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Technology Committee  
Thursday, June 12, 2003  
6:00 p.m.

Hotel Roanoke Conference Center  
Roanoke, Virginia

APPEARANCES:

Delegate Clarke N. Hogan  
Chairman

Delegate Kathy J. Byron  
Southside Vice Chairman

Mr. Eugene Huang  
Deputy Secretary

Mr. James C. Thompson  
Southwest Vice Chairman

Senator William C. Wampler, Jr.

Delegate Thomas C. Wright, Jr.

Mr. Claude B. Owen, Jr.

Mr. Thomas W. Arthur

Mr. Tucker C. Watkins

Commission Staff

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17 Frank Ferguson  
18 Senior Assistant Attorney General  
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20 DELEGATE HOGAN: Good evening, I thank everyone for coming.  
21 What we're going to do tonight is hear some comments from a variety of different people  
22 and use that information hopefully, to get input together with the Virginia Tech report,  
23 which I'm sure all of you have read in its entirety. We also have the minutes from the  
24 e58 Taskforce that were taken and we'll try to use that as a basis of discussion. We'll  
25 start again at 7:30 tomorrow morning and have a couple of presentations from some  
26 people that couldn't get here tonight. So, we'll do those in the morning. I hope we can  
27 run right along with this. We're not going to take any questions right now and I'll ask  
28 the people to hold their comments until tomorrow so we can get on through. They tell  
29 me dinner will be about 8:15 or so two doors down from this room and we'll ask  
30 everyone to join us. So Carthan, do you want to call the roll?

31 MR. CURRIN: Mr. Arthur?

32 MR. ARTHUR: Here.

33 MR. CURRIN: Mr. Hite?

34 MR. HITE: (no response)

35 MR. CURRIN: Mr. Montgomery?

36 MR. MONTGOMERY: (no response)

37 MR. CURRIN: Mr. Owen?

38 MR. OWEN: Here.

39 MR. CURRIN: Ms. Terry?

40 MS. TERRY: (no response)

41 MR. CURRIN: Senator Wampler?

42 SENATOR WAMPLER: Here.

43 MR. CURRIN: Mr. Watkins?

44 MR. WATKINS: Here.

45 MR. CURRIN: Mr. Williams?

46 MR. WILLIAMS: (no response)

1 MR. CURRIN: Delegate Wright?  
2 DELEGATE WRIGHT: Here.  
3 MR. CURRIN: Deputy Secretary Huang?  
4 SECRETARY HUANG: Here.  
5 MR. CURRIN: Delegate Byron?  
6 DELEGATE BYRON: Here.  
7 MR. CURRIN: Mr. Thompson Vice Chairman?  
8 MR. THOMPSON: Here.  
9 MR. CURRIN: Mr. Chairman?  
10 DELEGATE HOGAN: Here.  
11 MR. CURRIN: Mr. Chairman, you have a quorum.  
12 DELEGATE HOGAN: Thank you.  
13 MR. CURRIN: I'd like to remind everyone to please state who you are  
14 and who you represent for our minutes.  
15 MR. DOWNIE: Good evening, I'm Chris Downie with Communications  
16 Capital Advisors and with me is Patrick Doyle. We're going to thank everyone for  
17 having us come down here to talk with you and we're looking forward to listening to all  
18 the presentations that are planned for tonight and tomorrow. We were provided the  
19 report and asked to provide some comments on the report. We are not here necessarily to  
20 provide any answers and I don't know if there's any clear answers but sort of provide an  
21 objective view based on our experience.  
22 I actually know Clarke Hogan from high school way back when. We saw each  
23 other probably for the first time in eight or ten years six months ago. Clarke told me  
24 what he was doing which sounded very interesting and told me about this communication  
25 focus which I found very interesting. We spoke and I found out what he's been doing  
26 and what I've been doing. One of the comments sounded like a very compelling  
27 business proposition and very interesting. My second comment to him was as you go  
28 into this be very careful and make sure you do all your due diligence and have all your  
29 ducks lined up. Broadband and telecommunications in general as I'm sure everyone here  
30 knows, is a very complicated and a costly business.  
31 Just by way of introduction so you can get things kind of in perspective and what  
32 is being brought to the table and how we approached our view of the report. My  
33 background I spent about twelve years in telecommunications and finance and nine years  
34 of that was on Wall Street working across the communications arena. The majority of  
35 my time was in the competitive telecommunication phase and really working with  
36 entrepreneurs and companies developing business plans and business models and leaning  
37 toward raising capital in that industry and hoping to bring along these broadband and  
38 telecommunications services to the end customers and markets.  
39 After that I had an opportunity to spend about three years in an operating  
40 management capacity as a CFO of a company subsequent to that. Last year working with  
41 Pat and a number of other folks who have been providing consulting services to  
42 distressed communication companies. What I would say there is that a lot of those  
43 companies were really the ones that were considered the darlings of the industry when I  
44 was in a particular operating communication company.  
45 Patrick Doyle will tell you about his experience. He's got about sixteen years in  
46 telecom operations, ten years with Bell Atlantic and three years with a competitive

1 communications company. So, he spent a lot of his career building these networks and  
2 working through a lot of issues associated with these networks. He spent two years as a  
3 Senior V.P. with Next Generation Architectures and technology, switching platforms and  
4 optical switching platforms and over the last year on a consulting basis working with  
5 distressed communication companies.

6 Just to sort of outline what our objectives are and our discussion here tonight is  
7 really to, we reviewed the report and provide our objective view with the outlying  
8 propositions in the report. We're not here to necessarily provide answers but to really  
9 outline what we consider to be critical questions and considerations that we think are  
10 necessary to review before one would necessarily want to move forward with that  
11 proposition. Also to make sure that the ultimate goals that are outlined in the report are  
12 both practical and can be executed and supported on an ongoing basis. If they're not  
13 obviously the proposition will not meet success and will be quite costly as outlined.

14 So, what we ultimately want to do understanding the presentation from other folks  
15 in the room and weigh those supportingly and modify our thoughts as we go on with this.

16 Before we talk about the report specifically I want to sort of give you our view  
17 from our experience of the telecommunications industry. As everyone knows almost  
18 every competitive telecommunications company knows and some point of restructuring  
19 whether they've gone through bankruptcy or some kind of effort to avoid overextending  
20 their operations. More failures are more likely as well as a lot of companies have gone  
21 through and out of bankruptcy and we're counting on an improvement in the economic  
22 environment. So, they're going to be second round organizations as well. A lot of the  
23 failures you'll read in the paper point to a debt load created by plans that basically built  
24 these huge national, local and international regional intercity networks. When they were  
25 built it was sort of well, they will come and a lot of them were built basically on a very  
26 speculative vision and a lot of applications for services would be automatically driven on  
27 these networks. That really has been the sort of focal point that people point to and why  
28 these communications companies had trouble underneath the debt loads. There also has  
29 been and having been in the operational environment. There's also been a failure to  
30 address the critical operational complexities that any provider of voice data and video  
31 services for broadband are going to face. These complexities whether administrative or  
32 operational and technology focused to enter essentially a delay of promised profitability  
33 or at least in the timelines that were promised by these companies.

34 Coming out of the bankruptcies a lot of the restructuring certainly will provide  
35 great flexibility for these operators to operate outside of their capital structure but we  
36 would argue that the complexities and a significant operating costs remain. Other folks  
37 have figured this out and folks that have been in this business a long time. One of the  
38 semi permanent players are the Verizon's and Bell South's of the world. But I think  
39 folks that are relying specifically on this channel will over time limit competition and  
40 delay advanced services and opportunities, which is what you're trying to develop, and  
41 this type of networking. However, surrounding everything, I don't think there's any  
42 question that the demand for cost effective and widely available bandwidth is out there  
43 and that's helping to create the opportunity that folks have. Folks have built expensive  
44 networks and have continued to do that.

45 Pat and I will do a little tag team here as we go through the report. A lot of our  
46 focus is making sure that the proposition in the report is achievable and go through the

1 background within the cost perspective will work as well. We'll focus our discussions  
2 and have them oriented toward that.

3 MR. PATRICK DOYLE: I'll try to move through this very quickly with  
4 our presentation and a lot of information. About the report it's important to know up  
5 front that we're trying to address questions and issues that may remain open but this is an  
6 extremely very valuable body of work and it's obviously an enormous amount of work  
7 and effort that has been put into this. It's a fantastic input to whatever the complete  
8 solution will be. The report provides a thorough review and rationale and requirements  
9 to build the fiber based network in the region and the cost models seem to be very  
10 reasonable and they're quite well founded and rational.

11 We agree that the development of the network is possible and it will facilitate an  
12 advancement of applications in the region and we're probably looking at degrees of  
13 success as to how it gets implemented and whether it's the best choice versus others.

14 It introduces an assumption and I thought this was a very important thing because  
15 the intent of the communities is to become able producers of network services and  
16 content. Not just users who have access to things like a cable modem or a DSL line that  
17 you'll find in all the big cities and much better access. So, the resulting definition of  
18 broadband is unique in the report. That is a symmetrical to a high band with multi  
19 megabits and gigabits per second connection. That description doesn't need cable  
20 modem or DSL but practically in most scenarios the only fiber connection all the way to  
21 the end user. It's a huge premise and an important one defining how and to what degree  
22 you have to deliver the network. So, understanding and stopping short of detailing every  
23 service and they will have to come into being to get this all the way to the home and  
24 small business user. It's much easier to detail how you reach the big institutions like  
25 hospitals and etc.

26 We need to look at without the explicit definition of how we reach every customer  
27 you simply run the risk of the communication barriers building and they didn't come and  
28 that's why there's some degrees of success. It's easy in the short term to reach the  
29 biggest customers but the degree to which you can reach all the customers is probably  
30 what would define a degree of success. The commercialization of that network is what  
31 we're talking about and critical to achieving the objective. I kept reminding myself as I  
32 read the report the objective is to provide an economic and social development not  
33 technology for technology's sake. Commercialization is what would make that a reality.  
34 Without specific models for that you could limit the utility of the network.

35 Critical questions and issues. Full commercializations of end user services will  
36 come from third parties and a concept of asset based network, which is spoken to in the  
37 report. Where a customer would buy a last mile of fiber link or the last couple hundred  
38 yards and own that asset to connect up to a pot much like a resident connecting up to a  
39 public sewer line. Also, the quasi-governmental entity and there's some speculation it  
40 could be privatized but the trusted entities create. The important question is does the  
41 Commission support the creation of an actual entity that will remain permanent. Given  
42 the complexity of these and the operating costs could easily exceed those outlined that  
43 requires more diligence. The opportunity to spend time with people who wrote it is  
44 invaluable. Obviously from reading the report I'll confess there were two or three pages  
45 I didn't get to in the report. Clearly a lot more under the cover and not to take a thing

1 away from what is in the report. Things like salaries, rents, office equipment and things  
2 without describing the full scenario.

3 The case for service providers entering into the arrangement is not entirely clear  
4 from the report. So, certainly it's seeking to reduce costs from entry, will that be  
5 sufficient or will further subsidies be required is the critical question.

6 Two levels of third party providers are really required to make this viable the way  
7 I understood it. That is the local access provider could attach to the local pot or the  
8 MSAP as the report calls it but to connect outside the area or even across the region there  
9 needs to be a backbone provider as well. That could be one or it could be two separate  
10 levels of service providers but that's something to keep an eye on. I'm interested to hear  
11 what some of these service providers like ISP's will have to say and how they would  
12 access locally and who are they buying their wider area service from. It's all about who  
13 can you buy this service from in the end I believe.

14 The costs associated with the broadband networks. There are various slides with  
15 each one of these bullet points that I do not intend to go through those individual slides.  
16 There's a laundry list here so to speak, and I'll just quickly talk to this slide. The kind of  
17 things you need to keep in mind as a Commission as you get more information.

18 So, the cost of constructing a plant is very well covered in this report especially  
19 on the backbone side and the technology. That is the choice of what kind of fiber and  
20 how to connect it are all rational decisions. Injuries in the last mile is spoken to in some  
21 respects but not the whole, final proposal as to what entity would operate it. We need to  
22 spend time getting the cost and operational proposal straight there. The electronic  
23 software systems that run the plan are another enormous debt on detail. We talked about  
24 the cost of laying the fiber and the electronics that allow services to be offered. Not  
25 detailed although a lot of the technology is spoken to and what their options may be to  
26 light this network and those are very valid descriptions and some of the alternative  
27 technologies may be interesting in the near future as well but they're application  
28 dependent. How you light this fiber really depends on what you're trying to offer and  
29 whether it is a Metro Ethernet that the report speaks to or a wide array of any services  
30 you might offer on optical fiber. Consistency in deciding whether the applications and  
31 access needs are is critical as far as how to lay this fiber and what electronics and optics  
32 to put in there. The people to do that are rather expensive people.

33 The next point is what is costs to maintain the plant and the electronics and the  
34 people and equipment and maintenance costs. It's an enormous cost in many networks  
35 and that ranges from 15 to 20% annually in some of the traditional measures. There's  
36 also some of the new technologies that may start to cut those costs down but even 10% of  
37 the numbers we're talking about is an enormous annual cost and you have to remember  
38 that cost is always going to be there.

39 Costs of connecting the end customer. In the report it spends time or in some  
40 sections speaking about the individual communities and how many residents and  
41 businesses to figure up what the ultimate distances could be and that's important  
42 information. The design that's spelled out in the cost data if I understand it correctly,  
43 would get to these MSAP's, these local points of presence that serves providers where  
44 customers could access the network but it does not bring fiber to every domicile or every  
45 business. That's something that has detailed right of way inferences and repair issues as  
46 you tear up lawns and streets. There's a lot of cost underneath that.

1 Purchase provisions and maintenance of customer premise equipment. The issues  
2 that a telecom or data company confronts is do we know that we own it and rent it to the  
3 customer or does the customer buy it or put it in themselves, do we have to roll the truck  
4 out to the customer to install it. There's a lot of details that need to be made and we need  
5 to know what the decision is prior to coming up with the costs of deploying it or defining  
6 how we will recapture that from the customer on a monthly basis. The CPD plays back  
7 into the customer premise equipment and has to match that equipment that we laid the  
8 fiber with. It's a tie back, what are we trying to accomplish and what are we going to do  
9 with the fiber and what kind of application are we serving? It comes back at this point as  
10 well.

11 Finally, the cost of servicing the end customer, the marketing materials, the  
12 customer support care, training, maintenance and all the daily costs of answering the  
13 phones and taking orders, maintenance calls. This report speaks to the operational costs  
14 of the entity and outlines some good broad conclusions about what those would be. So,  
15 it's an area where you need to do a lot of building and ask a lot of detailed questions, not  
16 one that is not addressed in any way. I hope I can make it clear as I bring up the devil in  
17 the detail kind of comments. It's not at all to suggest that the report is not fairly  
18 comprehensive because it certainly is but this is a very complicated business and as you  
19 get or build the network and you want to run it, that's when some of the problems come  
20 up that you thought it would be easy to deliver.

21 MR. DOWNIE: What we were trying to do and we sort of wanted to lay  
22 out the costs. If you go from the second bullet here down by them not necessarily being  
23 detailed out in the report. My concern is that all of these costs and all of its planning  
24 required for the ultimate goal to be achieved which is to deliver this economic and social  
25 development. If any one of these components fails either due to costs or incentives for a  
26 service provider are not there then our thoughts are that would ultimately, in order to  
27 ensure success over the long term that would ultimately come back to this Committee  
28 and the Tobacco Commission and say if we really want to achieve that they're ultimately  
29 going to have to fund those requirements. Those requirements are materials as Pat  
30 outlined. The electronics are expensive, the maintenance on that equipment is expensive,  
31 just servicing those customers and providing that service is an expensive proposition.  
32 It's certainly achievable but those costs are there.

33 As far as the report is concerned we think the report is a great start and the design  
34 and construction of this regional network that's been created and can be implemented  
35 there. We think additional due diligence is required to achieve the goals and objectives.  
36 If certain things are not outlined and that's based on our experience, those things will  
37 come back and increase your costs later in order to achieve the objectives. We've taken  
38 a little bit longer than we intended to but we basically intend to react and comment as we  
39 go through the next few days. Thank you.

40 DELEGATE HOGAN: Thank both of you and we appreciate your  
41 comments. And now we'd like to hear from Jeff Hopkins with Gamewood.

42 MR. HOPKINS: Thank you for having me and hearing what we have to  
43 say. The comments that were given by the people that spoke before me were very salient  
44 to us as an ISP. We have in fact done the very same thing many times in many different  
45 ways on the not broadband scale. The costs associated with those are in fact the costs  
46 that we see on and all the other non-broadband technologies that we have employed all

1 these years. I hope to be able to give you a five thousand foot view of the narrow area in  
2 Pittsylvania County and in the Danville region which I am a part of. I think that's the  
3 only area that I can speak authoritatively about and hopefully I'll be able to enlighten  
4 you. Let me see if I can adjust this slide very quickly and I apologize.

5 My name is Jeff Hopkins and I'm CIO and Vice President for information  
6 technology for Gamewood Inc. We are an Internet service provider and also an  
7 application service provider. We provide an electronic wrecker over the Internet actively  
8 at this time and we sell it. We are also as recent as a week ago are now a telephone  
9 interconnect company which is a company that provides telephone services from the  
10 point of demarcation of the CLEC's or telephone provider. You're familiar that they  
11 install PBX's, key systems, telephones, inside wiring and that sort of stuff. We have  
12 recently merged with a company in Danville and have those capabilities as part of our  
13 repertoire also giving us some other capabilities within the broadband world.

14 The Danville, Pittsylvania County area is not served by either an ISP, there were  
15 no local numbers when Gamewood first started. Gamewood started to provide local  
16 access because this was a rural area and because the large providers would not come in.  
17 Small business in that case bore the capital risk and bore the capital costs of providing  
18 that service at this point in time. There are no currently large broadband initiatives in the  
19 area other than cable modems, the DSL initiatives have been aborted or non-existent at  
20 this point in time. There is a presence that does cable modem and broadband, not quite  
21 broadband with the specs we hear in the report.

22 The transport costs in our area is the upper-tiered costs are prohibitive and usually  
23 require transport from incumbent local chain carriers. You can buy quite a large  
24 bandwidth at some of the other areas in the state or perhaps in other states but to get back  
25 to Danville becomes cost prohibitive. We are limited I think, to a very small amount that  
26 is very exorbitant and is a large part of our capital structure.

27 I think the IDI, it's the old adage that if you don't know where you're going then  
28 it really doesn't matter which way you go. The report does address some of those things.  
29 I'm working off the theory of technology's role in economic recovery here which is that  
30 southside had traditional manufacturing and it is also technology can replace the  
31 traditional manufacturing economies with non-traditional economies. They are  
32 responsive to market demands and responsive to innovation and responsive to market  
33 direction. Something we can do in the southside that provides an economy that can be  
34 shipped worldwide and nationwide and all other things.

35 The question is beyond the scope of what I'm trying to address. Will technology  
36 provide the fulcrum for economic revitalization? That's a little big for me to handle so I  
37 think I'm just going to have to assume that it will in this case. Can access be reasonably  
38 priced, access to reasonably priced broadband have economic impact. If we get  
39 broadband and we give it to the homeowners and we give it to the small businesses will it  
40 have the economic impact we want it to. I can't speak to that but I hope that we can.  
41 Can demand be there, if they build it will they come. I think that was covered in the last  
42 talk very well.

43 The eCorridors proposal as I read it and as it has a bearing on what I do is really a  
44 three-tiered infrastructure. It not only includes physical connectivity as we have already  
45 experienced with the

1 e-band but it requires management on top of services. That has the Internet users at one  
2 end and the Internet backup providers at the other. There are components of those tiered  
3 services. The first mile, the metropolitan area network that actually does the distribution  
4 from the homes to the larger backbone of which our e-band project is. The Internet  
5 access which is obviously the cloud, the Holy Grail in this case.

