



1  
2 **eCORRIDORS TASK FORCE**

3 Monday, March 24, 2003

4 1:00 p.m.

5 Torgersen Hall Boardroom

6 Virginia Tech  
7

8 **eCORRIDORS TASK FORCE:**

9 Ben Davenport, Chairman

10 Paul Elswick, Vice Chairman

11 Senator William C. Wampler, Jr.

12 Senator Philip P. Puckett

13 Mr. Eugene Huang, Deputy Secretary

14 Mr. Thomas W. Arthur

15 Mr. Tucker C. Watkins

16 Mr. H. Ronnie Montgomery

17 Mr. James Thompson

18 Ms. Mary Sue Terry

19 Delegate Clarke Hogan

20 Delegate Kathy Byron

21 Mr. Claude Owen  
22

23 **COMMISSION STAFF:**

24 Carthan F. Currin, III, Executive Director

25 Mr. Tim Pfohl, Grants Program Administration Manager  
26

27 **ATTORNEY GENERAL'S OFFICE:**

28 Frank Ferguson, Senior Assistant Attorney General

29 Anne Marie Cushmac, Senior Assistant Attorney General  
30

31 MR. DAVENPORT: I'm going to call this meeting to order and ask our  
32 Executive Director to call the roll.

33 MR. CURRIN: Mr. Arthur?

34 MR. ARTHUR: Here.

35 MR. CURRIN: Deputy Secretary Huang?

36 DEPUTY SECRETARY HUANG: Here.

37 MR. CURRIN: Mr. Owen?

38 MR. OWEN: Here.

39 MR. CURRIN: Senator Puckett?

40 SENATOR PUCKETT: Here.

CRANE-SNEAD & ASSOCIATES, INC.

4914 Fitzhugh Avenue, Suite 203

Richmond, Virginia 23230

Tel. No. (804) 355-4335

1 MR. CURRIN: Ms. Terry?  
2 MS. TERRY: Here.  
3 MR. CURRIN: Mr. Watkins?  
4 MR. WATKINS: Here.  
5 MR. CURRIN: Senator Wampler?  
6 SENATOR WAMPLER: Here.  
7 MR. CURRIN: Mr. Elswick?  
8 MR. ELSWICK: Here.  
9 MR. CURRIN: Mr. Chairman?  
10 MR. DAVENPORT: Here.  
11 MR. CURRIN: Delegate Byron?  
12 DELEGATE BYRON: Here.  
13 MR. CURRIN: Delegate Hogan?  
14 DELEGATE HOGAN: Here.

15 MR. CURRIN: -- and Mr. Thompson are members of the Technology  
16 Committee, and they were extended an invitation to be at this meeting.

17 MR. DAVENPORT: All right, I think you all received a copy of the  
18 Minutes from the April 10th or the November 20th meeting. Do I have a motion to approve  
19 those Minutes?

20 MR. ARTHUR: So moved.  
21 MR. DAVENPORT: Do I have a second?  
22 MS. TERRY: Second.  
23 MR. DAVENPORT: All those in favor accepting the Minutes, say aye.

24 (Ayes) Opposed? (No response)

25 All right, we have a fairly tight time table today, and I'd like to move forward as  
26 quickly as possible. I'll ask Brenda Neidigh if she would commence with the Virginia Tech  
27 presentation. Before she gets started I'd like to thank Erv and all the members of the Virginia  
28 Tech Staff. This eleven-volume report took an enormous amount of work beyond, I think, any of  
29 our imaginations that it was going to be so thorough and complete. On behalf of the  
30 Commonwealth and also this group here we'd like to give you an extended thanks for what is, I  
31 think, a tremendous blueprint for the future of the tobacco region as well as the rest of Virginia.  
32 Without further ado I'll introduce Brenda Neidigh, who will begin the presentation. Brenda.

33 MS. NEIDIGH: Welcome, thank you all for coming to Blacksburg, and we  
34 have a beautiful day for it. For this portion of our presentation we have two hours, hopefully,  
35 and we'll start with Erv Blythe, who will give a basic overview, including the charge that got us  
36 started down this path and explain why we were asked to do this project. We'll hear from Jeff  
37 Crowder and Woody Sessoms about the communications technology industry perspective.  
38 Following that what we'd like to do is have three facilitated discussions. I'll introduce our  
39 facilitator when we get to that point, but the idea is that we want to make sure that everyone has  
40 a chance to ask questions, but under these three headings. We've changed the order from what  
41 you have in your handout, and so please go by this. First will be the applications and community  
42 network, which encompasses volumes eight through eleven, and then the technical issues, which  
43 are embodied in two, three, four, six and seven, and then, finally, the strategic and financial  
44 considerations included in volumes one, five and nine. Then Erv will conclude with  
45 recommendations and next steps. With that I'll ask Erv to start out, and then I will come back  
46 and introduce the facilitator when we reach that step.

47 SENATOR WAMPLER: Mr. Chairman, I'm having difficulty with the

1 yellow portion, are all the slides like that?

2 MR. BLYTHE: I have two others, sorry about that. I've got two others, but  
3 first I wanted to remind everyone of the charge that, these are all word phrases out of the charge  
4 to Virginia Tech back in the summer when we were asked to take this on. The main point I want  
5 to make in this whole thing is that there's a desire for certainty. One of the things that I picked  
6 up from the Commission is a strong desire for certainty in terms of what decisions you might  
7 make, in terms of what investments you might make. The dilemma is that if there's certainty and  
8 if you're absolutely certain that this is the right investment in terms of technology and in terms of  
9 how you structure the investment, I guess if there's that level of certainty then you're not going to  
10 gain a competitive advantage. If there's that level of certainty a lot of other players are already  
11 there. You certainly won't get, as Senator Hawkins asked us to do, he wanted us to put  
12 something on the table which would result in the tobacco regions getting something, having  
13 something that everyone would want. If you're going to be using leapfrog strategy, if you're  
14 going to be doing things that are not changing what other regions are doing, then you are not  
15 going to have that level of certainty. What I can tell you is that Virginia Tech is going to put its  
16 best thoughts on the table in terms of what you might do. You're also going to hear of some  
17 really good ideas from others about how or not only the specific technologies but about the  
18 strategy that should be followed. In the end you have to decide how to balance these differences.  
19 There's lots of opinions out there on the right technology investment to make.

20 Hopefully, in about forty-five to sixty minutes I'm going to be talking about specific  
21 recommendations and then lay on the table some action items that I think the Commission should  
22 take up and that you should consider for the tobacco regions' investment in advanced technology.  
23 All these studies, and I'm sure all of you got these on Friday and read those eleven volumes over  
24 the weekend.

25 The first conclusion is that absolutely advanced communication infrastructure is  
26 critical to regional economic competitiveness. You're going to hear more about that from some  
27 of the discussion from some of the players that led the development of these studies and also  
28 from industry spokesman, Woody Sessoms from Sysco. The main message that we want to give  
29 relative to the first point is that there are new emerging technologies that are actually  
30 accelerating the difference between regions like ours in terms of what they have in the advanced  
31 communication capabilities and the IT capabilities and the region and the hot twenty or thirty  
32 urban areas in the country.

33 Relative to communications we're going to see accelerated differences in one which  
34 you can't even get. We say we absolutely have to have the companies across the region, they say  
35 we absolutely will have to have multi-megabyte per second of service, multi-megabytes per  
36 second, millions of bytes per second of communications capacity. The urban regions I'm talking  
37 about with some applications coming down the pike demand billions to trillions of bytes per  
38 second access. You cannot buy that kind of capability at any price across the tobacco region.  
39 You can't buy that type of capability in Blacksburg today.

40 The second difference or the accelerated difference is that today we're talking about a  
41 tenfold difference in the cost of access if you want to be a provider or a producer of major  
42 communications and information services in the network world. That's the kind of cost  
43 differences we see for multi-million bytes per second of access to billions of bytes per second of  
44 access where it's available.

45 Over the next three to five years we'll be working with some technologies at the  
46 national level leveraging the latest and most advanced optical capabilities that are going to result  
47 in not being a tenfold difference but a hundredfold difference. Basically going from a few single

1 digit dollars like two, three or four or six dollars per megabyte per second in certain areas  
2 dropping down to less than ten cents per millions of bytes per second per mile per year in terms  
3 of communications type access. I hate to use these acronyms, but basically that's how companies  
4 in advance technologies measure communication capabilities. It's in the millions, billions and  
5 trillions of bytes per second of access and then what does it cost on a per millions of bytes per  
6 second per mile per year basis. We see an accelerating difference in what we have and the  
7 capability we have here and the capabilities in urban areas.

8 The second point is that the traditional telecommunications industry will not build the  
9 infrastructure in a time frame which provides competitive advantage to the Tobacco Commission  
10 regions. A major player in the region is Verizon, and Verizon is ahead of all the other Bell  
11 operating companies. They're saying the right things and in certain urban areas they're beginning  
12 to do the right things in terms of providing those capabilities. One important thing that Verizon  
13 is saying, and in fact they were quoted in a press release last week, that matches up with what  
14 you hear us saying, and this is a quote by Bruce Gordon, President of Verizon's Retail Division.  
15 Bruce Gordon has been interactive with us in some conversations on some of these issues a  
16 couple of years ago. He says having watched this industry for thirty-five years, says Bruce  
17 Gordon, I don't believe it's the network, I don't believe the telecommunications, it's the network  
18 that can take us into the next decade. He's saying that to explain why Verizon is getting ready to  
19 make major new investments in optical capabilities and optical infrastructure. The bottom line is  
20 they said return on investment region by region is going to dictate where they make those  
21 investments. That return on investment, basically this area or this region is not going to compete  
22 with the Washington, DC area or the Boston area or the Pittsburgh area or any one of the dozen  
23 to fifteen cities in the Northeast territories.

24 The second thing is that Verizon only covers a small portion of the total tobacco  
25 region area.

26 The third conclusion is that the Tobacco Commission, we are absolutely convinced  
27 and we hope we're convincing you as you read some of the material we've provided you, the  
28 Tobacco Commission can and is able, it can't pay for the whole thing, and it can't even pay for  
29 most of what the total investment would be required, but the Tobacco Commission can enable  
30 advantageous access to emerging national optical network infrastructure, and that's that leap frog  
31 element in this whole thing.

32 Lastly, the Tobacco Commission can be the catalyst that generates literally hundreds  
33 of millions of dollars over the next twenty to thirty years, hundreds of millions of dollars of  
34 investment in advanced network capabilities over the next twenty to thirty years. I'll just give  
35 you a couple of examples. We believe if you have the right kind of dark fiber optical capabilities  
36 in place, there's three industry sectors that are going to make early investment in leveraging that.  
37 Those are the medical community, the educational community and the research community.  
38 When I say research community I'm talking about the research community driven by federal  
39 investment and federal dollars, the Department of Energy, the Department of Defense, the  
40 Department of Agriculture, and they are the big, heavy hitters in this whole arena.

41 The second area that makes us convinced that it can drive that kind of investment is  
42 the fact that federal programs are coming on line and are going to be especially focused on rural  
43 areas. One example is a program sponsored by the Department of Agriculture, which is going to  
44 make available 1.4 billion dollars in federal loan guarantees for investment in communications  
45 infrastructure that might leverage the kind of optical fiber capabilities we're talking about.

46 The third example I'll give, given these first two drivers, the application drivers and  
47 the availability of federal dollars, it's easy for us to visualize over the next ten or twenty years if

1 you've made this investment, and it's easy for us to visualize the typical household spending  
2 twenty-five dollars a month to access advanced communication capabilities. We're talking about  
3 multi-million bytes per second kinds of capabilities to the household and the small business.  
4 That kind of investment, and if you just look at the households across the tobacco region and the  
5 small businesses, that kind of investment would generate between years ten and twenty  
6 something like 1.5 billion dollars in revenues for companies that are building infrastructure and  
7 leveraging these advanced communication capabilities and applications. With that I'll turn it  
8 over to Brenda again to introduce these panel discussions.

9 MS. BRENDA NEIDIGH: Next we have Jeff Crowder, who is the Director  
10 of Network Virginia, and he will introduce Woody Sessoms, who will give industry perspectives  
11 on all of our projects.

12 JEFF CROWDER: Thanks, Brenda. We have a lot of input from several  
13 private sector players as we've developed a report. One of the companies that contributed very  
14 significantly was Sysco Systems. It's my pleasure to introduce Mr. Woody Sessoms. Woody is  
15 the Mid-Atlantic Area Vice President for Sysco with responsibility for the Carolinas, West  
16 Virginia, Maryland, D.C., Delaware, Pennsylvania and New Jersey. He's a graduate of the  
17 University of North Carolina at Chapel Hill, which we don't hold against him here at Virginia  
18 Tech, but a few years ago when I was at UVA we might have thought differently about that in  
19 that basketball heyday. His team contributed significantly to the development of the report, as I  
20 mentioned. Their technology and business experts provided substantial editorial and technical  
21 support, particularly to volume six of the document, entitled, Leveraging Advanced Optical and  
22 Ethernet Technologies. That was developed by our research engineering team led by Carl Harris,  
23 who is here with us today. Also, Sysco developed a comprehensive, well-thought-out and  
24 advanced technology proposal for the eDan project that's now well under way and recently  
25 competitive and selected to provide optical and the Ethernet initiative. We've been impressed  
26 with the clarity and vision put together by Mr. Sessoms and his team, including Richard  
27 Shewmaker, who is with us here also from Sysco. Their perspectives and missions are firmly  
28 grounded in the practical business and economic development potential and the strategy that  
29 we're talking about here put on the table. We thought it would be worthwhile to invite Mr.  
30 Sessoms to join us here today to share his perspective and his thoughts, and we very much  
31 appreciate you taking time from your busy schedule to be with us here today.

32 MR. SESSOMS: Thank you, sir. First of all as a resident of the southern  
33 end of the tobacco road, it's an honor to be here today. I somewhat grew up working in the  
34 tobacco industry. I can tell you that obviously the initiatives that you're doing today are very  
35 well needed. I'd like to compliment each of you for having the foresight and vision to  
36 understand that information and communications technology are key drivers in improving the  
37 standard of living as well as driving profitability through various corporations. I'll tell you I've  
38 read through the proposals, and I absolutely think you're on the right track and very consistent  
39 and at the forefront of a lot of other forward thinking areas in countries no less are doing these.  
40 It is well established that information and communications technology do absolutely improve the  
41 standard of living for all those involved. Not only does it help do that but it helps in terms of  
42 social issues as well.

