago the telephone was good  
3 for making telephone calls, voice telephone calls, most  
4 of which you paid for if they were very far away.  
5 Today, that same basic access service provides a  
6 tremendous array of values that didn't even exist, much  
7 less more of them, as in local calling. We get local  
8 calling. In California over 50 percent of local  
9 calling already today is for Internet access. It's  
10 greater than all of the voice local calls added  
11 together, and it's growing so fast that within about  
12 three or four years it will hit 90 percent. 90 percent  
13 of all local calling minutes will be for Internet  
14 access. The simple reason for that, you know, a  
15 machine can be on the network much longer than people  
16 are going to be on the network using their voices,  
17 sometimes because the person's in front of the machine  
18 and sometimes because the machine is getting  
19 information or sending information without any human  
20 attendance.

21 Likewise, the growth in 800 numbers has been  
22 absolutely enormous.

23 Well, what does basic access service give you? It  
24 gives you the ability to make free telephone calls, in  
25 many cases, other places, the world, not just the

1 United States, because in fact a lot of 800 numbers  
2 don't actually terminate in the U.S., they terminate  
3 abroad. They're routed through an 800 number here,  
4 across a private line, a dedicated facility, to Europe,  
5 to Japan or whatever. Likewise with Internet, which  
6 literally lets you reach around the globe.

7 Here's some numbers on this. We've got  
8 7.7 million 800 numbers. 800 traffic is far and away  
9 the fastest growing area in voice telecommunications.  
10 By some estimates it constitutes between 30 and 40  
11 percent of total voice traffic. Hence, the traffic on  
12 800 numbers is growing so fast that we're running out  
13 of numbers quickly, so now I guess we've just added 877  
14 to the 888 numbers.

15 Internet. Florida, you probably already know --  
16 I've learned this some time ago, and have used it as a  
17 case study, in fact, in my telecommunications class at  
18 Berkeley -- is a real leader, probably the leader among  
19 the states in actually putting Internet services to  
20 work in providing better access to the government and  
21 better access to government services.

22 Internet usage, I know we're a little bit behind  
23 on this. It's seen as kind of a yuppie phenomenon, a  
24 techie phenomenon. It surely started out as that, but,  
25 you know, early adopters do some good. They're the

1 ones that pay the high prices early on that create the  
2 scale economies and the efficiencies of mass production  
3 that bring down the price of Internet modems or PCs to  
4 run them or whatever. As the price of that equipment  
5 falls so dramatically, the penetration of Internet  
6 devices and the use of the Internet is growing. In  
7 fact, it turns out that insofar as the data we have on  
8 a state-specific basis, it's growing faster in Florida  
9 than anywhere else. And in fact, interestingly enough,  
10 Internet usage across the country, I don't have this  
11 data for Florida, but it may explain this Florida  
12 result, the demographic use is growing fastest in the  
13 55 and over population, people who, among other things,  
14 have time to surf the Net.

15 So now we're hitting 79 million. This is going to  
16 become very, very, very widespread, not ubiquitous, but  
17 very widespread. And again, for some time, the local  
18 exchange service is going to be the predominant way of  
19 connecting to the network.

20 Now, what I fear is, I fear that at the very high  
21 end of the market, those early adopters are going to be  
22 the first ones to leave the phone network. In a sense  
23 that's good, because right now there's no pricing for  
24 those connections. Average AOL user is now on line 45  
25 minutes a day. That's free connect time. No access

1 charges, no local calling charges, and obviously,  
2 there's a cost of building the network to carry all  
3 that traffic, both to switch it and to transport it.  
4 But, of course, the bad side is then we're going to  
5 have this segmentation or compartmentalization, as it  
6 was referred to, now on a usage basis so the people  
7 that get the most value from it will be the first to  
8 switch over to cable modems. Once they've done that,  
9 though, the market research shows, the actual  
10 commercial testing shows they don't just take their  
11 Internet access to the cable modem, they take their  
12 telephone service along with it.

13 Some of the services available in the Internet,  
14 again, when you're thinking about affordability and you  
15 think about value, think, well, what can I use it for?  
16 Think, what is something worth? The answer is, is what  
17 can I use it for, the more things you can use it for,  
18 the more it's worth, and the greater your willingness  
19 to pay for it. If by being able to use my basic  
20 exchange service I can reach of lot of consumer  
21 information over 800 numbers that don't cost me  
22 anything and maybe even save myself some money, maybe  
23 by paying less for insurance because I can, at a zero  
24 price for telephone services, I can shop around and  
25 compare insurance prices, I have some money to spend on

1 other things. And one of the things I would be willing  
2 to spend it on is the thing that gives me that value,  
3 that creates that value, my basic exchange service.

4 Conclusion: Telephone versus telecommunications.  
5 Again, we have to move from one mind set to the other.

6 Telephones are critically important in our  
7 society. They're part of who we are. And we do not  
8 want to lose that. Telecommunications is part of who  
9 we will become, and we don't want to hinder or  
10 jeopardize or put obstacles in the way of that, however  
11 warranted, however well advised, however well our  
12 policies worked in the past.

13 My view is that you could raise the prices of  
14 basic exchange service by some moderate amount, that  
15 you would provide an impetus to entry and competition  
16 in residential markets that would be less distorted  
17 toward just the high end of the market, the high usage  
18 end of the market, that by bringing usage prices down,  
19 you'd encourage even more use of the telecommunication  
20 networks.

21 Unlike most other things in economics we have to  
22 deal with, it's interesting, we call things goods. The  
23 problem with most goods is they have a lot of bads that  
24 go along with them. When we make a shopping trip to  
25 buy something, we create, we contribute to congestion

1 and air pollution. When we make many of the -- even  
2 these things, these are pretty good. Well, I'll tell  
3 you, the problems we're having to deal with in toxic  
4 clean-ups at semiconductor plants in California in  
5 Silicon Valley and elsewhere reminds us that even those  
6 goods come with the bads. As goods go, there's few  
7 that have as few bads as telecommunications service.  
8 Why would we want to tax that in order to pay for  
9 something else? Even if we take it as absolutely  
10 undeniable that that something else ought to be  
11 available to everyone, that then isn't the question.  
12 The question is, how do you pay for that and how do you  
13 do it in the most efficient way possible?

14 In my view, that means affordability lies  
15 somewhere up in this range. And if we move in that  
16 range, I believe we will in fact achieve each of those  
17 objectives that I enumerated at the beginning of my  
18 presentation. You will provide incentives for even  
19 more companies to respond to the needs of residential  
20 customers. You will be able to maintain universal  
21 service with appropriately designed and implemented  
22 universal service plans. You will promote the  
23 development and the adoption and the deployment and the  
24 use of new technologies in telecommunications, which in  
25 turn will advance economic development in your state.

1           You will increase the rate of competition,  
2           increase the rate. It won't appear magically tomorrow  
3           morning, but you'll see an increase in the rate.  
4           You'll continue the process you've already begun of  
5           moving increased reliance to market forces and economic  
6           incentives versus what we've historically relied upon  
7           in this industry, and you'll do all of these things  
8           with increased efficiency.

9           MS. BUTLER: Can I ask you one more question,  
10          please?

11          DR. HARRIS: Of course.

12          MS. BUTLER: I'd like to go back to the discussion  
13          about whether or not the local loop is a common cost.

14          DR. HARRIS: Okay.

15          MS. BUTLER: And it seems to me that your way of  
16          looking at it hinges on the notion that long distance  
17          is essentially a severable service from local, is that  
18          correct?

19          DR. HARRIS: No, it's that -- the difference here,  
20          if I can introduce a technical term, because it's one  
21          of the most often confused concepts in economics,  
22          there's something in economics called a joint cost.

23          MS. BUTLER: Yeah, I understand what that is.

24          DR. HARRIS: And there's something called a common  
25          cost.

1 MS. BUTLER: I know what that is.

2 DR. HARRIS: I suspect there may be some who  
3 aren't so thoroughly familiar with the difference as  
4 you are, so --

5 MS. BUTLER: Okay.

6 DR. HARRIS: -- allow me to point out the  
7 fundamental difference.

8 A joint cost is involved when two goods or  
9 services must be produced, can only be produced in  
10 fixed proportions. There aren't any. The examples  
11 that have been used in the economic textbooks for years  
12 was wool and mutton. Well, the fact is, farmers all  
13 the time vary the proportions between wool output and  
14 mutton output. Not to be too morbid about it, but, you  
15 know, there's always the question, when do you convert  
16 the production process from one to the other? Which is  
17 of considerable interest to the farmer and even greater  
18 interest to the sheep.

19 There really aren't any significant cases of joint  
20 cost. A common cost is one in which something can be  
21 used, but in differing proportions.