6 The eCorridors project, the scope of it tends to at least from my perspective, focus  
7 very much on physical aspects of the intercommunity backbone. Building it, outfitting it  
8 but not managing it and not providing services over their once services are provided.  
9 That leaves a large gap in the first mile area of the metropolitan network and the Internet  
10 access areas. The report does touch briefly on the demand for Internet services and how  
11 that has been beneficial. It also touches on first year Internet providers and a section on  
12 those that might be in the area and might be able to provide within this structure that we  
13 talk about. Current ISP's. We work under the very same circumstances except it really  
14 deals with first mile and Internet access. We are this entire structure in most occasions.  
15 We are the ISP, we connect to the Internet and we service our users.

16 In the current ILEC situation we're dependent upon ILEC's to provide services,  
17 management and physical activity in the form of traditional telephone products such as  
18 T-1's for connectivity, OC-3's and all the other things you may have heard. In fact our  
19 PIR lines that we use for dial-up connectivity.

20 Public participation is probably one of the things that I can speak to and I'd like to  
21 speak to it is the crux of what I'm trying to tell you here today. The public participation  
22 only is probably something that I would like to say is not what I liked to see. I think in  
23 the case of eCorridors I feel it's very salient for eCorridors to address those things such  
24 as management and services within the intercommunity backbone. That's where I think  
25 our great strength lies but you don't need to stop there.

26 The question is in some circumstances in this I feel it's a very salient point and  
27 goes along with what the previous speaker said. How you get it out past that point in  
28 time. There are some areas using utilities looking for utilities distribution in the  
29 metropolitan area network where they in fact provide all the services and all the  
30 management and the physical structure behind it. I think you'll also find there are some  
31 initiatives in the public sector to in fact do the first mile of fiber to the home, do the  
32 management of those and then to the exclusion of private enterprise go ahead and take  
33 care of the first mile services that are given to the end users and to the businesses, to  
34 private enterprise out there. We're all familiar with Network Virginia and it obviates all  
35 these things in a public model in this case and is probably a very good example of the  
36 first to last involvement of the public in that. It bypasses all private participation. I  
37 really believe in a public-private partnership and I believe that is best. I think an all-  
38 private cannot provide the capital structure for a large physical infrastructure. I think  
39 we've seen that the larger CLEC's are not willing to put up the money it takes to do that  
40 and the smaller companies cannot do the debt structure and capital structure. It's just not  
41 feasible for small companies and companies that are scratching and clawing to try to  
42 make a margin to be able to do that. All public does not foster competition and  
43 innovation.

44 If we're looking for an economic recovery it is incumbent upon us to support and  
45 to assist private enterprise. Private enterprise and the entrepreneurial things that come  
46 from Internet and broadband capabilities are the things we need to foster. I think the best

1 of the two worlds is the public-private partnership that can leverage the public economy  
2 while remaining responsible to market demands. That's the road we call open services  
3 interface.

4 Services management physical connectivity with eCorridors perhaps providing  
5 the community background. Public-private coalitions working for the first mile in the  
6 metropolitan area with the network and the Internet activity and service providers  
7 providing those services on a fee-for-service basis across the public and private coalition  
8 based networks. Recommendations, expand the project direction to include services  
9 and management for eCorridors, continue to investigate first year Internet access. My  
10 cost for first year Internet access is very high and they are a huge burden for us. Develop  
11 strategies for public-private for physical connectivity and close service gaps. Let's keep  
12 looking at what we can do from a public-private standpoint to do that. Thank you very  
13 much.

14 DELEGATE HOGAN: Thank you. Next we'll hear from David Martin  
15 and Kelly Shaw.

16 DAVID MARTIN: Good evening, as Chairman of the Board of  
17 Supervisors for Halifax County, I've come to understand what a truly wonderful  
18 opportunity the Tobacco Commission represents not only to local governments but  
19 especially the people that those governments represent. The direction the Tobacco  
20 Commission and this Committee take has a huge impact on issues from economic  
21 development and quality of life. We're very pleased to be here tonight to have some  
22 opportunity to present you their views. I want to do something tonight that's somewhat  
23 out of character for me and let someone else do the talking.

24 Mr. Kelly Shaw has a Bachelor of Science and Electrical Engineering from  
25 Virginia Tech as well as a Masters Degree in Electrical Engineering from Tech. He was  
26 a software engineer for the very successful Tomahawk launch control systems for four  
27 years. He started Halifax County's first ISP in 1995, which is called Halifax.com and  
28 has worked for CLEC's since 1995 Internet networking engineering manager. He was  
29 gracious enough to ask me to be involved when he started a little ISP earlier this year,  
30 which is growing surprisingly fast, called Pure Internet. The focus of which is to try to  
31 bring broadband to rural Virginia.

32 MR. KELLY SHAW: Thank you for giving us an opportunity to speak  
33 here today. I'll try to make my presentation as quick as possible. I'd like to break it  
34 down into problem definition as I see it and how it affects the Internet service provider  
35 business and what Virginia Tech's idea what the problem was.

36 A little bit about their proposal and how it affects our business, a little bit about  
37 my companies background and how our business is set up to use telecommunications  
38 infrastructure. What I see as the bottom line in helping myself come to an understanding  
39 of what needs to be done and then our recommendations.

40 The common definition I could get out of this was the Internet is currently not  
41 available throughout the entire southside Virginia area. Providers do not intend to offer  
42 the advanced services or network services or broadband to these areas. We did a recent  
43 survey of over sixty companies in Pittsylvania County and only a handful actually  
44 needed broadband but couldn't get it which is kind of eye opening for us and the people  
45 that we talked to. Another thing is that major corporations in our area tend to use their  
46 own corporate network for their Internet access so, they're not even concerned with the

1 local providers. They go straight to their corporate guy back in Pittsylvania or Sweden or  
2 wherever it is and they set up their network that way. It's kind of eye opening when you  
3 think about the fact that they're not even going to talk to us. We have corporate  
4 customers who are happy with their IT connection and don't see a reason to upgrade. If  
5 you put this fiber in they're not sure they even want it.

6 Another example ISP's, if they need a bandwidth we're going to be able to get it.  
7 It may be as Mr. Hopkins was talking about pretty high but that's something that we  
8 hope that we can use this fiber infrastructure to help bring down the cost but they'll bring  
9 the service to you now but you have to pay for it.

10 Here's what we see is the real problem. Private citizens and small companies that  
11 don't live in or near high population areas don't have a real choice in getting broadband  
12 to serve their home business. How can you make this happen? Virginia Tech's proposal  
13 from a bird's eye view, install fiber in major southside communities. It doesn't still bring  
14 it to the home or near the home in some cases and we still have problems getting the  
15 service to the home and then there's also the last mile problem. What Virginia Tech is  
16 proposing is just to have an MSAP at a common location throughout the community. A  
17 leapfrog kind of technology and that's a key point I got out of this. They want to  
18 leapfrog but we still have a problem of how to get it to the home or for the end user to  
19 actually use the service. The ISP's and the CLEC's are still going to have to go to the  
20 Telco's to get local loops to these MSAP's. That's where a lot of our money goes on a  
21 monthly basis.

22 What we're doing right now with our current infrastructure. For Halifax County  
23 we offer broadband wireless, DSL services and you've got your standby dial up. I'd say  
24 there's a 10% or a little bit higher rates for people that actually want broadband services  
25 or who are willing to pay for it even. They want to pay their nineteen ninety-five a  
26 month and they're happy with that.

27 We just turned up a system where we offered broadband wireless Internet at 10  
28 megabits per second speeds to three hundred fourteen square miles in Halifax County  
29 which is actually growing quite fast. We're turning up at least a person a day right now.  
30 Right now we've purchased our bandwidth from AT&T and we don't have to pay a local  
31 fee for the Internet but we have to pay one for our phone lines. Even though we  
32 purchased our phone lines in twenty-three phone line increments called PRI's from the  
33 local CLEC's. We still have to pay over one hundred dollars per month to Sprint to get  
34 the line to us and that's several thousand dollars a month or more. This is what I see as a  
35 potential solution in the fiber that could help us.

36 Our wireless based infrastructure and I'm showing this just because I wanted you  
37 to see that just because we can do it that means that anybody else in our region can do it  
38 and it's totally doable. We back haul up to ten megabits back or more to our central hub  
39 via wireless. We don't need to rely on the phone company at all. We don't need fiber,  
40 we don't need any other structure in place to do that. Our main hub for our two point  
41 four-gigahertz equipment, we use rooftops in the towns. In the Town of Halifax and  
42 South Boston where we're bringing broadband to customers from rooftops. We don't  
43 have to pay the phone company a cent and most of the time the businesses are eager to  
44 get broadband and it's no problem to gain access to the rooftops. For each of these  
45 services one of the concerns that we've seen in the report was that 80211 is a protocol I

1 guess insecure if you want to put it that way. But we don't use those protocols, we use  
2 proprietary protocols to send our data back and forth across the network.

3 It's hard to see and I'll show you on the next slide but this is sort of our area. It's  
4 our line of sight coverage area. We cover three hundred fourteen square miles and we  
5 need to see the tower but the key to this is that we've already got towers throughout the  
6 community to serve emergency services and government uses that we could also put our  
7 equipment on. We can serve the smaller communities with a nine hundred-megahertz  
8 system that will blast through trees but it does not need to be line of sight and that will  
9 provide broadband services as well. We're going to compare the costs here in a second.  
10 That's a little bit bigger view.

11 Basically, if we had two or three of these going in our county the whole county  
12 would be covered and you'd be amazed at how much this costs. To compare the two  
13 technologies which is fiber to the home forty thousand dollars plus or minus per mile. I  
14 know it can be cheaper than that and I know it can be more than that. That's sort of what  
15 I've seen, you can use it for video and voice and data. Wireless to the home, our system  
16 was built for ten thousand dollars to cover three hundred fourteen square miles, less than  
17 ten thousand dollars and that included labor and the tower and everything. We know that  
18 for five thousand dollars or less we can serve not only a three-mile radius but a five-mile  
19 radius to get broadband to these smaller communities.

20 That's with speeds of up to ten megabits per second and we have a capability of  
21 bringing fiber optic speeds over wireless. We have equipment in our shop right now that  
22 we can set up for six hundred twenty-two megabits per second link if someone needs it in  
23 our region and we could do it tomorrow. But no one needs it just yet. We did talk to the  
24 county and they have a need for this and the fiber is perfect for this as well where they're  
25 seeing mass quantities of maps back and forth then there's a perfect use for fiber but it's  
26 already in place, we already have it in place in our county and these are things that have  
27 already been done.

28 One of the topics was at least for our county to connect using fiber with the school  
29 systems in those communities. The school system just purchased a quarter of a million  
30 dollars or less of wireless systems that link the schools together at ten megabits or greater  
31 so we'll be duplicating efforts.

32 Here's our recommendation. Let's build that fiber backbone to the counties that  
33 can actually show a true business case. For us we'd love to see the fiber backbone to our  
34 communities perhaps Danville, Martinsville, up to Lynchburg to connect these  
35 communities. We could use that to extend our wireless network. That's the part I see  
36 that a typical Internet service provider can use. We don't see fiber as a current solution  
37 to the entire problem but we see it as part of the solution. We'd love to compare and let  
38 other technologies fill the gap. We don't see the need to spend three hundred million  
39 dollars on fiber and the infrastructure. Right now we're already supplying our customers  
40 with the bandwidth that they want. If they need more we can do it now and we can get  
41 them the bandwidth that they need now and we don't have to have the fiber in place.  
42 What we'd like to see done with some of the funding is to develop a public private  
43 partnership to help rent or build towers for broadband wireless use, for school use, for  
44 EMS use, for government use. We're already talking to the counties EMS administrator  
45 and they see the need to have this wireless infrastructure in place right now. It can be  
46 done in a matter of a month or two and it's not that hard.

1 We'd like to see the public private partnership used to help expand the wireless  
2 system into the smaller communities now and we can do it now.

3 The other thing that struck me when I first looked at the report was that we have  
4 many MSAP locations that are not necessarily near the phone company's main office.  
5 No matter what we do we're going to have to get to the phone company at some point.  
6 So, I don't know the proper term but I think we need to be thinking and get cooperation  
7 from the phone companies to get connectivity to these MSAP's and if they don't we're  
8 on a road to nowhere. That's basically what we have to say. Thank you.

9 DELEGATE HOGAN: Thank you Calvin. We asked several of the large  
10 telecoms like Verizon and Sprint to put together a presentation, Keith Walton.

11 KEITH WALDEN: I'd like to say it's a pleasure being here this evening.  
12 My name is Keith Walden, I'm the Sales Manager in the Enterprise Solution Group for  
13 Verizon. I'm here now to talk to you not only with regard to Verizon but some of the  
14 other telecom providers in the state.

15 A little bit about myself. I have twenty-three years experience in the telecom  
16 industry all with Verizon. I've been working on the rural broadband initiative for  
17 probably a year and a half now. This has started and it's growing more and more with  
18 Verizon as far as working on solutions to meet the rural marketplace. I've seen a lot of  
19 the things we've talked about and hopefully I can give you the service provider view and  
20 how we see things going forward hopefully.

21 From the service provider view a project like eCorridors in looking at it there's  
22 always questions about since we are private and in business to make money just what can  
23 be done along those lines in order to meet what our shareholders want. In looking at the  
24 eCorridors project there are many implications of which there are three that stand out  
25 from an economic standpoint. Will it make money, from a financial standpoint what will  
26 it cost, from a political standpoint whether we can keep yourselves and other legislators  
27 happy with what we do. There's one other element that I put in the picture as well is that  
28 one of the things we look at with any technology and with any service we're about to  
29 employ and that is how many people are willing to pay for it, and is there a marketplace.

30 From a financial perspective in today's marketplace no immediate return on any  
31 type of investment does not bode well with the corporation and also Wall Street. Capital  
32 budgets have been cut but I still say that Verizon still swings big today on capital  
33 investment but I can tell you that money years ago within the state and within the  
34 community went toward looking at projects that would pay off years down the road. The  
35 immediate return within a couple of years is what's looked at because the nature of Wall  
36 Street today. I also would say that out of that we spend a tremendous amount of money  
37 researching the latest technology that goes on today and with that, I know today that with  
38 a gigabit supported network we can deliver services that you are looking for in the  
39 design.

40 In looking through the report done by Virginia Tech they did a great job in  
41 outlining the technical perspective, a network that is robust and meeting the needs for  
42 years to come and having a fiber based broadband network the way it seems as far as  
43 how much we can put down a strand of fiber and improvements are being made  
44 everyday. Also the design of the network having a tiered approach goes well with  
45 anyone who does an extensive amount of network design having the backbone regional  
46 and access level distribution basis. They also did a great job in defining the cost

1 structure. I think one thing it lends out is that telecommunications is not a cheap  
2 business it requires a lot of capital to bring things to the table. I dare say it's not that we  
3 as telecom providers don't want to go into the areas but we're doing a lot of things out  
4 there today deploying some of the intermediate technologies. You talk about the DSL in  
5 a lot of rural areas and rural marketplace, which for today I would say meets the needs  
6 for the majority of the people today and what I'm seeing in the metropolitan areas about  
7 a marketplace.

8 The critical issues we feel the report did not address is the last mile and to us is  
9 probably the most critical part of the network. The backbone structure, the regional  
10 structure, there's a tremendous amount of fiber in the ground and there's still fiber there  
11 for various projects but if we don't have the capital base and that's in the last mile as  
12 everyone has mentioned.

13 One of the other areas is who will make the decisions about the network. As has  
14 been mentioned telecom is a complex business. One of the concerns I would bring to  
15 you is that who's going to keep everyone in check that the equipment that gets deployed  
16 in the network, the fiber that gets deployed into the network where we could all work  
17 together of which there's no problems down the road with deploying additional  
18 technology, technology that's been upgraded in the network so it all works together.

19 As far as managing and maintaining the network it's been mentioned and I dare  
20 say that probably with a network of this size I myself personally and this is just with  
21 years of experience, I would dare say that to bring a network up this size to deal with all  
22 the issues that you are having to deal with in being a provider, keeping track of the fiber,  
23 keeping track of all the little elements and connection points and systems that are  
24 involved, dealing with customer service and those types of things. My feeling is that it  
25 would probably run twenty to 30% of what the cost of this network is. I spent quite a bit  
26 of time with various community leaders and working with communities on projects and  
27 one of the areas I see as a real shortcoming is that a good majority of the communities  
28 have no idea what they want to do with the network. Everyone wants a broadband  
29 network when you talk about what exactly do you want to do with this network. Being  
30 an engineer at heart I use the analogy that if someone tells you to design a vehicle it  
31 comes back to what do you want the vehicle to do, do you want it to carry heavy loads  
32 depending on what the loads are, do you want to carry people, what kind of engine or tire  
33 and what kind of chassis you build it on, all the different details that go into it. We have  
34 been working with CIT with some of the communities that haven't come in and to help  
35 these communities grow the ideas and there's plenty of ideas out there. Some  
36 communities are putting all of the courthouse records online so that mortgage providers  
37 and insurance providers can access the courthouse records from an online process instead  
38 of having to send someone down to the courthouse. Libraries are online and various  
39 other things. So, that's an area I feel is very important in moving forward with the  
40 project.

41 The other area the report does not deal with is the evolution of technology. We  
42 deal in our own network where in two to three years time the equipment being used has  
43 become discontinued. We have curtailed a lot of times long term contracts with  
44 customers because of that reason in looking out beyond five years. Most people will not  
45 sign contracts for various reasons and that's one of the reasons we don't want to go  
46 beyond five years. The equipment is changing so quickly that manufacturers are not

1 willing to support it and then we're left trying to maintain a network that is on borrowed  
2 time a lot of times.

3 After looking at the report this is the kind of things that need to be done to make  
4 this a viable solution in which there is a public and private partnership that would work  
5 in a region as well as across the state. That would be for the regional and backbone  
6 infrastructure to lease that from the existing providers. I guess in four years there's  
7 enough fiber already out there and we have the capability to give that in gigabit  
8 bandwidth and whatever it is anyone wants today. We feel that a good portion of the  
9 funds could be spent to help in that process and building out the community network for  
10 reaching the end user. For that the local jurisdiction would own the fiber and they could  
11 outsource the installation and the maintenance and management of that to someone to  
12 keep up and who would manage it. In some instances the end users that are on that  
13 network. Like today if someone mentioned like on a sewer type basis. That would also  
14 allow the service providers to use that fiber infrastructure. Now, that wouldn't be free  
15 but at some cost.

16 I'll talk about fiber to the premises in a little bit but that would open the local  
17 community up for multiple service providers to be able to come in and use the fiber for  
18 various technologies that they want to deploy.

19 The next one we'd follow right behind where Tech is without backbone the  
20 regional and community networks. Backbone again, utilize existing service providers  
21 from a variety of standpoints. If you utilize the existing service providers, one thing  
22 about the network is that you don't have to spend all the money upfront for a backbone  
23 and you can grow it as you need it and add as you need it.

24 There's two options from the Verizon standpoint that are in place today. One of  
25 them we're trying to contract with Virginia Tech on Network Virginia in which we have  
26 all the other telecom's in the state in which we offer pricing that's offered on a contract  
27 to state and local governments. Also part of that contract is there for the commercial  
28 marketplace through Virginia Link. You can't get a cheap price through the ATM then  
29 from a commercial standpoint on a contract today anywhere in the state.

30 Verizon is in the process since October of last year for long distance relief. We're  
31 in the process now of building out a network across the state and are installing Pop's in  
32 various places. From a regional standpoint this will be provider based and this will get a  
33 connection into the local community networks. One of the things that Tech outlines is  
34 kind of a geodesic network. Most of the service providers utilize the geodesic network in  
35 our network. Most of our CO's have more than one entry point into it so there is  
36 diversity so there's redundance in the backbone and reduces the failure.

37 From Verizon's standpoint we have several services we offer today. Regional  
38 transparent land which we are working with several communities including the western  
39 part of the state. This is an Internet based service. We've been pricing it out to several  
40 communities. One of the problems is that in the regional network there are pockets  
41 where there's not fiber that is laid there. In the community network the last mile is  
42 critical and we're working with all these technologies today.

43 Fiber to the premises. A couple of weeks ago we issued an RFP to come up with  
44 a low cost solution of providing fiber to the premises equipment. We're looking to start  
45 deploying that in 2004. We've started something with our company known as the Rural  
46 Area Network and that's a fiber based network deployed by the municipalities and it will

1 allow public providers to be able to have access to that fiber for wireless providers as  
2 well as local telephones and ISP's. Again, looking for public and private partnership.  
3 Today there is a place for existing technology.