43 The recently concluded World Economic Forum in Switzerland really drove home this  
44 fact. One of the key topics of discussion at that forum dealt with how do we make sure that  
45 developing countries and those countries that want to maintain their leadership are ready to  
46 continue to develop economically through investments in these areas. The real test to that is that  
47 an index was derived and used for the last couple of years. It's called the net radius index, and

1 you're welcome to go to their Web site, and I'll be happy to give you that, URL, and you can take  
2 a look at some of the data there. Eighty-two countries were assessed in terms of how are they  
3 prepared to compete in the new economy. In the United States we were leapfrogged this year,  
4 and we were first last year, and this year we were second to Finland. It shows you how quickly  
5 things can change along those dynamics. What the index really measures is the ability for three  
6 key shareholders or stake holders in terms of driving information and communications  
7 technology. How well are they prepared to compete in the new world? That's government,  
8 corporations and individuals. It deals anywhere from setting up the right type of environment,  
9 which I believe is part of what your charge is in this room, set up the right type of environment  
10 so that the public and private sector can jointly develop. Then what do we do in terms of  
11 preparing the individual in terms of investments and education and how we leverage those.

12 The other dynamic, as I looked at it, and you can look at the statistics, but the question  
13 is why were we number two and Finland was number one? Very close on our heels now is  
14 Singapore. These are not countries that you really would think that's where the pressure is going  
15 to come from, and that's where it's coming from. So as you think in terms of what do we do in  
16 terms of developing economically in this corridor that we're talking about here. Understand, as  
17 I'm sure you do, that Research Triangle Park in North Carolina or Ohio or California, they're  
18 your competition, and so is India, China, Korea. If you look at software development today and  
19 a lot of that software development is being done in India. The reason it can be done there is  
20 because we live in a network society now. The work goes to where the human resources and  
21 human capital reside. At Sysco during the tech boom we spent a lot of time working with the  
22 government in terms of immigration laws. As we see this Broadband access grow across the  
23 country we no longer worry so much about the immigration laws, because we can build a  
24 network virtual organization we can run our business. I would propose to you that the  
25 companies you're trying to recruit can do the same thing, and they can do it in Blacksburg,  
26 Virginia or offshore United States or they can do it in California. The competition is there, and  
27 he who gets there first will have a lot to do in terms of setting the playing rules and moving  
28 forward.

29 In terms of economic development and investment and information communications  
30 technology it's well established it's the key driver in productivity, and it's a key measure in terms  
31 of elevating the standard of living. The University of California at Berkeley did a study, done  
32 with the Brooking Institute in 2000, and took a look at U. S. productivity and broke it up in two  
33 different distinct areas of the decade of the '90's. From 1991 to 1995 productivity increased at  
34 1.6 percent. And in '96 to '99 there was a tremendous increase, and it was up 2.7 percent growth  
35 over that four-year period of time. One point one percent increase in productivity, and that was  
36 unheard of for a productivity type of increase. When it was measured what was actually  
37 influencing that big jump, two-thirds of the improvement in productivity came from investments  
38 like you're talking about today. Two-thirds of the improvement came from information and  
39 communications technology.

40 If you take a look in terms of what productivity means to a country of 1.1 percent,  
41 which is sort of in the normal range, you grow the productivity in the United States at 1.1  
42 percent, it'll take seventy years to double the standard of living. You can grow productivity 10  
43 percent a year and compound it, you're talking about seven years at double the standard of living.  
44 Certainly that's what we're all concerned about, and that's the whole vision and being in the  
45 American system that there's going to be a better day, we are going to have a better standard of  
46 living, our children will have a better standard of living. I think we all remember in the '80's  
47 when a politician suggested that maybe things won't be as good in the future as they have been

1 for all of us, and that was an unacceptable idea. The next president that was elected tried to  
2 recreate that type of thinking, which was aiding the idea that we'd never be able to increase the  
3 standard of living. I think through these technologies we're discussing it's well established that  
4 that holds a key to doing that.

5 The standard of living develops and increases, as we all know, and that's a very  
6 uneven proposition, and we all live close enough to Appalachia to understand that. It behooves  
7 all of us to make sure we do everything we can to empower our citizens and corporations to  
8 build and improve upon our lives.

9 At Sysco we believe, and Mr. Greenspan now believes, that you can sustain at the  
10 country level and the nation's level, productivity gains at thirty-five percent a year, thirty-five  
11 percent a year at a country level without having inflation. At a corporate level we believe that  
12 productivity can be sustained at twelve to fifteen percent a year, and that's investing in network  
13 technology and information communications technology. The same University of California and  
14 the Brookings Institute study suggested over the next ten years that clearly forty percent of all  
15 productivity gains are going to be driven through information technology and it's a key driver.

16 It's really all about creating the proper environment. I think what you have here really  
17 starts with Virginia Tech. Certainly it's well established that research institutions create jobs and  
18 drive the economic development. It's also no mystery that if you look at the major tech quarters  
19 that exist in the United States today you'll see two things that are in common. The first thing  
20 you'll see is a great research institution, and the second thing you'll see is physical proximity  
21 where you can get onto the national backbone.

22 Let's back up and talk a little bit Silicon Valley, it has access and it has Stanford  
23 University. If you go into the Boston area you'll see great educational institutions, such as  
24 Harvard and MIT, and you'll see access. At the Research Triangle Park you'll see three great  
25 research institutions access, very low in costs and access, Austin, Texas, the University of Texas,  
26 and access. It's very important that you have the access at a reasonable cost and that you have a  
27 research institution, because they influence the economic surrounding area. Also, just as  
28 important, and one of the reasons why I think Virginia Tech has a unique value proposition to  
29 you, is that the Staff of Virginia Tech has for years influenced new Internet activities, new  
30 backbone activities. They've been very instrumental in the Internet school initiative, and they're  
31 now instrumental in the National Light Rail initiatives. So, why do we want to make sure that  
32 Virginia Tech stays viable? Because it's important for this area. Make no mistake that it's a very,  
33 very competitive environment out there. I can tell you that if I meet with the CIO of the  
34 University of Maryland or anywhere else they're trying to make sure that these pots or these  
35 pathways go closer to their schools so they can get on these highways. The key piece of any  
36 research institution is the ability to get federal grants and funds, because they don't want to fund  
37 them on their state budgets or operating budgets. You want to pull outside money to do that or  
38 access to. If you look at the '03 and '04 budgets for the National Science Institute or National  
39 Institute of Health you'll see tremendous increases in grant money that's going to center around  
40 information technology, and you want to bring home as much of that money as you can and put it  
41 right back in this area.

42 Beyond the economic development aspects there's obviously some social aspects.  
43 First of all in terms of government, these technologies offer people access for all citizens  
44 regardless of economics or the location you're living in. It also, in the environment we're in now  
45 with budget shortfalls, it gives you an opportunity to leverage government driving down the  
46 costs of government without taking out the services. Everyone wants a smaller and more  
47 responsible government, but nobody wants to give up any services, so you have to drive out the

1 administrative costs. Certainly you'll be able to leverage the infrastructure you're talking about  
2 to do that. From an educational standpoint closing the digital divide regardless of the economic  
3 situation of an individual you want people accessed. I will submit to you it's not just about  
4 educating people, but it's also about attracting teachers and instructors. As we move into a  
5 society, and I call them the middle kids or gang war society, and I don't know how many people  
6 have a middle school kid here, but it's amazing what they know about technology. I've been in  
7 technology almost twenty years now, and it's scary when I get around middle school kids,  
8 because that's all they know, and they're so quick. A middle school kid has a hard time in a  
9 traditional classroom today. If you look at some of the things they're doing up in Fairfax County,  
10 they're training, but it's all about content and multimedia content, and it's coming at you in sound  
11 bites much like the MTV generation. It's great when you can get a middle school kid to sit down  
12 and learn about the Federalist papers and he can see Hamilton debating Jefferson, what they  
13 learn from that, and these kids are our future. We certainly have a responsibility to make sure we  
14 do everything for them.

15 Teachers are going to come into an environment where they are going to have access  
16 to content. Everyone likes to be at the forefront of their profession, everybody likes to be at the  
17 top of their game. It's very difficult if you talk to the K through 12 environment to attract  
18 teachers in the rural areas. If I had the same access that they have in Fairfax County I might  
19 choose to come and have a quality of life in the Southside or Southwestern Virginia versus  
20 moving up into the Northern Virginia corridor.

21 I started as a teenager working at a tobacco farm. After college I went into textiles. I  
22 realized quickly that probably was not going to be a long-term future for me. I was very  
23 fortunate, because when I turned my cards over I was a young man, and I had a pretty good  
24 education, and I just retooled myself. If you look at what's happening in the economic area we're  
25 in now, we've got a responsibility to retool a lot of people, because manufacturing jobs are going  
26 away, textile jobs are going away and probably won't come back. When you think about what  
27 you can do with this money, you can certainly build roads with it, or you can build the  
28 information highway with it. I would submit to you that building the roads is probably not going  
29 to have the same economic consequences it did twenty or thirty years ago. We're moving into a  
30 service-based economy away from the manufacturing economy. It's hard to compete with  
31 Mexico, Singapore, Taiwan in terms of manufacturing. We've got a lot of people that are going  
32 to have to retool. There are government statistics that would tell you that the number of jobs  
33 created and displaced through this information revolution in a thirty year period of time will be  
34 more than the number of jobs that were displaced in the industrial revolution over a three  
35 hundred year period. That means society has to constantly retool and reeducate the work force.  
36 We need to make sure we have an infrastructure that can do that.

37 In the area of health care the network gives you, as Erv spoke to, a lot of  
38 opportunities, a lot of the great delivery vehicles, both publicly and privately, that you have here  
39 in Virginia. Think about advanced radiology imaging moving outside the corridors. That's the  
40 best possible health care at the lowest cost.

41 Finally, in terms of homeland security each state is going to be charged with  
42 connecting all the communities and being able to move information quickly, being able to  
43 disseminate information as quickly as possible in terms of disasters and emergencies. The way  
44 the network is designed it gives you the speed and survivability to do that. Certainly there's a  
45 promise of a lot of money out there that could be leveraged to do that.

46 The role of government is really not just to use but also to facilitate in terms of  
47 economic growth. I sincerely applaud the efforts that you're doing here to try to transform the

1 region both economically and socially. What we have learned is that the realization of  
2 governments create the environment for information communications technology, and they really  
3 create the environment. I was very proud as Erv and his team shared with me what you're doing  
4 here. The real key is having the will to do it, having a fund to do it and then moving at the speed  
5 at which you can take advantage. The thing about technology is that it does give you a  
6 competitive advantage, particularly if you're first. As long as you continue to enhance the  
7 technology you can stay ahead, but at some point in time all these things will become table  
8 space, and you want to move quickly and take the advantage of being the first mover, and you  
9 want to continue to involve and improve on those efforts. Thank you.

10 MR. CROWDER: Thank you, Woody. In the next session we're going to  
11 have panel discussions, I believe.

12 MS. NEIDIGH: I want to thank Mr. Sessoms, that was very kind, what you  
13 had to say, and if you'd like to stay around I'd like you to be an active participant in our  
14 discussion.

15 MR. SESSOMS: Yes.

16 MS. NEIDIGH: I mentioned that we have a facilitator for our discussions,  
17 and how that's going to happen is that we'll have the key Virginia Tech contributors to the project  
18 in these three areas. Application is first, and they'll come up and sit up here, and each of them  
19 will tell us briefly about their involvement in the project. Then we'll open it up to questions  
20 focused on each of these areas. This will be facilitated by Mr. Emory Moore of Cornelius &  
21 Associates, and he is out of South Carolina. He has been working with Virginia Tech off and on  
22 for over the past five years. He's currently working with a group in Georgia that provides IT  
23 support to thirty universities and colleges throughout the state. He's also done work with AT&T  
24 and Eveready Battery Company in the past. He's going to try to help us focus the questions in  
25 each of these three areas, and at the end we'll open it for miscellaneous questions and discussion.

26 His second primary task is to make sure that everyone has a chance to get all of their  
27 questions out, so you don't have to worry about that, because he's here strictly for the purpose of  
28 insuring that everyone gets their questions asked. So with that I'd like to invite Marten deVries  
29 and Judy Lilly and Jean Plymale to come up to the front.

30 MR. MOORE: Thank you for letting a guy from South Carolina join you  
31 today. I've spent a lot of my time over the past five or six years, as Brenda indicated, doing  
32 support work with Virginia Tech and quite a bit of facilitating. I think I made one trip to  
33 Danville and met some of you at that time in very early stages of the project. My role is simply  
34 to help channel some of the questions. The first group has to do with applications. Marten  
35 deVries, Judy Lilly and Jean Plymale are our panel up here. What I'm going to ask each of these  
36 groups to do is give a very brief and no more than a minute or so commentary about their  
37 involvement in this particular piece of it, and then we'll go right directly into the questions and  
38 answers, and we need your participation. We started out suggesting that we'd use about twenty  
39 minutes for each of these groups, but with the time frame we're on we're going to target fifteen  
40 with a maximum of twenty. If you don't need the full time, we're not going to drag it out, as I'm  
41 sure all of you have a busy schedule the rest of the day. With that said I'll let you start with your  
42 group.

43 MS. LILLY: Thank you. I'm Judy Lilly, and I'm the Assistant Vice  
44 President for Advanced Network Infrastructure and Services here at Virginia Tech. We do the  
45 networking for the campus, and we actually manage Network Virginia. My involvement with  
46 this report was in volume nine. I worked very intensely with our economic development  
47 assistants here at Virginia Tech. Early on when we began working on this project, we all realized

1 that we had to have a wealth of information that was related to the tobacco region. We needed to  
2 know what was out there at a given point in time, so we engaged the Economic Development  
3 Assistance Center to develop the demographic data and the information. We met maybe four or  
4 five times, and every time they would bring information back, we'd like to have this or that, and  
5 this is something that it's felt the localities could use to move forward. So that was my  
6 involvement.

7 MR. MARTEN deVRIES: My name is Marten deVries, and I also work  
8 with the eCorridors Team. Most of my work has been on some of the technical aspects, and  
9 they'll talk a little more about that in the next panel. But I'll be here to answer any kind of  
10 questions concerning applications that I can.

11 JEAN PLYMALE: I'm Jean Plymale, and I work on the eCorridors Team. I  
12 personally authored volume number eight, which is a community level view of the technology  
13 that we're talking about today. In addition, I worked closely with volume ten, which is the  
14 medical volume, and the educational volume number eleven.