22 What if it were true -- let's go back to this --  
23 what if it were true that everyone made exactly the  
24 same proportion of long distance calls and local calls?  
25 Everybody. The average bill was the only bill.



1           Everybody made \$25 worth a month of long distance  
2           calls. And that's the way it always has to be, because  
3           you can't do it any other way. Technically  
4           constrained. Then what would you say in that case?  
5           What difference does it make what you charge for the  
6           calls versus what you charge for the loop? They're  
7           buying a market basket of goods, the contents of which  
8           doesn't change. It's not a common cost because the  
9           contents of the market basket do change. Some people  
10          put very few items, make only local calls, generate not  
11          even many 800 calls. 800 calls at least generate  
12          access charges for the local telephone company. Other  
13          companies -- other customers make an awful lot of  
14          calls.

15                 What we're doing is we're not allocating the cost  
16          of the loop. Let's be real clear about that. What  
17          we're doing is allocating the revenues from customers  
18          who use more, make more than their average or  
19          proportional use of the loops and saying, well, use  
20          some of those revenues over here from the long distance  
21          customers or the customers that buy a lot of vertical  
22          features and so on, and we'll use that to recover the  
23          cost of providing these loops.

24                 Now, if we had a world in which these people were  
25          geographically separated, it would be real clear to see

1 that. If we literally had a world in which we put all  
2 the high usage customers over here and all the low  
3 usage customers over here and said, but you've got to  
4 build the same network, because you would build the  
5 same network. The loop design wouldn't change. Loop  
6 design is not based upon usage. A loop design is about  
7 having a dial tone. And those people over there who  
8 never pick up the phone, once a day they pick up the  
9 phone, make a local telephone call to a friend or  
10 whatever, that's it. These people use their telephones  
11 all the time, including a lot of usage services. How  
12 do you recover the cost? The cross subsidy says, well,  
13 we're going to take all the costs of providing the  
14 access, put those into one common pool, take all the  
15 revenues from the usage, going to spread them across  
16 those costs. Well, what did you just do? You just  
17 took the revenues from the people who make lots of  
18 calls and you spread it over to cover these costs. If  
19 you've got a monopoly, it's okay, you can do that. It  
20 probably doesn't maximize efficiency, but it probably  
21 gets you a lot of other good results. In any case,  
22 that's what we did.

23 But now we can't do that, it won't work, because  
24 we don't have the monopoly anymore. So now the cable  
25 company comes along. It turns out there's a cable

1 company here and a cable company here. High usage, low  
2 usage, high margin, negative margin. Cable company  
3 says, well, let's upgrade our plant. How much is it  
4 going to cost? \$400 per home pass. What are we going  
5 to do with it? Provide Internet access. Anything  
6 else? Oh, yeah, plug their phone into the cable modem  
7 box, provide cable telephone calls as well. Route  
8 their calls to the long distance carrier, oh, sure,  
9 piece of cake. Well, where are we going to do it?  
10 We've got this neighborhood and we've got this  
11 neighborhood. Where do you think they're going to do  
12 it? They're going to do it over here. The entry, as  
13 it enters the residential market, and that is going to  
14 be happening in a significant way in the next few  
15 years, is going to be targeted at the very high usage  
16 customers whose revenues would be used under this loop  
17 cost allocation view of the world to cover the costs  
18 over here, only those revenues are going to be gone.

19 And in part, we're chasing them away. It's even  
20 worse than just letting it happen. We're making it  
21 happen, in a sense. We're providing them to be, those  
22 high usage customers, a much more attractive target of  
23 entry relative to these low usage customers than they  
24 would be if we had economically rational prices.

25 MS. BUTLER: Actually, you answered that in a way

1 that I had totally not anticipated, and I thought I  
2 understood what you were saying before you had answered  
3 me. I really, frankly, don't understand how revenue  
4 allocation has anything to do with the definition of  
5 common costs.

6 DR. HARRIS: Well, what -- how are you allocating  
7 these costs? You're allocating them to long distance,  
8 right?

9 MS. BUTLER: No, I'm just saying, we're trying to  
10 define common costs.

11 DR. HARRIS: Yeah.

12 MS. BUTLER: And as I understood common costs,  
13 common costs are costs that are incurred in the course  
14 of producing multiple products that cannot be  
15 attributable directly to any single product. Is that  
16 -- do you agree with that definition?

17 DR. HARRIS: In the long run. In the long run.  
18 Only in the long run. Almost all costs are common in  
19 the short run.

20 MS. BUTLER: Okay. When you were talking about  
21 long distance and local, it was my thinking that -- I  
22 understood you to mean that what was happening here was  
23 that because you could have local service without long  
24 distance and that in this new era there's like --  
25 there's competitive factors on the long distance level

1 that make it a foregone conclusion that there will be  
2 local service without long distance, that the two  
3 services are now severable and therefore should not be  
4 looked at as producing a multiple of goods with costs  
5 that are attributable to neither one directly, but that  
6 you sever off the piece, the local piece, and say that  
7 it's attributable to the local, and that's what I  
8 understood. And --

9 DR. HARRIS: Okay. What I'm saying is, the cost  
10 of these loops over here, people who aren't making any  
11 long distance calls cannot possibly be part of the  
12 common cost of making long distance calls.

13 MR. OCHSHORN: Mr. Harris?

14 DR. HARRIS: That's what I'm saying.

15 MR. OCHSHORN: Let me suggest --

16 MS. BUTLER: Hold on, Bill. I want to get to the  
17 question.

18 MR. OCHSHORN: Okay.

19 MS. BUTLER: We're in the same place, and what I  
20 want to know is, if you defined the services instead of  
21 being local and long distance, if the second service  
22 was access to long distance and you assumed that  
23 customers of local service pay that in the charge that  
24 they pay for access through the charge that the FCC  
25 puts on their bill essentially when they purchase local

1 service, and if you look at it as though instead of  
2 purchasing local and long distance, you're purchasing  
3 local and access to long distance, would it change  
4 anything in terms of the loop costs being common?

5 DR. HARRIS: No, it would not. I think it's  
6 helpful to think about part of the value of basic  
7 access as including not only a dial tone and local  
8 calls, but also access to long distance, but it doesn't  
9 make the loops of people who don't make long distance  
10 calls part of the common cost of those who do. It just  
11 doesn't do that. There's no way you can get that into  
12 a common cost pool.

13 MS. BUTLER: Okay. I just needed your answer.

14 MR. OCHSHORN: Mr. Harris?

15 DR. HARRIS: Yes.

16 MR. OCHSHORN: I'll be real brief because I want  
17 to help keep us on schedule, so I'll just make an  
18 observation rather than a series of questions. And  
19 that's that, from our perspective, part of what you pay  
20 when you pay your basic rate is for access to long  
21 distance calls, to receive them as well as to make  
22 them, and because of that, we think it's reasonable to  
23 allocate part of the costs of the loop to long distance  
24 even if you don't make them. And I realize you're  
25 arguing for a different point of view and for the -- I

1 appreciate particularly for the most part that you're  
2 putting this in terms of a policy argument rather than  
3 in a, you know, technical cost kind of argument,  
4 because we agree that's what we think is really  
5 involved here. Thank you.

6 MR. REGAN: Sir, I have a question about the  
7 earlier slide. My name is Tom Regan, by the way.

8 On slide 43, page 43, you had a summary of  
9 affordability and you had some ranges that you  
10 provided, and the ranges started at \$20. I just wanted  
11 to clarify what your position was. Does the \$20 --  
12 that is including the interstate 3.50 SLC, is that  
13 right? That includes that, right? So without the SLC,  
14 the range would start at 16.50?

15 DR. HARRIS: I think that's right, yes.

16 MR. REGAN: Thank you.

17 MS. MARSH: Thank you, Dr. Harris.

18 We'll take a 15-minute break.

19 (Whereupon, a recess was had in the proceedings.)

20 MS. MARSH: The next speaker is Dr. Marvin Kahn.  
21 Before he starts, I do want to ask you all to remember  
22 to state your name for the court reporter, and if it's  
23 been a little while since you've asked a question, you  
24 might want to state it again because he can't remember  
25 who everyone is.

1 I'd also like for y'all to try to limit your  
2 questions to questions -- because we are real short on  
3 time today, we have a lot of speakers, so please keep  
4 it to questions for the speaker.

5 And with that, as soon as Dr. Kahn is ready, we  
6 will start.

7 DR. KAHN: Okay. Is this working? Can anybody  
8 hear me? Okay. We'll try it this way. Okay.

9 Good morning. My name is Marvin Kahn. I've been  
10 asked to offer some observations on behalf of Public  
11 Counsel.