4 This slide shows the optical network and that will include the DLS and we're in  
5 the process of putting that out on the network. Where we go from here is that we  
6 recommend a public private partnership that will capitalize on existing infrastructure and  
7 business and utilize the benefits that are available with broadband technology to all the  
8 citizens of the tobacco region. Thank you.

9 DELEGATE HOGAN: Now we'll have our second speaker, this is Old  
10 Dominion.

11 DAVID HUDGINS: Ladies and gentlemen I appreciate the opportunity.  
12 When Old Dominion first came in here three years ago to ask the Commission's  
13 consideration and we've made some progress in only three years. So, where do we go  
14 from here? I'm going to briefly run through these bullet points that I've pointed out here  
15 for this presentation and cover the gist of the report. The last mile not quantified fiber to  
16 the home estimates, no discussion on wireless. No discussion on telecom assets or  
17 partnerships with existing rural ILEC's. The last mile depends on municipalities  
18 contributing what is the benefit and how does the community profit. One of the things  
19 I've found out in the last three years is that the communities don't have any money.  
20 They're still trying to find out what to do and this is a government thing versus new  
21 telephones. When I did the original survey three years ago this is not exactly how they  
22 wanted it and there was no money for it.

23 Financial numbers very generalized. Four million from Emporia to Norfolk  
24 underground construction tops seventy-five to one hundred thousand per mile in urban  
25 areas. The report focuses on research and education but how do we create jobs and what  
26 about the private sector. What we want to concentrate on and have everybody talk about  
27 is the entity because in my opinion it's not complicated and it needs to be done. We can  
28 make it complicated but that's what the private sector is for.

29 It's my opinion and Old Dominion's opinion that we've got to provide the  
30 interstate that's back to the future and that revolves around the two to three years ago  
31 conversation involving putting the fiber on 58 and let the private sector do its thing. That  
32 is mutual access to our rural areas that will empower the previous presenters whether it  
33 be Verizon or whoever, to use their creativity, their market knowledge and bring it to the  
34 forefront. It may be wireless. I personally think that 802.11 whichever standard you  
35 want to talk about will be first because it's quick and it's available and it's cheap and  
36 then as money becomes available in the next phases and that's pushed out to the edge  
37 when the demand is there.

38 The other comment I want to make is education. One of the things we've looked  
39 at is E. Scotland who has people on staff of their effort to go out and cold call businesses  
40 and educate them on a one-on-one basis of what broadband can do for their business. It's  
41 been extremely successful and it drives business.

42 We're talking about the cooperative model and we built the highway and others  
43 put the cars and manage the traffic. It's inclusive, provides incentives to carriers to  
44 expand broadband coverage. Members participate in and build that broadband and  
45 include in the plans because you have a class of membership. One of the things I found  
46 when I tried to do this two years ago in the public private partnership and the private

1 non-profit is who's going to be on the Board, who's going to control it and then we get  
2 into sectionalism. In the cooperative you had a class of local government and local  
3 government decides who will represent themselves in the Board. These classes will run  
4 it and they know the concept and will contract with local providers. In my opinion my  
5 considered opinion three years in Virginia a cooperative model which is used in  
6 electricity and that's using the same model we used and it's operative and it's a benefit to  
7 all and all interests are represented.

8 That's the end of my slide. Ultimately we've got to provide a superhighway, the  
9 interstate and let the private sector work and figure out how to get it into the rural towns.  
10 Once we provide that MSAP then it's primarily a proprietary wireless process and let the  
11 process compete for business on a neutral highway. Whether it's Verizon or Sprint then  
12 let them compete against the Gamewood's who has the local expertise and local  
13 connections and let the private marketplace work. Ultimately it's not only the  
14 availability but is affordability. Verizon and some of their reports have gotten a very  
15 poor uptake. In northern Virginia it's forty-nine ninety-five so what does that tell us.  
16 When you have an average income of about fifteen thousand it's got to be below thirty  
17 bucks a month. How do you do that, you got to beat the competition and not only that  
18 you've got to get them motivated to come into it because now you have to figure out a  
19 pathway into these rural areas so, that's back to the future very quickly.

20 The glass fiber by the way is not obsolete. You've got to get it going. When  
21 you've got that backbone blowing in with the fiber that's on 58. So, this is going to be in  
22 your areas whether it's six months or sixteen months and that's when the competition  
23 will start and everybody will gear up and be ready unless the economy goes down the  
24 drain. Thank you.

25 DELEGATE HOGAN: Mr. Skinner.

26 MR. SKINNER: Good evening, my name is Skip Skinner and I'm with  
27 the Lenowisco Planning District and I'm joined here today with Paul Elswick and most  
28 of you know Paul from his work with the eCorridors Taskforce. Ron Flanary sends his  
29 regrets he couldn't come at the last moment.

30 Some of you have knowledge of what Lenowisco has done in our area and have  
31 knowledge of the Lenowisco Rural Area Network. I'd like to take some time to provide  
32 an overview of accomplishments to date and see how it has interfaced with some of the  
33 Virginia Tech report. Lenowisco has a working model with a regional fiber optic  
34 backbone. Firsthand experience as to who owned the structure, firsthand knowledge of  
35 who should manage it and we're well beyond talking and we're doing this.

36 There are four successful public fibers to the home working models in the U.S.  
37 Grant County, Washington, Provo Utah, Bristol, Virginia Utilities Board and Lenowisco  
38 Rural Area Network. 50% of Virginia's tobacco counties and 50% of the working  
39 knowledge of these projects are in Virginia. Why not use that knowledge? I understand  
40 that Bristol, Virginia has approximately twenty five hundred customers tied up now, is  
41 that correct? I guess it is. We have experience. What we know. Aspects of the network  
42 that provide economic development of course, is speed. However, bandwidth is the  
43 measure of volume, it's the size of the pie and the most important factor. Only with  
44 enough volume can you reach the true richness of broadband regardless of whether we're  
45 talking entertainment or business services. It's important and may be the determining  
46 factor in economic development. Reliability to be used as needed. Most economic

1 development prospects now require access to networks. Multiple connections to the  
2 same or separate networks require the highest level of redundancy. It must be affordable  
3 from the shops on Main Street. Remember we're doing this as an economic development  
4 program. A competitive environment is required and price be competitive with cities and  
5 this is not the case in the rural tobacco counties. Quality of services necessary.  
6 Guaranteed bandwidth when needed customer-by-customer and application-by-  
7 application makes high definition T.V. possible on the network. In addition, the lack of  
8 quality of service on some existing Internet connections and local health clinics spend at  
9 least seven hundred fifty dollars a month to support applications and equipment. We're  
10 talking about support and quality of service and we must try to reduce the cost. Of  
11 course, why should we care about the local health clinic who does not pay for health  
12 insurance or some degree of responsibility to try to hold down health costs?

13 Quality of service makes it possible for there to be convergence. A single  
14 transmission media can provide many different services. Services on the same transport  
15 medium Internet, cable T.V., telephone, video, the costs are reduced and values increase  
16 to the consumer. The first converged networks will attract companies to develop tests  
17 and deploy applications that have yet been envisioned. If all of our schools were  
18 connected with the Lenowisco network we could establish the greatest video classroom  
19 that's ever been envisioned.

20 In summary this is what is important to economic development. There's got to be  
21 speed, reliability, competitive pricing, quality of service and all these convergence. What  
22 Lenowisco has done including financial, technical, and the economic development  
23 impact.

24 Suitability review. The application to eCorridors Committee that is recommended  
25 for funding by the consultant. We received a letter from Virginia Tech stating that our  
26 project meets their technical recommendation, the only project recommended for funding  
27 by the eCorridors Committee.

28 The Tobacco Commission has been most gracious in providing funding for our  
29 projects and over six hundred forty thousand to be exact. And we have already to this  
30 day leveraged that more than 100%. That leverage includes local cash of about one  
31 hundred thousand, the Coal Field Coalition, the town of Big Stone Gap has helped  
32 provide some funding in the amount of fifty thousand dollars as a grant that originated  
33 from various folks. It has been announced within the last month the Town of Duffield  
34 and Scott County Telephone Cooperative is going to be the recipient of five hundred  
35 thousand dollars rural utilities broadband grant and this is a result of a national  
36 application process. That went forward in November of last year and that's the only one  
37 awarded in Virginia and one of twenty-one awarded nationally. Over three hundred  
38 applications were submitted for that particular program.

39 On the technical side we have designed our network. That is a diagram of our  
40 electronics and each node represents a community in the planning region. You also have  
41 to consider those MSAP's. You have there our fiscal infrastructure. What you have  
42 there is a proposed Lenowisco area network. One of the assets Lenowisco brings to the  
43 table is over forty years of experience working with the local communities in the  
44 development and construction of public utility projects. Currently as of this date, we are  
45 approaching twenty-five projects under active management and that means management  
46 today and representing fifty million dollars of public investment. We have the

1 experience needed to implement these projects as well as others. It's just another piece  
2 of infrastructure.

3 We have built a working demonstration project. There's a map of the area  
4 highlighted with a red marker representing places that are now in operation. We have  
5 completed a co-location research project. We have identified a conduit to facilitate co-  
6 locations of fiber optic lines with public water systems. Our investment is currently  
7 being made and we are trying to maximize the investment. This will allow us to develop  
8 an educational design to support fiber long haul in conjunction with the fiber to the home  
9 distribution system in a cost effective manner. We were the first to use this concept in  
10 the U.S. project development. We used this conduit first and that was the project  
11 developed.

12 There's a photograph taken of the ditch showing that and it's currently working.  
13 What we've done is we've developed a future proof standard and technique development  
14 fiber conduit to build out public water construction for distribution to other areas. We  
15 are concentrating in two population centers for two point six miles besides providing  
16 connectivity to the centers. This backbone is capable of supporting fiber to the home  
17 additional drops.

18 It is not included on the slide but one of the earlier speakers reminded me that  
19 we'd also written a program to manage the connection of fiber placement and electronics  
20 can do it. That program operates off a handheld PDA device and has a barcode reader  
21 and a wireless connection for allowing updates and a GPS. We intend to use this in order  
22 to establish E 911 services. Economic development in addition to the software I  
23 mentioned previously.

24 We have a connection pending. We received favorable press coverage within the  
25 last month and an article appeared in E Week a national publication. In today's Wall  
26 Street Journal there's an article as well as our local paper. The Tobacco Commission has  
27 been the beneficiary of this press type coverage. We've also been recognized among our  
28 peers in the development field. We have completed our research and design and we have  
29 completed the co-location project engineering, we have proof of concept network  
30 activation. We're now going to build backbone between population centers for a  
31 redundant ring and connect some large customers and we have to obtain funding for the  
32 fiber to the home build out. The large customers will pay for their own connections.

33 The Lenowisco Planning District Commission has over forty years experience of  
34 construction and management. Telecommunications is another factor. We know what  
35 we're doing and we're ready to do it and time is a wasting.

36 My last slide and I want one last thought. This is an article that recently appeared  
37 in the Scientific American magazine in May. It talks about skills and networks. This is  
38 intended for those that say let's go slow and be right with the chosen technology and how  
39 we address these problems. In the article it talks about that we could expect to gain over  
40 100% increase with our concept network by being first to develop this network in this  
41 manner. That more than compensates with the additional risk. If we do it first we'll  
42 become the de facto standard. As the article points out a preferential attachment  
43 develops and reinforces our concept. Thank you.

44 DELEGATE HOGAN: Nicholas Pesce.

1                   NICHOLAS PESCE: Thank you, my name is Nicholas Pesce and I'm one  
2 of three principal consultants here this evening from Syntrex, this is an IT  
3 telecommunications consulting firm. I'd  
4 like to introduce the other two if you don't mind so, anytime later on people can  
5 recognize them and ask questions. The person standing up right now is Frank Spasaro  
6 and the other gentleman is Frank Pulaski. We appreciate this opportunity to present our  
7 impressions of the *eCorridor* proposal.

8                   Let me start by providing you some background about ourselves and what we've  
9 done. We've spent over thirty years putting together the technologies and growth  
10 engineering for companies and communities. In the last year we have concentrated our  
11 broadband growth in rural communities. We've spent a significant amount of time in  
12 southside and southwest Virginia learning about resources, plans and needs. We've  
13 talked to many economic development directors, town managers, Virginia Tech  
14 *eCorridor* team members and several public and private shareholders. As a result of  
15 these discussions we think there's an excellent opportunity of a small amount of well-  
16 spent seed money to really make the difference.

17                  Now for some impressions. We've reviewed the eleven-volume *eCorridors*  
18 proposal and that took quite a bit of time. Our impression is that the *eCorridors* proposal  
19 is well thought out as a strategic roadmap for planning the Virginia tobacco region with a  
20 fiber network that will satisfy the telecommunication needs for decades. The *eCorridors*  
21 proposal is based on many assumptions that is well documented in the report. The  
22 document identifies the type of fiber to be deployed to the people, fiber roots and the cost  
23 for inner and intra county networks. This slide illustrates some of the key components  
24 that must be addressed in a business plan for a full-grown network system  
25 implementation. As you see at the top what you first need to do would be a business  
26 requirement and once we know the business requirements or objectives we have to  
27 identify who are in the target. Large businesses or small businesses, residential. Once  
28 we're aware of that we need to identify the service requirements which is the second  
29 road. After that we would work with the public private sector and identify how a service  
30 could be implemented. In doing this determine if the government needs to provide the  
31 services retail or wholesale. Following that you would have to identify the network  
32 needs. On the bottom you see two light green. These are the areas that have been  
33 completed by Virginia Tech. They have identified the plans for inner or intra county and  
34 city networks and the cost.

35                  Next slide. We believe the next steps are that the Tobacco Commission should  
36 determine what the business focus is. It's very important that the initial implementation  
37 is focused. History has proven that one of the focuses for implementation of a new  
38 network of technology the risks of failure are higher. We need to determine what we  
39 want to achieve, who we want to serve and how and when they will be served. Next we  
40 need to identify market needs, business models, multi generation network. Once we  
41 identify the services that have to be provided and when we determine the actual network  
42 needs are over time.

43                  We suggest next that a grant application proposal procedures can be developed  
44 that would achieve the Tobacco Commission's objective as well as assuring that  
45 communities requesting funds will achieve what they're sent out to do.

1 The last item on that list is to establish a single focal point. What we're saying is  
2 that many of the private sector here today said they'd like to do a public private initiative.  
3 The best way to do that would be one entity that they can work with within the  
4 government. It's very difficult for them to work with forty-two different entities and  
5 different local governments. So, this is what we have and these are our impressions and  
6 our recommendations. Thank you very much.

7 DELEGATE HOGAN: Thank you. We have Mr. Hamm and Mr. Chafin.

8 MR. SPRADLIN: Mr. Hogan, Mr. Hamm will be here in the morning.

9 DELEGATE HOGAN: All right, then we'll adjourn at this time until  
10 tomorrow morning at 7:30.

11 Whereupon, the Technology Committee recesses on June 12, 2003. The  
12 Technology Committee reconvenes on Friday, June 13, 2003 at 7:30 a.m. at the Hotel  
13 Roanoke Conference Center, Roanoke, Virginia.

14 DELEGATE HOGAN: Good morning everyone. This morning we're  
15 going to take up a couple of quick presentations and then spend a few minutes talking  
16 about what we've heard and what we're trying to do for the rest of the morning. With  
17 that we'll hear from Jim Kelly from Bristol.

18 MR. KELLY: I'm Jim Kelly, Vice President of Operations. After hearing  
19 a few of the presentations yesterday I'd like to thank you all for giving us an opportunity  
20 and let everyone know what Bristol is up to and I'm sure a lot of people in this room  
21 don't know. When Bristol first started into this we had three goals. One was to enhance  
22 the economic development with offers of competitive services to extend the high quality  
23 of service for telecommunications and to bring the cutting edge technology to the area.  
24 As most of you know Bristol customers are among the first to be involved with fiber to  
25 the home. We're a municipal utility system and our customer base is sixteen thousand  
26 electrical meters and seventy-five hundred water and wastewater and we currently have  
27 ten thousand homes for communications services. Our electric infrastructure is six  
28 hundred miles of electric lines, our communications infrastructure is five hundred one  
29 miles of fiber underground and we have five points presence where we have our hubs for  
30 the fiber to the homes and fiber to the business. We run a metropolitan area network, our  
31 voice and data backbone is built on two point five gigs. They are diverse between the  
32 five hops in Abingdon and fifty milliseconds of recovery time for any breaks or  
33 especially in the voice world that is a must. We have the ability to transport DS-3's and  
34 OC-12 and it also provides us with our Metro Ethernet.

35 What I wanted to show you was an overview here of fiber to the home. That's  
36 why I asked if I could be first, this thing doesn't like me on the slide and yesterday either.  
37 We have two access networks, two architectures passive optical networks point-to-point  
38 Ethernet. Our passive optical network allows us to very efficient relatively low cost  
39 performance fiber to the user. Our cost based on single fibers is split thirty two times so  
40 thirty-two customers off one single fiber and it carries three optical wavelengths for  
41 voice data transmission receiving and also for the video broadcast. It's ideal for serving  
42 the general voice data and CATV access.

43 Here's an overview of the fiber to the user and gives you an idea of the data and  
44 how far it reaches.

45 What services do we offer? Effective July 1 we offer cable television analog,  
46 digital, video on demand is on the horizon for us and HDTV we hope to have by the end

1 of the year. Then voice over IP, telephone service and competitive access for the  
2 network and broadband Internet. Some utility applications remote meter reading and  
3 we're in the process of evaluating that now. Our schedule system is on the network and  
4 traffic light control soon. Some of the other applications to be home security, video and  
5 so forth.

6 Here's the product offerings. Down at the bottom some of the future products.  
7 Meter reading, home security, distance learning EOD and I've got one more over here.  
8 Then we'll have gaming in the not to distant future and we feel we'll have bingo on the  
9 Internet. That's over the bandwidth, gaming. Adult games starting at a younger age but  
10 that's a big business now. Telephone service offerings like local service, extended  
11 calling scope for the Bristol area, long distance and you can see the rest of the services.

12 How did we get this far? We're a very progressive thinking board. We had  
13 unanimous support from the Bristol City council and overwhelming support from the  
14 state legislature. Since there's a number of you here I thought it would be better to throw  
15 that in and it sounds good. We've got extremely talented people on the board and that  
16 human resources is critical. Everyone on my staff and the entire utility board is  
17 dedicated to this project. Make no mistake it's an expensive venture and the City of  
18 Bristol has funded this. It's very time consuming and it's been a long struggle and yes,  
19 there was lots of opposition and a lot of opposition is in the room with me today but  
20 they're good people. I'm trying to please everyone.

21 Right now there are no killer applications that I can see. With the installation of  
22 our fiber plant we feel like we're ready for that next killer application. I think you're  
23 going to find a competitive environment, we have found competitors. I think in the near  
24 future you're going to see partners with cable providers and telephone and electric co-ops  
25 partnering with cable. Municipal partners and co-ops with cable and cable providers.  
26 Municipals partnering with co-ops and cable and incumbents partnering with municipals.  
27 Investor owned utilities, they'll partner with anyone around, and they'll partner with  
28 everybody and anybody if they can make a nickel.

29 The Virginia Tech report. Pound for pound it's the best report I've ever seen.  
30 There is a last mile issue and you need to be able to get competitive services to the end  
31 user and without the last mile there's a problem. I know that the incumbent's at least  
32 have put down enough fiber to weigh down a battleship between each other and it's not  
33 getting directly to the end user. These folks have the backbone and there's a lot of  
34 backbone available across the state. They can very easily provide the bandwidth and  
35 provide you with diversity and provide the transport but it'll have to be a trusted  
36 partnership without a doubt. This wise philosopher was Winston Churchill and said  
37 things may come to those that wait. Thank you very much.

38 DELEGATE HOGAN: Thank you. We'll now hear from Mr. Hamm  
39 with Sprint and what they've done in North Carolina to address the same problem.