15 MR. MOORE: I think all of you have a summary form of the report, and  
16 this group is dealing with eight, nine, ten and eleven. At this point questions from anyone?

17 MS. PLYMALE: I might be able to help a little bit in the sense that from a  
18 community level the general sense is, or the way we see it is, we don't know what all this  
19 technology is about, and we don't know what to do with it, and we don't know why we need it,  
20 but we know we need it. Volumes eight, nine, ten and eleven try to address some of those  
21 questions. Volume eight addresses technology at the community level and tries to offer  
22 communities some strategies for preparing their citizens for the next generation. Volumes nine,  
23 ten and eleven are works which represent snapshots of the tobacco region today, the  
24 demographics, education and medical environment within the tobacco regions at a particular  
25 time, which is the last six months or so. We felt that was important because it's a way of  
26 understanding the current conditions that exist in the area that's under consideration. The people  
27 that have produced volumes nine, ten and eleven are experts in their fields. The medical volume  
28 was produced or directed by Dr. James Bowling, and he is the Executive Director of Northern  
29 Virginia Operations and is also a senior fellow of the BioMedical and Health Projects here at  
30 Virginia Tech. John Rendrick produced and directed the educational volume that you've got, and  
31 that should be volume eleven. He's the Associate Director of the Institute of Science and  
32 Research in the Classroom and is the instrumental figure in the Internet to Virginia K-20  
33 Initiative. John Offenbrough from the Economic Development Assistance Center produced the  
34 demographics you have before you. All these people are experts in their fields. They're often  
35 involved in acquiring funding for their disciplines and are key people in answering some of the  
36 questions that relate to why we need it and how we're going to use it.

37 MR. DAVENPORT: I might start off by saying that I know in the  
38 beginning when we were thinking about the possibility of doing a joint project with EDA it was  
39 absolutely critical that all of the demographic data, all that information and the statistical data  
40 that was known about the area that the EDA grant was being applied for. A lot of this gives us  
41 going forward not only the substance that we need to be able to go out and get matching dollars  
42 but also helps understand exactly what each of the areas, it's kind of a baseline of information  
43 about each area. Are there any questions?

44 MR. BLYTHE: I'd like to make a comment in terms of the purpose of this.  
45 These are working documents that are intended as tools to whatever entity that takes on the task  
46 of building this infrastructure. It basically identifies what we call an anchor tenant. If you were  
47 building a shopping center you would need an anchor tenant that would be early players in this.

1 The early anchor tenants in the use of this kind of technology tend to be in these areas. We've  
2 asked the people not only to give us a lot of information about the communities across the region  
3 but also to identify for us and for the entities that will be taking this on the kind of federal  
4 funding those particular communities might qualify for in each of the application areas. These  
5 are really resource documents, these four documents, for whoever takes on the task of building  
6 the infrastructure and marketing it and bringing in additional funding to leverage whatever the  
7 Tobacco Commission puts into it.

8 SENATOR WAMPLER: Maybe this is as a good a place to ask this  
9 question, but Erv brought up a point of an anchor tenant, and that these volumes would suggest  
10 who your anchor tenants are. I did my overview of the volumes and now the executive  
11 summary. What about the for-profit entities? Where do we find the anchor tenants in these  
12 volumes for the for-profit entities? If those are the important demographics that we're trying to,  
13 to change the economic footprint of the region, so to speak.

14 MS. PLYMALE: They fall in the general business sector, which is a very,  
15 very important driver. In volume eight I address some of the business aspects. There is a survey  
16 that was used in two sections or two parts of the region, which is Southwest and Southside, in  
17 Tazewell and Prince Edward Counties. The goal of that particular survey was to see what it  
18 actually took for a community to survey their business sector and what the business sector  
19 thought they needed and what they wanted. The general conclusion out of that was that the  
20 business sector does want to advance the community but not quite sure what. They're willing to  
21 pay more for it, but they don't really know why. So what's coming out of this and almost all of  
22 these volumes, it is education and an understanding of what technologies do and why they're  
23 important, that's just key. It's at the community level that these issues need to be addressed. The  
24 business sector for-profit is a huge piece of the driving force.

25 MR. DAVENPORT: I guess the point you're getting to in our area, the  
26 Goodyear plant, and are you saying that you feel like we should, that in this report we should  
27 have gone to every corporation and made a survey?

28 SENATOR WAMPLER: I think if we're going to describe an anchor tenant  
29 there should be a couple that we know on the back of the envelope who benefit from --

30 MR. DAVENPORT: Certainly the ISP's that exist.

31 MS. PLYMALE: You're talking anchor tenants from the overall  
32 perspective. I was addressing at the very community level, the anchor tenant scenario.

33 SENATOR WAMPLER: Yes, I'm concerned with the debt service. Banks?

34 MS. PLYMALE: Banks, hospitals, education.

35 MS. TERRY: BB&T and Wachovia.

36 MS. LILLY: I think if you get into the hospitals you'll see that would be  
37 your big anchor tenants, your banks. The big anchor tenants would be the ones that would have  
38 the volume locations strategically placed. When we get into the business section I'll talk about  
39 how you would deploy a network so that the anchor tenant would come on, because you do need  
40 the anchor tenants to underpin the financial model and working with the community, and we'll go  
41 into that.

42 MR. BLYTHE: There's another aspect of it, and that is, you talk about in  
43 the recommendation and actions items identifying entities that are going to do that and the need  
44 to bring on certain people almost immediately to begin developing that. In the early stages of an  
45 advanced infrastructure project like this, and it's not really well understood by anyone, much less  
46 the private sector. In every case, whether it be first generation Internet effort to the second  
47 generation effort to the kind of optical based infrastructure applications that are coming down the

1 pike, in almost everyone of those cases it has to be initially approached not like you're building  
2 traditional business but like a capital development campaign. You have someone that literally  
3 creates a development of early players that are going to become part of this really before there's  
4 great certainty about the particular application that we're going to leverage. The first generation  
5 of Internet pushing this in the late '80's and early '90's for the next generation efforts. The early  
6 anchor tenants, what we had to do is focus on major application areas, and in lining up those  
7 initial players the early drivers were government entities. In the state of Virginia it could be  
8 public service, state governments across the region. It was government entities and medical  
9 entities, which includes the for-profit private sector players and education areas. What we're  
10 saying is that when those individuals from Southwest and Southside start developing that capital  
11 development list that's putting together that campaign, the capital development campaign, and to  
12 get early players to sign up to support, this is going to be the same thing. If there's a problem it's  
13 the same thing, it'll probably end up going to education entities and medical entities and  
14 government entities in the region. They will have to be identified at the local level a few major  
15 industry players across the two regions, Southside and Southwest. The critical mass is probably  
16 going to come from medical and education unless it takes a totally different path than the first  
17 and second generation efforts.

18 DELEGATE HOGAN: To follow up on what Senator Wampler said, one of  
19 the suppositions that this report is predicated on, we're going to try to provide a network of  
20 producers of information technology or Internet content that we'll use. It supposes the people  
21 that we're going to be hoping to recruit are those people. I can certainly understand where the  
22 benefit in this project is, and this is the part I'm trying to, I can understand how education  
23 institutions need to have this, I can understand how hospitals, perhaps, although, but if that's  
24 what we're building this network for, it's not Goodyear, it's not a sawmill, it's some other sort of  
25 business that's going to take advantage of this. I'd like to know what is that business and how  
26 then is access to this network going to bring them into the area. The gentleman from Sysco  
27 spoke about India earlier, but the reason it works in India is that India has a bunch of inexpensive  
28 programs, and we don't. The demographics that are laid out points that out pretty clearly. How  
29 does this come full circle?

30 MS. PLYMALE: Many of the networking scenarios that we spoke of  
31 earlier overseas are government run and government projects, and the reason they have become  
32 as well integrated into society is because it is a government run project, and that's not our  
33 situation here.

34 MR. DAVENPORT: Clarke, I was given this book, *The Virtual Engineer*,  
35 and engineering is going through the next phase of development, and it's a treaty that requires an  
36 enormous amount of capacity to generate and move forward. Like Boeing and the last plane that  
37 they manufactured, it never went to the part of developing a model prototype. They developed it  
38 by this advanced engineering. The point being that any company today that's in our region that  
39 has in-house engineering and collaborating with other areas is going to want the capacity to be  
40 able to interact in this type of way. There are things that we've got to be able to do in order to be  
41 able to continue to provide the companies we have with the ability to interact with what's going  
42 to be the requirement for employees, much less attract new companies.

43 MR. ELSWICK: I've been involved in a prototype project in Southwest  
44 Virginia. To answer this question has been beyond my imagination. We went into a very  
45 analytical, yes, education, yes, hospitals, and it's true. Hospital volunteers make themselves  
46 nodes, and we use their operating room generators twenty-four/seven uptime. That was very  
47 good. My banker said when can I get this connection, and I want you to hear what my IT

1 director says, and this is in Lee County, and that happened. We launched Friday our first test  
2 customer, who is a mining company with a land ark system, and we can do overhead mapping  
3 with a light beam within two hundredths of a foot or a meter or something phenomenal. He's  
4 now signed a contract with Unisys, a subcontractor with NASA, which has a twenty-five million  
5 dollar contract, and he's doing a large percentage of the maps for ships coming in the harbors,  
6 mapping the bottom of the ocean and doing those maps. They have all kinds of capabilities.  
7 They are using DVD's or hard drives and Fed- Exing them to customers, and he wants this  
8 networking. The most amazing thing is that these businesses are small and they're either a one or  
9 a two-man show. He has no telephone, just an average Joe who's interested in the game. He has  
10 started collecting and buying video games that he buys at auctions, and then he parts them out.  
11 He takes digital camera pictures of circuit boards and how they interact with the equipment, and  
12 he puts them on e-Bay. People find these circuit boards, and they may or may not work with  
13 their game, and they buy the parts and the signs from him. He advertises this on e-Bay and sells  
14 it on e-Bay. He told me I could share this with you, but he made a hundred thousand last year,  
15 and he didn't have a telephone. It's magical the things that come up. Our company is providing,  
16 because the electronics allow virtual lens, which is a new service that's basically a private  
17 channel between the customer and the Internet connection. We can reroute that connection  
18 through our firewall. We can provide that firewall service, and we do all the filtering for human  
19 resources, and we can do disaster recovery. We're in the process of buying network storage  
20 units. Those businesses would not exist, there's no business to provide firewall services and  
21 filtering. So what's going to happen, we can't think of what's going to happen with all of these  
22 things, because it's just happening, and it's sort of like "Field of Dreams." Things are just  
23 happening rapidly.

24 MR. BLYTHE: Another element of this is that the National Science  
25 Foundation has technology development areas. There's four or five major areas that are going to  
26 literally drive the economy in the future. All points require billion and trillion of bytes per  
27 second of access, and they'll locate where they can get the most economical access to that.  
28 Nowhere really in Southside or Southwest Virginia is a candidate for those kinds of development  
29 efforts, those leading edge high tech areas. We don't have those kind of companies today in this  
30 region, and you're not going to have those companies ten years from now unless you have a very  
31 different kind of communications capability and very different economic access to that.

32 MR. deVRIES: If I can build on that, my wife works for IBM, and I  
33 graduated from Virginia Tech, and three years ago I wanted to move here, and the one  
34 requirement she would have is that she would have Broadband access, and there were whole  
35 neighborhoods that we would immediately cross out because she wouldn't be able to work from  
36 home and her office is in New York City. Most of the people on her team have this access. One  
37 of the big issues now, the amount of data that is being generated, and we now have a cable  
38 modem, plus she now needs symmetrical data capability. She can download information from  
39 the server very quickly, and it only takes maybe five or ten minutes. If she wants to upload to  
40 the server it could take fifteen hours, and she can do it over the weekend. It becomes extremely  
41 important for her as she works with customers to be able to do that. The next time we move one  
42 of the key things she's going to say, I must have symmetrical data, and I must also be able to  
43 have a lot of other features that we don't.

44 MR. DAVENPORT: One more question before we move on.

45 MS. TERRY: I do have a comment, and maybe it'll lead to a question. It  
46 seems to me that if the Commission were to decide to take the next step in this direction it would  
47 not be the kind of thing to bring in representatives of banking industry, insurance industry. The

1 finance industry has a vested interest in economic development, and if the banking industry is  
2 not willing to, and these sort of companies and industries, then it would be wise on their part to  
3 participate. I'd like to raise two other areas where this type of technology might be useful in  
4 conjunction with other applications. One is crisis management, and then law enforcement. Last  
5 week I was in Washington with the Association of Attorneys General. The lead-off speaker was  
6 Paul Fierro of the Division of Forensic Science here in Virginia, and he had the most advanced  
7 database and advanced technology of any entity in the country, and Virginia is a model  
8 nationally. You all may remember when we had the stalker in Washington, and if you kept  
9 following these articles, had Mississippi been linked up to the federal firearms data bank we  
10 would have caught that person probably before six or seven people got killed. If you think of  
11 other areas of our country where disastrous type things have occurred, like Oklahoma City, and  
12 the experiences with this type of bombing. When I was Attorney General the same type of  
13 people that blew up the courthouse in Oklahoma were also in Pulaski County. I introduced  
14 legislation, now we have a statewide zoning law in Virginia that was put on the books back in the  
15 late '80's that bans the type that you have in the western part of the State. The federal  
16 government has set aside a significant amount of money in the area of homeland security, and it's  
17 for technology. Given that we're here in Virginia and we are one of the leaders in the nation in  
18 terms of forensic science, and given the importance of link-ups in the area of alcohol, firearms,  
19 tobacco, DNA related to fingerprints. We could pursue as one aspect of our municipal  
20 government initiatives with the help of the Virginia Department of Forensic Science model  
21 programs in areas of law enforcement as it relates to technology and crime solving and that sort  
22 of thing. That would be another source of federal funds. The fact of the matter is that a strong  
23 public policy statement can be made, but there's got to be a federal solution, and you can't leave  
24 any areas behind when it comes to law enforcement, whether it relates to terrorism or crisis  
25 prevention because these folks go where the technology is not. We do know that we were a site  
26 some years ago for networking. When I look at municipal government as an anchor tenant, I  
27 think you can take fire and rescue, which is volunteers, and you can take law enforcement in  
28 addition to thinking about our public schools and providing whatever public services are needed.