12 As I understand it, a copy of a summary of my  
13 remarks has been distributed, and with that, what I'm  
14 going to do is I'm going to address the issue of fair  
15 and reasonable rates from the point of view of a cost  
16 assessment, and most specifically, recognizing that  
17 this Commission has addressed that specific issue on a  
18 number of occasions. It did in the context of asking  
19 whether local exchange rates are fair and reasonable,  
20 in the context of long distance and access charges  
21 approximately ten years ago, it's had a generic cost  
22 docket, it's had a generic cross subsidy docket. And  
23 given what's going on in the market with regard to  
24 competition, it's probably reasonable to ask the  
25 question again, because the context itself has changed



1 somewhat.

2 The Commission in the earlier dockets have  
3 addressed it and recognized the reasonableness of  
4 what's referred to as a stand-alone cost study. It  
5 found approximately ten years ago that local rates were  
6 fair and reasonable, were just and reasonable, in the  
7 context of a stand-alone cost study, and used the  
8 information from a stand-alone cost study as a basis of  
9 that conclusion.

10 For that reason, among others, I'm going to  
11 present information, or would like to present  
12 information with regard to a stand-alone cost study.  
13 We would like to try and do it in two ways, and I'll  
14 explain to you what I mean by like to try to do it in a  
15 moment.

16 One is from the point of view of an embedded  
17 basis. By embedded basis, I mean we'll take a look at  
18 the companies' costs that they incur today on their  
19 books, and ask the set of questions with regard to  
20 stand-alone costs. This was the basis of the analysis  
21 undertaken earlier in the Commission's investigation of  
22 local rates relative to access charges and long  
23 distance rates. The Commission has since that time  
24 found that incremental costing, I believe correctly, is  
25 the best way to examine questions such as this. We

1 would therefore like to also ask that same set of  
2 questions in the context of an incremental cost  
3 analysis.

4 Finally, given we're talking about a competitive  
5 environment, I believe it's fair to say, and I'll  
6 explain further why, that it's the customer, at least  
7 from the point of view of residential service, that  
8 becomes an incremental unit rather than necessarily  
9 individual services, and for that reason alone it  
10 becomes reasonable to ask the question of cost support  
11 or revenue support for rates and fair and  
12 reasonableness, recognizing that the customer is the  
13 incremental unit, and as I indicate here, I would like  
14 to examine the information from the point of view of an  
15 incremental cost study.

16 These -- no one of these in my opinion necessarily  
17 provides the determinative answer of exactly what is  
18 fair and reasonable rates. I think there's both  
19 economic and policy issues involved in that question.  
20 But what I think this does is it would provide the  
21 Commission and the Legislature with information by  
22 which it can put its arms around the problem and  
23 provide it with information by which it can reach  
24 reasonable conclusions as to whether or not the rate  
25 and the rate levels are themselves reasonable.

1           You are going to hear further about a stand-alone  
2 cost methodology, and so I think it's worthwhile to  
3 spend a little bit of time talking about exactly what  
4 it is, what its usefulness is, how it fits into the  
5 picture of the questions that you're talking about here  
6 today.

7           The concept of a stand-alone cost methodology is  
8 relatively simple. Basically what it says is the  
9 telephone company, as are most organizations in the  
10 economy today, multi-product firms. They produce a  
11 whole variety of goods and services. They provide a  
12 variety of goods and services because it's more  
13 economically feasible to do that than to provide  
14 services individually. That is to say, there are  
15 economies of scale and scope that are involved in most  
16 production processes, meaning the jointness in the  
17 production process is appropriate.

18           Now, by jointness in this context, I simply mean  
19 providing them together, not joint costs in the very  
20 narrow and strict sense that Dr. Harris was talking  
21 about.

22           The question that comes up in economics and the  
23 question that comes up in any business sense is what to  
24 do about it. From our point of view, what I'm doing is  
25 I would like to examine and talk about examining the

1 issues before us from the point of view of a stand-  
2 alone cost. Recognizing this, what we have is we take  
3 a look at the cost structure of the entire  
4 organization. In doing that, we would come up with  
5 what I've referred to as the total cost of service  
6 under the assumption all products are involved.

7 In this case, I'm simply saying I have a firm  
8 that's producing two products, which I'm calling X and  
9 Y. The stand-alone cost is simply the cost of  
10 producing either of those. For instance, the stand-  
11 alone cost of service X would be the cost of producing  
12 that service without producing the service Y. In other  
13 words, whatever the benefits of economies of scale and  
14 scope that might be involved, when jointness of  
15 production takes place, we're excluding it. We're  
16 asking, what are the costs if only X were produced?  
17 Well, since we know the total cost of producing both  
18 services together, and if we can calculate the cost of  
19 producing X alone, the difference between the two by  
20 definition is the increment involved in producing Y.

21 Similarly, we can identify the stand-alone cost of  
22 producing service Y. Again, this is a cost of  
23 producing Y, assuming X is not produced. There will be  
24 none of the benefits from the economies of scale or the  
25 economies of scope of the jointness in production that

1 will be realized here. They'll all be foregone.

2 We have a stand-alone cost of Y and X scenario.  
3 We compare it to the total cost incurred of producing  
4 both X and Y together when all benefits of jointness  
5 are realized. The difference is by definition the  
6 incremental cost of the excluded service, or service X  
7 in this context.

8 Having done this, we can address a lot of the  
9 questions that are being asked here today, and  
10 specifically what we do, having done this, is we  
11 identify not only what are the stand-alone costs of  
12 each service, but what are the benefits that accrue  
13 from jointness in the production process? And it's  
14 those benefits that come from economies of scale and  
15 scope that are captured in this crosshatch area that  
16 I've identified as shared costs. And I've used the  
17 words "shared costs" intentionally. I did not use  
18 common costs. I did not use family costs. I did not  
19 use joint costs, because I don't want to get hung up  
20 here, at least not right now, in the technical  
21 definition, in the narrow scope of the definition of  
22 each one of those terms.

23 These are the benefits that result from the  
24 jointness in the production process. These are the  
25 costs the society -- initially the producing firm is

1 saving, and therefore society is saving from the  
2 jointness in the production process. As long as the  
3 stand-alone costs of the individual services exceed the  
4 costs of jointness in production, such shared costs  
5 will result.

6 Now, let's take a look at what we've done here.  
7 There's a couple of very important things that happened  
8 here. I can go through this and I can point to a  
9 volume of shared costs. I don't have to stand here  
10 before you and begin by saying I'm assuming this is  
11 fixed, this is common, this is dedicated to that  
12 customer, this is dedicated to those customers. All I  
13 have to do is identify what the stand-alone costs of  
14 each of the services are, over which there doesn't seem  
15 to be much dispute based on what I've heard here today;  
16 what the total cost of production would be -- again,  
17 there doesn't seem to be any dispute -- and this  
18 process identifies, the analyst does not identify, the  
19 process identifies those costs which are shared in the  
20 process, those costs which fall out due to the  
21 jointness of the production process.

22 I took a quick step ahead of myself.

23 This is a summary of the observation I just made,  
24 but you will hear an argument being made that stand-  
25 alone cost is not needed to determine whether prices

1 are subsidy-free, but instead it suffices only the  
2 prices be above their TSLRIC. That's all that needs to  
3 be done. And in theory, that statement is absolutely  
4 correct, but you've got to recognize one thing, going  
5 back to what I said a moment ago, is that in theory is  
6 that what's necessary is if the analyst has to, in this  
7 context, make assumptions as to what costs are shared  
8 and what costs are common before the analysis begins.  
9 In other words, focusing only on TSLRIC does not  
10 provide a satisfactory test in reality for the  
11 following reason.

12 In a stand-alone test where you use stand-alone  
13 and TSLRIC as I just described it, as I indicated, the  
14 analyst only has to gauge the stand-alone cost of the  
15 individual services. The study process identifies what  
16 costs are shared, what costs result from the  
17 jointness. Focusing only on TSLRIC, as one might  
18 suggest, and you will hear that one does suggest,  
19 requires that the analyst, the person doing the study,  
20 first assume which costs are joint and which costs are  
21 shared and which costs are not, and all the study then  
22 does is measure the costs involved but does not  
23 identify shared costs. In other words, what is  
24 identified as shared is an input into the study process  
25 if you focus only on TSLRIC. It's an output of the

1 study process if it uses stand-alone cost technique.

2 That's about as far back as I can go. We will do  
3 the best we can. Okay. Nope. Okay. We're going to  
4 do the best we can here.

5 As I indicated, earlier analysis that was  
6 presented to this Commission has indicated that the  
7 current level of rates are in fact -- or the rates when  
8 the analysis was done were in fact subsidy-free. In  
9 fact, what I've indicated to you also is that a stand-  
10 alone cost study is one method of doing that, in fact,  
11 the cost methodology that the Commission relied upon in  
12 its process.