40 MR. HAMM: It'll just take a minute to make the transition here. While  
41 we're waiting for this to come up, let me just tell you I'm delighted to be here to present  
42 to you a model of how something is done that I think is somewhat close to what you all  
43 are about in North Carolina. That's the Rural Internet Access Authority. We found that  
44 it takes a group of dedicated people working together with an end result clearly in mind  
45 trying to get a result. Any group that gets together for a meeting at 7:30 has got to be a  
46 dedicated group and I commend you for that.

1 Let me give you something about my background. I've been with Sprint for  
2 thirty-five years and been in several of the states and have prior experience in regulatory  
3 issues, human resource, broadband, broadband development, business markets and now  
4 in public affairs and corporate communications. My current responsibility is to manage  
5 our public affairs function for the State of North Carolina for all Sprint operations. Prior  
6 to that I had an occasion to be in a business group and we did some things including  
7 partnering with the State of North Carolina on the information highway which is a  
8 broadband network statewide that's been around for over ten years. I was involved with  
9 the Network Virginia project back in those days with the early development. What  
10 broadband is all about is having a process like these happen almost instantly. Any  
11 questions thus far, I'm sorry for the delay here.

12 Not to waste any more time let me start this discussion. In North Carolina we  
13 have a Rural Internet Access Authority. Each one of those words is pretty important and  
14 as I get into my presentation you'll see why. The first word is the keyword of our group  
15 and that's Rural. Our whole mission in life is the issues and opportunities in the rural  
16 part of the State of North Carolina. North Carolina has one hundred counties and with  
17 the economic classification system that we use eighty five of those counties are classified  
18 as rural, the other fifteen are urban. Raleigh, Greensboro, Charlotte, Wilmington. The  
19 bulk of the state is rural and very rural.

20 The second word is Internet. On this project we'd like to focus not just broadband  
21 connectivity but access to the Internet that is our driving force and our objective, high-  
22 speed access to the Internet. Access is the third word. Authority, this is what was  
23 designed by the North Carolina State Legislature as a way of going about doing this.

24 We were created by the General Assembly of North Carolina in August of 2000.  
25 Under the terms of the legislation we will sunset at the end of this year, a three-year  
26 project. As far as we know or what I've been told by those around the state government  
27 we are the only official agency that will ever go away. There will probably be a separate  
28 group or a smaller group to finish the work that we've done hopefully for a very short  
29 period of time because a lot going on. The authority will end or cease to exist this year.  
30 There are twenty-one Commissioners appointed by the Governor, Speaker of the House  
31 and President of the Senate and a wide range of interests around our Commission. The  
32 Commission runs the authority. We are chaired by a Chancellor of one of the  
33 universities in North Carolina and we have people from community colleges, people  
34 from cable T.V., Telco's, business people and quite a range of interests that are  
35 represented.

36 The emphasis for our creation or what was behind doing something like this in  
37 North Carolina, the Department of Commerce who coined the term "Digital Divide".  
38 We've got three reports in North Carolina about the need for technology to advance  
39 economic development and be a player in the global economy. We had a very  
40 comprehensive taskforce appointed by the Governor when he returned to North Carolina  
41 following services as the Chief of Staff for President Clinton and then the Rural  
42 Prosperity Taskforce. That included a range of issues including the need for connectivity  
43 throughout the rural parts of the state and that gives us our first word Rural.

44 Here are the goals set forth by the General Assembly. High-speed access in three  
45 years, two tele-group centers in eighteen months, significant increase in ownership of  
46 computers, Internet access, provide all citizens with local but to have access within one

1 year, have a website for people to go to, to see where they can get services and how they  
2 can get connected. Last but certainly not the least important is, develop the application.

3 I think you can see from this we tried to make a very comprehensive multi faceted  
4 approach. Not just a narrow focus on one part of the equation or another but access,  
5 high-speed access, putting work centers throughout the state, make sure people have  
6 computers and devices to connect to the Internet and make sure they have a way of using  
7 the Internet access to improve their well being and that's what we set out to do.

8 Very important principles have guided our operation in the last two and a half  
9 years. We're serious about this and we stuck to this. We've stuck to it as best we can.

10 Technology neutral. We're not about saying there's a single technology that will  
11 be the magic answer to broadband development in North Carolina. We're looking at all  
12 kinds of technologies.

13 Encourage local solutions. We do not want to sit in Raleigh and tell the people in  
14 the rural parts of the state what's good for them and what they need to be successful.  
15 We'll talk a little more about the grass roots effort that went into it.

16 Using the private sector to the maximum. This was a controversial thing we  
17 talked about what we have become and how we started was a good model I think. A  
18 public private partnership as we went into it. Avoid extra special regulations. We do not  
19 want to mandate, regulate or do anything but we want to provide opportunities for access  
20 and see what happens. To keep with local solutions we want to avoid the same solution  
21 for all. If we say you have two hundred fifty six kilowatt access you're there. We  
22 looked at the whole range of possible end users from large business, state government,  
23 small business and consumers, residential consumers and each having their own needs.

24 How do we operate and how can we do all this wonderful stuff? We have some  
25 money and private funding from Micro Electronic Center in North Carolina which is a  
26 self supporting non-profit semi-public and they happen to have a windfall of money  
27 available because they incubated a small start up business before the actual dot com's did  
28 very well and then sold it and accumulated some money and that's been our funding  
29 source. With thirty million dollars we started on day 1 saying, we've got thirty million  
30 dollars now, in 2003 we want to have zero dollars and how do we go about doing the best  
31 with what we've got available. Because of some of the projects we started on we were  
32 able to attract two other grant sources and one was from the Department of Commerce  
33 Technology Operations Program called TOP. That's in progress right now and the goal  
34 of that grant is to provide local governments whether it's counties, cities, municipalities  
35 to come up with or design and implement an interactive website transactional base so,  
36 that's that project.

37 Most of our projects have been seeded by our thirty million dollars but we've  
38 been able to leverage that with matching funds and other sources of money that are  
39 provided locally or regionally. Our total investment in this project far exceeds the thirty  
40 million dollars and that was our seed money to start with.

41 We've invested nearly two-thirds of that thirty million dollars in rural counties  
42 through grants and incentives. My role on the Commission was to make sure we didn't  
43 build a bureaucracy and spend half or more of our funds in staff and payroll costs. About  
44 two-thirds we have actually directly invested in direct centers.

45 We put three million dollars in the area of education, outreach and awareness  
46 projects. We saw the need right away to build the demands and to educate everybody

1 including the entire population in North Carolina. We have a very aggressive PR  
2 campaign and news releases and that type of thing and how we can benefit from high-  
3 speed Internet access and we put money into research.

4 We did a lot of surveys and studies to get some level settings and setting up where  
5 we are so we can measure where we need to go and how to get there. Most of the  
6 surveys we did we contracted out. We surveyed current infrastructure from all service  
7 providers and all technologies of high-speed access to the Internet and came up with a  
8 GIS program that was very impressive. The E Government Survey what the local  
9 government was doing in this area. E Health and Digital Literacy. How many people  
10 actually know how to operate a computer and how to have access? E Agriculture and  
11 that seemed to be a very important part of our process because agriculture is one of the  
12 mainstays of the economy of North Carolina has been and will continue to be I'm sure.

13 Our focus was not just on decisions around Raleigh and spread out through the  
14 state but it was customized and locally driven and driven throughout the state.

15 The ENC Initiative is what we became known as and we thought maybe it was the  
16 RAA but we found out that was trademarked by another group but we are the ENC  
17 Initiative. We have a broad base of support and our mission is a very plain one. Also  
18 there's a number of standing committee's about seven or eight in number with other  
19 people on it other than the Commissioners and that includes volunteers and people doing  
20 good work in all the counties twenty eight hundred of them. It's a broad base of  
21 involvement I guess is the keyword. What we decided to do to really be serious about  
22 getting this out to the local communities is come up with an initial grant program called  
23 E Communities. Our concept there was to take our eighty five rural counties appoint or  
24 designate an E Champion in each county a person and kind of a focal point to look at  
25 local needs and an implementation plan. We did that and provided seed money for there  
26 to be an E Community effort planning group committee in eighty-five counties. Then we  
27 provided implementation grants for those particular groups that saw a need to do  
28 something specific to address their needs for that county or other counties and we funded  
29 that program.

30 This will give you an idea of the widespread dispersion of our efforts and the E  
31 Community Program. These are the rural areas and these represent the urban counties.  
32 In each of these eighty-five counties there is a local committee made up of all kinds of  
33 people looking at their needs in that area for high-speed connectivity and how we can  
34 benefit from the results of this project.

35 The stars represent the very rural economically depressed counties in North  
36 Carolina and we provide a little extra money to help them along in their planning  
37 process.

38 One of our goals is to create a website and you can call anytime and go through  
39 lots of stuff and get information. One thing you can do on it is put down information  
40 that'll show you all the public access sites where anybody can go and get Internet and do  
41 whatever they need to do. One of our grant programs was to fund public access sites and  
42 get them up and running. You can click on that website and that'll take you to and put  
43 your county in and it will display all the options available in that county. There's the  
44 website four point one million hits. We encourage people to go to the website and get  
45 lots and lots of information. We have one click on there that will help you put your

1 telephone number and it will translate who is the Internet service provider that serves  
2 your area so you can contact them.

3 This is a public access project. This is the way a lot of our grants work and that is  
4 that they have the grantee and the applicant, put up some cash and some commitments  
5 and some manpower. Most of our grants are done that way. Another requirement we  
6 had was that the projects must be able to become self-sustaining. We learned many times  
7 from past experiences that you cannot use free money to start a program and expect it to  
8 automatically continue on but it's got to have a self-sustaining plan and we did.

9 We wanted to become a public access site. You go into a drugstore and while  
10 you're waiting for your prescription to be filled you go to a bank of computers and sign  
11 on and get on the Internet while you're waiting and learn how to use it.

12 There's a lot of public access sites throughout the state but we realized right off  
13 the bat that despite our goals we're not going to have 100% of all citizens in North  
14 Carolina having a computer and having Internet access. We knew we had a need for  
15 places that people could go and get online and work on the Internet. One of our goals  
16 was the tele-work centers and these are in rural parts of the state. They are high-speed  
17 centers and there's a number of things. Public access sites, business-learning sites  
18 connected to colleges, community colleges and universities. In some cases they're  
19 business incubators as well. That project is going very well and we'll probably try to  
20 expand those before we go away the end of this year. The tele-centers created sixty-six  
21 new jobs for small locations in 2002. They raised four point four million and part of the  
22 requirement to be funded as a tele-center they had to prove that they have a self-  
23 sustaining plan that when their funding goes away they'll be able to continue operating as  
24 they are.

25 Another focus was on training and training is very important to talk about.  
26 Broadband and high-speed access to the Internet. A small business was a big focus and  
27 we conducted twenty-five E Business Workshops throughout the state. Helping  
28 businesses using the Internet get into E Commerce and improve their revenue and their  
29 profitability. Digital Literacy Training Program is one of our grant projects. We really  
30 want to truly be and I believe we are all-inclusive in North Carolina. So, we focused on  
31 the unemployed, disabled, the elderly and people like that.

32 Now, this illustrates the way we're getting our goals met and having a fair amount  
33 of success. In our grant program we've had two-thirds of our thirty million dollars I  
34 guess twenty million dollars in one type or another grant whether it's public access grant  
35 or tele-center grant or what we call an incentive grant for a service provider to deploy  
36 high-speed access in rural parts of the state. When we formed the incentives committee  
37 we had to decide how we give this money out for the best good to accomplish our results  
38 and will do the best good in the best fashion. One of the initial debates was do we focus  
39 our money on demand, build demand and then service providers will put the technology  
40 out there or do we go the "field of dreams" approach and build supply and deploy all this  
41 stuff and then hope people will sign on and use the services. What ended up was that  
42 more than half of the money went into the supply area. We did fund some very good and  
43 innovative demand designed applications projects and their ongoing and doing good  
44 things. We felt that if we didn't have a technology deployed we could build a lot of  
45 demand and it would still take a long time for the service providers to realize the best

1 needs for the service providers to realize what needed to be done. That's the decision we  
2 made for our situation.

3 When we talk about deploying technology we had a lot of discussion about  
4 funding middle mile solutions or funding last mile solutions. We funded three pretty  
5 significant middle mile solutions and funded a number of last mile solutions realizing  
6 that in the middle of all these despaired interests we had to have some good backbone  
7 and a certain amount so we could have last mile access to all customers. One of the  
8 interesting things we did was once our focus was on getting this high-speed access to end  
9 users should it be on the high end or should it be on the low end and we tried to achieve a  
10 balance. In one of my preachings I did focus on solutions for everyone. Broad based  
11 solutions and not just the end customer.

12 The demand grants that we funded like the E Community Program, E Learning,  
13 and Distance Learning for the Internet. We funded several projects there the E  
14 Government use for that, tele-medicine, E Agricultural, E Commerce.

15 On the other side of the equation we funded four technologies and supply and  
16 access. Wireless and E Cable and satellite. We put money in each of these four areas  
17 and a number of them are still in process and being deployed. A couple of them have  
18 been done and have been very successful and some have not. There's no guarantee of  
19 success on any of these projects but we're willing to try a lot of different innovated  
20 things. We also funded public access sites and health centers.

21 This is kind of a wrap up of the North Carolina model. We want something and  
22 we have something that's comprehensive and that's the best we can do and I think we've  
23 done a pretty good job. Technology neutral and a public, private non-governmental  
24 partnership and I think that has worked very well to accomplish our goals.

25 It's a grass roots movement with motivation coming from local areas and I think  
26 that's one of the keys to the success we have and will continue to be ongoing after the  
27 Commission goes away. We've had active leadership and enthusiastic support staff and  
28 you have to have a support staff to do the kinds of things that we have done. We have a  
29 staff of eight or nine people in a statewide effort. We've done a lot of research to focus  
30 on what the needs were so we could put our money to the best effect. We tried to  
31 achieve a scale of occupations which can be replicated statewide and I think we'll be  
32 successful in that.

33 Finally, words of wisdom and three things that I would comment to you to keep in  
34 mind as you go forward in your efforts and your goals. Leverage new and existing  
35 resources and the keyword is leverage. There's a lot of stuff, there's a lot of money. I  
36 think you can find ways as we have, to do a lot of leveraging both in cash and existing  
37 resources. Make the future brighter. What I mean by that is that we found that we  
38 needed to have in front of us is our specific goals and our end result. When you get up to  
39 it the end result we're trying to achieve is to enhance the economic well being of  
40 everybody in North Carolina and that's kind of our goal. We do have specific goals on a  
41 roadmap of how to get there but we need to keep focused on that so that we can make the  
42 future brighter. I also highly recommend provide opportunities for all. We found in  
43 North Carolina by focusing on these three principles we come up with a program that has  
44 had some success and I think will continue to have success as we go forward.

1 With that I'll end my presentation and wish you the best of luck however you  
2 decide to approach these kinds of things and I'm sure you'll be successful. Keep meeting  
3 at 7:30, that's a great idea.

4 DELEGATE HOGAN: Thank you. We have some folks here from the  
5 Cumberland Plateau. I want to thank all of you that have come and shared your wisdom  
6 and your comments with us. I think there's a couple of things that are important to  
7 comment on. We talked about when we contemplated securitization that didn't happen  
8 and the reality is we may get the same amount of money but over a longer period of time.  
9 Then the question comes up how do we avoid something that would keep us from  
10 accomplishing what we want to. We can do this a couple of different ways, we could  
11 dish out ten million or so to various projects that are before us and go about our business  
12 or we can try and figure out what's the best way to allocate these resources so we end up  
13 with a more comprehensive plan that deals with a larger region. I think there are both  
14 ways of doing it and I was hoping one of the things we could figure out today is which  
15 one should we do and how should we go about it? We've sat here and listened to a lot of  
16 folks that know a lot about this and what they had to say for several hours. So, I'd open  
17 the floor to any comments from the Committee, what their response is to what they heard  
18 this morning or yesterday.

19 MR. WATKINS: Based on the income we got in this year, how much is  
20 available for this?

21 MR. CURRIN: Mr. Watkins, this Committee presently has four and a half  
22 or four point seven million carried over. I'm estimating about that. Our staff's current  
23 recommendation on the budget is that we'll have the same amount of money, five  
24 million.

25 DELEGATE HOGAN: So, ten million.

26 SECRETARY HUANG: I'd like to offer some observations on where we  
27 are today. I think we heard from a number of very good presentations and I'll summarize  
28 my own thoughts on those presentations. I think we heard three main themes come out  
29 from these presentations.

30 The first is that the broadband architecture that was put forward by Virginia Tech  
31 eCorridors but that there are some concerns about operations and service provisions and  
32 models on how to operate and how to survive, what is the best structure to run this. The  
33 public, private partnership may solve some of these problems.

34 The second thing is that the last mile problem we heard about every single  
35 presentation and the last mile problem has not been solved at all. The goal of this  
36 Committee and the goal of the Commission is to deliver economic development in  
37 southwest and southside and we have to worry about how we get these applications and  
38 how we get the broadband solution to these areas.

39 The third main theme is that the model that Virginia Tech presented as a manager  
40 which is to build it and they will come. The Committee I believe needs to address the  
41 supply side question and that is how you educate, how do you deliver the applications to  
42 the community? One such model was presented by RIAA North Carolina model which  
43 is holistic scheme.

44 There's one other point which has been alluded to and that is the financing.  
45 Securitization was contemplated and that's when you get all of the money all at once. If  
46 we have a four and a half million dollar stream of income going forward that is dedicated

1 to the project and securitization is not an option then do we have to look at different  
2 options rather than the big bang approach to solving these problems that are in front of  
3 us, which is how to get broadband to the communities. That is the overriding question  
4 that can help guide the solution to the other problems that you heard presented over the  
5 past two days.

6 Mr. Chairman, my assessment of the Virginia Tech eCorridors report is the first  
7 step in the process but is not yet a holistic approach.

8 DELEGATE BYRON: Mr. Chairman, I'll give my two cents for what it's  
9 worth. We've heard a lot of presentations that were excellent and we received excellent  
10 information that was provided to us and repeated itself as we heard throughout the  
11 presentations today and last night. I think things we were beginning to be concerned  
12 about ourselves. The biggest question we have and actually one that's to our advantage  
13 for the Tobacco Commission is having so many different scopes of work. Economic  
14 development in other areas that we're looking at and the sole mission is to revitalize our  
15 communities and make sure something's in place long term to help our economy to  
16 rebuild and grow and for our families to have something to solve and to look forward to  
17 for years to come and be able to sustain the communities.

18 The question of course, that goes hand in hand with not just if it is feasible to  
19 build. Anything is feasible if you have the money and the partnership to do it. The  
20 success of it afterwards is another story but we have to go back to the original reasoning  
21 and realize what we're doing and our mission. Putting in communications or having that  
22 available doesn't by itself provide enough stimulus for economic growth if the  
23 population that is supposed to use it isn't prepared to use it in relatively short order.  
24 Some of those bases we have in our rural communities even if they had it you have to go  
25 back to that mentality if they build it they will come. I don't believe government should  
26 take the risk of believing that if we build something our communities are going to all of a  
27 sudden be able to prosper and do things that we have not been able to do.

28 Now, we know in our work force training and all these other issues that  
29 technology is essential and it's something that our communities are going to need and  
30 they're going to need to get to a certain level, but the question is whether government  
31 needs to be in that private part of that economic picture and that's another question that  
32 needs to be addressed. I believe strongly in the public, private partnership and there are  
33 ways we can enhance those opportunities and help bring the private sector to the table  
34 and things to try and help businesses that are already in our communities grow, prosper,  
35 expand and do those things that would help create more jobs and more revenue. Looking  
36 at ways we can partner to make those communities more stable by infrastructure that is  
37 needed to make them grow and that can afford the businesses to be able to look more  
38 objectively at those areas and to bring competition that is needed. Putting investment in  
39 knowing your partners come to the same successful solution. I believe the direction we  
40 need to go is not one of stepping out on our own and stumbling along the way but  
41 looking to those that know how to do it best which has always been private industry and  
42 businesses that have a risk factor involved that knows that if a business fails they fail  
43 with it. Government comes along but the people that are paying for all of this are the  
44 taxpayers and not ourselves and we're not taking the same level of risk.