29 MR. MOORE: You're making my job as a facilitator so easy I haven't had  
30 to open my mouth. One role I need to be sure that I take care of is that we don't spend more time  
31 on this one at the expense of the other two sections. I'm going to go ahead and conclude this  
32 particular segment and get our next group to come forward. We've got quite a few questions  
33 apparently, we want to make sure we don't miss anyone.

34 So we'll start off with our next group, and I'll ask you to introduce yourselves briefly.  
35 This is the more technical group.

36 MR. CROWDER: I'm Jeff Crowder, and I was responsible for volume two  
37 of the report, which has to do with describing the rationale and means for connecting the  
38 regional infrastructure we're talking about to the rest of the world effectively. We described the  
39 need to establish links from the tobacco region to major tier one markets in major metropolitan  
40 areas surrounding the tobacco region, Washington, D.C., Atlanta, Raleigh, Richmond. Richmond  
41 is a reasonable point of presence and others. This section also talks about extending connections  
42 to universities, research facilities, federal research laboratories and other entities that happen to  
43 surround the tobacco region with the notion being that if you have that infrastructure in place  
44 you have an opportunity to establish essentially a regional grid infrastructure. Grid is one of  
45 those terms that's now being bandied about by advanced information technology folks. You  
46 could establish a grid regional infrastructure system throughout the tobacco region in order to  
47 leverage those research facilities that are surrounding you to do a number of things. One would

1 be to create tremendous opportunities for high tech economic development, high tech firms and  
2 bio-technology, material science and some of the things that Erv mentioned. You would have the  
3 ability to establish connectivity to essentially any point within the entire tobacco region that  
4 could provide access to those research facilities and leverage those and make them essentially  
5 appear to be part within your region, and that's a real possibility. We could also use that  
6 infrastructure and those linkages to facilitate educational opportunities, work force training and a  
7 whole host of other things that those resources in the region can bring to bear for your region.  
8 The report describes methods by which you may go about establishing those links. We would  
9 not necessarily advocate that you needed to build the fiber optic infrastructure that would reach  
10 to Washington and Atlanta. We talked about this before, but there is this fiber glut that exists  
11 right now between major metropolitan areas. There is not excess fiber in the tobacco region, not  
12 in Blacksburg or other parts of the country. There is plenty of fiber connecting the major metro  
13 areas, and it does intersect the tobacco region. There is a window of opportunity that we believe  
14 is relatively short right now, it's distressed assets. A lot of the fiber out there, and it's overbuilt,  
15 and some of the companies are in trouble, those assets right now are available in many cases at  
16 bargain prices at cents on the dollar. There's a limited window of opportunity that exists right  
17 now, and you may be able to acquire access to those existing fiber optic assets to connect the  
18 region to the major metropolitan areas. To take advantage of that opportunity it would require  
19 the ability to move in a relatively fast fashion to go after those opportunities. We're  
20 recommending you avail yourself of those opportunities, as that window closes there is existing  
21 fiber that will be available for that. We've also identified cases where there may be an interested  
22 partner out there with other entities to construct fiber along long haul routes where the fiber does  
23 not exist, and that's also true for many areas, particularly the Blacksburg region and far  
24 Southwest Virginia. The report provides a listing of existing providers with fiber optic facilities  
25 in Virginia. We've given you a map for each one of those providers showing where that fiber is  
26 approximately, and that's based on data that we acquired from KMI Research Corporation, and it  
27 seems to be reasonably accurate. We also provide contact information for each of those  
28 companies in the report, so we're hopeful it will be helpful to you in establishing those links.

29 MR. NICHOLS: I'm John Nichols, I'm the lead engineer for our fiber  
30 optics design team. I'd like to refer you to the executive summary. You'll see a map, and I want  
31 to point out a couple of things on there that explains what our group did. This is a summary map  
32 that shows the preliminary fiber optic network design. Within each county you will see the red  
33 lines, and you will also see interconnecting each county are these blue lines, and together these  
34 form a mesh network for reliability and disaster recovery, multiple routes in and out of all the  
35 counties. The yellow blocks are the major access nodes, which are typically located at county  
36 seats or cities. The little green diamonds are within the county access nodes. Basically this is  
37 the intra-county, within the counties and between the counties. On page eight, to take it at the  
38 lower level, within any county or city we've done some generic models and some sample designs  
39 for metro networks and local access networks and the fiber infrastructure and the cost for all of  
40 this. Volume three, about two hundred and forty pages of detailed maps and spreadsheet tables  
41 for the design of all this infrastructure. Volume four is the design guidelines and specifications  
42 and sources for additional specifications that an engineer or community would need or a service  
43 provider would need to build out infrastructure.

44 MR. deVRIES: My name is Marten deVries, and I worked on volume  
45 number seven. Volume seven gives an overview of a number of different technologies that are  
46 either possible to use or first model or last model alternative but some that have been receiving a  
47 lot of press that may be more speculative in nature rather than a practical solution right now. I

1 spent some time in the report looking at other fiber deployment methods that help reduce the  
2 costs of deploying the fiber, and some of those are deploying fiber or gas lines. There's a project  
3 going on now in California where they're doing that, deploying fiber in sewers, which is being  
4 done a lot in Japan, and it's cost effective. There's also opportunities to co-locate fiber with other  
5 utilities. I know that LENOWISCO is doing that with water lines now, where they're co-locating  
6 the fiber, and you have tremendous opportunities for saving money that way, too.

7 MR. HARRIS: My name is Carl Harris, and I'm the Director of Network  
8 Engineering Operations here at Virginia Tech. I was author of volume six of this report. Erv had  
9 indicated about some press material on the cost advantages of these new optical Ethernet  
10 technologies. There's been a tenfold decrease in costs for using these next generation  
11 technologies. As an engineer, there's no free lunch that comes to mind, and we wonder given  
12 that there's fundamental conservation or laws of conservation that must apply. There's got to be  
13 some trade-off if you're going to get this huge decrease in costs. What's the trade-off? So one of  
14 the things that this report focuses on is what are some of the things that you lose going with a  
15 lower cost solution. In the end what we concluded was that these technologies are quite suitable.  
16 We propose an architecture that is vendor neutral, service provider neutral. It's open architecture  
17 that allows all players to come. It's unfortunate that we use the term producer and consumer in  
18 this discussion. The architecture and network is targeted to allow us as much capacity away  
19 from the particular user of the network as it provides coming towards it. That's certainly not the  
20 case with today's Broadband. Today's Broadband is engineered with the notion that most people  
21 are surfing the Web and most people are downloading content from the Web. The producer  
22 information could be those kinds of content producers that we might think of when you think of  
23 a producer in the network economy. Maybe it's a video content or a music content, but it's likely  
24 to be those things that are more business-to-business application. So much on the supply side,  
25 the logistic piece of interaction between industries these days is Internet driven. So it's important  
26 to have these high capacity communication channels when you think of both ends as being a  
27 producer and a consumer simultaneously.

28 MR. MOORE: Are there any questions or comments from the group  
29 relative to what we have heard?

30 MR. DAVENPORT: In talking about the buy-down of existing fiber, where  
31 would we go to find how to do that?

32 MR. CROWDER: There is some information provided in the report, but  
33 we're working with the National Light Rail Project right now in the research university  
34 community. We've been afforded an opportunity to acquire fiber on a twenty-year IRU, it's like a  
35 lease for a capital asset, fiber from Level Three, and this is a done deal, an agreement. National  
36 Footprint, Level Three is a provider like AT&T and other fiber providers. We've acquired the  
37 fiber from Level Three on a twenty-year IRU at a very low cost. We've leased the fiber from  
38 them, and we intend to, within the research community, to light a national network footprint for  
39 research purposes. We went through the process of developing an agreement with Level Three,  
40 and it required us to move very quickly and uncharacteristically, frankly, for a research  
41 university. We established a corporation in North Carolina called National Light Rail, LLC,  
42 lightweight enough to be able to execute the deal at Level Three, lease the fiber. We've got that  
43 fiber now in our hip pocket, and we're working on an agreement to be able to light it up with  
44 technology from a couple of potential providers. There are a number of those types of providers  
45 out there with those types of assets today. What we have seen is a change in the willingness of  
46 all the providers to talk to you about that type of arrangement. Essentially everyone who has  
47 fiber is now willing to talk about leasing some of it to you, particularly if you're talking about the

1 routes on these wet fiber paths between major metropolitan areas. Still not able to typically lease  
2 dark fiber in a community area, but along those paths there's a number of providers. We can  
3 share information that we have about who the people are, and some of that's provided in that  
4 report.

5 DEPUTY SECRETARY HUANG: I want to talk about the last mile  
6 problem and how it's involved.

7 MR. NICHOLS: On page eight that's a generic metric design. In volume  
8 three there are eleven towns and cities which we did a preliminary design for running fiber in the  
9 communities. We provided the spread sheet models where specifications and guidelines for  
10 delivering services all the way to the home or the business, and there's also the financial cost  
11 estimates for doing that.

12 DEPUTY SECRETARY HUANG: Is the financial costs envisioned, what  
13 does that take into account?

14 MR. MOORE: I think that'll be covered in the third group. That'll be in the  
15 recommendations.

16 MR. DAVENPORT: I think you're going to find the problem is going to be  
17 not the amount of money that, it's really or probably a definite amount of money, but how far  
18 will that definite amount of money go and what will it buy. If you had an unlimited budget it's  
19 not a problem to talk about everything, but in the absence of that, and the LENOWISCO report  
20 will talk about some aspect of that.

21 MR. ELSWICK: Tier one, the business customer, and you can get financial  
22 data from them. They pay for their own installation. The fiber to the home people you're going  
23 to have to give a bunch of services such as television, Internet, telephone to support the  
24 investment. The big concern is if you let a vendor come in and have unlimited perpetual  
25 ownership to drop, or if they connect to the network, if you have a drop dead date where it  
26 reverts back to the network, otherwise we'd be right back where we are today with the monopoly  
27 on the connectivity, so that's the way we look at it.

28 DEPUTY SECRETARY HUANG: At some level I'm convinced right now  
29 that the thing is buildable, but without just worrying about the big companies, we're also  
30 worrying about the small entrepreneur that has a great idea. If you use e-Bay for example you  
31 need some sort of access to it, the question is how do you get it?

32 MR. ELSWICK: I'm right now working with that kind of a problem. We  
33 have four homes, one of them is a Maytag repairman, and another one is a small businessman,  
34 another business is a doctor, and they want connectivity. We're working to get them one drop  
35 between the four of them and wireless to distribute it or put one drop and run copper to the four  
36 homes and not have to do the fiber, but we are addressing that issue economically. How you do  
37 it on a statewide basis would take more study. From a small perspective we're dealing with it the  
38 best way we know how to do.

39 MR. HARRIS: Since architecture has sort of been an enabler, there's a lot  
40 of barriers for entry to a small service provider. Today people want to provide the Broadband to  
41 the home the most, but it's a question of the cost to the access to the Internet. In Southwest or  
42 Southside Virginia getting those connections is the substantial barrier. I think we'll see a lot of  
43 entrepreneurship if the backbone technology is there that allows them in the community to get  
44 access to those resources, if it's cost effective, allows them to get into this business. I think  
45 there's a huge spectrum of possibilities for what kinds of first mile access could be provided in  
46 terms of wireless and fiber to the home. The entrepreneurialism I think will show up in the  
47 communities as the cost to access goes down from the providers' perspective.

1 MR. MOORE: Any other issues or questions?

2 SENATOR WAMPLER: Erv, before we let you off the hook on that one,  
3 one hundred and twelve to one hundred and thirty million dollars is only the backbone of the  
4 geodesic mesh and does not cover fiber to the business or fiber to the homes?

5 MR. BLYTHE: That's exactly right.

6 SENATOR WAMPLER: I don't know who wants to address this schematic,  
7 but in the executive summary --

8 MR. BLYTHE: -- We'll be talking about the financial aspects in a moment,  
9 and that's in the recommendations.

10 SENATOR WAMPLER: Then we'll wait.

11 MR. BLYTHE: The whole point was to generate a model that would pull in  
12 investments from other sources. For the last mile piece, the goal needs to be able to, in terms of  
13 leveraging Tobacco Commission moneys, the goal has to be for this to be a solvable problem that  
14 the early dollar Tobacco Commission moneys generate in the beginning five to ten dollars of  
15 outside investment, in the long run ten to twenty dollars of outside investment for every dollar.  
16 The financial models that we played around with were to see if that was actually possible. It was  
17 also to bring in revenues for backbone and intra-county and intra-city piece, to bring in revenues  
18 that had a potential to be investments and including those last mile capabilities.

19 MS. TERRY: I want to ask a question. The question I have is about these  
20 nodes, and some counties have as many as seven, and one county here has two, and the locations  
21 are interesting. By what formula did you decide which counties got more nodes and which  
22 counties got less and where those nodes would go?

23 MR. NICHOLS: These are preliminary locations. The determination was  
24 based on demographic tools. We used GIS demographic tools that show locations of population.  
25 It was also determined by using state road right-of-ways, secondary highways. These nodes are  
26 not, the next step to this would be go into a county and then work with the local community  
27 people there and their leaders and actually nail down where the nodes should be and what the  
28 routes should be.

29 MS. TERRY: My question is how many a county gets.

30 MR. BLYTHE: For the backbone it's purely a political decision. One  
31 access point per county and one access point per city, that's the actual backbone. Then the intra-  
32 county infrastructure is dictated by where the communities are, where are the major populations  
33 in each city or county. With all that said, one of the things specified in this is in the financial  
34 planning piece and John's piece as well. If the Tobacco Commission decides to fund an entity to  
35 do this we said the very first is to negotiate a commitment from every county and city to be part  
36 of this. As part of that negotiation they put down on the table a straw man design to give cost  
37 information about what the cost of that infrastructure would be and specifications and the  
38 amount of fiber per strand and so forth, the amount of fiber and strands and that kind of thing.  
39 That would be negotiated county by county and city by city. The overall backbone itself, the rule  
40 was one backbone, major backbone per county. We might find out that there is justification for a  
41 multiple backbone nodes for some counties that had unique kinds of population distribution  
42 compared to what is actually being proposed. Then there's a second level of nodes which are the  
43 nodes for the intra-county infrastructure, and that's dictated by where the communities are with  
44 major populations.

45 MS. TERRY: If the county wanted seven nodes would they pay for those  
46 seven nodes as opposed to saying we're going to give this county seven, and we're going to give  
47 you three. We're paying for those seven and we'll pay for your three.