13 What I'd like to do here is to follow through with  
14 some of the implications of an argument being made by  
15 some of the people that you're going to be hearing from  
16 is that -- such as Dr. Harris, for instance -- is that  
17 the current pricing of the local loop and local service  
18 is below cost and that that is inconsistent with the  
19 workings of a competitive market. After all, the issue  
20 with regard to a competitive market is one of the  
21 reasons why the question is being asked today. And  
22 what I'd like to do is run through a couple of the  
23 expected actions that we would anticipate seeing in the  
24 marketplace if that statement were absolutely correct,  
25 and compare it to what some of the actions are that we



1 do see in the marketplace that I think you'll see are  
2 really quite different.

3 For instance, if loops are priced below cost, one  
4 would expect that the provider of the loop will find it  
5 irrational to promote their demand. On the other hand,  
6 what we do know is BellSouth, among all other RBOCs and  
7 all other local exchange carriers, is actively  
8 promoting second lines. If rate rebalancing, which is  
9 one of the arguments that we're hearing must take place  
10 in the market, will occur in a competitive market, it  
11 will be to better align prices for individual services  
12 with the costs of individual services. Yet when we  
13 take a look at the market, what we find are that  
14 service packages and one-stop shopping for the  
15 residential customer is increasingly becoming  
16 commonplace. And what that indicates is a high  
17 proportion of costs being incurred are shared costs.  
18 Again, multi-product production process benefits, if  
19 and only if there are shared costs, jointness in the  
20 production and delivery process. And what that means  
21 therefore for any assessment of costs versus revenues  
22 increasingly is that the relevant comparison is the  
23 costs and revenues of the package of services where the  
24 costs would include the shared costs to the revenues  
25 received for the entire package of services.

1           If in fact pricing is below cost, as argued, the  
2 market action expected would be the competitive market  
3 entry will not occur until and unless rebalancing takes  
4 place. To be sure, two years after the  
5 Telecommunications Act, market entry on no front is at  
6 a level near what was claimed or expected as of the  
7 date that the act was passed; however, we are seeing  
8 entry taking place in the residential market in areas  
9 where local rates are not substantially different from  
10 what they are here in BellSouth. Cox Cable has  
11 introduced a residential service package and is  
12 marketing it intensively in markets in California and  
13 Nebraska, and there are others.

14           If in fact local service was below cost, and it's  
15 the individual price-cost relationship that would be  
16 important, we'd expect to find a universal service  
17 benchmark, for instance, should be based on costs and  
18 revenues of the universal service components, i.e., the  
19 basic service components only. And what we do find,  
20 however, is that the FCC and several state commissions  
21 have found it necessary to identify a benchmark that is  
22 much broader than that, recognizing the importance of  
23 the jointness in the production process, the extent to  
24 which costs are shared in the production and delivery  
25 of a multiplicity of services. Again, the market

1 observation and the expected action that we would -- we  
2 expect to see from that statement just don't go  
3 together.

4 What we hope to be able to do, and unfortunately,  
5 I'm not able to present to you today, are the results  
6 from any of the analyses that we hope to be able to do  
7 with regard to the information made available in the  
8 context of this investigation at this time. Of the  
9 three kinds of studies that I identified, we are hoping  
10 to be able to provide to the Public Counsel, who in  
11 turn will make it available, I'm sure, to the  
12 Commission and staff and the Legislature, focusing on  
13 the stand-alone cost aspect from an embedded  
14 perspective as it was done in the earlier  
15 investigation, stand-alone costs from an incremental  
16 perspective, again consistent with the Commission's  
17 rules with regard to TSLRIC, and then finally a cost  
18 investigation focusing on the residential customer as  
19 the unit, as the incremental unit in the competitive  
20 market.

21 What I would like to share with you today,  
22 however, are some broad gauge results based upon what  
23 one could expect to find if in fact those data were  
24 available today. And I repeat, they are broad gauge,  
25 but I do believe they are somewhat instructive.

1           As I indicated, when the analysis was done  
2 approximately ten years ago, it found that the rate  
3 structure was in fact subsidy-free. That is, rates for  
4 residential services were found to be above cost, rates  
5 for toll and access were found to be below their stand-  
6 alone cost. That's the test within the stand-alone  
7 cost study.

8           What can we say can be expected to happen since  
9 that time? Well, let's take a look at what's happened  
10 to the costs and the revenues of BellSouth Florida.  
11 What I'm going to focus on first is looking primarily  
12 from the company's output productivity and therefore  
13 its cost side.

14           When examining BellSouth activity over the course  
15 of this time period, comparing 1988, the ten-year  
16 period -- actually the nine-year period, '88 through  
17 '97 -- and then again the period 1992 to '97, the  
18 company has continued to realize impressive gains in  
19 total factor productivity.

20           By the way, for those of us in the technical  
21 world, I have made use of the FCC methods in its order  
22 and its Docket 94-1 for calculating productivity,  
23 growth changes, et cetera, in this analysis. Measures  
24 of output and measures of productivity as well as  
25 measures of input are in every instance taken from the

1 FCC procedure. Now, someone may want to argue it's  
2 right or wrong, but at least we have a commonality with  
3 regard to procedure.

4 For BellSouth over this time period, increases in  
5 total factor productivity, which recognize labor  
6 productivity, capital productivity and all other inputs  
7 in the production process, has grown by more than three  
8 percent a year, between three and four percent over the  
9 time period, still above three percent now. Labor  
10 productivity has increased over the nine-year period by  
11 almost nine percent a year; in the most recent period,  
12 by approximately 11 percent a year. Capital  
13 productivity increased by just shy of one percent a  
14 year on average over the nine-year period, by 1.2  
15 percent over the most recent five years. Output per  
16 unit input has continued to increase.

17 Going to the bottom for a moment, these are  
18 measures of output. Access line growth is something we  
19 all know about. These are the numbers involved with  
20 it. In the BellSouth territory, access line growth has  
21 been a little less than four percent over the entire  
22 nine-year period, higher than four percent in the most  
23 recent time period. Interstate minutes of use have  
24 been growing by between seven and eight percent. State  
25 toll minutes of use have been continuing to grow.

1 Joe?

2 MR. GILLAN: Joe Gillan.

3 Just for clarification, where you have state toll  
4 minutes, that very small percentage in 1992 to 1997,  
5 did you adjust for the fact that BellSouth during that  
6 period took substantial portions of the long distance  
7 market and redefined it as local? For instance, in the  
8 southeast LATA, I think it was like about a  
9 \$130 million market, they took about \$100 million of  
10 that and redefined it into a local calling area.  
11 Does --

12 DR. KAHN: I am aware that there has been major  
13 extensions to EAS or the equivalent throughout the  
14 southeast, and no, these are the numbers per reporting  
15 books with no adjustments made at all.

16 MR. GILLAN: Okay.

17 DR. KAHN: Whoops, excuse me. Obviously, if those  
18 adjustments were made, at least the numbers in the last  
19 five years could be significantly different.

20 The middle set are inputs, number of employees and  
21 capital stock, plant and service. The fact that number  
22 of employees are diminishing is something we all know  
23 from simply being here and reading the newspaper.  
24 Capital growth itself, capital growth went up by almost  
25 four and a half percent on average in the nine-year

1 period. The growth rate of capital declined, and  
2 again, this isn't dollar value, these are in fact  
3 constant dollar measures, which mean we're talking  
4 about raw physical units, increased by only three and a  
5 half percent, i.e., capital expansion, while  
6 continuing, has slowed in the last five years.

7 This is the growth in output. Again, output has  
8 been growing. Input per unit output, total factor  
9 productivity has been growing, total factor  
10 productivity has been growing at a fairly handsome  
11 rate. By the way, total factor productivity estimates  
12 for the U.S. economy as a whole are in the neighborhood  
13 of one to one and a quarter percent. Productivity in  
14 the telephone industry historically has outpaced that  
15 of the U.S. economy as a whole, and obviously has  
16 continued to do so over this time period.

17 Using the FCC data, we are also able to get a  
18 gauge on what happens to prices paid by BellSouth for  
19 the inputs it uses in its production process. For the  
20 nine-year period as a whole, the price paid by  
21 BellSouth for the inputs into its production process  
22 went up on an average of just shy of one and a quarter  
23 percent per year. Over the last five years, those  
24 average prices went up somewhat more rapidly, went up  
25 by approximately two and a quarter percent per year.

1           The factor productivity changes or the total  
2 factor productivity changes I identified on the  
3 preceding page.