45 With that said I think part of our direction should be looking at partnerships and  
46 possibly looking at grants that we can use that will be similar to the North Carolina

1 Initiative. We all know that when we get everyone involved we have a better chance of  
2 success. So, with all that said I think if we start looking at the basic issues and take our  
3 economic development funds and looking at our base structure and seeing if these  
4 communities need water and other things because businesses won't come for the fiber if  
5 there's no water and sewer services. So, there's a lot of things we have to do to create  
6 this environment that's going to make all of this possible.

7 DELEGATE HOGAN: The question I'm trying to figure out, we do have  
8 a backbone or we don't have a backbone, what's it going to look like, will we have  
9 access, how expensive is it? If we have the backbone and an access issue that  
10 contemplates one set of facts. Do we have a backbone or do we accept that assumption  
11 or not?

12 SENATOR WAMPLER: Mr. Chairman, who knows? We've asked for  
13 the data for over two years and whether it's available and maybe an opportunity to lease  
14 it but at what price, we just don't know it. I think the North Carolina model is much  
15 different that the provider shared that data and that's one of the frustrations with this  
16 Committee. I guess over the last two years we've been receiving input, we don't know  
17 what that is right now. We always find another significant hurdle to cross when we try to  
18 partner. The short answer is I don't know and whether this Committee is in any position  
19 to determine that.

20 SECRETARY HUANG: Why don't we ask the  
21 representative from North Carolina how they got the data?

22 MR. WATKINS: How did you get the information where the backbone  
23 was?

24 MR. HAMM: Part of our early development work, we did a survey of  
25 what the availability of our infrastructure was. The staff people went to all the service  
26 providers that they could think of and asked them to provide information. Some would  
27 not do that and some would do it only under confidentiality provisions and things like  
28 that. For the most part what we were able to do was come up with a very GIS database  
29 of what services were available in different areas of the state. We didn't focus on let's  
30 come up with a map of the state where all the fiber is. We got some of that information  
31 but we really didn't focus on that. We found that maybe not more than 10 service  
32 providers in the past were willing to come up with that. Our focus was on what services  
33 are available, what kind of feeds are available regardless, fiber or copper or cable T.V. or  
34 satellite. We based most of our focus on service availability by local exchange, local  
35 telephone company exchange by addressing that.

36 MR. WATKINS: How much did you address on cost differentials  
37 between rural and urban? Is that the kind of thing that you feel that the same company  
38 can provide a different cost between communities?

39 MR. HAMM: That was one of the assumptions we had going into it.  
40 Some of it was not based totally on fact but we did look at, kind of a de facto objective  
41 was to have high-speed access with reasonable costs. The cost issue in our experience  
42 turned out to be mainly what we'd call the first mile.

43 How can you get to the Internet Pop in the best fashion? We found out that point-  
44 to-point services you have a very high cost but switched services have a lower cost. We  
45 looked at it and had studies done that said okay, you're a small business in this town  
46 here. To get a key one-speed access to the Internet it costs this in a rural area and an  
urban area it costs less. We found that the point-to-point technology distance is very

1 expensive the way it has evolved and that's not necessarily the only approach to it. We  
2 found out that in urban areas and rural areas that if you had an Internet Pop on the same  
3 location or could get to it without this distance problem then the price disparity goes  
4 away.

5 DELEGATE HOGAN: The folks that are hooking up to the backbone,  
6 what are their costs and how good is it? The folks from Lenowisco, are you satisfied  
7 with the fiber in the ground, are you hooked up to wherever you're going, how good is it  
8 and how expensive is it?

9 MR. SKINNER: Right now we are with our demonstration project and  
10 we're looking into bonded T-1 which is three migs a second. I think our cost on that is  
11 about fifteen hundred a month and that's allowing us to provide that service throughout  
12 the area. What we can do once we have a network in place, we can have a partnership  
13 with the Scott County Telephone Cooperative and had discussions with Bristol Utilities  
14 before, after we had the connectivity built in then we can transfer the data and the  
15 connectivity back to anywhere that we want to go or where we've got a network built  
16 out. Looking at existing costs or what's being provided by the existing provider. From  
17 our business model that appears that that's going to work. The beauty of the services is  
18 going to come into value of the services and not connectivity. We continue to see pricing  
19 going down.

20 MR. ELSWICK: I'd like to say one thing. Once we have our network in  
21 place we can obtain Tier 1 access. Washington is a Tier 1 city, Chicago, Atlanta. Once  
22 you obtain services from multiple Tier 1 locations you have diverse routes to the Internet  
23 backbone. At that point you have the ability to put out a bid for competitive pricing  
24 which you can take advantage of because competition drives the price. Right now we  
25 only have access from the Washington Tier because the only network out there is the  
26 Verizon ring in southwest. Once we have a ring that we can connect to Kentucky,  
27 connect Washington through Verizon a Tier 1 city. There's a Tier 2 city in Johnson City  
28 and a potential for an agreement to Atlanta. We can connect to three Tier 1 cities  
29 through southwest Virginia. That will allow competition to exist which will continue to  
30 drive prices.

31 DELEGATE HOGAN: To accomplish that is that a matter of negotiating  
32 access to fiber or does that matter? You've got to make some connections to make this  
33 happen or is that a matter of negotiating?

34 MR. ELSWICK: Well, both. These people have pricing standards and  
35 they, a carrier is a carrier. There's opportunities to share in the cost of the build out.  
36 Kentucky Data Link is building from Kentucky and they're entertaining the gap. The  
37 partnership of being able to build on that line you can share the cost. Scott County  
38 Telephone, Lenowisco, Kentucky Data. Now we each have 48 strands of fiber on their  
39 build out and we pay one third of the cost so we're able to leverage some money. We get  
40 this spread through our territory. They allow us to take a diverse route. Pennington,  
41 Duffield and we say we'll pay the difference and go Pennington and Jonesville and  
42 Duffield and that is our population centers in the Lee County area. That's a way to  
43 leverage your money. There's efficiency in building a contract for build out and then  
44 there's an opportunity to have contracts with service.

45 MR. WATKINS: I think Gamewood, how do your costs run?

1 MR. HOPKINS: We have what appears to be a different situation and we  
2 do buy traditional Telco Internet access. There is perhaps very good discounts at the Tier  
3 1 levels, D.C.'s and the areas that are Tier 1 Pop's but transport back to those, right now  
4 occurs through traditional Telco's. We purchase directly. It's very expensive. Bonded  
5 T-1 at a price that's a little cheaper for a government rather than an organization as a  
6 private entity. It gets to be quite large when you talk about three megabits and if you  
7 turn around and look at Internet 2 it starts at one hundred megabits which is far beyond  
8 the reach of anything we can do. Fiber to the home is never going to work if we can't  
9 put something behind it to connect them to the Internet. I do not believe the transport is  
10 there and that's probably the most expensive part of it especially in our rural areas. The  
11 point is it is available for larger metropolitan areas. You can get one hundred megabits  
12 and you can go up but to actually purchase into a small community is another story. For  
13 instance, we have Verizon in our area and we purchase from them directly. We have to  
14 pay the transport from the point of presence back to us for Internet access. We also do  
15 that with Sprint and some of our other Lata areas. But we have multiple Lata areas and  
16 each of those we have to go back to their point of presence. There is no aggregate, there  
17 is no transport to go across Lata without costs. We do not attract the big boys and we are  
18 not big enough to buy enough bulk to interest them to amortize perhaps transport costs.  
19 Large Pop's are literally unavailable to small areas and small entities because we're not  
20 aggregated.

21 DELEGATE WRIGHT: You mentioned access to the backbone. My  
22 question is do we have to have the eCorridor, the broadband cable from southwest all the  
23 way to southside or can you use other technologies to accomplish the same thing and not  
24 the investment in the underground cable. Do we have to have that or why? If we do that  
25 answers one question and if we don't what would be the options? MR.

26 HOPKINS: From my standpoint I think it is just one of the other options. I look at the  
27 possibilities and some of the things we're doing for the eDan Project to be able to  
28 aggregate across Lata that would offer transport that is cost prohibited across Lata. It  
29 could be an economic boom not just to me but to other ISP's that will be connected to the  
30 eDan Project. It's one way to go. If there is a way back to subsidize or arrange for a low  
31 cost transport such that the one hundred megabit two pipe can come in at a reasonable  
32 amount of money for us to distribute profitably and as a business entity that's fine. We  
33 are interested in a business case of anything we do. That's the bottom line for all private  
34 enterprise.

35 DELEGATE WRIGHT: Do you need a backbone cable in order to reach  
36 each community or does each community have high-speed technology? I know that  
37 some localities we've talked about satellites. Is it necessary to have the e58 cable run all  
38 the way or can different technologies take care of different areas so they all have access,  
39 I don't know the answer to that.

40 DELEGATE HOGAN: I don't know the answer.

41 SENATOR WAMPLER: I'll take a stab at what Delegate Wright said. In  
42 some cases he's right and some cases he is not. If unsubscribed capacity is available you  
43 can lease it if it's available, that can answer part of the problem. I think it's not  
44 necessarily the technology to what is available in the marketplace for the transaction.

45 Mr. Chairman, what I wanted to say was I think the discussions are at an  
46 interesting phase here and if the Committee would bear with me for just a moment. The

1 original question was how much money do we have to put on the projects and the answer  
2 is something like between four and five million dollars a year. Sprint and Verizon  
3 probably have deployed in their facility this morning four to five million dollars on the  
4 trucks this morning within their service areas that they're going out to fix or deploy. I  
5 think what we have to do is try to decide where we can have an impact. I don't know  
6 how in the world we can come up with thirty to forty to fifty million-dollar deployment  
7 of long haul fees even if we decided that's what we wanted to do. The Deputy Secretary  
8 told us a long time ago we needed to look for leveraging opportunities. I'd say there's no  
9 right or wrong answer. We don't have the ability or the expertise to decide what is the  
10 proper course for us to take in my opinion. That's why I think we need to keep it open-  
11 ended at this point and allow for creativity at the local level. We want to make sure we  
12 don't have, we want to make sure whatever we invest in can communicate to the eastern  
13 part of southside and to the far west of southwest. With only four million dollars a year  
14 to deploy at this point I think we need to be as creative as we can. Whether it's our cable  
15 providers or CLEC's or incumbents I do not subscribe to the theory that everything is  
16 okay.

17 We need a lot of competition, we need a lot of redundancy, we need better  
18 quality, better pricing. To say that our existing folks can take care of the load I don't  
19 think takes us where we need to be. We need additional providers for the redundancy  
20 alone. I also believe that DSL and cable modem have a very positive part to play in this  
21 market. Fiber to the home, DSL, cable modem may answer part of that. I know there's  
22 some communities and the Virginia Tech report probably would disagree or be in  
23 contraindication to what I'm saying but DSL and cable modem probably does meet a  
24 good part of the goals. You could use North Carolina as an example. There's not one  
25 right or wrong answer.

26 The last point I'll make is what has been deficient I think in everybody's  
27 presentation has been what this investment will do in transforming our economy, not  
28 only do we take care of our existing businesses. It's great to have a T-1 connection and I  
29 have 46k. and that's a great connection and the T-1 is real unique and don't pay a kings  
30 ransom for it either. I would say to everybody here send us a proposal and keep it open  
31 ended and let's see what we can do about leveraging and we will do the best that we can  
32 with the dollars that we have. I didn't mean to slight somebody's presentation but I think  
33 that's where we are today.

34 DELEGATE BYRON: Mr. Chairman, I've got a question for Mr. Hamm.  
35 You were talking about the North Carolina issue. You talked about the three largest  
36 communication companies coming together and signing some type of agreement.  
37 You've been talking about keeping the price pretty neutral in the communities. My  
38 question is how were you able to accomplish that goal and are we able to see the same  
39 type of thing in Virginia and any reason why we couldn't look forward to the same  
40 thing? Talking about Internet services and then opening it for other cable possibilities for  
41 faster needs for businesses and communities.

42 MR. HAMM: For the first part of your statement yes, the three Telco's  
43 partnered with the state on an agreement on principle to promote broadband development  
44 and application development throughout the state. That was done as a precursor to the  
45 RIAA. That was the start of a legislative effort to formalize that and that got that kicked  
46 off.

1 The cost issue is a very complex issue. As I said before, we want to have  
2 affordable high-speed access and that was and is our goal. To accomplish that you've  
3 got to have a pricing structure that's priced to the local end user. For thirty-nine ninety-  
4 five you can have five hundred twelve kilobit downloads and one hundred twenty eight-  
5 upload DLS service and that includes your ISP. For sixty-nine ninety-five you can have  
6 T-1 rate on the DSL. What we saw on our deliberations about the cost issue and the  
7 availability issue. We've got to get this stuff as widely dispersed as we can and not just  
8 focus on high end users but a broad dispersion of the technology.

9 DELEGATE BYRON: If this fiber is in place and everyone said it's  
10 there, the fibers in the ground and it's laying there waiting for whoever comes along to  
11 connect to somebody, wouldn't it be more profitable to the company to have some type  
12 of usage on it and the customer using it then just having it sitting there?

13 MR. HAMM: Certainly, that's any kind of service. DELEGATE  
14 BYRON: Then why can't it be more affordable to some of the areas that we're talking  
15 about that have to pay high prices?

16 MR. HAMM: You're talking about a lot of tradition and traditional  
17 pricing methodologies that need to be broken and looked at in a new light. On the fiber  
18 issue, Sprints got a very active fiber deployment in southwestern and north central  
19 Virginia. It's available for whoever wants it. Let me give you a couple of examples. We  
20 started an incentive Pop's for service providers eleven million dollars but for service  
21 providers eleven million dollars is what our pot of money was. We funded three middle  
22 mile solutions, fiber backbone solutions three of them.

23 The largest one we said we'll give you some money to do yourself but to get the  
24 balance of the money you have to have the last mile solution. With this infrastructure  
25 you're putting in will actually connect to the end user and all end users and not just  
26 businesses and that's one of them. They have yet to do that, they're looking for a partner  
27 for the last mile solution.

28 Another one was a small one in the western part of the state. We need fiber and  
29 we need the infrastructure and we need backbone. We gave them some grant money and  
30 told them come up with a plan and come back to us and then we can and they determined  
31 that most of their needs were already there. They didn't know that they had this kind of  
32 fiber situation with existing providers.

33 The third one is in the far western part of the state and we gave them a grant and  
34 they're coming up with a work plan today but they realized they needed to have a last  
35 mile solution there. The key is the last mile and not the last mile to high-end customers  
36 but to everyone.

37 SENATOR WAMPLER: What is the corporate policy in allowing other  
38 people to lease your unsubscribed capacity?

39 MR. HAMM: In certain areas and under certain conditions we do.

40 SENATOR WAMPLER: Where would those be?

41 MR. HAMM: One that comes to mind immediately is our DSL service  
42 that we have available and available to a lot of our customers. We allow that to be resold  
43 and we wholesale our DSL offering to ISP's or anyone that wants to do it and we partner  
44 with them. That's turned out to be a very good way of doing business because they can  
45 come up with their own channels. We price it on a wholesale basis. That's a broad  
46 based sharing or leasing of facilities that I'm aware of.

1 SENATOR WAMPLER: Is that a uniform policy?

2 MR. HAMM: Yes.

3 DELEGATE WRIGHT: Mr. Chairman, if we spend a lot of money  
4 putting cable and still have the same problem and not going the last mile and it's not  
5 profitable for private enterprise to do that now then we spend all our money on  
6 infrastructure where it seems to me we're wasting a lot of money. We have to put it  
7 where it will help us more.

8 DELEGATE BYRON: What is the corporate business you need? What  
9 would it take for a company to say we're going to do the last mile, put service in this  
10 area?

11 MR. HAMM: We work closely with economic developers and we've told  
12 them all that any company that wants to locate in any of our service areas we will  
13 provide any service they need.

14 DELEGATE BYRON: Have you turned away from any of them recently?

15 MR. HAMM: Not that I'm aware of.

16 DELEGATE HOGAN: One of the things that struck me and we heard  
17 from the folks in southwest and Lenowisco how they were able to negotiate contracts and  
18 were happy with their access. I heard just the opposite from the gentleman from  
19 Danville. I'd like to hear something about that from the people from Halifax or Danville  
20 about, why can the folks in southwest get easy access and we're having such a hard time?

21 MR. SHAW: I want to point out one thing. In Halifax I personally  
22 ordered a DS-3 to be delivered and I know that Sprint spent several hundred thousand to  
23 bring fiber OC-3 into this building and we're the only users of the OC-3. We pulled a  
24 DS-3 off of the fiber – and used it for a year and that was it. I know it's possible that  
25 they can do it and they jump through all kinds of hoops in a very easy process for us to  
26 get a DS-3 or even actually pull the fiber into this building over fifty years old. I know  
27 that process is easy. The one thing we're seeing now is if we don't or if we want to use a  
28 competitor to Sprint or if we wanted to use MCI or AT&T and we wanted to get a DS-3  
29 to our office, that's why we're paying this local fee which is ridiculous. I've priced out a  
30 DS-3 local loop and it was between three and six thousand dollars per month for the local  
31 loop. The DS-3 itself has come down in price to about ten thousand dollars. I remember  
32 the days when you had to pay at least thirty to forty thousand dollars and higher for the  
33 DS-3 and that's forty-five megabits. Now, AT&T and I think Sprint's pricing but it's  
34 down to ten thousand dollars per month for forty-five megabits. The local loop, if you go  
35 to anyone other than Sprint you have to pay Intra Lata to bring the service in. You've  
36 got to go from one Lata to the other. You've got to pay not only Sprint but a long  
37 distance carrier as well as the other incumbent. In Halifax if I wanted to pull a T-1 from  
38 Clover, Virginia which is in the Verizon territory to the Sprint territory not more than  
39 seven miles away I have to pay three people. Verizon, Sprint and someone like AT&T or  
40 MCI to do that.

41 This is how we solve the problem, the wireless technology. I know a school  
42 system in southside Virginia right now is looking at purchasing bulk bandwidth from  
43 Greensboro over thirty miles away and they can do it via wireless microwave and save  
44 big bucks. I'm not sure who the provider is but it's a Tier 1 where they're going to put it  
45 on the building and beam it back to an antenna in Danville and get this high-speed  
46 service without having to touch the fiber between the two facilities. Right now the FCC

1 has not jumped on that bandwagon yet to prevent such services from taking place without  
2 having to pay these intra Lata fees. You can use the wireless because it's thirty miles and  
3 it's totally doable even more. AT&T has been doing it for twenty or thirty years sending  
4 microwave across the United States. We know the technology works and it's totally  
5 doable right now. Thank you.

6 DELEGATE HOGAN: We've got some other folks that have just come  
7 in. Let's take about a fifteen-minute break and then we'll come back and hear from those  
8 folks. A fifteen-minute break is had whereupon the meeting continues, viz:

9 DELEGATE HOGAN: Good morning everyone, we'll next hear from  
10 Andrew Chafin.

11 ANDREW CHAFIN: Good morning, I'm Andrew Chafin and I'm the  
12 Director of the Cumberland Plateau Planning District. That encompasses Buchanan,  
13 Dickenson, Russell and Tazewell County's. Our goal is to have a broadband fiber trunk  
14 line to our four counties. Our process began in July, of 2002 and we prepared  
15 applications to the Department of Commerce and we joined with the Bristol, Virginia  
16 Utilities Board and we're co-applicants for this grant. At the end of May we received a  
17 grant offer of one million six hundred sixty-five thousand dollars. To bring the trunk line  
18 from Abingdon to Richlands through Lebanon. Russell and Tazewell County's pledged  
19 seven hundred thousand dollars in local matching monies for this EDA Grant.

20 During the year we did two independent studies at the cost of several thousand  
21 dollars, which would give us an idea of what economic benefits would come to us if we  
22 had the trunk line. My associate Larry Carr will expand on these studies and tell you  
23 what they revealed in so far as what our economic benefit expectations are. We  
24 partnered with the Bristol, Virginia Utilities Board to construct, operate and maintain the  
25 system and we're close to signing a final agreement. Should the system meet our  
26 expectations so far as economic development and any profit that we would achieve  
27 would go back to the two counties for further economic development. I'm well aware  
28 that information computing telecommunication industries have become a critical driver  
29 in the United States economy. Our rural areas don't have the resources to accomplish  
30 this so we beat the bushes for grants, loans and whatever else we can find and somehow  
31 we have to get the job done. We think the benefits economically will be tremendous for  
32 rural counties.