1 MR. BLYTHE: The Southside and Southwest entities would negotiate with  
2 the counties exactly how that would work. For the business case, Judy and her people, I think  
3 they came up with three different scenarios. I think there was a flat rate per county and one rate  
4 that was population based, let me let her explain that. All we can say is this is a scenario that  
5 you can use, and really whoever the entities are that are negotiating the participation of the  
6 counties, they have to be able to negotiate that on a county by county basis. Our argument is that  
7 if it's not perceived to be fair and equitable, then they won't get the participation of the counties.

8 MR. MOORE: At the risk of cutting anybody off, I think this is an  
9 appropriate place to stop and bring on the next panel.

10 MR. DAVENPORT: One more question.

11 SENATOR WAMPLER: From Virginia Tech to Floyd and then Lynchburg  
12 to Charlottesville and Amelia to Richmond and Petersburg. I know there's a technical reason  
13 why that's there, but the Tobacco Commission usually likes to invest money within the Tobacco  
14 Commission region.

15 MR. BLYTHE: Actually, there's a financial reason why it's there. The  
16 financial reason is that we have identified major anchor tenants, and what we said is that we  
17 cannot obligate Virginia Tech or we cannot obligate University of Virginia to actually buy access  
18 to fiber strands and that type of infrastructure, but we believe, based on some of the things that  
19 UVA is involved in and some of the things that Tech is involved in, and we believe that both  
20 universities would be willing to buy and commit up front to long-term leases of strands in that  
21 infrastructure. The funds that are actually used to acquire those strands are funds that basically  
22 come from federal agencies that are funding us to participate in that kind of infrastructure. Right  
23 now we're negotiating, and we're trying to buy fiber infrastructure for linkages through that  
24 region to such as the Research Triangle, the D.C. area, and to possibly Chicago and Pittsburgh  
25 areas. The funds that we bring into that kind of thing could be leveraged to actually route a lot of  
26 that through the tobacco communities. Instead of going directly to D.C. from Blacksburg, we  
27 could go from Blacksburg down into the tobacco regions and then Richmond and up to  
28 Richmond. But we're totally neutral, and so is UVA. We have a little concern in that it's possible  
29 that the Tobacco Commission won't have this infrastructure in the time frame that we need it so  
30 we will have to develop alternative access paths. The anchor tenants that we knew most about in  
31 terms of the kind of money that they will be bringing in over the next five to ten years for this  
32 were Virginia Tech and UVA. That's the reason it's there.

33 MR. DAVENPORT: The point is that the system in Southside and  
34 Southwest, if all it does is connect to itself, you don't have anything that really connects it to the  
35 outside world. We always presupposed we'd go through Norfolk and connect it to a hub there,  
36 and the question is who would pay for that leg between Emporia and Norfolk or down to the  
37 Research Triangle? We want the system to be as vibrant as it can be, but at the end of the day  
38 we've got to decide who do we want to hook up to.

39 MR. BLYTHE: What we proposed, that the financial entity itself, instead of  
40 just creating Southside and Southwest, those entities would have to make a business decision  
41 about what or where they would build to, and it's based on revenue potential. So they'll have to  
42 negotiate that. For this scenario we were looking for where we could actually identify real  
43 dollars that would flow in on the revenue side for a project like this. That's the only reason. If  
44 we could identify other locations that had that potential capability we could build on that.

45 SENATOR WAMPLER: I know you're interested in time, but this is a right  
46 important point, at least for me. The research institutions, which is why we're going to  
47 Charlottesville and Albemarle County, Chesterfield and Richmond in unemployment, anybody

1 that wants a job probably has one. I worried that we're making other regions more competitive  
2 with our dollars. That concerns me, so I would say that if you're looking for a second course of  
3 action you can find other anchor tenants within the tobacco region rather than having to invest  
4 your dollars outside of those counties. You might call that an oversimplistic view.

5 MR. DAVENPORT: We ship a lot of data, we have a hotel relationship in  
6 Philadelphia, a major expense to the state of Virginia. If you didn't have the ability to hook it to  
7 this part, do you see where I'm going? There's a lot of government in Virginia that goes outside  
8 Virginia. If we were in a position to competitively seek that business, Southwest and Southside  
9 could potentially get that business.

10 MR. ELSWICK: Mr. Chairman, we've had the same problem on a smaller  
11 scale with the LENOWISCO Project. Lee County is in the Tobacco Commission area, and we  
12 certainly want to build network there, and we want to build Wise, but Wise is not a strong  
13 tobacco county, and why do we do it in Wise? That's to help their economy into our area until  
14 our economy develops. The analogy is that if there was a gold mine in Richmond or in Wise and  
15 they told you you could have half the gold if you'd come get it but the road didn't go there, would  
16 you stop there on the road at the Lee County line? The same thing, you've got to build a road  
17 there if you want to help the economy. They'd do the same thing to us, but we can't be jealous of  
18 what they're going to do, and we've got to do what we want to do. We've got to build the  
19 economy that will also help us, and that's the reason we do that.

20 MS. TERRY: I would certainly think, Mr. Chairman, that if every county  
21 had its own nodes and Roanoke had its own nodes those other counties would step up to the bar  
22 and help pay for it. The same thing with Albemarle, I would think that if they saw the values  
23 that we see in it they certainly would work out and negotiate a contract with these counties, a  
24 couple of which are very wealthy.

25 MR. BLYTHE: The counties outside the tobacco region have to pay full,  
26 total costs of the infrastructure to get through their county. The counties inside the tobacco  
27 region, the price they pay if they come in is heavily subsidized. Using a couple of these  
28 illustrations as an example, a reason to get into Richmond has nothing to do with our belief that  
29 you guys want to help out the Richmond economy but has to do with the fact that all of those  
30 major telecommunications, Level Three, AT&T, all of the major players are still in business that  
31 have that dark fiber, and they run right down through Richmond, and the closest access point to  
32 that infrastructure is in Richmond, two or three different locations. That's the reason to go to  
33 Richmond. It only goes to Richmond if the counties in which it basically, basically the entities  
34 in Southside would have to sell each of those counties it goes through on the idea they're paying  
35 full cost for that infrastructure moving through their counties. It's not subsidized in any way in  
36 that illustration.

37 MR. MOORE: All right, obviously, we're going to go a little past the three  
38 o'clock timeline.

39 MR. DAVENPORT: Is anyone here pressed for time? All right.

40 MR. MOORE: Let's set this for about twelve minutes so we can get back  
41 on track. Brenda, if you'll introduce yourself. This has to do with strategic and financial  
42 considerations, volumes one, five and nine.

43 MS. NEIDIGH: Hi, I'm Brenda Neidigh, Director of the eCorridors  
44 Program, and I worked primarily on volume one, which is meant to be a tool and a resource to  
45 educate our community leaders as to the rationale and strategic considerations for this project  
46 and for the investment of the Tobacco Commission dollars. I think it's evidenced in our  
47 discussions today that most of the people here understand the rationale. We've all been on this

1 task now for at least six to eight months. We gave this presentation to you all last summer, and I  
2 think it's pretty clear the rationale for doing this. I'd like to remind you that as far as the content  
3 of each volume that this was not just an ivory tower type of endeavor, we had a lot of input from  
4 private sector companies. At the beginning of every volume you'll see a list of over sixty  
5 companies that provided input, review and consultations on the project. Feel free to reference  
6 that and point that out if you have any questions about that type of participation from the private  
7 sector. We also have in the back of every volume a list of twenty-six frequently asked questions.  
8 I would encourage everyone to review those, and it references which volume those issues are  
9 addressed. These are the types of questions that people in the community might ask, that some  
10 of the anchor tenants might ask and that some of the legislators and community leaders might  
11 ask. I think it's very useful to be familiar with those frequently asked questions and where the  
12 answers can be found.

13 Some of the questions that I anticipate and I see a lot is what is the role of the private  
14 sector in this scenario as portrayed in these eleven volumes. There is a significant role for  
15 private sector companies. As Carl mentioned earlier, this is an open access infrastructure, which  
16 means it does not exclude anyone. It does not exclude any private sector participants that want  
17 to provide services over the infrastructure. They can provide a wide array of essential  
18 management functions to help manage the customer on the infrastructure. They can offer new  
19 and enhanced services to augment the infrastructure. On a more basic level they can assist  
20 communities in attracting band width intensive business and industry, which increases the  
21 demand for band width, which helps them sell more of their products and services. That's  
22 explained in volume one.

23 Also in here is an example of job creation potential as a result of building the  
24 infrastructure. Then it gives some policy recommendations and some examples of policies in  
25 other states that help enable the infrastructure development on a statewide level. That's what I  
26 have for volume one.

27 MR. HACH: My name is Richard Hach, and I work with the University as  
28 Assistant Director of Network Administration, also with Judy Lilly and others in our  
29 organization that are responsible for the content in volume five. I don't know if it's been  
30 mentioned, but it's probably worthwhile to note that each of the volumes were written essentially  
31 to stand alone. You'll find as you spend time with them that they do borrow and support one  
32 another as you read them. Volume five begins with a discussion about some of the things that  
33 you've already heard about in terms of some of the issues with the Legacy Telephone Company  
34 and either their reluctance or their inability to build the type of infrastructure that we've been  
35 talking about. The first part of number five borrows from a number of consultants and financial  
36 analysts that lead you to a discussion about asset-based telecommunications and highlights some  
37 of the municipal based and customer-owned networks, and really the premise there is to give you  
38 some examples and give you the notion and real world examples if possible to do that to build  
39 municipal base networks where the content and infrastructure are separated, and there are some  
40 practical examples. Like in Grant County, Washington, Bristol, Virginia where some of that  
41 work has been done. The analogy that we have found and seems to make sense is similar to the  
42 actual electrification of rural communities during the '30's and how customer dissatisfaction  
43 prompts a lot of activity there, and that could be possible also with this infrastructure. We also  
44 talked a little bit about the notion of patient money, the difference between return on investment  
45 and return of investment, what Judy will describe as a partial return of investment, where there's  
46 a reasonable expectation that money will be earned back but there's some uncertainty over what  
47 period of time, and Judy will explain that. The notion is that there would be a simple and

1 predictable revenue stream over the life of this project that could be used to support the project.  
2 We also introduce in volume five the notion that this entity, and with particularly what Erv has  
3 been talking about, it's our idea to facilitate the creation of the infrastructure there needs to be  
4 what we described as a politically neutral trusted organization to promote participation in  
5 network infrastructure. Erv described it as almost a capital development campaign earlier. We  
6 think at a minimum it should be non-profit and certainly tax exempt. We think that one of the  
7 things that's important is to separate the ownership of the infrastructure from the services that are  
8 provided on that infrastructure to avoid any type of conflict. So there's no entity that has a  
9 particular advantage over another within that group. We also think that work could be done at  
10 the federal level, and it becomes more of a trusted partner and more attractive to some of the  
11 federal and national research efforts that Erv referred to before. Our focus on the entity in the  
12 document will be to outline some of the out-person activities in a very practical sense of what we  
13 think that entity should be doing to acquire the funds, build the infrastructure and collect  
14 revenue. In that section as well we talk about additional anchor tenants. As Ms. Terry suggested  
15 before, we do expect both the existing base of industry to be readily adopters of the  
16 infrastructure, and your anchor tenants will justify the fiber build and higher education, health  
17 care as well as law enforcement will be interested in that, and also because of the reach that they  
18 get outside of the region. Those are just the highlights of the piece that I did for volume five.

19 MS. LILLY: The other piece, such as the research community that's outside  
20 of the state that wants to get in, and possibly an anchor tenant or someone that could bring one.  
21 I'm going to have to refer to my notes, because there's a lot of numbers here, and I don't want to  
22 give you the wrong numbers as we go through this very quickly. Then maybe we can open it up  
23 for questions. The business model assumes that we will have ongoing operations,  
24 administration, provisioning, marketing costs, and those can be recovered as part of the fees  
25 established for use of the dark fiber. The maintenance of the dark fiber is recovered on a strand  
26 mile maintenance. There's a chart in the document that gives you an estimate of thirty dollars  
27 per strand of mile, and that's an annual cost. The plan assumes a portion of the capital  
28 investment will be recovered from the consumers and will be used to sustain and continue the  
29 development of the network in the region. That means that as the cash flow starts to come back  
30 in, the model that is in this document actually provides cash flow that can go back into those  
31 areas where you have the demand coming in and can be used for that last mile. I tried to develop  
32 it with a model saying that we have to get up and get operating but we also have to create  
33 something that has life and at the end of the life you still have some money. What I mean by you  
34 still have money, the Tobacco Commission still has an amount of money at the end of the project  
35 that they can use to make decisions on how those funds are going to be expended. I don't think  
36 the Tobacco Commission should assume that you would get a hundred percent direct recovery on  
37 all the capital invested from the consumer. You may find that you have strategically a location  
38 that you have to get to because it's so important and that that consumer necessarily is not one  
39 that's paying for all of it. It may come from other sources as you build your model, but in order  
40 to have total value for the network you have to get there. I think that's the example with the  
41 Richmond location. I think it's very critical to the success of the overall network, do not build an  
42 island that you cannot get out of, that you can't control your destiny as far as getting out and  
43 what you want to do. I think it'll be very critical to education. I know that when we met with the  
44 school superintendent and when we met with the county groups they were talking about what  
45 schools will be required to have now for the SOL's and how there needs to be more and more  
46 band width and connectivity and they wanted to move that not just from the school location but  
47 to the home, because the students use that, and that to me is very important. Think of strategic

1 locations that you're going to deploy the network. The network should always be deployed, and  
2 demand should drive the buildout.