4           What's the impact? The result of those two  
5 numbers tells you what's happening to BellSouth's cost  
6 per unit output, not the cost necessarily of the total  
7 company. The total company's larger, so its total cost  
8 of doing business will be larger. But what's the cost  
9 on a per-unit basis? What's the cost of serving a  
10 customer? On average, over the nine-year period, that  
11 fell by two and a half percent a year. Over the most  
12 recent five-year period, that fell by almost one  
13 percent a year.

14           By the way, keep in mind that these numbers  
15 reflect book costs of the company, not incremental  
16 costs of the company, an observation I want to talk  
17 about a little more in just a moment.

18           Therefore, the fact, if you recall from the  
19 preceding slide, that investment slowed somewhat, part  
20 of this was as a result of a slowdown in the company's  
21 replacement program for central office switches. Most  
22 companies still have 1-A ESS analog switches in the  
23 major switching centers, in the major cities, even  
24 though the initial projections were, and the initial  
25 projections were that they'd be long gone by now. The



1 slowdown in the capital development program of the  
2 RBOCs over the last several years has in part  
3 contributed to the slowdown in the cost reduction on an  
4 embedded cost basis. Again, that's an embedded cost  
5 basis that we're talking about here, a revenue  
6 requirement basis. Nevertheless, over the last five  
7 years on average, it's been a one percent decline.

8 What, then, does that tell us if we were to do and  
9 we were to consider the stand-alone cost information  
10 that was last presented to the Commission? What we  
11 would conclude from this is on the stand-alone cost  
12 basis, the rate structure in place today is subsidy-  
13 free, and the reason we would conclude that is as  
14 follows.

15 From the point of view of local rates, over the  
16 last eight, ten years, local rates in the state of  
17 Florida have remained largely unchanged. Nevertheless,  
18 what we found is that costs over that ten-year period  
19 fell by approximately two and a half percent a year, or  
20 by over 25 percent if you allow for any compounding.  
21 Any conclusion reached earlier that rates for local  
22 service were in excess of their incremental costs, that  
23 conclusion would be reached even more easily today and  
24 the conclusion would even be stronger today.

25 How about long distance and access charges? Well,

1 toll rates have fallen by approximately 50 percent in  
2 the state of Florida. The toll rate schedule right now  
3 is relatively flat. It costs about eight cents, I  
4 think, for a three and a half or a four minute call,  
5 and the cost for a 150 mile call in the state of  
6 Florida ten years ago was twice that, at least. A call  
7 from Tallahassee to Miami was more than twice that. So  
8 toll rates are down over 50 percent.

9 Access charges are down from 12 cents is where  
10 they were in the approximate 1998-1999 time frame, to  
11 about five cents today for BellSouth. That's down  
12 about 60 percent.

13 Consequently, what we can conclude from this is if  
14 toll and access charges were found to be below the  
15 stand-alone cost at an earlier point in time, they  
16 would be even further below the stand-alone cost  
17 today. The bottom line conclusion, bottom line  
18 conclusion -- oh, I'm sorry.

19 MR. DOWDS: Yeah, I have a clarification of your  
20 overhead. It says local service rates were found above  
21 SAC in 1998. Should that be 1988 --

22 DR. KAHN: Yes, thank you.

23 MR. DOWDS: -- in both places?

24 DR. KAHN: Thank you. The handout has 1998 right  
25 here and it should be 1988 instead, and right here and

1 it should be 1988 instead.

2 MR. DOWDS: That was in the '86 docket, but the  
3 order came out in '88?

4 DR. KAHN: Yes.

5 MR. DOWDS: So the actual study was based on '86  
6 data?

7 DR. KAHN: Probably.

8 MR. DOWDS: Okay. So it should be 1986, then?

9 DR. KAHN: It could be '86. The context, and  
10 really all I'm trying to get at here is that with  
11 changes that have taken place over time, the general  
12 nature of the conclusions that were drawn earlier would  
13 remain in effect today, and in fact, unless there was  
14 reason to believe that there were other, some kind of a  
15 dramatic change that happened, would probably even be  
16 somewhat stronger today than they were then. Again --

17 MR. DUNKEL: Doctor, can I interrupt?

18 DR. KAHN: Yes.

19 MR. DUNKEL: Is there a typo in there? It says,  
20 "Local rates were found above stand-alone costs."  
21 Don't you mean below stand-alone costs and above  
22 incremental -- the same --

23 DR. KAHN: That is correct. Local rates were  
24 found below stand-alone costs, and that should also be  
25 in 1988. And then down below, it's that toll and local

1 service was found to be -- toll and access was found to  
2 be below stand-alone costs. That's correct.

3 MR. DUNKEL: Both were above incremental, both  
4 were below stand-alone?

5 DR. KAHN: Stand-alone. The first one should best  
6 read, "Local service rates were found to be above  
7 incremental costs in 1988," would be the most -- would  
8 be the clearest way of making that statement.

9 Let me add one other observation. As I've  
10 indicated here, the analysis is based upon -- that the  
11 analysis done initially was based upon the cost of the  
12 company per books with modifications to bring it --  
13 make it as forward looking as possible, given the  
14 information available. This broad brush adjustment  
15 that I've described here as an attempt to bring it  
16 forward is again based upon the cost of the company per  
17 books. That's what these total factor productivity  
18 numbers are.

19 But we're not restricted to that. If one were to  
20 take a look at, as we have in other contexts, the  
21 incremental cost estimates for the various services  
22 provided by the RBOCs over time, take a look at the  
23 incremental cost study done at an earlier point in  
24 time, a more recent point in time, and then again most  
25 recently, keeping in mind that certain inputs like cost

1 of money may have changed, but nevertheless, simply  
2 taking that, what we found is that there is a very  
3 decided downward trend in the incremental cost as  
4 well. So even though we're talking about cost per  
5 books with the numbers that I'm using here,  
6 conceptually the same kinds of results would be found,  
7 I suspect, if we focused on incremental cost analysis.

8 Those are the remarks I wished to share with you  
9 today. Thank you.

10 DR. HARRIS: Thank you, Dr. Kahn. We're going to  
11 continue with Kent Dickerson. We're not going to take  
12 a break. We'll just pause for a moment to set up  
13 equipment.

14 (Whereupon, a pause was had in the proceedings.)

15 MR. DICKERSON: Is this mike working? Can you  
16 hear me?

17 Good morning. I'm Kent Dickerson. I'm here  
18 representing Sprint. I'm employed by Sprint as the  
19 Director of Cost Support, and my staff and I prepared  
20 the total service long-run incremental cost studies  
21 which were requested by staff in this docket.

22 I think I can get us back on track timewise here.  
23 What I plan to cover this morning is I want to provide  
24 for you my definition that I'm operating under as far  
25 as a total service long-run incremental cost study.

1 I'm going to hit the highlights of how we performed  
2 this study, and then we'll have a brief summary.

3 First off, I just wanted to point out the serving  
4 area of Sprint in Florida. We serve close to two  
5 million access lines now. We've got 139 wire centers.  
6 We serve some very diverse areas in Florida. We've got  
7 the Tallahassee area, we've got Winter Park, suburbs of  
8 Orlando, which would show some of the lower costs  
9 relative to some of the very high cost areas down  
10 towards the Everglades area, and I think, as we examine  
11 costs here, we provided both averaged cost information  
12 and we provided deaveraged cost information. I think  
13 it's important to understand that. I think it relates  
14 to Dr. Harris's comment about what motivates people to  
15 enter certain markets.

16 The definition -- the TSLRIC acronym, total  
17 service long-run incremental cost, that's one of the  
18 better acronyms I've seen, in that it hits all of the  
19 major elements of what defines a total service long-run  
20 incremental cost study. It includes the total forward  
21 looking. The point of the forward looking is you want  
22 to predict what will the costs be tomorrow, not what  
23 they were a year ago, five years ago, ten years ago.  
24 It uses -- the forward looking uses the least cost  
25 forward looking technology. It doesn't attempt to

1 replicate technologies that are in the embedded  
2 network. It looks to use the most efficient forward  
3 looking technology. It takes a long-run perspective,  
4 and Dr. Harris mentioned that several times.

5 The long-run perspective, the purpose of that is  
6 so that these fixed costs, which are the nature of our  
7 business to a large degree, can thereby be recognized  
8 and included in the service cost calculation. The  
9 long-run perspective relates to the fact that fixed  
10 costs are included in this cost study. It's an  
11 incremental cost study, that is a driving principle of  
12 the cost study. It seeks to identify those costs that  
13 are incremental to the provision of this service.