33 Now I'm going to ask Larry Carr to come and tell you what the two independent  
34 studies we did revealed in so far as the economy.

35 MR. CARR: Thank you very much. I'm going to concentrate on what  
36 broadband would actually mean to our planning district and I think to the whole region of  
37 southwest Virginia. The two studies we did I think pointed out the missing link in our  
38 economic development effort is easy and affordable access to high speed internet or  
39 broadband. Someone on the Committee mentioned earlier another type of infrastructure  
40 such as water and sewer. Most of the planning districts in Virginia have been working  
41 on that for the last twenty or thirty years and we've made a lot of progress but I think the  
42 missing link now is this broadband. We all know that industries that we're going to try  
43 to recruit in this century are not going to be resource based industries and they're going  
44 to be called brain power industries which means they can locate anywhere in the United  
45 States or actually in the world that has the infrastructure they need.

1           The studies we've looked at have shown that the early benefits may come from  
2 retention or retaining current industries. I think we're going to find out a little later that  
3 one of the industries in our area that this is true. Not only will allow people to stay but  
4 allow them to expand and that's very important. In other words job creation and we've  
5 been using this concept for this idea of broadband to recruit industries in our area. Just  
6 recently located an AT&T wireless and they're going to create four hundred fifty new  
7 jobs for their service center. They're being provided service now by Verizon but they're  
8 also looking for redundancy and I think that's where we come in in that situation. I think  
9 if you look at the study it shows that there is a direct link between technology and the  
10 wealth of an area.

11           In southwest Virginia and the Cumberland Plateau we have been losing these jobs  
12 and high paying mining jobs and our best bet to get better jobs now I think is through  
13 technology. If we get the broadband in our area we can do that. It also makes our region  
14 competitive with the rest of the world. We hear a great deal about this concept or the  
15 idea of the Digital Divide and it might be a cliché but it's true that if you don't have the  
16 access to high speed Internet then you're going to wind up on the wrong side of that  
17 Digital Divide and not able to create these industries in the twenty first century.

18           The study pointed out that if we could run this and as Andy said, first leg is the  
19 fifty-one mile leg from Abingdon to Richlands and in phase two we would go up through  
20 Tazewell and Bluefield. Then the third phase would be from Richlands to Grundy and  
21 make that move to Clintwood and back through our county. I think the first phase is  
22 going to be key to make sure that we can do it in a very cost effective manner and do it in  
23 a manner that will allow us in the future not to rely solely upon grants and contributions  
24 but even to be able to borrow some money to do a portion of the project. We're working  
25 with Bristol and I think they're going to help us on that.

26           We're also looking at some secondary benefits. We know that there are  
27 educational opportunities and government capabilities. We've been dealing with a group  
28 in Lebanon that's wanting high speed Internet service and they're paying what they  
29 consider to be an absorbitant rate for a half of the T-1 line. We think that when the  
30 Commission puts their money into this area helping localities to deploy the broadband  
31 and Internet services, that really is the way to go. Thank you.

32           TIM TAYLOR: Thank you, my name is Tim Taylor and I'm the Town  
33 Manager of Richlands, Virginia. I'd just like to address the end user type of application.  
34 We have a lot of concerns and the same concerns that Mr. Carr spoke about a few  
35 minutes ago. We also have a business that moved from a different state to the Town of  
36 Richlands and I'll leave most of my time to him. The Town of Richlands and also the  
37 Bristol Utilities Board and we have an electrical distribution system.

38           Our Town Council had the foresight to go ahead and provide us with local  
39 funding to do some fiber in town. With the deployment of this backbone from Richlands  
40 over to Russell County will afford us the opportunity to expand what we're already  
41 doing. We have a plant up from our eastern corporate limits to the center of town. We  
42 have built what we call a "fiber room" which is a separate room and what Bristol Utilities  
43 has actually and we're also talking about the water and sewer plant for a large portion of  
44 the county as well as parts of Russell County. So, we're putting most of that in place at  
45 least part of it to be able to monitor a lot of these activities. Our biggest concern is that

1 we would like to enlist businesses and industrial type customers that have a need that we  
2 have from our businesses in the county. Mr. Mitchell will talk about that.

3 In the Town of Richlands what is such a problem for us is the DSL and I think  
4 there is some areas in town that now have that available and that's been talked about for  
5 the last three years. The plant in town is so old that sometimes it will not support that  
6 technology within the local area.

7 Wireless, even though we're talking to some people now about wireless it's not  
8 there either so, the options for businesses such as Mr. Mitchell has is very limited. If  
9 that's the case then the cost is exorbitant for that type of application. I'd like to give  
10 the rest of my time to Mr. Mitchell President of Spandeck Corporation and he's going to  
11 talk about some of the specific needs for our area.

12 MR. MITCHELL: Good morning, I'm Bill Mitchell President and CEO  
13 of Spandeck Incorporated. We are a manufacturer of mobile cranes located now in 100%  
14 of our manufacturing capacity is in Richlands, Virginia over the last three or four years.  
15 We have several opportunities to continue to grow the business from that area. Primarily  
16 rely on support services for the products that we're putting in the field. We think we  
17 have a unique opportunity to grow in Richlands because we are a transition between the  
18 old and new skills that are required to succeed in the 2000's.

19 We came to Virginia in Richlands because of the manufacturing skill sets that  
20 were available and particularly because of equipment companies that were there. As  
21 we've grown in this area and taken advantage of those skills and the people there do a  
22 fantastic job on just about anything they undertake. What we want to create now is a  
23 customer support facility and that has to do with our primary function. One is to Fed Ex,  
24 UPS Overnight to support cranes in the field and elsewhere. We want to keep our  
25 equipment up and serviced as quick as we can. This not only is for dealers but to keep  
26 the parts flowing for those that need these. That part of our business is being moved to  
27 Virginia primarily as opposed to where it was in middle Tennessee. We have people and  
28 the storage facilities to do that. The second part of that customer support  
29 requirement is that while our cranes and our machines that sit outside job sites, we have  
30 two computers on every crane now and one is diagnostic concerning the engines required  
31 by the Federal Government and allows remote monitoring of that engine. The second is  
32 what most companies are putting on their machines now and in our particular case it's a  
33 computer that not only monitors the job and how people are using the crane but also has  
34 a black box on it and that allows us to record what they've done. Traditionally in our  
35 business folks would say I was lifting up something too heavy and I broke or turned the  
36 crane over. So, when these things happen we have this box now that can tell us what  
37 actually happened. So, we need one hundred megabits at any one time to be able to go  
38 on the Internet and down to a satellite into that crane. I can have contact with any crane  
39 through the computer and monitor it by plugging into it.

40 What we're using in Virginia now at the Richlands site is T-1 that is linked  
41 directly back to our corporate offices in Nashville. That T-1 line costs us anywhere from  
42 twenty eight to forty thousand dollars a year and doesn't have the capacity that we can do  
43 that. We cannot do that. We also have as far as the DSL and the modem, no electronic  
44 contact with that site at all. Right now we can't even have drawings, complex documents  
45 or anything to that location. We're bugging the wireless people now trying to get this  
46 worked out. I think you're looking at a situation where we can transition a lot of people

1 that are in old type industries and into new skills and it will pay to get them transitioned.  
2 Right now while other infrastructure things are there and we have no intention of leaving  
3 the city. For us to continue to grow in where we see our business going we have to have  
4 these type of opportunities. I'll take DSL or take whatever I can get so we can be the  
5 most productive we can and where we can continue to grow the business. If we do we're  
6 going to need more bandwidth than we currently have. I suspect that cable modem and  
7 DSL will work well but I don't think it is the ultimate solution.

8 MR. WATKINS: Wireless won't work for you?

9 MR. MITCHELL: We're working a temporary nature and especially the  
10 type of situation I was describing. In the four years we've been there our costs have been  
11 between twenty-eight and forty thousand dollars a year for T-1. I'll take wireless but it  
12 won't work long term for customer support and the capacity will not work for that  
13 expansion at Richlands. Thank you for your time.

14 DELEGATE HOGAN: We can now hear from Mr. Walden from  
15 Verizon.

16 MR. WALDEN: Good morning Mr. Chairman, Keith Walden with  
17 Verizon. I wanted to discuss the backbone and as was said yesterday the backbone  
18 already exists. I think one of the things that might be done to reduce the cost structure of  
19 what several of the individuals have talked about is probably for the Commission or Sub  
20 Committee to use your clout and probably some of your money to see about the expense  
21 of bringing a large pipe from the Tier 1 provider into southwest Virginia. Verizon has  
22 two Pop's in southwest Virginia. Use the economy of scales to where you take the front  
23 end of a large organization so there's volume coming to us so that our bean counters  
24 when they look at it they're not looking at individuals on an individual basis but they're  
25 looking at the southeast region as a conglomerate of which that price points down. The  
26 capacity coming into those Pop's would probably not be enough today to meet the needs  
27 of what's in this room but with the Commission working with us and some other  
28 providers I think we can create one peering point or multitudes of points which reduce  
29 the cost structure of bringing internet access to southwest Virginia.

30 Another thing was mentioned with the Lata. We're held by the regulations so the  
31 transport of information across Lata still has to go through and meet those requirements  
32 through some other outside entity even within Verizon but those things can be worked  
33 around. I think that solution probably created in the region that would help reduce costs.

34 If you look at it or that large pipe is brought in some kind of way to a particular  
35 location then by use of the commercial arm of what exists today you're talking about a T-  
36 1 ATM connection now being four hundred twenty dollars. There would probably be an  
37 additional charge onto that structure to account for the Internet access and that's what  
38 happens today. But on Network Virginia today for a commercial client the T-1 basis four  
39 hundred twenty local loop portions and seven hundred forty-five dollars for the Internet  
40 access portion. That equates to the backbone and the charge into the Internet. Again,  
41 economy of scales are working I think that price probably can be greatly reduced.

42 DELEGATE HOGAN: Are you suggesting that you are prepared to put  
43 forth a proposal to do that?

44 MR. WALDEN: I can go back and do that but I guess I should clarify  
45 this. I'm more of a technical person and I have to go back and deal with the lawyers and  
46 bean counters. I think we can work something out.

1 DELEGATE HOGAN: Part of the frustration is a lot of these folks have  
2 done this a lot longer than I have but we keep hearing what can be done and what's  
3 possible and we're at a point now we want to do something that will deal with the issues  
4 that we've been talking about for the last day or so. So, I guess I'm asking you folks or  
5 telling you that we need to go ahead with this. If this is part of the solution let's get a  
6 substantive proposal and deal with it. If we can't do that then that's not part of the  
7 solution. So, I'm asking you folks what can we do to do this? If you can or if you're not  
8 willing to then don't tell us you can do it. I'm not saying you're not willing to do that.

9 MR. WALDEN: I understand where you're coming from and there's a lot  
10 of pieces that go into that puzzle and some I control and some I do not, and some that we  
11 as an industry control and some we don't.

12 MR. OWEN: Mr. Chairman, I'll ask a little different question.  
13 Essentially the Virginia Tech proposal perceives a spider web about our publicly owned  
14 fiber in the ground like an interstate highway. Open access to any downstream providers  
15 that want to tie into it. As I understand your presentation last night you were suggesting  
16 there's no need for that duplication because it's already corporately owned fiber pretty  
17 much running in the ground and some areas need to be brought up and we should take  
18 advantage of what is out there. As I listen to those sort of downstream providers I was  
19 concerned that these corporately owned fibers have some exclusivity to them and they're  
20 not open access. How do we get the open access and availability to this, to the Verizon  
21 and Sprint owned pipes comparable to what we would have if we had a public utility pipe  
22 in the ground?

23 MR. WALDEN: I want to say that what you heard today is not a matter of  
24 that, it seems like everything comes back to a matter of price. The question to me is what  
25 can we do about price. I think if everybody had access at the price they wanted the issue  
26 of having fiber going from one place to another would disappear. The bandwidth exists  
27 but it's the cost of the bandwidth. OC-12's, which is six hundred twenty-two-megabit  
28 pipes, run throughout the network back to the Internet.

29 MR. OWEN: It's not an issue with you as far as releasing capacity to  
30 competitors or any of those exclusivities?

31 MR. WALDEN: I can only say right now that I think the policy within  
32 Verizon we do not do any type of dark fiber type selling. DELEGATE  
33 HOGAN: Why is that?

34 MR. WALDEN: I'm not sure if I can address that. I'm the technical side  
35 of the house. I'm sure it's a business case.

36 DELEGATE BYRON: I think the consensus here that we're trying to get  
37 out is that there should be some excitement because we're customers and we have a  
38 unique opportunity in our region to make a difference and do something. You have  
39 identified the technology and a big part of it. I feel like we're pulling teeth to say talk to  
40 us like customers, bring some proposals and tell us how we can partner together and  
41 leverage funds to provide all of this and make all this happen. Now, if you need to go  
42 back to the drawing board that's one thing but what I'm trying to say is show us what we  
43 can do and we're ready, we're waiting and we want to see what it is. You're the provider  
44 and you have the fiber in the ground. We don't want to walk away from here without a  
45 solution. I think what we're looking for is a solution to be presented to us.

1 SECRETARY HUANG: In other words, and it's really a question of  
2 economics. If you were able to provide us or say one hundred thousand customers and  
3 five businesses in Danville that wanted access tomorrow, would you be able to provide  
4 that at a more cost effective price, hypothetically?

5 MR. WALDEN: Hypothetically, yes.

6 DELEGATE WRIGHT: Following up a little bit on what Delegate Byron  
7 said. I think we support or the time now is for action. Rather than us leaving here today  
8 and talking about a lot of issues and so forth and go our separate ways and no action  
9 taken, if we formed a Committee to deal with providers and try to work out something. I  
10 think we're at a point where can you provide it at a price and help figure out a way to get  
11 the demand and supply together. If we can get those two together and that's just a  
12 suggestion but I think that's where we're headed or we should be in that direction.

13 DELEGATE HOGAN: One of the things that troubles me is and one of  
14 the things that you said is that with some effort from us we can buy down the cost to T-1  
15 access. You're not willing to share that, if we do it for you your corporate policy says  
16 you won't share with anyone. We want to buy down access from Verizon, Sprint or any  
17 other people.

18 MR. WALDEN: I guess what I'm trying to say in my comments is that  
19 from our perspective or from a business perspective if we bring an oversupply of access  
20 into the region without any customer base or without knowing what the customer base is.  
21 I have issues everyday dealing with my customers in going through the internal workings  
22 of my company today. Say a customer that wants to do a, b and c and the bean counters  
23 get down to be realistic and want to know how many customers are you talking about and  
24 what is it on a monthly basis or yearly basis because they're looking at the financials to  
25 see if this thing will work. So that when you throw something out and we want to do  
26 something in this region. You looked at and they're saying we're already doing  
27 something in this region and access does exist. The way they look at it the pricing is  
28 competitive. It's a very unique paragon in trying to work through that relationship  
29 internally to say prices need to be reduced and solid information is what is needed.

30 DELEGATE HOGAN: Thank you. Go ahead Kelly.

31 MR. SHAW: I've been listening for a while trying to pay attention instead  
32 of falling asleep and I did attend the last meeting of the Tobacco Commission that was  
33 held at Virginia Tech and it looks to me there's three issues here. One is the backbone  
34 issue. I cannot perceive that the Tobacco Commission and really anyone other than the  
35 incumbents providing this backbone. Why build a second or a parallel Internet when the  
36 folks from Verizon and Sprint have that capability to manage it. They can supply you  
37 with any amount of bandwidth, they can route it wherever it needs to be routed. Let  
38 them provide you with those things to provide business access.

39 Where I see the Tobacco Commission able to help is providing monies for, I think  
40 you guys call it MSAP's but locations and providing to help construct that. Let the  
41 Verizon's and Sprint bring in the fiber and turn up the amount of bandwidth that would  
42 be a demand. When they come in and set electronics to do that they're going to set a  
43 piece of electronics that's capable of OC-3 to OC-12. Just don't come in and set  
44 something for T-1. You bring in whatever's necessary.

45 Bristol is currently going to have a full DS-3 turn up and that's running over  
46 Sprint's local loop. Yes, we pay for that and we pay pretty well. We do appreciate it.

1 You pay for the bandwidth on top of it and we have noted that pricing. But you could  
2 help build locations and then the legislature gave a vehicle for local government or  
3 political subdivisions to be able to construct that last mile. It doesn't have to be the local  
4 government and it could be the ISP or a provider that wants to put the DSL out here.  
5 Have a place for them to have access to this bandwidth. If they want to get the local loop  
6 from the Verizon's or Sprint's or from anyone else then they can do so. I think that's  
7 where you need to concentrate your money and the last mile because without that end  
8 user it's fruitless to look where the interstate is.

9 You've got to have the off ramps and you've got to be able to get the off ramp to  
10 the street with the driver and the driveway. That's where I feel you should go. It goes  
11 back to the partnership and I feel like there needs to be a partnership between local  
12 government and the private side and public side and however southwest and southside.  
13 And don't forget this is not going to be just pushing fiber to the home or the business it  
14 can be wireless. There can be many different situations to use wireless but there's places  
15 in southwest Virginia where you'd be lucky to use wireless from house to house or street-  
16 to-street, it's not conducive right now.

17 The DSL, there's got to be a demand and there is a demand. 52% of our telephone  
18 customers are taking high-speed Internet but it has to be competitive. If it's not  
19 competitive nobody's going to take it.

20 MR. WATKINS: What's your pricing?

21 MR. KELLEY: Do we need to talk about that? We don't do the DSL.  
22 Fiber directly to the home single fiber converged service and we provide cable, telephone  
23 and Internet.

24 MR. WATKINS: What does your fiber cost to the home?

25 MR. SHAW: For the Internet part of it five twelve down two fifty six up  
26 it's twenty-six dollars and thirty-six cents. If you have any questions I'll try to answer  
27 them but these folks from Verizon and Sprint, you don't have to lease the dark fiber from  
28 them, let them bring the fiber in and see what the demand is and let you take it out or let  
29 them help you provide it, it's not a difficult model.

30 DELEGATE HOGAN: Let's hear from Mr. DeFalco now.

31 MR. DeFALCO: Mr. Chairman and Committee members, thank you very  
32 much. I didn't plan on speaking and I don't have a presentation put together but after  
33 hearing what I have heard I just wanted to come up and tell you a little bit about my take  
34 on this.

35 I'm with the Appalachian Regional Commission and I'm the person that is  
36 running the initiative to try to bring broadband out into the rural areas of Appalachia in  
37 thirteen states. We put together a program entitled "Information Appalachia". What that  
38 program is trying to do is to support pillars that I call information and tie them in with  
39 what you're trying to do here. The first one is access to the infrastructure. You  
40 can't do it if you don't have the pipe there to make it work. It's critical to get the pipe out  
41 and that's the primary goal of what you're trying to do is figure out how to do that on an  
42 economical viable basis that works.

43 The second part and we thought through this. It really doesn't do too much good  
44 to try to bring the pipe out there when people don't know how to use it and don't know  
45 what to do with it. Then you have training and education and you're trying to get access

1 of the community but you need a strong component of training and education to tell  
2 people this is what you have and this is how you use it and how it works.

3 The third component is that because the Appalachian Regional Commission is  
4 about economic development and we've heard so much about economic development.  
5 The third component focuses on eCommerce and how we get businesses in rural areas to  
6 understand that they can grow the business, expand and get new lines of business and in  
7 some cases if they don't start using access correctly they're going to go out of business  
8 because there will be technological developments that competitors are taking advantage  
9 of and they are not.

10 The fourth component was trying to get good jobs or high tech jobs into the rural  
11 areas and we've heard a lot about that as well. Those are the four things we're trying to  
12 do.

13 I understand this is positively an economic issue and it's a question of how do you  
14 make this work. The incumbent telephone companies right now have the ability to do it  
15 and in some cases they have the capacity to be able to do it. What's missing is the  
16 business case and how do you do this from an economic standpoint that makes the money  
17 because these companies are not going to be able to grow and invest additional dollars in  
18 infrastructure without having a good return. So, you need to have a way to do it.