3 Do I need to go into the specifics of how much the strand mile is and how many miles  
4 of fiber and all that?

5 SENATOR WAMPLER: No.

6 MS. LILLY: Okay, I won't do that, then. I think there's two little bits of  
7 information that are important. In the intercounty city buildout, there are fifty-seven segments or  
8 legs in that map, and there's an average of thirty miles per segment. It isn't that everyone is  
9 going to be thirty miles, but there are fifty-seven there, and those could be moved, and in some  
10 instances there may be more than one, but it was necessary in order to cover the locations. There  
11 are seven counties and seven cities that are outside of the tobacco regions' jurisdiction. In the  
12 model I assumed though I did not factor into the revenue side of it, but I did say that I felt like  
13 those localities, because of those localities that they would be willing to buy in, and they would  
14 buy into it up to four times as much as we thought the localities within the tobacco region would  
15 pay. The financial model for the intercounty intercity dark fiber buildout that spends funds for  
16 this phase would be in the form of patient money based on a to-be-negotiated confirmation of  
17 loans and grants to the entity. We used certain amounts of money, but the model is very flexible.  
18 Erv has really tried me on this, he comes in and says, tomorrow I need another model, can you  
19 draw it up? The model now that we've drawn up we can modify those models based on what is  
20 needed on different scenarios or on what's happening at a given time. For the municipal  
21 government we assume four fibers for twenty years, IRU's, and those would generate 5.1 million  
22 dollars. For higher education, that's Virginia Tech and UVA, those would generate 2.7 million.  
23 Those amounts of money were not included in the business model as it is shown in the tables, but  
24 those were examples of where the money could come from and what you could expect to receive  
25 from those entities. Pole rentals is something someone asked about, so I did a section on that,  
26 and I used an average. I used thirteen dollars for annual rental rate for pole attachment fees.  
27 That varies all over the board, but that's actually in the financial model. On the intercounty city  
28 there are two hundred and sixty fiber settings, and those average thirteen miles per segment. As  
29 was pointed out, some localities have two and some have six, and that's based on the factors that  
30 John drew up and used when modeling the network. That's very flexible. I looked at their map  
31 and said, why did you put one from here to here, why would you go all the way around? So  
32 what you get into, what we realized is that when the counties and localities get into this and start  
33 building it out it may make more financial sense and it may be better if you took it from or  
34 instead of taking it this way it may be better to cross that line at a different place or to get some  
35 synergy going within that county, among those counties, or within those planning districts.  
36 Hopefully those are the kind of things that as we get into the administration and marketing that  
37 you'll have those groups come together, and they will really help define how you want to  
38 buildout the network. I worked with figures a lot in a lot of financial planning here at Virginia  
39 Tech and came up with some models, and I really surprised myself when I looked into it to  
40 realize that this will work. At the end you will generate or should have generated about eighty-  
41 nine million dollars of funds that you could reinvest in other things. A couple of figures, and if  
42 you go through this after you've paid all your operating costs and after your construction you're  
43 going to generate, and I thought this was interesting, two hundred and ninety million dollars,  
44 because we're talking about the Tobacco Commission region, and in this project it would go back  
45 into those areas through the construction and operation of the network. That's over a thirty-year  
46 period of time.

47 In twelve years of the first part of it, you would generate one hundred and forty-five

1 million in the construction piece, and that's business I thought going back in, this is business  
2 where you're building these communities. The operations will be about twenty-six million going  
3 back. I was very conservative with these figures. When you get into these tables that I gave  
4 you, and I'll give you the tables that are the most important, table number five, to me, five, six,  
5 eight, fifteen and eighteen. Those are your financial models. Number six is an intercounty city  
6 financial model. Number fifteen is the intra, t-r-a, county city financial model, and number  
7 eighteen combines them all together.

8 I'd like to open it up to questions, because I'm sure there's something that I'm not  
9 going to go over. Remember this is a model, and it's something I came up with based on my  
10 knowledge of the industry, what's going on, and using all the other volumes. I was almost  
11 constantly in contact with everybody that was working on the other volumes and reports to make  
12 sure that the financial model stayed in sync with what they were doing. A lot of thinking went  
13 into this to get it where it is. Erv, can you think of anything else I need to run over?

14 MR. MOORE: Questions?

15 DEPUTY SECRETARY HUANG: Concerning the last mile question, the  
16 hundred million buildout through the intercity model, does that assume solely the last mile  
17 problem, or if it does how many households are we talking about?

18 MS. LILLY: No, it does not, but coming out with eighty-nine million  
19 dollars left in the kitty, so to speak, creates a revenue stream that as the city, and you need to  
20 build out that last mile piece, it creates and generates the money that you can do that with and  
21 also have the cash flow coming back in from building out the last mile piece. This model does  
22 not assume that you're going to give money to people. It doesn't assume giving out, but it's going  
23 to create a financial model that the entity if there's one created, that that entity would borrow the  
24 money, and that entity would repay the money to the Tobacco Commission so they could build  
25 out those last mile pieces or whatever was important to the region.

26 DEPUTY SECRETARY HUANG: If I am a businessman in the region, or  
27 consumer in the region, how much is it going to cost me per month to get access?

28 MS. LILLY: That would depend on the company that is actually servicing  
29 or providing that service, such as LENOWISCO. We're talking about, you're talking about the  
30 end company or the store on the street. Making it financially feasible for the providers of  
31 services, the individual companies that actually develop and come into an ISP they want us to do  
32 it and build a network out and so they can keep their costs low enough and allow them access to  
33 have the infrastructure for them to do it and so they can provide services to the local company. I  
34 think Jean's survey showed that the companies would be willing to, I think it was a hundred  
35 dollars, wasn't it, Jean? I think that's what they said they would be willing to pay. I worked  
36 some models out for that last mile piece, and I was just trying to give you an example. They're  
37 not here, but that was, maybe there's some incentive that a company that wanted to come in and  
38 do this that you would actually provide them a grant or a loan or a no cost low interest rate to  
39 build this out. My model was that you just didn't give it to that company, and maybe they'd sell  
40 it to somebody else, and they'd jack the prices up to the end user.

41 MR. BLYTHE: In terms of the effect of reducing that into the local ISP, as  
42 an example if the cost of access to major tier one Internet we believe would be less than it  
43 currently cost us in several places, and several Blacksburg projects have that kind of access.  
44 Basically it's through a combination of shared infrastructure among a bunch of ISP's, but a  
45 typical Ethernet provider in Blacksburg, and I think there's about a half a dozen, they're from the  
46 Internet service providers. Typically a ten megabyte per second Ethernet connection in an  
47 apartment complex is thirty to thirty-five dollars a month. There are entities that are providing

1 wireless access within housing units and basically pricing it in the same range of thirty to thirty-  
2 five a month.

3 DEPUTY SECRETARY HUANG: What I'm hearing is that the thirty dollar  
4 strand per mile annually is less than what Verizon charges.

5 MR. BLYTHE: That was not a given per strand mile, I was saying per  
6 megabyte.

7 DEPUTY SECRETARY HUANG: I'm saying that when going through  
8 your summary it was thirty dollars per strand per mile.

9 MS. LILLY: The maintenance.

10 DEPUTY SECRETARY HUANG: Oh, maintenance.

11 MR. BLYTHE: That's a maintenance cost. Virginia Tech buys an IRU from  
12 the tobacco region, and we route our linkage to Richmond or the Research Triangle. You route it  
13 through so many strand miles of the Tobacco Commission infrastructure, we would be paying the  
14 entity that does that, and we'd pay them thirty dollars per strand mile, and that's pretty much the  
15 going rate for maintenance and operating services for dark fiber. That's pretty much the market  
16 cost as far as maintenance services to get through for access to the fiber. It's not actually on a per  
17 strand mile, but it's on a per fiber mile basis, and there's a slight difference there.

18 MR. DAVENPORT: I guess the point here is that what we were talking  
19 about here was providing a low cost highway that no services were going to be provided on that  
20 highway, and we were not going to provide the services, and we were not going to light the fiber.

21 What we were going to do is provide this fiber, an interstate highway, which allowed hopefully  
22 competitive providers where we would have the multimedia service access points where they  
23 would be, for instance in the case we're doing one in my area where there are four providers now  
24 that are wanting to provide the service. I would assume from that if there were four providers,  
25 then they're going to drive down the price of what they were doing, but the idea was all along if  
26 I'm not mistaken, we were talking about providing a highway for this fiber system to be able to  
27 operate on. Did you understand it another way?

28 DEPUTY SECRETARY HUANG: I guess what I'm trying to find out, and  
29 maybe it's tangible for the members of this Committee, as to what does it actually mean out there  
30 and how much is it going to cost at the end of the day?

31 MS. TERRY: I'd like to ask a question, Mr. Chairman. We're not a private  
32 corporation, and this is taxpayer money to represent a region. What I'd like to ask Virginia Tech  
33 to do is, as it relates to the last mile, I'd like to know on a county by county basis what would be  
34 the cost for buildout to reach the public schools? Some of our counties have less money than  
35 others. Some of our counties would never be able to afford the infrastructure and backbone. I  
36 think you have a fundamental policy decision as it relates to our public schools as to whether  
37 we're committed to bring this into the public schools and at what level, high school, middle  
38 school, elementary school. We ought to see what that last mile is and what that buildout would  
39 be, then sit down and talk very pragmatically about what kind of formula we would use to try to  
40 put all the school children in Southwest Virginia on equal footing, if that's our objective.  
41 Otherwise, we're going to end up with a disproportionate, this is a wonderful volume and  
42 helpful, and we're going to end up with disproportionate offerings and opportunities for public  
43 school children more so than we have right now. So I would like to, for the next meeting, have  
44 that cost. It could be the Commission could come back and say to the county, and I know one  
45 person in your county, and it's a wonderful county, and you have sixteen elementary schools.  
46 There ought to be a formula whereby the Commission would say we're not going to fund but so  
47 many elementary schools in the county, and I think we need to give consideration to that.

1 MR. ELSWICK: I'd like to address that. It turns out that the school system  
2 is your premiere tenant anchor customer. They're funding by federal funding, so they have  
3 money to pay for it.

4 MR. BLYTHE: Twenty dollars for every dollar spent.

5 MR. ELSWICK: In the poorer communities it's up to seven percent money  
6 coming from the federal government. So that's your main anchor tenant you want, too. If you  
7 like the fiber and have Internet access on it you got to hook them up. So I would simply say that  
8 in any business plan that is considered by the Tobacco Commission to make sure the schools  
9 were hooked up, and that would be the number one priority.

10 MS. TERRY: On a county by county basis?

11 MR. ELSWICK: You have to do it, and in the business plan there has to be  
12 a revenue stream.

13 MS. TERRY: Some counties are not in the Appalachian --

14 MR. ELSWICK: -- This is the federal money, and the money is there, and  
15 you've got to hook them up.

16 MR. BLYTHE: That's one of the reasons, K-12 education is considered  
17 one of the major anchor tenants, and because of the revenue that would flow into the entity back  
18 to the Tobacco Commission it could basically be a federal subsidy.

19 MR. ELSWICK: Wise County public schools have seventeen of nineteen  
20 schools, three hundred thousand in that revenue stream.

21 MS. LILLY: Eugene, if you'll look on table nine, ten and eleven, you're  
22 asking about the cost of that and how that works for the IRU.

23 MR. MOORE: All right, I think we're ready for recommendations.

24 MR. BLYTHE: Recommendations, one, we basically in terms of our  
25 planning said every major town and city in the tobacco region needs to be part of the plan, and  
26 that's basic, the intercounty backbone, that is what dictates where the nodes are. Politically that  
27 was a requirement set for ourselves, and we think for the entities representing Southside and  
28 Southwest to be successful they need to do the same thing. So there's a development plan for  
29 whatever infrastructure is built and that's fine-tuned and negotiated county by county to get that  
30 commitment and city by city. Then the actual deployment and order in which will be  
31 controversial. The order which you build certain segments through that region for the entity you  
32 negotiate as we believe the potential return on investment that needs to dictate the bank  
33 backbone infrastructure and intercounty infrastructure is built.

34 The next two items really relate to why we don't pursue a heavy subsidy on the part of  
35 the Tobacco Commission for last mile infrastructure, at least the active elements in the  
36 infrastructure. We believe that the bulk of the Tobacco Commission investment needs to be, and  
37 I don't like the term although it's one being used in Europe, basically in future proof  
38 infrastructure. It's got a twenty to thirty year life. In the advanced communications arena the  
39 only thing that has a fairly long life associated with the return revenues back for the further  
40 development of the infrastructure is dark fiber, optical fiber.

41 The fourth recommendation is that the bulk of the investment needs to be in projects  
42 that are financially self-sustaining in terms of overall operating costs. Judy talks about that in  
43 her financial plan scenarios.

44 The fifth item, it really needs to be, in terms of planning it needs to be thought about  
45 from the top down, connections to tier one locations outside the region that'll bring great value to  
46 the region. The inner county backbone needs to be an early priority, and then intercounty city  
47 fiber optic infrastructure, and finally intercommunity neighborhood infrastructure. This does not

1 mean that the project would not have a neighborhood to the home project or a half a dozen or  
2 dozen such projects going concurrently right from the beginning along with the development of  
3 access outside the region in the intercounty piece and intracounty piece or intercity piece. It  
4 means the lower elements, the intercounty piece and the intercommunity pieces, the increasing  
5 leverage on the dollar meaning that someone comes to you and you've got your game plan and  
6 the entity is building the intercounty backbone and pursuing opportunities for interregional  
7 access. We believe every interregional access opportunity should be able to stand on its own  
8 bottom. If you have an opportunity to acquire twenty IRU's from Bristol to Chattanooga, and  
9 Chattanooga is one of the nation's biggest cross connectors for optical fiber, or from Danville to  
10 the Research Triangle, or a northern location in the infrastructure to Richmond. We believe if  
11 you see an opportunity to nail a long-term contract for twenty-year leases on dark fiber and  
12 pennies on the dollar costs, and those deals are out there. We've been negotiating for a couple of  
13 efforts, and we've been negotiating for capability for things like the National Rail Effort was  
14 mentioned earlier. The pennies on the dollar opportunities are out there right now, maybe for  
15 twelve or twenty-four months. We believe you can nail revenue commitments on that if you  
16 have the right kind of players interacting, revenue commitments that may basically guarantee  
17 those interregional projects. You're really utilizing the cash flow in this as a way of temporarily  
18 getting the project in place.