14 The "total" part of the definition relates to  
15 we're talking about the total demand. That would be  
16 important if you were to just look at the cost of  
17 providing the next hundred units, you might have assets  
18 which are necessary to provide the total demand which  
19 would not be incremental to the next hundred units due  
20 to the block increments in which assets are deployed to  
21 provide telephone service.

22 Finally, the perspective comes -- the TSLRIC  
23 perspective comes at it from a point of view that we're  
24 looking to identify all the incremental costs that come  
25 to bear providing this service assuming that all other

1 services are present in their current form. I've hit  
2 on some of these. Again, it includes all of the  
3 service-specific fixed costs and volume sensitive  
4 costs. Again, this goes to the long-run part of the  
5 definition. It represents the total direct costs  
6 relative to the total demand for the service. This is  
7 the driving principle. It follows the principle of  
8 cost causation. It looks to identify what costs are  
9 brought to bear if I offer the total demand for this  
10 service; conversely, what costs would not be brought to  
11 bear if I didn't offer this total service.

12 A very important point, I think we all know it,  
13 it does not include joint and common costs. This is  
14 critical to understand this, because any pricing  
15 decisions, which I believe are part of this docket,  
16 need to consider the fact that the TSLRIC costs you're  
17 looking at exclude substantial amounts of costs which  
18 are necessary for the total firm operation.

19 I wanted to get to this point in some specificity,  
20 and so rather than just talk about it generally, I've  
21 provided two slides. Here we're looking at investment  
22 costs. Starting at the top, I've included certain  
23 general support assets which are directly incremental  
24 to the construction and maintenance of outside plant  
25 facilities, being heavy trucks and special purpose



1 purpose computers, land, building and generic software  
2 in a switch.

3 To take this to the level of expenses -- I'll not  
4 go through all of them in detail -- basically the  
5 direct expenses you see here follow the investments  
6 that I just covered.

7 There's a couple of points that I need to make.  
8 The network support was not -- network support is  
9 basically a function of assigning lines, cable pair  
10 assignments, port assignments in a switch, circuit  
11 assignments for interoffice facilities.

12 COMMISSIONER GARCIA: Remind me, what's the  
13 difference between buried cable and underground cable?

14 MR. DICKERSON: Underground cable is in a conduit  
15 system, buried cable lays bare in the ground.

16 COMMISSIONER GARCIA: Okay.

17 MR. DICKERSON: So that was not related to any  
18 specific asset. You have to undergo a study which  
19 looks to identify, okay, what portions of this expense  
20 are related to interoffice facilities, switching  
21 facilities and cable pair assignment, and that's not  
22 too difficult to do.

23 The general support follow the assets on the  
24 previous page. A couple of points that show up here  
25 that weren't on the previous page, you've got the

1 depreciation, which of course follows the assets,  
2 marketing expense to the -- there certainly are  
3 specific -- product-specific costs associated with  
4 specific products, and to that extent we've picked  
5 these up.

6 Customer service operations, each time you sell an  
7 offering or a unit of basic local service or B-1  
8 service or Centrex service, you certainly have people  
9 employed who are there to take those orders, gather  
10 customer information, insert it into a billing system.  
11 These are the types of costs we've captured in our  
12 study for 6620.

13 Finally, you've got uncollectibles as part of  
14 doing business, and those uncollectibles can be  
15 identified as being specific to services, and that's  
16 what we've picked up.

17 Again, looking at some shared or common costs,  
18 there are some residual costs still in 6310. I think  
19 they may still pertain to some pay station equipment.  
20 There are certain categories of 6610, marketing  
21 expense, which would be considered generic and have not  
22 been picked up. I think an example might be image  
23 advertising for Sprint Total Corporation.

24 Customer operations service, I've shown that -- we  
25 did not pick up any billing costs. I think an argument

1 could be made that there are some directly incremental  
2 costs of billing to a service. That's a bit of a  
3 function of not having the account level information  
4 that tracks that, and therefore we have not picked that  
5 up. I also view this somewhat as we have a standard  
6 billing platform that makes it difficult to say that  
7 that's not a platform, that's shared across services.  
8 So I've not picked those up.

9 Executive and planning, general administration, I  
10 think we all understand those are classic examples of  
11 common costs, support the total offering of services.

12 Take a look at -- our approach to these service  
13 cost studies was to identify what basic network  
14 components are necessary to provide the service. And a  
15 brief review, you've got the local loop, cable and wire  
16 facilities that connect the customer premise to the  
17 switch location. You've got what's called a port, that  
18 is, your line card, your main distribution frame, your  
19 lightning protection. That is not a traffic-sensitive  
20 investment. It is incurred on a per-unit basis in  
21 terms of each unit of R-1 service requires this  
22 equipment, with some explanation that we'll get to  
23 later.

24 Switching equipment, that is picked up, and I'll  
25 explain, we've picked that up -- that is largely

1 talking about usage sensitive investment, and by  
2 understanding the cost of switching a call on a per-  
3 unit basis through a switch and then applying that to a  
4 usage study which is specific to individual services,  
5 you can identify what costs of those switches are  
6 associated with individual services. We've got --  
7 there is some -- a high degree of mandatory EAS here in  
8 our Florida serving area, and so we have picked up, to  
9 the extent that that is part of basic local service,  
10 we've picked up the interoffice transport, cable and  
11 wire facilities, and we've also picked up the  
12 additional switch usage to switch the calls.

13 MR. DUNKEL: I have a question on this chart.

14 MR. DICKERSON: Yes.

15 MR. DUNKEL: If you were doing a similar chart  
16 showing the facilities necessary to provide toll, you  
17 would include a local loop in that as well, isn't that  
18 correct?

19 MR. DICKERSON: If you're trying to look at the  
20 network components that are used to transfer a toll  
21 call to here, that's correct, but if you're trying to  
22 look at this from a perspective of what network  
23 components are incremental to the offering of toll,  
24 that would not be correct. The only service that bears  
25 that direct incremental relationship is R-1, H-1,

1 Centrex. Each time a unit of those is sold, a loop is  
2 deployed. Conversely, as Dr. Harris hit on several  
3 times, there's a certain proportion of those services  
4 that are sold that never make a toll call. There's  
5 some proportion that may use toll 20 hours a day.  
6 These costs are unaffected by that. That service does  
7 not bear a direct cost causation relationship with that  
8 network component.

9 MR. DUNKEL: But if you were going to draw a  
10 diagram that showed the facilities needed to provide  
11 toll, you would have to have a local loop on that  
12 diagram?

13 MR. DICKERSON: That's correct --

14 MR. DUNKEL: Thank you.

15 MR. DICKERSON: -- and what I'm clarifying is, if  
16 you've doing a service cost study, the only service  
17 that you sell that drives the incremental deployment of  
18 loop is basic local service.

19 MR. DUNKEL: And if you're also doing a diagram  
20 that showed the facilities needed for toll, you'd have  
21 to include a port on that diagram as well, is that  
22 correct?

23 MR. DICKERSON: Not from an incremental cost  
24 causation perspective. Again, if you're just trying to  
25 look at the network path that a toll call takes, that's

1 true, but we're dealing with a service cost study here,  
2 and toll does not drive incremental deployments of  
3 loops or ports.

4 MR. DUNKEL: You have to have a loop and a port if  
5 you're going to provide toll service, correct?

6 MR. DICKERSON: You have to buy basic local  
7 service in order to gain access to the network, in  
8 order to make a toll call.

9 MR. DUNKEL: You need those facilities to provide  
10 toll. Thank you.

11 MR. DICKERSON: Now I'm going to provide a little  
12 detail about how we went about the local loop portion  
13 of our service cost study. For the statewide average,  
14 looking at it on a statewide average basis for R-1  
15 service, the loop comprised 85 percent of our total  
16 service cost study. So, you know, this is where the  
17 dollars are. We used the benchmark cost proxy model,  
18 version 3.1, to develop forward looking costs. The  
19 inputs into the model to the greatest extent possible  
20 were developed to be forward looking and to be specific  
21 to Sprint's Florida serving area, and let me hit on  
22 that a little bit.

23 For example, the cable costs and the labor to  
24 install the cable -- and labor, by the way, makes up on  
25 average about 60 percent of the installed cost of cable

1 -- those are drawn based on Sprint's current vendor  
2 costs for cable and Sprint's most recent experience for  
3 the entire year of 1997 to gauge what is the proper  
4 labor cost added to cable installation.

5 Serving area interfaces, digital loop carrier  
6 costs, again, those are drawn from our current vendor  
7 costs. We're not looking five, ten years back. We're  
8 using our most recent costs. We're using Florida-  
9 specific sales tax rates, we're using Florida-specific  
10 labor costs.