19 Unfortunately when you're dealing with the rural areas you're dealing with higher  
20 costs, lower densities, lower demand and thereby not making a business case to make  
21 investments make this happen and that's where the government steps in and says okay,  
22 we're going to try to provide some kind of a subsidy and there are dollars that need to  
23 flow into this to make it work.

24 Providers are not unwilling to do it but we have to find a way to give them a  
25 financial incentive to go ahead and do this. That's where the tobacco money could be  
26 used for this purpose to help make it work.

27 There is an excess of fiber nationally but there is not necessarily an excess of fiber  
28 capacity in rural areas. On a national scale there is a lot of dark fiber and a lot of  
29 distressed telecom's that have put in facilities that are no longer being used but they  
30 didn't do it necessarily in rural areas. Where you have the excess it's not really where  
31 you need it. We need to find a way to get access to the infrastructure. We're finding  
32 more and more wireless applications are taking root. Some states are looking at the  
33 wireless backbone. Somebody asked a question is there another way to do it and there is  
34 a way of doing it through wireless depending on the topography. Point to point, line of  
35 sight wireless. Wireless may be lower in cost structure and it doesn't solve the last mile  
36 issue and that's a critical issue.

37 In North Carolina there are portions that still are without access that they're  
38 looking for. They are looking at other places in Virginia and elsewhere and looking at  
39 additional funding sources and the subsidy is going to be required to make this work for  
40 rural areas. North Carolina has thrown about four times as much money as we're talking  
41 about right here. If you're looking at ten million dollars over two years. They started out  
42 with a thirty million dollar grant and they got another seven hundred thousand dollars  
43 from Tops, they got two hundred thousand dollars from ARC. You need to be very  
44 careful what you spend your money on because if you make the wrong choice you're  
45 going to have something that really doesn't work that well and you're going to have to  
46 think it through very carefully.

1           You need to focus on the last mile and there has to be a strong component in  
2 whatever you're doing on community understanding or outreach, education and training  
3 so you don't bring people in and then people don't know what to do with it once it's there  
4 because if you end up going down that route you're not going to get the bang for your  
5 buck.

6           MR. WATKINS: Is the ARC going to put money into this?

7           MR. DeFALCO: ARC funnels money to the states and that's meant to be  
8 spent in the ARC counties. The state decides pretty much through the Governor's office  
9 where they want to spend their allocation of funds within the state. If I can be of any  
10 further assistance please let me know.

11          MR. PAUL ELSWICK: My name is Paul Elswick. It seems to me we  
12 have some factors coming together here in this meeting that struck me with the gentleman  
13 from Verizon, Mr. Kelley and his comments. I'd like to refer to the Virginia Tech report  
14 and there's two points.

15          Virginia Tech, if you look at it straight down the diagram it shows there's a  
16 network but if you bring it down and look at it from the edge there's a spider network at  
17 the local level, the distribution network to the population centers and then you have the  
18 long haul portion. It would seem that Verizon or Sprint would fit the long haul portion  
19 and it's already in place and ready to go. And the issue is cost.

20          Being a small businessman the last thing I want to do is write a check. The first  
21 thing is do I have the power and the force to twist arms. In the Lenowisco project the  
22 reason we don't have trouble with access is that we utilized to help build out this network  
23 we can reach the points of presence of three different Tier 1 providers. We now have  
24 competition and the pricing takes care of itself. We put out an RFP and asked for a  
25 competitive quote. That's arm-twisting and they see that, Verizon sees that as a  
26 possibility of having that territory in southwest Virginia. The next thing is you have the  
27 purchasing power of the state. Those are two relatively low cost items and if you can  
28 keep those up and come back and then maybe subsidize slightly with the Tobacco  
29 Commission funding. I would suggest that we challenge the major incumbents to come  
30 up with a proposal to your staff in this direction. This gives you long haul Tier Virginia  
31 Tech and continue with the Lenowisco's and Cumberland Plateau's for the spider for the  
32 local region. There's just several prospects here that come together and that's really the  
33 solution.

34          DELEGATE HOGAN: I've heard we do have the backbone and we don't  
35 have the backbone. I'm trying to figure out do we or don't we have access to an adequate  
36 backbone. The Tech report talks about need speeds somewhere between two and a half to  
37 ten gigs. I think we better at some point define how big a pipe do we really think we  
38 need. What is the level or amount of broadband that we need? North Carolina to a  
39 certain extent has been satisfied with dial up connections in some place and that's  
40 different. Maybe I'm the only person to worry about that. I'm trying to figure out how  
41 much broadband do we need?

42          MR. ELSWICK: The answer is you don't want to put yourself where you  
43 can't scale. You don't need two and a half gigs today but you're going to need it  
44 tomorrow. You don't want to provide a solution that's not to scale. Everybody is right,  
45 we don't need DSL today but the day after tomorrow we're going to need two and a half  
46 gigs. Just like Microsoft, the things they have envisioned to operate over the Internet.

1 You've got video and all that. Yes, you don't need it actually at this point but you don't  
2 want to build something that's not to scale where you can't do these things.

3 MR. WATKINS: What's your cost per customer?

4 MR. ELSWICK: Depending on the products and the home, twenty-nine  
5 ninety-five for the Internet. Keep in mind the Internet will not support this network, it  
6 has to be bundled services so you have to have video to go with it and voice over IP so  
7 you bundle it and the customer will stay and the whole bill runs one hundred or one  
8 hundred five dollars a month.

9 MR. WATKINS: What's the cost to you per customer?

10 MR. ELSWICK: One thousand six hundred dollars a drop is our planned  
11 cost right now. That price fluctuates.

12 MR. WATKINS: Does that include the fiber from town to town?

13 MR. ELSWICK: No, not the fiber from town to town, only the  
14 distribution, the electronics and the drop.

15 MR. SKINNER: That's called point of presence. After you've got the  
16 mesh network in place.

17 MR. WATKINS: The Tobacco Commission would pay for the mesh  
18 network and your cost is one thousand six hundred?

19 MR. SKINNER: We had some agreement with the local incumbent to  
20 provide fiber capacity. The MSAP as Jim Kelley suggested.

21 MR. KELLEY: You're talking about a backbone, where fiber is available.  
22 Neither Verizon nor Sprint have a big fiber bundle going down a side street or out in the  
23 country. It's along interstates or maybe major throughways. Just let them get that pipe in  
24 and let some other entity take that out and disperse it. Whether it be the cable company,  
25 they need Internet bandwidth and that's what they're talking about. They have the fiber  
26 and the copper. You're looking to get the end user the ability to use the Internet. I think  
27 that's what you're talking about. Verizon and Sprint will continue to deploy the DSL. I  
28 think we're missing the boat here. You're asking where is the backbone and I don't know  
29 that we really need to know where it is. Find a central location or locations in the county  
30 southside and southwest. Let them bring it to them. They can get it there and they don't  
31 want you to build this miles and miles away. Look at where it can be located and then let  
32 local government provide and industry will move it around. Don't forget about the cable  
33 company, they can play a big part. We're not talking about telephone and cable T.V.  
34 what we're talking about is the accessibility of broadband service.

35 SENATOR WAMPLER: I guess there comes a point in time when we're  
36 trying to figure out what little bit of cash we have. It seems to me that southwest is more  
37 focused on being a provider where southside at this point is leaning more towards  
38 development and deploying infrastructure rather than a long haul piece or a combination  
39 of that. I don't know what's right or wrong or what is the better investment but I would  
40 say that for our first task we need to disburse dollars and get on with our business. I don't  
41 know whether Sprint, Verizon, cable providers can solve the problem. What we cannot  
42 do is act on something that's not before us. We have to have a proposal before us. I'll  
43 just say that I find it phenomenal that we're at a point that we're having discussions with  
44 Verizon and Sprint and they're willing to participate at the level that they are and there's  
45 been a huge change in corporate philosophy to date. If we've done nothing more than  
46 that I think we've accomplished something.

1 My point is that we're going to meet on the 10<sup>th</sup> of July and we ought to have  
2 another meeting before that and try to corral all of the proposals and see what we have. I  
3 know from the southwest perspective we have three very hot proposals that have jobs on  
4 the other end of it and that's our mission. That's what we ought to be doing. We realize  
5 we're going to have to face this and this is just the seed that gets us started and we can  
6 learn from our first investments as to what we might do in the future. We can spend  
7 another two months meeting every day and not come to an agreement. We should allow  
8 creativity to try to enter in this and we should be prepared to make a recommendation to  
9 the Full Commission on the 10<sup>th</sup> of July.

10 SECRETARY HUANG: I think we need to start out how we can move  
11 forward from here. I've been writing some notes to myself and I've been thinking or  
12 starting from the goal of what we need to come up with. How we're going to move  
13 forward from here. We need to come up with a plan for spending the amount of money  
14 annually or whatever the final amount is. We're talking about developing this broadband  
15 for southside and southwest Virginia and I think everyone generally agrees with that. To  
16 that end there's a few principles and outcomes that the Technology Committee has to  
17 consider. One is technology neutral, two is leverage the private sector, three focus on  
18 high-speed access, four is development of applications.

19 So, if we are to take Delegate Wright's suggestion one way to do that is to split  
20 this group into two separate groups and one would have a grant program and this would  
21 be not only responsible for developing guidelines but how to disburse the funds and  
22 developing or exploring a private/public partnership somewhat like North Carolina has  
23 done and developing a clear vision of what we're trying to do. When we look at the  
24 Virginia Tech report comparing that with the end goal and I understand we might not  
25 have the money right now to get where the end goal is.

26 The second group to look at grass roots and local action and how does that  
27 education and training become a stimulus for the demand that we need in order to affect  
28 the cost effectiveness of a broadband solution.

29 MR. OWEN: Mr. Chairman, number one, even if we wanted to go out to  
30 build a broadband backbone we don't have the money to do it, there's no way we could  
31 do that in that process. So, we're in some effect forced to rely on the providers of the  
32 services that are out there. It also seems that whether it's ISP's or educational institutions  
33 or medical facilities or businesses and whether it's southwest or southside, folks that have  
34 an immediate demand for higher level broadband service then we currently have  
35 available. In each case there's at least one missing link somewhere in the whole  
36 communications challenge they can get their hands on at the right price. It seems to me  
37 the best use of our limited funds might be to figure out let those folks come forward with  
38 a proposal and we'll figure out how to assist them in covering that missing link. It may  
39 have the last mile covered or the backbone covered but it's that MSAP that's not there in  
40 one case. Maybe the last mile is not covered in another case. Let these folks that have  
41 that existing demand come forward and say we can do this and this but we need a little  
42 help here and a lot of help here and make our judgment in accordance to what their needs  
43 are in the field rather than start from top down directing how people do things.

44 DELEGATE HOGAN: If you take a hospital and they're on Network  
45 Virginia, Verizon or Sprint's and they're hooked up and they have it and their comment is

1 they don't have the finances or the quality of service to deal with adequately for them,  
2 how do you respond to that?

3 MR. OWEN: In a perfect world with all the money in the world that might  
4 have a priority we could fund but if they have something that works to grade b and not a,  
5 I'd say that's a lower priority than someone somewhere else that has nothing and can't do  
6 anything. I don't think we can get to the perfect state for anyone and I may be wrong on  
7 that. I think you have to judge the priorities and stack those requests up against all the  
8 others and see where we spend our limited funds. We've got to respond to the creativity.  
9 Some have suggested to let people out there do the things that they're doing and if  
10 somebody wants to change the game somebody like Gamewood or Halifax, let them that  
11 have already done that talk with the Sprint's and the Verizon's and figure out what  
12 everybody's willing to do and what's missing and we'll deal as best we can with the  
13 missing link.

14 MR. WATKINS: If we're going to make grants I think we need to tell the  
15 people, come back to us and tell us what you need and maybe we can send you to work.  
16 Campbell County's got some folks here and they've got places in their counties where it  
17 won't work. Other people have problems in certain parts of their counties where this  
18 won't work. But as far as the missing link, we might step in and help them until the last  
19 link but we need to let them know that. I don't think at this point in time most of the  
20 people in those counties realize that they need to apply.

21 DELEGATE HOGAN: That's correct.

22 MR. WATKINS: As far as going and giving all the money we have I think  
23 we or it's incumbent on us to let everybody know the opportunity is there.

24 DELEGATE WRIGHT: Mr. Chairman, I would agree and I think it's a  
25 good idea to get the input back to us from people who provide these services and have the  
26 expertise in that field. That's what I was thinking about.

27 DELEGATE HOGAN: The secretary laid out a plan for how we might  
28 look at this process. I think you're right Senator Wampler, we've got to start doing  
29 something and we probably need some process to look at. Here's a suggestion for a  
30 proposal, what do you folks think about that?

31 DELEGATE BYRON: Mr. Chairman, I've talked to you about that and I  
32 think that there's a good starting point there and we need to have some details. I think the  
33 providers should come back to us and see how much or how many miles we're talking  
34 about concerning the distance of each of these areas so that we have some idea of this  
35 total concept. Whether you're doing this piece meal from here to there or whether we can  
36 get something going. When you look at how we can leverage funding so all areas will  
37 benefit from it and make sure that our whole mission is coming together. Without putting  
38 figures together and agree on a concept of what direction we need to go. We need to have  
39 a partnership to get there but we've got to get the details worked out and we need to do  
40 that as a body.

41 DELEGATE HOGAN: Concerning Sprint, are you all willing to tell us  
42 where you're willing to provide access to your backbone and what kind of price  
43 structure?

44 DELEGATE BYRON: In the North Carolina initiative, can you identify  
45 what's there and how you or map out what's there and how it's deployed?

1 MR. SPRADLIN: As Jon mentioned, the companies got together with the  
2 people involved and determined what resources were available in all of those areas.

3 DELEGATE BYRON: Could you do that with southside and southwest?  
4 Do we have a roadmap saying how they can connect?

5 MR. SPRADLIN: We have provided a map that shows our, we have 90  
6 central offices.

7 DELEGATE HOGAN: This tells where you've got fiber and it doesn't tell  
8 us who can get on it and where you're willing to lease bandwidth and were you or not?

9 MR. SPRADLIN: I know that we are willing to lease bandwidth anywhere  
10 that we can provide services. We compete throughout Virginia not only as Sprint local  
11 telephone but we have the other divisions of Sprint that provide broadband services. We  
12 are a participant in Network Virginia. One of our people in the Network Virginia  
13 organization actually works with administering that whole network. It's a matter of us  
14 sitting down with somebody trying to come up with where is everything. We're willing  
15 to sit down and try to work with these areas to promote economic development. It's in  
16 our best interest if we have consumers down there that want our services. Jon, did you  
17 have something?

18 MR. HAMM: I think what he said is exactly right we need to know where  
19 you are today. From the standpoint of services, technology and infrastructure you need to  
20 set specific goals where you want to try to get to. I would encourage you not to focus on  
21 a goal being more fiber or a goal being a DSL or the goal being wireless. The goal  
22 should be application driven and consumer driven for the benefit of all. Once you set  
23 those goals then it's a matter of how we get to those goals. Then you bring people into  
24 the room and we're very willing to be a part of that, what goal or what role can you play,  
25 what is your proposal for accomplishing this goal at this location and what are you going  
26 to charge for it. There's two things, have specific goals where you want to try to go to in  
27 southwest and southern Virginia and then a way to get there. I would suggest getting all  
28 kinds of people from different view points and different service providers, interested  
29 parties, educational, healthcare and whatever. Then you need to work it out. And once  
30 you do that then you've got to decide how you're going to use your money and you can  
31 do a lot with that kind of money and put it where it needs to go.

32 One thing I need to mention about the fact that when we were giving incentive  
33 grants to different providers to do different things with we put out an RFP and that was a  
34 very formal concept. Our goal was to have the high speed Internet access and who can  
35 provide it at a reasonable rate and that's kind of how we did that. Does that answer you?

36 DELEGATE BYRON: I guess as well as you can answer it.

37 MR. SPRADLIN: We have the ninety exchanges and we are working to  
38 roll out DSL in all of our exchanges and we've rolled it out in forty three thus far and  
39 thirty five of those are in the tobacco region.

40 DELEGATE BYRON: We've had some that want to come in the region  
41 and we can no longer say they're not coming because there's not fiber, potential  
42 businesses and so forth. The question is no matter where it is in the Tobacco  
43 Commission's region they want to come in and tomorrow be assured that they will be  
44 able to have connectivity. I think that's what we're looking for in that commitment.

45 MR. SPRADLIN: We are committed to bringing the needs of the  
46 customers to them. One example I can think of is, is one we visited recently and I think

1 some of the folks in this room were there and that's at Berry Hill. When that  
2 international firm came to Berry Hill we brought fiber right to the premises and they had  
3 high speed data right there onsite because that's the training center that they used and  
4 they brought people in from all over the world to that site and we'll be willing to help any  
5 way we can.

6 MR. HAMM: Let me give you a couple of examples. We've talked about  
7 the needs for all of this and hospitals. In North Carolina now the gigabit Ethernet  
8 network robotic surgery. This is a billion bits per second and it's a huge amount of  
9 bandwidth and we'd come up with some pricing that's attractive, the same kind of  
10 technology, equipment platform where the gigabit Ethernet. We're deploying that now in  
11 the school system so there's all kind of possibilities and applications out there. It's a  
12 matter of getting what the needs are and getting people that can fill those needs.

13 MR. WATKINS: I understand you all can bring it, the question is not  
14 whether you can bring it but the question is the cost. We're dealing in Charlotte County  
15 with an industrial park and prices are all over the place. We're talking anywhere from  
16 twenty-five thousand to one hundred fifty-thousand dollar difference in cost in putting the  
17 fiber in, we know there are providers but will that person be able to provide that where it  
18 will be cost effective, the question is the pricing structure. When you talk about  
19 competitive prices, we hear about cost competitive but the costs right now is not  
20 competitive. When they do the screen and the initial cost there is going to be two  
21 hundred thousand dollars a year extra to operate in southside Virginia versus somewhere  
22 else, northern Virginia. We're asking you to do other things to come down to southside  
23 and we can't get rid of that two hundred thousand dollar extra cost. You're putting the  
24 cost in, in this industrial park but how are we going to get you to say in that industrial  
25 park we'll put this in at a reasonable cost to you. They do it themselves for 25% of what  
26 you're telling me it's going to cost.

27 MR. SETTLE: Mr. Chairman and members of the Commission, my name  
28 is Richard Settle and I work for Verizon. Tucker, affordability is a very ambiguous term.  
29 What's affordable to you may not be affordable to me and I doubt if it is. One of the  
30 things Verizon has done and has in place is statewide pricing. It doesn't cost any more in  
31 southside or southwest in Verizon territory then it does in Fairfax County or Tidewater.

32 MR. WATKINS: We've got people in both places. We've got offices in  
33 both places and pricing is different.

34 MR. SETTLE: It's got to be apples and apples I can't speak to that  
35 without having the appropriate information. The reason I came up is I wanted to thank  
36 you all for listening to the industry. We all agree on the industry side that we're doing a  
37 magnificent job and we wouldn't be here if that wasn't the case.

38 Secretary Huang has a good idea. It's my experience you get what you ask for in  
39 the way of information or rates or any of that kind of thing. If you ask for a solution area  
40 wide or region wide and you include in your RFP the desire of industry, public/private  
41 across the board that's what you'll get because we'll get together from the industry side  
42 and see that that happens. I would encourage you to pursue your direction.

43 MR. WATKINS: How would you spend our first ten million dollars on  
44 this?

45 MR. SETTLE: Seriously I would solicit proposals with definite  
46 parameters for what you expect in the way of pricing, technology or access parameters

1 bandwidth if you will, and see what kind of response you get from the public private  
2 partnership angle. Personally that's what I would do.

3 DELEGATE BYRON: Is there anyone that can give an investment cost of  
4 what an estimated investment would be in order to meet the demand we've been talking  
5 about, for this region?

6 MR. SETTLE: They run the gambit.

7 DELEGATE BYRON: You have statewide costs, what are the figures?

8 MR. SETTLE: We have figures that tell us that fiber to the home costs us  
9 two thousand four hundred dollars per home on a statewide basis. We can pass ten  
10 thousand homes in a mile in northern Virginia and we can pass ten homes in a mile in  
11 certain areas. If I told you I could do fiber to the home everywhere in southside and  
12 southwest for five thousand dollars per home invested it wouldn't necessarily be  
13 applicable because every home doesn't want fiber. You go by ten and one purchases it,  
14 that's fifty thousand per home. There is not in my opinion and I don't want to presume  
15 and I don't want to trespass on your time any more than necessary but, DSL is the answer  
16 for some communities or some parts of communities, cable modem, fiber to the home,  
17 that might be an answer some place but not in another place.