19 The intercounty and intracounty piece where we propose the bulk of your investment  
20 go with patient money with some level of guarantee up-front return on investment based on what  
21 the entities are able to negotiate with the counties, school system, medical infrastructure system  
22 with large private sector players in the Southwest region. We believe that the intercommunity  
23 and interneighborhood piece in the first several years you should be looking for five to ten  
24 dollars on the dollar. Meaning you, you invest one dollar, the neighborhood that has a proposal  
25 in place covering anywhere from five to ten dollars to the table for a fiber to the home project.  
26 Right from the beginning you should allocate funds and you should take home those kinds of  
27 projects. When we say the bulk of the investments in those kinds of future proof projects we're  
28 talking about seventy or eighty percent of the total investment. We believe anywhere from  
29 twenty to thirty percent ought to be in projects that you are not going to have an insured return  
30 on investment. You need to view those as grant funded type projects. That's where you fund the  
31 last mile demonstrations, and that's where you fund a wide area network project. Someone  
32 comes and puts something on the table and says we would like to light two strands of fiber in  
33 this entire backbone infrastructure across this region, and this is what we'll put on the table in  
34 terms of funding toward this project, and the Tobacco Commission would evaluate those projects  
35 on a case-by-case basis. The same for a town or community that comes to you and says, we've  
36 got these commitments in terms of local companies, and we have these dollars we think we can  
37 pull in from this federal grant that we put on the table, and we want an 802.11 wireless project  
38 for this entire community. That's the kind of project where you're getting that good match and  
39 good leverage for your dollars. We think those kind of projects should be running concurrently  
40 with this. Our primary focus has been on the idea that the bulk of these funds look like loans  
41 with some sort of expected return of investment. If there was a return on investment you  
42 wouldn't be doing this. If there was an expected return of two or five or ten or fifteen percent  
43 investment for developing of this kind of infrastructure the private sector would be doing it.

44 The Tobacco Commission decisions, and we've argued about this among ourselves for  
45 some time, I believe you need to decide if you're going to develop this as a one or two region  
46 project. In the beginning we felt strongly it should be one Tobacco Commission region effort,  
47 because we think it would be the greatest net value. We've become convinced that there's

1 enough differences in terms of ideas about the right strategy to pursue that very likely you need,  
2 you have a better chance for a successful project, for a full major initiative, if you divide this  
3 between Southside and Southwest and you basically put in motion two projects. The only thing  
4 we would say to do this is that there is some value in requiring to the entities to take this on for  
5 Southside and Southwest, and there is value in the Tobacco Commission requiring some degree  
6 of coordination, for instance the order in which you develop certain segments.

7 The second issue that the Tobacco Commission certainly has a lot of influence on is  
8 what kind of entities would you be willing to support to take this on. There's quite a bit of this in  
9 the financial plan, but basically we believe it could be an entity that's fully focused or mostly  
10 focused on the region in which it's serving. If it's Southwest it ought to be that one. An example  
11 of what you might require is that a non-profit partnership or entity be created and you invite  
12 players like LENOWISCO, Bristol Telecommunications, and some entity representing the  
13 northeastern area of Southwest, some third entity to create an entity and come back to you with a  
14 game plan for developing the Southwest Virginia with the idea that the Southwest piece of it.  
15 They make the recommendations and negotiate with the Tobacco Commission the number of  
16 nodes and the order in which things get built, and they negotiate the actual infrastructure plan.  
17 We provide the financial models and design models that are very adaptable to any kind of change  
18 they might want to plug into those models.

19 For Southside it might be an entity representing Halifax County and the northeast area  
20 of the Southside region, Future of the Piedmont, you might bring in someone like ODEC into the  
21 picture. You create an entity, and there's a lot of different choices on this. Our recommendation  
22 is that it should be primarily focused on developing advantage for the Southside region. It  
23 should be non-profit and not be in the services entity. It doesn't mean that ODEC or the Halifax  
24 entity couldn't be in the services arena, but that partnership that actually developed the optical  
25 infrastructure would be just in the game of developing the optical fiber advantage. You could  
26 come up with other scenarios. You could basically charge these entities, and they're out there  
27 ready to go. LENOWISCO is champing at the bit to do some things, the same with Bristol  
28 Telecommunications. They are and have been doing some great things, and the same thing for  
29 Southside, Future of the Piedmont, and some of those players. They could be invited to bring  
30 forth a plan for an entity or creation of an entity and within two, three or four weeks have  
31 something on the table to you. The incentive for them to do that, I believe, is you could provide  
32 them with money to require the hiring of an executive director and one or two technical people,  
33 and you allow them to hire those people with the understanding that what's going to make or  
34 break this effort or what's going to make it successful or not successful is the quality of that  
35 talent. We're not talking about cheap people, we're talking about a couple of extraordinary  
36 executive directors that would understand the vision you wanted in Southwest or Southside, and  
37 they basically would be charged with, and they could put it together pretty quickly by leveraging  
38 information that we put there, or they could do something entirely separate. When they brought  
39 you a business plan or sign-up sheet they've got a critical mass of anchor tenants that would fund  
40 a piece of this, and they'd bring that to you. When they could show you they've got long-term  
41 commitments of a hundred percent of the counties and cities within Southside and Southwest,  
42 when they had that you agree to provide a first incremental funding for whatever it is that  
43 business plan says they're going to do and build and that's going to address these issues. That's  
44 the allocation of funds. The Tobacco Commission could decide exactly how or where it's going  
45 to split those funds between Southwest and Southside if you did two separate projects.

46 The critical success factors, we're absolutely convinced these are sorted in priority  
47 order. Number one is a regionwide vision. If you've got a LENOWISCO region vision and a

1 Bristol area region and something else in the northeast or whatever, you're not going to get  
2 maximum value out of this thing. The same thing with Southside, if there's a Pittsylvania  
3 County, Future of the Piedmont kind of vision and a Halifax vision and a northeast area you're  
4 not going to get maximum value. Your likelihood of success will be reduced. The right  
5 implemented entity, and there are a lot of options out there. I think a corporative association has  
6 been discussed as one possibility, and that's out there on the table, and that's a possibility of  
7 being the right entity. It could be a non-profit and possibly tax exempt entity. It's got to be  
8 trusted, and it's got to be perceived by both the private and public sector entity as one of the  
9 anchor tenants. It's got to be trusted that it's going to be developed in this infrastructure that  
10 everyone's good. Critical mass of anchor tenants, they've got to be identified right up front, and  
11 we've tried to give you ideas where you can find those anchor tenants. Long-term commitment  
12 of a hundred percent of the regions, counties and cities, we started to say that's a political  
13 commitment, but that doesn't make sense, doesn't mean a damn thing. Even if there was not a  
14 requirement to get an annual commitment of some dollars, and in Judy's model or one model it's  
15 only about six thousand dollars per county, per city if you did just a flat rate. It's ridiculous in  
16 terms of the infrastructure that would be given, but there's got to be a real dollar value. To have  
17 a political commitment there's got to be dollars behind it. To be sure the counties and cities are  
18 going to stay there for the long haul they have to have some funds into this thing. Right from the  
19 beginning you're going to see a number of community projects put on the table, last mile projects  
20 that leverages infrastructure. In some cases they're going to be there before the backbone  
21 structure develops. You're going to see a number of community investment projects where you  
22 can get maximum leverage, you should pursue these.

23 I believe there was an authority proposed that would be tightly coupled to the Tobacco  
24 Commission. We believe these entities should be private sector based. The Tobacco  
25 Commission's control is through contracts and through performance requirements for those  
26 entities back to the Tobacco Commission. The flow of money into them is contingent upon their  
27 meeting those performance criteria. The third control is project management, being able to  
28 monitor, project monitoring and requiring continuous reports on projects and building  
29 infrastructure that's been contracted for.

30 There's been fifty or sixty people at Virginia Tech that have put a lot of time. I know  
31 there were people that worked Christmas Day and Christmas Eve and January 1st, and one of  
32 them is John Nichols. I think he's put more into it than anyone else. The one who's handled the  
33 funding of this project internally is Judy Lilly. Brenda made a point of telling me I needed to  
34 recognize Judy. Basically the bulk of these people were in her organization. I think  
35 approximately forty of the sixty people that were involved in it came from her organization.  
36 Special thanks to you, Judy and Brenda and everybody.

37 MR. DAVENPORT: Thank you. Before we have comments and discussion  
38 I'd like to allow LENOWISCO to make their presentation so we can go ahead and incorporate  
39 that in what will be the final comments and discussions.

40 MR. FLANARY: Thank you, Mr. Chairman. While we're loading up the  
41 CD I'll just go on. My name is Ron Flanary, I'm Executive Director of LENOWISCO, and I'll  
42 submit to you you really can't understand Broadband until you've been in a ditch and you've  
43 fooled with this conduit, you've negotiated easement with an irate farmer, and you have an  
44 exchange of nasty letters to the Health Department over regulations. You can't really appreciate  
45 that until you've really gotten down and done this. We've spent doing the financials provided by  
46 the Tobacco Commission. I want to acknowledge the great support not only from the Chairman  
47 of this Committee but all the people who supported that. I want to mention Carthan and his staff

1 and Ms. Wass, Frank Ferguson from the AG's Office. I'm going to take you through a really  
2 quick presentation and show you what on-the-ground experience looks like. I'll answer one  
3 question Ms. Terry had about what real world costs are. In the experience in our project we put a  
4 hundred percent of the fiber in place for twenty-seven thousand dollars a mile, which is a little  
5 different than what you find in the Tech study, and that's a little cheaper, but that represents real  
6 world experience.

7 To give you a quick review, we received a two hundred thousand dollar grant from the  
8 Tobacco Commission to design the system in the LENOWISCO service area. We received a  
9 loan of four hundred and forty-five thousand to co-locate this in the same ditch as the regional  
10 waterline project, which our office was administering on behalf of two of our public service  
11 authorities. We were able to get a hundred thousand dollar grant from the Virginia Coal Field  
12 Coalition, which was left over money from the Virginia competitiveness site, and fifty thousand  
13 from the town of Big Stone Gap, which was a CIT grant from an earlier project. With that we  
14 have constructed eight miles of conduit co-located with the water project and six miles of  
15 conduit plowed to complete the Duffield to Big Stone Gap link. The first U.S. customer to use  
16 Intel conduit solution, we've put twelve fibers into 13.36 miles of conduit linking Big Stone Gap  
17 to Duffield, and we've been able to put it in operation. As of Friday we had a dedication, and we  
18 were joined by Senators Wampler, Pickett and Delegate Kilgore and other members. Mr.  
19 Montgomery was either out of town or couldn't be there. We had it at a business that we're going  
20 to discuss a little later, and we recognized that end user businesses are one of the things that's  
21 most important. We hope to have three hundred and sixty-two homes and businesses waiting  
22 drops, so this is clearly a last mile project. It does not include the businesses we picked up in  
23 Big Stone Gap. I wish I could show you some images of the installation in the ditch, but we're  
24 having technical problems, so we'll move beyond that. I'll tell you the co-location of conduit is  
25 cost effective, and it's a little tricky sometimes. You can't just say we're building a water project  
26 and we're going to put conduit in the ditch. Sometimes it's difficult to bid in cooperation with  
27 the PSA, there's lots of technical issues. Sometimes it's not more cost effective to plow it in, but  
28 I am confident that installing it underground is probably the best overall solution. We have  
29 learned some things about securing the right-of-way. I'm very happy to tell you that VDOT has  
30 been great to deal with. VDOT in some cases gives us a four-day turnaround as far as acquiring  
31 rights-of-way, and I have no issues with VDOT. This is going to be an advanced Internet project.  
32 We've learned that switching equipment can provide beepers that result in new business models.

33 I'll be glad to answer any general questions, but Mr. Chairman, we wanted to talk  
34 about some specific business applications that involve some contracts and some planned  
35 business expansions as a result of this project, and I need to do that in Executive Session, if it  
36 would be appropriate. Before that I'll be glad to answer any general questions about our project.

37  
38 We can go through the slides very quickly, and I know it's been a long day for you,  
39 and I want to be considerate.

40 MR. DAVENPORT: We're not going to get there to do that?

41 MR. FLANARY: I don't think so.

42 MR. DAVENPORT: What they've asked to do, and I apologize, Virginia  
43 Tech people are included in this, but there's a need to go into Executive Session. This involves  
44 some client sensitive information. Let me ask Senator Wampler if he has a motion.

45 SENATOR WAMPLER: Mr. Chairman, pursuant to the provisions of the  
46 Virginia Freedom of Information Act for public meetings requirements, I move that we adjourn  
47 the public meeting and reconvene the closed meeting for the purpose of receiving and discussing

1 information which contains proprietary and/or trade secret matters and includes potential  
2 business expansions or creations not previously announced. These topics are subject to the  
3 exemptions from public meeting requirements pursuant to Virginia Code Sections 2.2-3711,  
4 paragraphs A 29 and 2.2-3711.85.

5 MR. DAVENPORT: The motion is on the floor, is there a second?

6 SENATOR PUCKETT: Second.

7 MR. DAVENPORT: All in favor say aye? (Ayes) Opposed? (No  
8 response)

9  
10 NOTE: Whereupon the public meeting is closed and the  
11 Committee is in Executive Session.

12  
13 MR. DAVENPORT: We're back in session.

14 SENATOR WAMPLER: I move that we adjourn the closed meeting and  
15 reconvene the open meeting and ask each member to certify that during the closed meeting only  
16 matters contained in the motion for the closed meeting were discussed and no other matters were  
17 considered. I so move.

18 SENATOR PUCKETT: Second.

19 MR. DAVENPORT: All in favor say aye? (Ayes) Opposed? (No  
20 response) We're back in session. Roll call.

21 MR. CURRIN: Mr. Arthur?

22 MR. ARTHUR: Aye.

23 MR. CURRIN: Mr. Elswick?

24 MR. ELSWICK: Aye.

25 MR. CURRIN: Deputy Secretary Huang?

26 DEPUTY SECRETARY HUANG: Aye.

27 MR. CURRIN: Delegate Hurt?

28 DELEGATE HURT: (No response)

29 MR. CURRIN: Mr. Owen?

30 MR. OWEN: Here.

31 MR. CURRIN: Mr. Montgomery?

32 MR. MONTGOMERY: (No response)

33 MR. CURRIN: Senator Puckett?

34 SENATOR PUCKETT: Aye.

35 MR. CURRIN: Ms. Terry?

36 MS. TERRY: Aye.

37 MR. CURRIN: Mr. Watkins?

38 MR. WATKINS: Aye.

39 MR. CURRIN: Senator Wampler?

40 SENATOR WAMPLER: Aye.

41 MR. CURRIN: Mr. Chairman?

42 MR. DAVENPORT: Aye. All right.

43 MR. FLANARY: Thank you, Mr. Chairman, this concludes our  
44 presentation.

45 MR. DAVENPORT: What I'd like to do now is have a little discussion  
46 about where we're going from here. Obviously we've covered a lot of ground today, and I would  
47 assume that all of you understand that if we do go to the next step that there's going to have to be

1 some kind of business entity that the Tobacco Commission feels comfortable with. I would  
2 assume that we would solicit over the next period of time, we would solicit proposals to come to  
3 the Commission or to this group that would be proposed to the Commission and would identify  
4 such business entities that might propose to deploy different assets to meet this end. Before we  
5 go much further I'd like to open the floor for further discussion and comments and questions that  
6 might pertain to anything that you feel that has not been answered.

