Mr. WISE. Mr. Davenport?

TESTIMONY OF HOWARD C. DAVENPORT

Mr. DAVENPORT. Thank you, Mr. Chairman.

I am Howard Davenport, currently General Counsel of the Public Service Commission of the District of Columbia. I have been nominated by Mayor Sharon Pratt Dixon to become the D.C. Commission's chairman. I have been confirmed by the D.C. Council. I am due to be sworn in as Chairman of the D.C. Commission no later than Friday, July 19.

Mr. WISE. I just want to make sure we are not keeping you from the swearing in. You get that close, let's go for it.

Mr. DAVENPORT. I am pleased to appear before this subcommittee today to explain what the D.C. Commission is doing to insure that citizens of the District of Columbia receive adequate local telephone service.

The D.C. Commission has the power after a hearing to direct that reasonable repairs and improvements, changes or additions to service or equipment be made by C&P within a reasonable time.

In addition, the D.C. Commission may oversee new technology when it is introduced in the context of a new rate filing. The D.C. Commission may refuse to allow the ratepayers to pay for new construction; it may require that
new technology costs be allocated in accordance with public
benefits. This last power may be most effective since it
increases the costs of the utility if the service is not
adequate.

With respect to the adequacy of telephone service, the
D.C. Commission has taken a number of steps. We have
established a digital deployment reporting group to discuss
the C&P planned deployment of digital facilities on a
regular basis and to develop a digital deployment reporting
system.

Second, we have reviewed C&P's plans for deploying
equipment.

Third, the D.C. Commission has before it the issues of,
one, the reasonableness and prudence of C&P's construction
program, and, two, the costs and benefits of digital
switches, fiber optics, SS-7 and other new technologies.

The D.C. Commission is very concerned with the recent
outages. While up to this time telephone service has been
adequate, the recent events warrant investigation to make
sure that they do not reoccur. At this time, the D.C.
Commission staff is conducting its investigation in an
informal manner and is in contact with C&P, the FCC and
other State commissions. Should the informal investigation
warrant a hearing or action in a rate case, the D.C.
Commission will take such action.
At this time the D.C. Commission has only partial information as to the reason for the outages. Based on the information we have from C&P, it appears that there was not a capacity problem that led to the overload of maintenance messages which resulted in the outage.

The SS-7 signal system has been designed to carry the signaling required by the long distance calls to or from the District of Columbia as well as signaling requirements of new digital services. Neither the long distance signaling load nor the load for these new services is currently carried by the SS-7 network, so the system is currently lightly loaded.

Therefore, the problem appears to be related to the SS-7 software provided by DSC Corporation. Bellcore issues the specifications for signal transfer or point switches and the SS-7 software and tests the delivered hardware and software from regional companies.

Bell Atlantic does not have an independent capability to fully test SS-7 equipment provided by DSC, but rather relies on Bellcore.

It is yet unclear whether the problem is with Bellcore specifications in testing or with the equipment and software provided to meet those specifications by DSC. Based on recent reports, it appears the problem is with DSC software.

I am pleased to say that Bellcore and Bell Atlantic have
established working groups to address problems and this hopefully will result in improved performance of the system.

For the present, Bell Atlantic is making temporary fixes such as monitoring and blocking the maintenance messages which overload the SS-7 network. It is also working to identify and make corrections to the existing software and considering an addition of back-up facilities to eliminate signaling system outages in the future.

I particularly want to commend Mr. McDonald who suggested that we may need to go to back-up systems.

However, there is some consideration which must be given to how much of a cost is involved, a cost-benefit analysis would be appropriate before adopting fully back-up systems.

However, the underlying reasons for the outage, particularly why there was not such efficient testing of the software and its long-term solution have not been determined.

In our investigation, there are a number of matters to consider. For example, it may be necessary to investigate how Bell Atlantic gives the proper personnel adequate guidance to take the necessary steps to isolate and cut off a problem before it spreads.

It may further be necessary to investigate whether the use of existing network architecture along with new technology may exacerbate the problem and cause it to spread.
Certainly with the development of software which enables telephone companies to provide beneficial services, telecommunications systems have become far more complex and difficult to test than before.

In any event, the D.C. Commission in conjunction with other commissions will follow through to make sure that C&P maintains its reliability. We have asked C&P to provide us with copies of its deployment plans for SS-7 and asked to participate in its planning for network emergencies. With this information, the D.C. Commission will be able to take whatever actions are necessary to assure the C&P meets its responsibilities to provide adequate and safe service to the public.

This concludes my statement. I will be happy to answer any questions the subcommittee may have.

Mr. WISE. Thank you very much, Mr. Davenport.

[The testimony of Mr. Davenport follows:]

*********** INSERT 2-2 ***********
signaling system problem in that case that was software driven that resulted in the outage for that day of the AT&T network.

So there are some parallels, some lessons that were drawn from them.