18 It's going to take many responses to your RFP if it's structured correctly to  
19 address particular markets. Ten million dollars will not begin to solve that problem and  
20 probably won't begin to study it but if it's applied in RFP's and trials and you get  
21 responses – if you refuse to entertain anything but a public private partnership project  
22 that's what you're going to get I'll bet you.

23 DELEGATE HOGAN: Mr. Hudgins looks like he wants to say something.

24 MR. HUDGINS: I want to go back to where I was three years ago and  
25 some of you all weren't here. It's called competitive advantage. What you're talking  
26 about here is two-hundred k high speed Internet access to North Carolina with this.  
27 We're saying we're trying to piece together something that North Carolina, South  
28 Carolina and Georgia has. When economic development comes is that competitive  
29 advantage? The purpose of doing this is for competitive advantage. That's the reason.  
30 What we've been trying to do in the last three years is trying to get a vision of where we  
31 need to be ten years from now. But in three years we still haven't come to the table with  
32 any kind of proposal to do the backbone or wireless or modem and that's where it's got to  
33 be because ultimately to issue an RFP you're going to have as many opinions as there are  
34 RFP's and be exactly where you are today. Who decides? Let the private sector work,  
35 bring in Verizon, bring in Gamewood and bring in everybody and fight over that local  
36 mile and that might work. When you get the RFP's back and whether you get twenty  
37 back or fifteen back or last time like two years ago who decided this is the right  
38 technology. Thank you.

39 MR. OWEN: Mr. Chairman, it seems to me that interested parties have  
40 been waiting for this Commission to decide are we going to put in Virginia Tech's  
41 proposal or not? I think there was an assumption that we were and once we started down  
42 that path then the last mile pieces start their work and figure out how to play off of it. I  
43 think it's pretty self evident we cannot build a backbone as a Commission because of the  
44 money to put it in. If we're going to get input from the private sector and build a public  
45 private partnership I think we have to sort of announce we're not going to build it and say  
46 now we're open for business. What we can do is foster and subsidize what is necessary

1 the kind of projects and proposals that will spur economic development through the  
2 provision of broadband service. I don't see under any scenario how we build a backbone.

3 DELEGATE BYRON: I would agree with that and we've all heard today  
4 that supply and demand and how competition creates neighborhoods. Now some  
5 companies go out and compete with neighborhoods. At least making some type of  
6 investment into our communities whether it be from competition that is created through  
7 local ISP's or other entrepreneurs that run the risk, but I think to create that encourages  
8 people and businesses. It's that competition out there through some type of grant or  
9 subsidized program that brings it into focus. Whether it's business created or economic  
10 environment for that community that's where I think we have to start going toward.

11 DELEGATE HOGAN: Secretary Huang, would you go ahead and restate  
12 what you laid out here a few minutes ago?

13 SECRETARY HUANG: I was outlining the goals for this Committee or  
14 plan for spending four and a half million dollars annually to community aid and economic  
15 development through broadband and community development in southside and southwest  
16 Virginia.

17 To reach that goal there are four principal outcomes. One is technology neutral  
18 and number two is leverage the private sector, three is high-speed access and four is  
19 development of applications. To reach that goal spending four and a half million would  
20 be two groups. One would be a grant program which would be responsible for  
21 developing strict guidelines and explore the public private partnership and also a map of  
22 the region and go from there.

23 The second part stimulating supply which is community development focusing on  
24 grass roots, local action, education and training. Each of those groups need to focus on  
25 where you want to go and that would probably be the responsibility of this Committee or  
26 Commission.

27 SENATOR WAMPLER: Mr. Chairman, Deputy Secretary Huang is much  
28 smarter than all of us collectively on this Committee and I don't see any need to have any  
29 disagreement with what Eugene has said. I think a comprehensive plan is a good thing  
30 however, I could see us spending another two years putting something together and I  
31 think we need to break it down into long term and short term and in the short term I can  
32 only speak for southwest.

33 We have at least three entities that are willing to put part of what Virginia Tech is  
34 talking about together. Let me say again we have businesses that are ready to start  
35 employing people as a result of it. To that extent we need one goal. We've studied this  
36 for two years in a very extensive report from Virginia Tech. I don't know how much  
37 more volume or how much more study we need. I'm not disagreeing with what Deputy  
38 Secretary says but I think we need to give thought to defining exactly what that report and  
39 study and goals would be. I don't like the idea of us carrying a ten million dollar balance  
40 over a two year period and not putting the money out on the street where folks that have  
41 spoken to this group whether it's for profit or not have an opportunity to get on with the  
42 business. That's my thought.

43 DELEGATE HOGAN: I think Mr. Kelley said it best we're trying to  
44 provide access. I don't see the difference in giving a grant to Lenowisco or to Sprint.  
45 Who cares?

1 MR. FERGUSON: Mr. Chairman, the difficulties we have faced a number  
2 of times is we have a significant limitation in providing state support for private  
3 endeavors which is why we have a practice of making grants or loans to IDA's or  
4 localities. They in turn may in fact operate as a private company. It's very difficult for  
5 me as counsel to sign off on grants or loans to a private for profit organization.

6 SENATOR WAMPLER: Mr. Chairman, duly noted. There are ways to  
7 accomplish that task and I really think for purposes of the discussion today we really  
8 ought not talk about that matter.

9 DELEGATE HOGAN: Fair enough.

10 MR. ARTHUR: Mr. Chairman, I've listened to all of this today and  
11 actually what the Secretary has just stated is essentially a mission statement which we've  
12 lacked as to what direction we're going. I think he just summed it up to say where we're  
13 going and where we want to go and he's provided a partial road map which we have not  
14 had. I think his statement can be very helpful as to how we're going to proceed from  
15 here. Yes, we need to go ahead and get the money on the street working I would agree  
16 but we've got to have some direction and a road map as to how we're going to get there  
17 and we don't have that.

18 DELEGATE HOGAN: And we need to evaluate whether what we're  
19 doing makes sense or not.

20 MR. ARTHUR: We've got several things here and one of them is  
21 concentrating on the last mile and basically what southwest has been doing. Some of us  
22 have had a different approach. I believe in the super highway in southside myself. How  
23 we do that and what if someone can provide it that's another question. I don't care as  
24 long as the backup is there and the redundancy is there and we can do for the future and  
25 next level Internet that it's going to be possible to do this with what we've got. As far as  
26 I'm concerned we're now with the Model A Ford. We need something much more that's  
27 not obsolete already. I personally have both sides of it. I have at home twenty-four k and  
28 at my office one hundred Meg cable modem, daylight and dark. We need to look to the  
29 future and not become obsolete before we get started.

30 DELEGATE HOGAN: Do we want to walk away from this meeting until  
31 July 10<sup>th</sup> to take up the grant applications? I think what we've got to do is put together a  
32 proposal, we really haven't defined what we're looking for.

33 MR. ARTHUR: That's right.

34 DELEGATE HOGAN: We've got to get a proposal. I would tend to agree  
35 with Senator Wampler it seems to fit in with what we're trying to do. Do we want to take  
36 the road map or mission statement you referred to Secretary Huang and try to generate an  
37 RFP out of that? Pretty quickly go back to the Full Commission and attempt to say this is  
38 what or how we want to do this.

39 SENATOR WAMPLER: Mr. Chairman, the RFP is something that you  
40 will wish you hadn't done it and that's just one opinion. I'd say let's leave it open ended  
41 and allow these folks to be as creative as possible and let them bring the solution to us  
42 rather than us trying to describe what the solution is. That's one person's opinion so feel  
43 free to disagree. I'm just saying let them bring something to us. We don't have the  
44 expertise to do that.

45 MR. ARTHUR: Mr. Chairman, I think Senator Wampler is right on that  
46 we don't want to get into the nuts and bolts of it. These people are professional in their

1 jobs and we need to try to evaluate their proposal back to us in some fashion so that we  
2 can find the best possible course for us to take and what we should fund.

3 DELEGATE WRIGHT: Mr. Chairman, I think the road map of what  
4 Secretary Huang mentioned and Mr. Owen, they both mentioned that. A proposal to  
5 come in and give us an idea what the private sector can do to help us proceed and get on  
6 with this process.

7 DELEGATE HOGAN: I'm trying to get to the question. What is the will  
8 of this Committee as far as going before the Full Commission at the July meeting and  
9 saying what we want to do?

10 MR. WATKINS: It looks like to me we could go to the Full Commission  
11 at the July meeting and say here's what we want to do. The end of July or first of August  
12 a proposal and everybody will know we're doing this. In the mean time have a meeting  
13 one in southwest and one in southside and talk to the locals and say this is, it could be a  
14 workshop and say this is what we're looking for. At a workshop we can talk about here's  
15 where we're headed and put that in your proposal and in the next thirty days or first part  
16 of August and give us that proposal back, get it on the street and everywhere we can and  
17 see what's the best course of action.

18 DELEGATE HOGAN: I don't know whether Sprint or Verizon's people  
19 whether they'll walk away from this meeting thinking about what we can do or not do.  
20 I've got a pretty good idea where we are in southside on that as far as the timeline.

21 SENATOR WAMPLER: I would say that we have tried to plan through  
22 the Planning District Commissions and what you see in the applications coming from the  
23 Cumberland Plateau and Lenowisco and the Mount Rogers Planning District and  
24 primarily Bristol Utilities as folks that are interested and have legitimate applications that  
25 meet the long term goals and want the higher speed. I think the beauty of this it should be  
26 open ended. If others wish to provide applications they can do that. We have  
27 applications and we're ready to act on them.

28 MR. THOMPSON: They seem to be concerned with the goals and  
29 objectives with what Deputy Secretary Huang put forth. Senator Wampler also said that  
30 both of them are in a position to create jobs now.

31 DELEGATE WRIGHT: We have a meeting scheduled at Longwood and  
32 we could discuss this but I'm not aware that proposals to present to the Tobacco  
33 Commission would give an opportunity to have economic development. I think this  
34 should go with economic development, together.

35 DELEGATE HOGAN: But I think it's reasonable to say we'd have ten to  
36 deal with over the next twelve months, the ten million is that right?

37 MR. CURRIN: Yes.

38 DELEGATE HOGAN: I think we're looking at two and a half or three  
39 million worth for southwest?

40 SENATOR WAMPLER: Three or three and a half.

41 MR. WATKINS: We had some other proposals that we shelved waiting  
42 on the e58 report. There was a DSL and some other people had proposals and we set  
43 those aside to wait for the results of these. These are really not all the projects out there.  
44 We put those on the shelf.

45 DELEGATE BYRON: I can't see how we can generate anywhere outside  
46 of southside and southwest. Maybe Senator, maybe we need to be informed on how we

1 can prepare in the event we can vote on monies spent in our areas. There are individuals  
2 out there that would come to the table with something. We want to be able to create that  
3 competition and allow that opportunity to come before us. I don't want us to act too  
4 quickly and not give the public enough chance to know what's going on and what our  
5 intentions are. I'd also like to know what amount of money we'll have or what is  
6 contemplated to come down. I'd like to know some information on funding and who has  
7 pet projects out there.

8 DELEGATE HOGAN: We've used the formulary to allocate resources. If  
9 we're getting down to specifics and we don't have to do that. Maybe the reasonable way  
10 to approach this problem or if we're going to say that plans from southwest and southside  
11 and get those plans into a master plan.

12 SENATOR WAMPLER: Mr. Chairman, you've got to understand there's  
13 some overlap and you've got to realize that there may be only twenty five in the  
14 southwest, if the electronics happen to be in the southside or whatever makes the whole  
15 system work I think would rule. I'm sure there's other opinions on that matter and I think  
16 that would keep peace in the family.

17 DELEGATE HOGAN: Or if we put money into a project that generates  
18 jobs.

19 SENATOR WAMPLER: I don't see how you can do anything less than  
20 some type of goal that says we're going to have this much money available over this  
21 period of time.

22 DELEGATE HOGAN: If we look at the long-range plan when we talked  
23 about securitization we were looking at one hundred or one hundred thirty million for a  
24 period of time for broadband. Do you think that's a reasonable assumption, is that what  
25 you're talking about?

26 SENATOR WAMPLER: With thirty some members on the Commission  
27 we have a hard time getting some people to agree on one thing. Five million bucks at  
28 least over a period of however long we transact business, I think that's the consensus and  
29 that's what we're dealing with.

30 MR. OWEN: That's a low number Mr. Chairman. You're talking about  
31 securitization proceeds of less than seven hundred million and if you're just looking at the  
32 one hundred thirty you're close to 20% and the Commission is going to have certainly  
33 fifty million dollars or more based on the MSA payment. 5% is only ten million, 10% of  
34 that total. I would think that's sort of a base number at least in terms of the long-range  
35 plan.

36 SENATOR WAMPLER: Absent securitization it's hard to plan for long  
37 term. If we have to sweat the next MSA payment, we'll just have to wait and see. The  
38 minimum would be over a ten-year period five million a year.

39 MR. OWEN: I would hope that we get around to reviewing these and  
40 we'd have some due diligence done by the staff or a panel of experts and we're not just  
41 having the applicants make the comments about this. We need some opinions about the  
42 appropriateness of the request from our staff or outside persons.

43 DELEGATE HOGAN: What's your pleasure, what do you want to do?

44 MR. WALDEN: I think it's necessary to let the local communities come  
45 forward to us as providers and state what you're looking for in backbone and that gives us  
46 something to take back that this is real and this is what you're looking to do and gives us

1 the power to move forward and work toward a solution and working with other folks in  
2 the industry to get a solution. I don't think it necessarily has to be an RFP but it can be  
3 something like an RFI or something of that nature. When I look back over the history  
4 I've spent working with the Committee I guess over the last fourteen months, I wrote a  
5 paper and what came out of that was that the Commission had issued a paper asking for  
6 what could be done for the rural communities.

7 I think maybe in the same way what needs to happen is maybe a little more teeth  
8 that the Committee ask what can be done to supply backbone to reach various  
9 communities as well as creating connectivity for the local ISP's in the region so they can  
10 provide the services they need to at a price that they can. Then I think from that you will  
11 get competition that'll come out of the providers or some of us might join together and  
12 work up a solution and others might do it on an individual basis or it might get multiple  
13 solutions. Then there might be another step to move forward with an RFP or move forth  
14 with one of those groups and fashion some type of contract or paperwork that did  
15 comport on pricing or whatever nature fits the region as a whole.

16 DELEGATE HOGAN: Do you mean southside and southwest or is  
17 southwest or southside different or what's the region you're talking about?

18 MR. WALDEN: I guess the tobacco regions. The other thing is the  
19 pricing scenario. We've done two pricing scenarios for two different communities.  
20 Today we're in the process of installing and working with the Department of Housing and  
21 Urban Planning and ARC. We just submitted a proposal for the two communities in  
22 trying to reach basically a backbone fiber that was basically done for about two hundred  
23 eighty-three thousand dollars. From our standpoint somewhere in the neighborhood of  
24 four hundred fifty or five hundred thousand dollars. That gives you an idea when you're  
25 talking about backbone fiber infrastructure and still is not to the home but puts in  
26 infrastructure that will support business activity into different communities.

27 MR. OWEN: Are you familiar with Russell County where they said they  
28 needed fifty miles of backbone? Abingdon to --

29 MR. WALDEN: No, I haven't. We need more information to take a look  
30 at it. We're also working with many of the counties creating the backbone for some of  
31 the schools and I guess government locations and that's something we expanded on. One  
32 of the issues arising there is that there are times to get outside the backbone type setup  
33 and there are pockets where there is not fiber. We can bring prices down depending on  
34 whether there's special construction. Where there is fiber missing in the marketplace and  
35 that is potentially an area that grant money might help these communities in putting that  
36 fiber structure in and able to support higher speed throughout the county.

37 SENATOR WAMPLER: I guess my patience may be running thin but I'm  
38 not sure I understood what you said for the last ten minutes. If you need additional  
39 guidance I'd be more than happy to talk to you at length later. I think what this  
40 Commission needs to move forward with Mr. Chairman, is try to decide a work plan  
41 between now and the 10<sup>th</sup> of July. I get a sense that the southside doesn't think they need  
42 to hear this. That you need a greater opportunity for discussion among the southside  
43 regions as to how you want to invest those dollars, maybe southwest as well. I think in  
44 southwest I would ask we have that technical review from the staff that Mr. Owen speaks  
45 of so we can show the comprehensive planning that's already been conducted by the  
46 Cumberland Plateau and Lenowisco and Bristol and so that we can hopefully address

1 concerns that once we light the fiber we're able to do what it says we can do. But I ask if  
2 that's a reasonable expectation by anyone.

3 I hope we don't set things on the shelf terribly long and we get on with the  
4 business of promoting the economic growth transforming the economy. For the longer  
5 term even trying to plan or creating solutions that we may not have and for the longer  
6 term. That's what I suggest we do.

7 DELEGATE HOGAN: I appreciate your comments. The Full  
8 Commission meets on the 10<sup>th</sup> so we could have another meeting on the 9<sup>th</sup>. If we want to  
9 get together on the 9<sup>th</sup> and have the staff evaluate on the long-term plan based on what the  
10 Secretary laid out. Then evaluate the proposal we have before us on that basis on the 9<sup>th</sup>  
11 and the Full Commission meet on that proposal.

12 DELEGATE WRIGHT: I think that's right and Mr. Watkins said the  
13 southside has put all this on the table and let them know, let people know what money is  
14 available for all these things. SENATOR WAMPLER: Mr. Chairman, I agree  
15 with what's being said but the proposals that we have here are at least 18 months in the  
16 making and it's not something that we dreamed up. This has been very technical detailed  
17 work. I don't know if it would be reasonable to expect many of the applications to be  
18 acted on.

19 DELEGATE WRIGHT: That's because people in the southside say we  
20 didn't know we were supposed to make them.

21 DELEGATE HOGAN: If we say we're going to spend ten million and  
22 roughly three of it goes to the southwest and people in the southside haven't heard of that  
23 at this point and therefore don't have proposals together by the 9<sup>th</sup> of July. I don't know  
24 if there's any particular disadvantage. They're not going to not get the money. I think  
25 what we need to do is put out after this meeting and then we'll have a meeting sometime  
26 in mid to late August to review the proposals for southside in anticipation of our October  
27 meeting which means the southside is looking at sometime after southwest.

28 DELEGATE WRIGHT: That's fine with me. Some folks aren't aware of  
29 these.

30 MR. ARTHUR: Mr. Chairman, I support the recommendations of let's  
31 have a meeting and have the staff evaluate the four, five or six or however many are here  
32 right now so that we can move on those. There is one in southside that was tabled  
33 because it came from economic development and was sent to e58. That one we should  
34 consider and maybe look at that one to even though it was on a shelf for the 9<sup>th</sup> meeting.

35 DELEGATE HOGAN: All right, we'll do that and we'll get the times.

36 SECRETARY HUANG: I want to complement Senator Wampler, I can  
37 turn this around very quickly.

38 DELEGATE HOGAN: All right, is everybody happy? Any other public  
39 comments, okay, thank you.

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41 PROCEEDINGS CONCLUDED  
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3 **CERTIFICATE OF THE COURT REPORTER**  
4  
5

6 I, Medford W. Howard, Registered Professional Reporter and Notary Public for  
7 the State of Virginia at Large, do hereby certify that I was the court reporter who took  
8 down and transcribed the proceedings of the Technology Committee meeting when held  
9 on Thursday, June 12, 2003 and Friday, June 13, 2003 at the Hotel Roanoke and  
10 Conference Center, Roanoke, Virginia.

11 I further certify this is a true and accurate transcript to the best of my ability to  
12 hear and understand the proceedings.

13 Given under my hand this 27<sup>th</sup> day of June, 2003.  
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18 \_\_\_\_\_  
19 Medford W. Howard  
20 Registered Professional Reporter  
21 Notary Public for the State of Virginia at Large  
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25 My Commission Expires:  
26 October 31, 2006