11 The construction activity, the construction  
12 activity, by definition what we're talking about in  
13 this model is what percent of your cable is placed  
14 using a straight plowing technique, what percent is  
15 used with backhoe trench, what percent is cut and  
16 restore concrete or asphalt. We have a database which  
17 tracks these expenditures. We had an annual period  
18 that we could look at, very recent information that  
19 told us relative to approximately 100,000 lines added  
20 in Florida, what construction techniques were  
21 necessary. That's what's reflected in this cost study.

22 The plant mix reflects the reality of doing  
23 business in the state of Florida, and y'all -- it's in  
24 the papers daily, it seems, the hurricane threats drive  
25 that -- the prudent least cost approach to placing

1 plant is largely a buried plant methodology, and that's  
2 what our study reflects. The access lines were input  
3 into the study on a wire center basis. They're as of  
4 year-end '97.

5 MR. DOWDS: Kent, a real quick question on the  
6 plant mix, did you derive the plant mix ratios based  
7 upon a recent additions, existing plant or some  
8 combination thereof?

9 MR. DICKERSON: It was a combination thereof.  
10 What we did, David, was we took a look at our existing  
11 plant mix. We then did an analysis of four years'  
12 gross adds, and we were looking to see, is the very  
13 recent trend, four years' analysis, is there any  
14 demonstrated deviation away from the totality of the  
15 plant? And in Florida we are so -- make such heavy use  
16 of buried plant for two basic reasons. It's very easy,  
17 the terrain's very easy to plow cable, and the  
18 maintenance, the overall -- not just looking at the  
19 initial cost, but the maintenance of it makes it the  
20 obvious plant mix of choice. I think we demonstrated  
21 some shift between -- between underground and buried on  
22 both the feeder and the distribution side based on that  
23 recent analysis.

24 COMMISSIONER JACOBS: Excuse me, I have a  
25 question. On your access lines, you indicated you



1 looked at them on a wire center basis?

2 MR. DICKERSON: Yes.

3 COMMISSIONER JACOBS: Were you looking at the  
4 lines served or capacity of lines possible to be  
5 served?

6 MR. DICKERSON: We were looking at the total lines  
7 served.

8 COMMISSIONER JACOBS: So let's say with the trend  
9 now, with the large influx of second lines, would your  
10 analysis accommodate averaging out the impact of those  
11 second lines?

12 MR. DICKERSON: Our analysis reflects the current  
13 level of second lines, neither the equipment costs --  
14 if you were to look out forward and say, okay, there's  
15 going to be additional lines in the future associated  
16 with that, there would be additional equipment.  
17 Neither the additional equipment costs nor the  
18 additional demand has been reflected in this cost  
19 study. It's -- I guess you'd say it's a snapshot in  
20 time. It does, however, reflect a realistic level of  
21 inventory in the network which is necessary to provide  
22 service on five days' demand, for example. And when a  
23 customer calls and requests a second line, you don't  
24 have to come back and do construction through their  
25 front yard and through their neighborhood to add a

1 cable pair. Those are realities of our business that  
2 any prudent operating telecommunications company  
3 anticipates. The study reflects that, but to go beyond  
4 that, you would have to add additional inventory and  
5 additional demand in the model if you were to  
6 anticipate additional second lines.

7 To convert -- and let me clarify here. We used  
8 BCPM to calculate a forward-looking investment level  
9 for loops. We then developed annual charge factors and  
10 applied those to the forward looking investment to  
11 yield the monthly loop costs.

12 To show you the level of detail we went to, we  
13 went to a part 32 account level of detail in this  
14 conversion of the forward looking investment, applying  
15 an annual charge factor to get a total investment,  
16 dividing it by the total number of lines, dividing by  
17 12, that's the monthly loop cost.

18 To give you some understanding for how we  
19 approached the cost of a loop for an R-1 customer  
20 versus a B-1 customer, the benchmark cost proxy model  
21 calculates costs at a highly deaveraged basis. It gets  
22 down to, you've got statewide, you've got wire center,  
23 you've got census block groups which are defined by the  
24 Bureau of Census, you have census blocks within a  
25 census block which are defined by the Bureau of

1 Census. You have grids below that level. We pulled  
2 grid level costs, and in the model documentation the  
3 dimensions of a grid are defined. I'm wanting to say  
4 they were like 17,000 feet by 14,000 feet, but don't  
5 hold me to that. It produces costs at that level.

6 We then looked to the same information to say,  
7 okay, how many res lines are in that grid relative to  
8 total, how many biz lines relative to total are in a  
9 specific grid. And, for example, in this example,  
10 grid E produced a cost of \$30 for a loop. A thousand  
11 relative to 2,700 residential lines were in grid E.  
12 Therefore, the math worked out to \$11 of that \$30  
13 worked into our average. The business customers, only  
14 25 relative to 475 in this example were in grid E, so  
15 only \$1.58 of that worked into the weighted example.  
16 And in that fashion, you depict the cost of loops to  
17 serve residential customers versus business customers  
18 on a statewide average basis.

19 MR. DUNKEL: What cost of money did you use in  
20 this calculation?

21 MR. DICKERSON: We used the federal 1125 cost of  
22 money.

23 MR. DUNKEL: Thank you.

24 MR. DICKERSON: To give you one more level of  
25 understanding on this issue of res costs versus

1 business costs --

2 COMMISSIONER GARCIA: Could you go back for a  
3 second?

4 MR. DICKERSON: Yes.

5 COMMISSIONER GARCIA: So the business there costs  
6 you less?

7 MR. DICKERSON: Yes. The loops for the business  
8 customers are less than the costs for a res customer.  
9 And this next slide I think is going to give you some  
10 good understanding of that further.

11 We're on slide 12, if it helps to refer to your  
12 handouts, if this isn't clear.

13 There are several issues that impact loop costs.  
14 A couple of major ones are the distance. How far away  
15 is this customer located from the central office that  
16 serves the customer? That's simple mathematics. You  
17 have to dig longer trenches, you have to place more  
18 copper facilities, eventually you have to convert from  
19 copper to fiber and digital loop carrier in order to  
20 provide an acceptable level of service quality. So as  
21 the customer gets farther away from the central office,  
22 costs increase.

23 Another major issue is the density. How many  
24 customers can we serve? If we dig one trench coming  
25 out of the central office, to the extent that I could

1 serve and spread that cost of trenching over a thousand  
2 customers or a thousand loops, I'm going to get a lower  
3 unit cost than if I have to dig that same trench and it  
4 only serves 400 customers, so clearly, density affects  
5 the unit cost calculation.

6 What we've got here, there's your wire center  
7 location. And what you've got, the top numbers on each  
8 of those colored boxes represents the residence  
9 customers, the bottom number represents the business  
10 customers. The BCPM model as well as the HAI model  
11 have some standard density zone categories. Looking at  
12 these, looking at the density issue, the highest  
13 density zone is over 10,000 customers per square mile.  
14 Looking at that in Tallahassee exchange, 90 percent of  
15 your business customers are in the most dense zone.  
16 Only 37 percent of your res customers reside there.  
17 And basically I think you can relate to this living  
18 here. What you've got is the higher density zones in  
19 the downtown areas and you've got lower density zones  
20 in the suburb areas. Looking further, the next  
21 density zone, 5,000 to 10,000, you've only got 7.9  
22 percent of your business customers, you've got 45  
23 percent of your res customers. I think this is very  
24 illustrative.

25 Looking to the loop length issue, on average for

1 this exchange, 6,000 foot loop lengths for res, 3,000  
2 for business customers, and then here you see the  
3 stratification. Within 2,000 feet or less, 26 percent  
4 of business customers, only one percent of res, and on  
5 down the scale.

6 Looking to the next basic network function of  
7 switching, we use the Bellcore switching cost  
8 information system model office feature to generate the  
9 forward looking investments associated with digital  
10 switching equipment. We then took -- and I should say  
11 that those inputs were based on Sprint of Florida's  
12 specific operations. The investments out of the SCIS  
13 model were then used as inputs into a Sprint model,  
14 switching -- Sprint switching module. SWM is our  
15 acronym.

16 We then used exchange-specific information,  
17 traffic information, access line information to develop  
18 unit costs for various switching functions, and this  
19 would be called setups, call CCS, which are really  
20 those switching investments which are traffic-  
21 sensitive, which are affected by the duration of the  
22 call, if you will. Some portions of switching  
23 equipment, which I have specified the port, are a  
24 function of how many basic local units are sold. Each  
25 time a basic local service, R-1 service, is sold, a

1 port is incurred regardless of the traffic. There's  
2 other switching investment which is incremental based  
3 on the number of calls made. Each time a call is made,  
4 this equipment is utilized to set up the call. There  
5 is other switching investment which is sensitive to the  
6 duration of the call. It's affected by the continued  
7 tying up of that equipment, if you will, as the  
8 customer stays on the line. The SWM model looks at it  
9 in that detail, develops unit costs.