Mr. WISE. Mr. Davenport, we focused a lot on the FCC and your Public Service Commission has significant jurisdiction also over C&P of the District, as C&P of West Virginia and other C&P systems. We sometimes get, I think, into conflicts of jurisdiction.

I would ask you whether you consider the situation such as what happened in these outages, particularly as it affected the District of Columbia--is this something that is strictly within the purview of your Public Service Commission, or is there, do you feel, a role for the FCC?

Mr. DAVENPORT. There is a definite role for both the FCC and state utility commissions to play. We are talking about telecommunications equipment which is involved with the provision of interstate traffic and intrastate traffic, so there is dual jurisdiction.

In addition, quite frankly, the FCC has expertise which you, for the most part, will not find in state utility commissions, which is why we are, of course, working cooperatively with the FCC as the investigation moves forward.
Mr. WISE. Do you feel that the FCC is assertive enough in trying to work with the state public service commissions and do you think there are some things the FCC could be doing to head off these problems such as we experienced before they occur more so than what they are doing?

Mr. DAVENPORT. From what I have seen, I think Chairman Sikes and Mr. Firestone and others are doing a splendid job of going forward with the investigation.

They have reached out and gotten the D.C. Commission involved and other state utility commissions involved, so I have no reason to quarrel with the FCC investigation at all.

Mr. WISE. That is after the event happened. That doesn't go to the question of what could have been done to prevent it or whether there were warnings that could have been heeded and the FCC could have played more of a role in disseminating.

Mr. DAVENPORT. I don't want to say anything to impair the cooperative spirit in which we are all progressing.

Mr. WISE. I had a feeling I was putting you on the spot. Mr. Firestone, we are not going to resolve our basic differences.

I do note with interest the FCC's opinion that, for instance, the cutting of the cable was a sign of progress and what happened was a sign of progress versus a sign of degradation of the system.
When my long distance system went out that day, I did not say that is progress, and I am so happy, nor did I when the phones in my state went down for seven hours.

What concerns me is I understand progress. I got caught in traffic the other day as they narrowed four lanes down to two to re-pave. But I knew what was at the end.

I know that we are getting improved telecommunications, but there is some concern that we don't know what is at the end, that there are not adequate standards, that there is not adequate attention by the FCC to network reliability, not adequate oversight.

So it is going to be hard to get people to accept the fact that we are going to have larger and larger outages and that we ought to be satisfied that this is progress.

That is a basic difference, I think, we are going to have between us for a while.

Delegate Norton.

Ms. NORTON. Thank you very much, Mr. Chairman.

I want to thank you for providing me the opportunity to appear in this morning's hearing. As a result of our own experience here in the District of Columbia two weeks ago, I have followed the development crisis intensely.

Our country is experiencing an increasing number of serious disruptions in telephone service which cannot be allowed to continue.
Here in Washington, members of the public and the business community, vital government agencies and the Congress itself, lost their primary means of communication. Clearly we can no longer take our telephone service for granted. It is not a convenience. It is a necessity. For many, the telephone is a life line. This reality makes me particularly happy to be able to join the Subcommittee's effort to see if we can find an effective solution to the problem.

I have some questions for Mr. Davenport. Mr. Davenport, here we are in a city where one would have thought that this kind of emergency might have had catastrophic effects, because while it would have been very serious in any community, for this city to be cut off in this manner raises not only normal serious considerations but considerations that might even go to national security considerations.

I would like your opinion as to the amount of time, seven hours, it took to restore service in the District. I suppose I am as concerned about the amount of time it took as I am about the emergency itself. If it had happened and sprung back, I would be more likely to regard this, Mr. Firestone, as a sign of some kind of progress that we will get over in time. But the long time seems to me to raise very, very serious—to have very, very serious implications.
I think we are all lucky that at least we don't know of
terribly serious problems that resulted at the time. Do you
think that seven hours was par for the course? Can you
explain why it took so long? Do you think it should have
taken less time to restore service?

Mr. DAVENPORT. Given the unprecedented nature of the
outage, there is no standard to determine in the District of
Columbia, at least whether the seven-hour duration is
unreasonable on its face.

However, I think in the District we are in the unique
position of being able to take a hands-on look at whether a
back-up system is going to be effective.

In Congress Heights in the Woodley section of the
District, they are not served by the SS7 system. They are
served by an analog system which is still in place, and it
is due to be replaced by the SS7 system in August of 1992.

What the Commission is going to consider is whether when
the cutover takes place it is in an engineering sense
economically feasible to leave in the back room, if you
will, the system which is currently in place for Congress
Heights and Woodley.

The short answer is that given the unprecedented nature of
the outage in the District of Columbia, I have no basis to
say this morning that seven hours was simply too long.

However, we have a concrete plan to determine whether
seven hours is going to be too much in the future, given the fact that we have a system in place now, the analog system, which is due to be supplemented by the SS7.

Ms. MORTON. Would that so-called back-up system cover the entire city in the event of another such crisis?