7 SENATOR WAMPLER: I don't know of any document that captures what  
8 we are trying to do better than these eleven volumes. It's the amount of information, trying to  
9 digest it and making the best decision possible. I think it shows we are well on the right track.  
10 Much like Ms. Terry, I'm not sure where we are in modifying what the Commission may want to  
11 see some more emphasis on. I'm not sure where we are in trying to perfect the end product, and  
12 that's my first observation here. I don't think it's necessarily one region versus the other. My  
13 concern, and perhaps I'll be in the minority on this viewpoint, but with the last mile in a subset of  
14 fiber to the business we will address fiber to the home later. Fiber to the business has not been  
15 adequately addressed, as far as I'm concerned, others may feel that'll come along at a later time.  
16 What do we do to not only attract new businesses, but what do we do to retain our existing  
17 businesses by having high speed at an affordable price. I don't blame the economic models for  
18 not demonstrating what the affordable price is, and that's a very tough one to get your arms  
19 around. I guess the last point you brought up, and the one Erv was speaking about at the  
20 conclusion of his presentation, was the entity. I had a lot of concern, if I read the report  
21 correctly, that five people would be the ones to determine how a hundred and ten million dollars  
22 plus would be spent. I have a great deal of concern about that, and I know as a thirty-member  
23 Commission trying to decide how to spend non-discretionary dollars of twenty million. I don't  
24 know what the answer to that is, but I'm just saying before we have our next meeting I just  
25 wanted to share that with the group. The entity is who gets what and when and what is that  
26 return on investment. There's about six different ways you probably could address that. I don't  
27 have the answer, but that's my biggest concern. I think that's about it, other than Virginia Tech  
28 did a great job of putting this together. Now the question is what do we choose from?

29 MR. DAVENPORT: I would say what you say is the most important piece  
30 of the next step, and that is either we come up with an entity that the Commission feels  
31 comfortable with or this whole project goes no further, because the Commission is not going to  
32 be able or will not be allowed to do this on its own. At least legislatively at this point the  
33 Commission does not have the authority to do this on its own. Unless they are willing to come  
34 up with a forum or an organization that they are satisfied with, then we can go no further.

35 SENATOR WAMPLER: Mine is not on the operational side but the process  
36 of determining disbursement of dollars. That's the difficulty I have in transferring that decision  
37 to a small group of people. I think clearly we do have the right to determine where those dollars  
38 will be spent.

39 MR. DAVENPORT: You have a right, but do you know today what you  
40 would accept as an entity that would be in charge of this?

41 SENATOR WAMPLER: I don't know what the entity would look like, but  
42 my point is severing our decision making process or allocating a hundred and ten million dollars  
43 to the subcontractor and him make the decision.

44 MR. DAVENPORT: The Commission ultimately has control by what Erv  
45 said, and that is that you control the flow of money going out. At any given point you can stop  
46 the outflow of money if you're not satisfied with the way the money is being spent or the results  
47 you're getting.

1 DELEGATE HOGAN: Mr. Chairman, I'd like to clarify that point. Clearly,  
2 and you pointed out what we can't do, but if we have this entity and whatever it might be coming  
3 back to the full Commission or any subset of it and say we want you to give us twenty million  
4 dollars to do X and then we approve the twenty million dollars to do X and give it to that entity  
5 and they go on about their business with it. Can we do that, Frank?

6 MR. FERGUSON: Mr. Davenport and I have been puzzled over this for  
7 some length. Rather than answer the question exactly how you asked it, let me be a lawyer and  
8 recast the question slightly to sort of phrase how we got here, and I think that's what Mr.  
9 Davenport said. At least those in the legislature know that there were efforts to try to come up  
10 with a legislatively creative mechanism to handle this, and for whatever reasons it's not to be.  
11 The Commission, of course, can expend funds that are consistent with its statutory mandate and  
12 in this case economic redevelopment of tobacco dependent communities. I think the problem  
13 here is that even if we spent all a hundred and ten million dollars or whatever it is budgeted for  
14 the project and not knowing if it's anywhere close what we're talking about having been created.  
15 You need to bring in other sources of investment and other people and other folks that are going  
16 to be involved in this project. That's where the authority for the Commission starts to end. We  
17 have no authority, equity position with other companies, and we have no authority currently to  
18 create business partnerships with private entities. I think that gets to the problem that Mr.  
19 Davenport is talking about. We need to essentially bend out, if you will, some portion of that  
20 activity. I don't know if the Commission would want that kind of day to day operational  
21 authority in any event, but even if we had further legislative authority we'd still be talking about  
22 the mechanism for those day to day operations of a project of this nature.

23 MR. DAVENPORT: One solution might be to maybe add some of the  
24 pieces that Senator Wampler was talking about dealing with the last mile piece dealing with the  
25 business community. Then put it out on the street for a proposal. Issue it out, and then have an  
26 opportunity to have different entities come back with their proposal about how they would  
27 implement this program, given in the form of different phases where it wouldn't all be at one  
28 time or one aspect of it. Let's talk about the interstate piece that would deal with initially one  
29 aspect of the fiber connection and to hold back on the expenditure of money. Certainly the  
30 quicker this thing is deployed the quicker you get substantial revenue being generated by it.

31 MR. ELSWICK: I would think maybe we should reconvene our group here  
32 after we've had some time to think about this, in another month reconvene to try to determine  
33 whether we can come up with a definitive plan. I might add that a lot of the leverage that's been  
34 gained from this is local leverage, and if we take away ownership from the localities, then we  
35 would lose ability to leverage local funds. The bigger the entity the less leverage of local funds.  
36 If the localities, what about maintaining ownership in the localities and having overall  
37 enforcement from the technical aspect, and we talked about becoming the banker and  
38 recommendations and review process set up. The ownership of the project would be people like  
39 PSA or LENOWISCO or towns or counties.

40 DELEGATE BYRON: Forgive me, and I'm new to your Committee here  
41 today, so I have not seen from not being involved in this project, but some of the things I'm  
42 hearing today, such as involving the localities, sounds like an apple pie and wonderful things.  
43 We know as legislators trying to get an agreement with all different scopes and thought processes  
44 is not always as easy as it looks. You have several scenarios. You can talk about complete  
45 agreements and going with Southwest or Southside, but coming to agreements is one part of the  
46 picture. Number two, you have to get an agreement with, but if localities want to become a part  
47 of this and you talk about bringing them to the table you start bringing so many people to the

1 table, your question of how many are going to be involved in that group is going to be difficult.  
2 If you talk about the Commission coming to an agreement on something and you bring in all the  
3 other parties you're going to even have a bigger scenario trying to have an agreement on  
4 something that is just very big. What Senator Wampler said I think is a tremendously excellent  
5 idea to have some of the private sector in, not only to draw the picture of what's involved but to  
6 kind of get a private look of, they're used to dealing with the private sector and throwing out  
7 scenarios that you can get a better picture of where you're going and if you're going to do it by  
8 mileage. When you talk about pulling back on funds it kind of reminded me of some sessions  
9 during the electric deregulation. You start out on a project and all the investments made in it,  
10 and just stopping projects is not always the best solution to the situation either. As you talk  
11 about starting and stopping you have to look at how expansive that is before you stop certain  
12 things along the way or if you're going to focus on a small area and then move on. That's a lot,  
13 what you've put into all this over a series of meetings sounds like a lot. It immediately jumps out  
14 to me that there's so much more that needs to be discussed and figure out where we're going and  
15 how you're going to get there.

16 MR. ELSWICK: I agree with your starting and stopping. I think we need  
17 to set certain parameters, and as the entities come up we need to meet these parameters and  
18 guidelines and connectivity, but once these projects are approved, whether it's wireless or not,  
19 we have an overall plan and all the approving is done up-front. Once you've spent twenty  
20 million dollars you're not going to stop. You need to pre-approve this.

21 SENATOR PUCKETT: Mr. Chairman, earlier we heard Erv say in his  
22 presentation that they have sort of observed that there's two different directions going here,  
23 Southside and Southwest. If we pursue another entity, which I tend to agree, might it not be  
24 worth considering two entities, one for each of the regions?

25 MR. DAVENPORT: Personally, I think so, and I think it probably would be  
26 an easier fit, because I do think there's probably two different agendas, or conceptually you  
27 certainly have well developed leadership, Bristol utilities and LENOWISCO, kind of have a  
28 game plan going forward. At the end of the day we don't really think, or I don't think that how  
29 we do this as long as it would be spent prudently. You're still going to get an up-tick from  
30 whatever you do. Personally I would encourage that and then have some kind of Executive  
31 Committee to interact between the two to make sure that if they come together that they'd be  
32 compatible.

33 SENATOR WAMPLER: I don't know who from Virginia Tech to ask this,  
34 but do the two regions have the same degree of connectivity as it relates to the national access?

35 MR. BLYTHE: It depends on the ideas that these entities would have and  
36 different development strategies, but the end game over ten or fifteen or twenty years is very  
37 similar. Over time I think they would have the same kind of capabilities.

38 SENATOR WAMPLER: Would we have access to the national access?

39 MR. BLYTHE: If the Southwest and Southside, that entity proposed, and if  
40 the Tobacco Commission bought into it, absolutely. But if one of the entities said we're  
41 absolutely not interested in developing those national connections, and the Tobacco Commission  
42 said, that's okay with us, or Southwest or Southside, then, it's going to be what you decide.

43 DELEGATE HOGAN: Mr. Chairman, it seems to me this access to the tier  
44 one pipeline or whatever you want to call it, it seems to me that both regions would concur that  
45 is something that we need to do. From what I can gather it's not required to lay fiber and to do  
46 things like that, it's a matter of leasing and arranging access to fiber that's already here. Is that  
47 it? I've oversimplified it.

1 MR. BLYTHE: It's basically that, and partnering with players in the  
2 process of building infrastructure.

3 DELEGATE HOGAN: But it's not a matter of building anything, that's a  
4 matter of negotiating and making arrangements with people?

5 MR. BLYTHE: Basically leveraging --

6 MR. DAVENPORT: -- Wait a minute, are you saying then that you could  
7 get Bowman-Halifax?

8 DELEGATE HOGAN: Maybe, to the extent that a piece of this project is  
9 access to tier one structures, tier one structure is a statewide problem, certainly. It seems to me  
10 that you would negotiate that one time for both regions. When you get into the intercounty and  
11 intracounty and some of these other relationships that the gentleman from LENOWISCO  
12 mentioned, perhaps it's a different approach, but the kind of arrangement that Erv was talking  
13 about negotiating with these long haul pipelines, I don't think you want to do that twice. To the  
14 extent that we do it once and leverage in the major players, which would be these two  
15 universities, I think it's a real advantage for doing that one time and not twice.

16 MR. BLYTHE: I think you could consider separating that activity or task  
17 or opportunity from the rest. It's not a one-time thing. We're talking about multiple deals to  
18 Washington and the Research Triangle and to Chattanooga and Atlanta, it's multiple deals and an  
19 ongoing kind of effort, or it could be separate. That could be done for the entire Tobacco  
20 Commission region as a separate task, that's true.

21 MS. TERRY: Mr. Chairman, you suggested that we meet again in about a  
22 month, and I'm very concerned about this last mile situation, whether or not unless we go to  
23 some of these localities and know what we're looking for and realistically know the benefits we'd  
24 get out of this. It'd be like a natural pipeline going through Patrick and nobody from Patrick  
25 getting benefits from it. So I'd like to have information about what it would take to put all the  
26 school children in every county and city on the same footing in terms of access, what the  
27 buildout cost would be, so that if we decided to go out and do this we could break out the  
28 counties and cities and we would know what the cost would be for it to be a practical application  
29 beyond the county office. Secondly, I'd like to see if these federal funds are there and if they're  
30 still there and what would be available so these counties could take advantage of them and move  
31 on the last mile.

32 MS. LILLY: That's an action item.

33 MR. DAVENPORT: I think we could probably interview a number of ISP's,  
34 what it would be if they had it and what it would be without it. I'm sure you have an Internet  
35 provider in Patrick County.

36 MS. TERRY: I get mine from Floyd.

37 MR. DAVENPORT: Then we can talk to the Internet provider in Floyd.  
38 We'd also like to go to a group of ISP providers and find out their costs, or number one, what  
39 they would do different if they had the ability to expand from an MSAP that existed and whether  
40 that would make any difference and how they're cost of service would be changed. I can bring  
41 an example from a provider in Gretna, Chatam and Danville and calculate what the difference in  
42 the rate will be now as opposed to what it would be once the system is connected. I think the  
43 thing that we have all got to decide is how important is Broadband connectivity to this region  
44 and whether in fact we could get to where we want to go some other way and whether the  
45 existing telecommunication companies - I know in a past meeting the Secretary made a comment  
46 about having a meeting with the different telecommunication companies - to see what their input  
47 would be if they were asked to make a recommendation or if we asked them what they could do

1 for us, and I know we haven't done that. So maybe all at the same time we would try to have  
2 some kind of interaction with the existing telecommunication companies and other providers to  
3 come up with a better set of answers of what it is we really accomplish by spending a hundred  
4 million dollars.

5 What else do we have for today, any other comments? Does anyone in the audience  
6 have any questions they'd like to pose? Well, I'll entertain a motion to adjourn.

7 SENATOR WAMPLER: So moved.

8 DEPUTY SECRETARY HUANG: Second.

9 MR. DAVENPORT: It's been moved and seconded to adjourn. All in favor  
10 say aye? (Ayes) Opposed? (No response)

11  
12  
13 **PROCEEDINGS CONCLUDED.**  
14

---

15  
16 **CERTIFICATE OF THE COURT REPORTER**  
17

18  
19  
20  
21 I, Medford W. Howard, Registered Professional Reporter and Notary Public  
22 for the State of Virginia at Large, do hereby certify that I was the court reporter who took down  
23 and transcribed the proceedings of the eCorridors Task Force Meeting held on Monday, March  
24 24, 2003 at 1:00 p.m. at Virginia Tech's Torgersen Hall Boardroom.

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

27 Given under my hand this 7th day of April, 2003.  
28

29  
30  
31  
32 \_\_\_\_\_  
33 Medford W. Howard  
34 Registered Professional Reporter  
35 Notary Public for the State of Virginia at Large  
36  
37  
38

39 My Commission Expires: October 31, 2006.  
40  
41  
42  
43