10 We then did service-specific customer usage  
11 studies. We randomly sampled approximately 350  
12 customers for each of the services that we provided to  
13 staff's data request. We applied the number of calls  
14 and the number of minutes of use to these unit costs to  
15 develop the switching costs for the appropriate  
16 service.

17 I'm going to explain further in a moment, I have  
18 two changes to the study that I filed with staff, and  
19 I'll cover those, and that's what this adjusted  
20 externally on the port costs will get to.

21 I mentioned earlier the mandatory EAS in Florida  
22 and that that brought in some level of switching costs  
23 for EAS as well as the transport facilities, the cable  
24 and wire facilities, to take it from the originating  
25 point of the call to the terminating point. We use

1 Sprint's transport cost model to perform that  
2 calculation. The transport costs model reflects fiber  
3 fed, SONET based technology. It's forward looking  
4 technology. It's technology that we're placing in our  
5 network on a daily basis. It reflects the actual wire  
6 centers in Florida. It reflects forward looking  
7 utilizations of those equipment based on experiences in  
8 Florida. We applied these per minute of use costs to  
9 the usage studies that I just mentioned. We had EAS as  
10 part of that cost, or that usage study. We applied  
11 those minutes service-specific to the unit costs coming  
12 out of the TCM model.

13 MR. DOWDS: Kent, I've got a couple of questions.

14 You used BCPM 3.1 to get your loop ccsts?

15 MR. DICKERSON: Yes.

16 MR. DOWDS: Am I correct that you zeroed out all  
17 variables for transports, switching and land and  
18 buildings?

19 MR. DICKERSON: Yes, you're correct.

20 MR. DOWDS: Okay. My next question is, on page 15  
21 you show a local loop as 21.44?

22 MR. DICKERSON: Yes.

23 MR. DOWDS: But on page 10, the number's 19.10.  
24 What's the difference?

25 MR. DICKERSON: Which page was the other one,



1 David?

2 MR. DOWDS: On page 10 you show a local loop,  
3 monthly cost for local loop as 19.10.

4 MR. DICKERSON: This would be the total across all  
5 services, whereas what we're looking at on page 15 is  
6 an R-1 service, which relates to the weighting  
7 technique that is explained on slide 11.

8 And, David, you may be most interested in these  
9 next couple of points.

10 What this provides is a summary, and this has been  
11 revised. The new R-1 service costs for the total  
12 Sprint operation in Florida is 25.20. Two items  
13 changed. The local loop costs went down, I think it's  
14 28 cents. What we did there was the forward looking  
15 fill factors that were initially used in the BCPM model  
16 were the result that we believe appropriate for a  
17 resulting fill factor. However, I believe, as you  
18 understand, that model will add additional cable pair  
19 due to the fact that only certain sizes of cable are  
20 available. In recognizing that, we have increased  
21 those in this new run which, you know, had a slight  
22 reduction.

23 The other item is on port costs. The original  
24 study had \$1.79. You see 56 cents here. The issue  
25 gets kind of technical, but as you understand, the

1 analog lines, copper lines coming into the switch  
2 require MDF, line card and lightning protection. Those  
3 that are served by fiber on a digital loop carrier  
4 device will have the line card and the MDF costs  
5 included in the digital loop carrier device. The \$1.79  
6 would be applicable to a copper line. What this  
7 revision reflects is the weighting in the forward  
8 looking network of 67 percent of lines being DLC fed.

9 This goes to the point that I hit on earlier.  
10 Your loop costs are 85 percent of this total. Your  
11 switching costs in aggregating the port and the usage  
12 costs are 12 percent. The EAS is only three percent.

13 MR. DUNKEL: I have a few questions on that slide.

14 MR. DICKERSON: Okay.

15 MR. DUNKEL: First of all, just to clarify, the  
16 loop and port costs are 100 percent of those costs?

17 MR. DICKERSON: Yes, they're 100 percent of the  
18 incremental network components necessary to provide R-1  
19 service.

20 MR. DUNKEL: For example, the FCC allocates 25  
21 percent of loop costs to interstate. You did not take  
22 that 25 percent out of here?

23 MR. DICKERSON: No. That's a cost recovery  
24 issue. What I'm doing here is a direct incremental  
25 cost study which doesn't concern itself with regulatory

1 allocations.

2 MR. DUNKEL: Fine. Now, in your total incremental  
3 cost study you do not include any of the loop or port  
4 costs, is that a correct statement?

5 MR. DICKERSON: That's correct. They're not  
6 incremental to the service of toll.

7 MR. DUNKEL: And in your switched access  
8 incremental cost study, you do not include any of the  
9 loop or port costs in that study, is that correct?

10 MR. DICKERSON: Yes. Again, they're not  
11 incremental, they're switched access.

12 MR. DUNKEL: If we did this study for local  
13 service on the same basis, excluding loop and excluding  
14 port, what's the cost of local service, according to  
15 your own chart?

16 MR. DICKERSON: If you want to do that math, go  
17 ahead. I would not -- that does not adhere with TSLRIC  
18 cost study methodology. Staff requested a total  
19 service long-run incremental cost, and that's what I've  
20 provided.

21 MR. DUNKEL: If I add the last three numbers up  
22 and get 321, is that the cost of local, excluding loop  
23 and port? Is that a correct statement?

24 MR. DICKERSON: Assuming your math's correct, that  
25 would be the correct math.

1 MR. DUNKEL: Thank you.

2 MS. SIMMONS: This is Sally Simmons on staff. I  
3 had a question I guess relating to Mr. Dowds'  
4 question. I'm still a little bit confused comparing  
5 pages 11 and 15.

6 MR. DICKERSON: Okay.

7 MS. SIMMONS: And what I'm wondering is the \$21.44  
8 entry on -- which you have up there on 15.

9 MR. DICKERSON: Right.

10 MS. SIMMONS: Is that really supposed to be the  
11 24.44 over on chart 11?

12 MR. DICKERSON: No. Eleven was just an  
13 illustrative example.

14 MS. SIMMONS: Oh, okay.

15 MR. DICKERSON: There's literally thousands of  
16 grids.

17 MS. SIMMONS: Okay. So that's purely  
18 illustrative?

19 MR. DICKERSON: Right, that's correct.

20 MS. SIMMONS: But it would be the same process,  
21 the same process used to establish the 24.44 in your  
22 example was used to calculate the 21.44?

23 MR. DICKERSON: Exactly.

24 MS. SIMMONS: Okay, thank you.

25 MR. DICKERSON: And you've probably pointed out

1 for me that, if I use this again, I will make them  
2 match just so the example matches the result.

3 MS. SIMMONS: Okay. Thank you.

4 MR. DICKERSON: The next slide summarizes the  
5 total results, including the revisions that I covered  
6 for basic R-1 service, B-1 service, Centrex, PBX trunk  
7 and multi-line circuit switched services.

8 In conclusion, I would like to emphasize the  
9 TSLRIC studies that we've provided to staff are  
10 specific to the geography, the market conditions, the  
11 densities, the distances, the actual labor costs, the  
12 actual terrain that is occurring in our serving area  
13 for two million customers. To the extent possible,  
14 we've used geographic company-specific inputs such that  
15 you can get a realistic view for a forward-looking cost  
16 estimate in these same territories. It would be my  
17 opinion that this factual, recent, actual information  
18 provides the best basis for predicting forward looking  
19 costs in these same markets from which this data was  
20 drawn.

21 That concludes my presentation, if there's no  
22 further questions. Thank you.

23 MS. MARSH: Thank you. We're scheduled to return  
24 at 1:30. Will that work for everyone or -- we'll see  
25 you back at 1:30.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

C E R T I F I C A T E

STATE OF FLORIDA )  
COUNTY OF LEON )

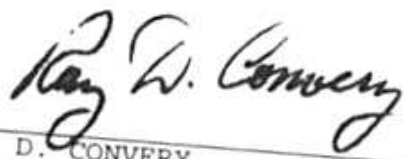
I, RAY D. CONVERY, Court Reporter at Tallahassee, Florida, do hereby certify as follows:

THAT I correctly reported in shorthand the foregoing proceedings at the time and place stated in the caption hereof;

THAT I later reduced the shorthand notes to typewriting, or under my supervision, and that the foregoing pages 3 through 132 represent a true, correct, and complete transcript of said proceedings;

And I further certify that I am not of kin or counsel to the parties in the case; am not in the regular employ of counsel for any of said parties; nor am I in anywise interested in the result of said case.

Dated this 21st day of October, 1998.



RAY D. CONVERY  
Court Reporter