Mr. DAVENPORT. It would not. The system which is in place now only covers Congress Heights and Woodley.

The SS7 covers the rest of the city. C&P simply has not yet gotten around to upgrading Congress Heights and Woodley.

That is the only reason that the analog is currently in place for Congress Heights and Woodley.

Ms. MORTON. So they did not experience this problem at all?

Mr. DAVENPORT. They did not because they are on a different system. In terms of national security, according to our briefing from C&P, there were no national security implications.

Ms. MORTON. Mr. Firestone, do you have an opinion on the amount of time that it took to restore service?

Mr. FIRESTONE. I think Mr. Davenport is correct that it is too early to know whether all the steps taken were the correct ones. This is a complex system. It is a complex series of problems, and Mr. Cox was correct in talking about the cutting edge technology that is involved in the development of these networks.
So it is not something where a single technician goes out and uses pliers and tape and can fix the problem. It is more difficult to diagnose and solve.

One of the questions that we will be addressing is not merely ways to avoid these kinds of incidents in the future but also ways to minimize their impact. And that deals with such things as how to diagnose better and resolve better any outages in the future.

That will be one of the tasks, if you will, of this entire industry group that we are going to be bringing together.

Ms. MORTON. In asking that question, I don't mean to imply necessarily that it was too much time. One can hypothesize, and there is information that this may have been a heroic event.

Given the fact that nobody knew why it was happening or why it occurred, you had to go through a hit-and-miss diagnostic procedure to find out. So it may well be that seven hours was very good given where you started from. I don't have any basis to judge that.

Mr. FIRESTONE. The companies did take a number of steps trying different solutions in different parts of the network, in Baltimore versus in Washington, separating the pieces of equipment and trying different solutions in each. And they will be here later so you can ask them about that.

I was not implying that there weren't massive efforts by
the company to try and deal with the problem. I was focusing for the future on are there ways to build into the system structures that will ease that task should they be confronted with it again.

Ms. NORTON. Mr. Davenport, are you totally dependent upon the FCC when it comes to a review of steps that might be taken to prevent re-occurrence of this problem, or is your Commission able to--yourself are in the process of trying to monitor and review and identify steps that might be taken?

Mr. DAVENPORT. The D.C. Commission is not totally dependent upon the FCC. Seated to my left is the D.C. Chief Engineer, who is heading up the D.C. Commission's investigation.

The D.C. Commission will probably work in conjunction with other state utility commissions in investigating the situation. We have our national meeting coming up July 21, the National Association of Regulatory Utility commissioners, and I am certain that this outage will be one of the primary topics on the agenda.

Ms. NORTON. Is yours an independent investigation or is your investigation tied into the FCC investigation?

Mr. DAVENPORT. The short answer is that the Commission is working both independently and in concert with the FCC. The FCC has resources which they are willingly sharing with other state utility commissions that we don't have.
Ms. NORTON. What, if any, action will the commission take
to ensure that C&P's District customers are compensated for
the loss of service they experienced if such compensation
would be appropriate?

Mr. DAVENPORT. That is a tricky question in the sense
that C&P would have to come before the D.C. Commission and
request rate relief to the extent they have financial
exposure, and then the Commission would have to determine
whether it is going to grant C&P that rate relief.

If the Commission allows C&P the rate relief, then it is
going to come out of the pockets of all District of Columbia
constituents.

Ms. NORTON. Thank you very much.

Mr. WISE. Mr. McCandless.

Mr. MCCANDLESS. Mr. Firestone, we have a number of other
panels, but I want to leave you with this thought for you to
take back and share with the ivory tower from which you
come, that the time has come--and this has come up before--the
time has come for somebody to decide who is responsible
administratively for the operations of the
telecommunications system.

And the fact that we have had a judicial management,
administratin of this for somewhere in the neighborhood of
nine-plus years, and your answer is that it takes something
here on the Hill to change that is accepted, but it also is
the responsibility of the FCC now that we have a demonstrated need, as you have testified and as others have testified and will testify, I am sure, a demonstrated need to put this back in an administrative context so that certain things that are necessary can happen without compromising the decisions that are made.

That needs to take place, and I would suggest that the FCC do this while the iron is hot and you can show examples of why you need to have this change.

I thank the Chairman for the time.

Mr. WISE. I wish to thank both witnesses, Mr. Davenport, and we look forward to seeing you next time as Commissioner Davenport.

Mr. Firestone, thank you very much for your time.

The Subcommittee notes that the FCC has begun to act in what I consider to be a constructive way. The results of the meeting last night, the steps that you have announced, I feel that you can go further; but this is a good first step, and I look forward to working with you in the future as we review these and work with you to make sure network reliability is an uppermost goal.

The next panel will be composed of those in the industry that are directly working with this situation. Fred D'Alessio, Vice President of Network Operations and Engineering, representing Bell Atlantic; James R. Young,