

1242 Mr. WISE. Mr. Davenport?

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1244 TESTIMONY OF HOWARD C. DAVENPORT

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1246 Mr. DAVENPORT. Thank you, Mr. Chairman.

1247 I am Howard Davenport, currently General Counsel of the

1248 Public Service Commission of the District of Columbia. I

1249 have been nominated by Mayor Sharon Pratt Dixon to become

1250 the D.C. Commission's chairman. I have been confirmed by

1251 the D.C. Council. I am due to be sworn in as Chairman of

1252 the D.C. Commission no later than Friday, July 19.

1253 Mr. WISE. I just want to make sure we are not keeping you

1254 from the swearing in. You get that close, let's go for it.

1255 Mr. DAVENPORT. I am pleased to appear before this

1256 subcommittee today to explain what the D.C. Commission is

1257 doing to insure that citizens of the District of Columbia

1258 receive adequate local telephone service.

1259 The D.C. Commission has the power after a hearing to

1260 direct that reasonable repairs and improvements, changes or

1261 additions to service or equipment be made by C&P within a

1262 reasonable time.

1263 In addition, the D.C. Commission may oversee new

1264 technology when it is introduced in the context of a new

1265 rate filing. The D.C. Commission may refuse to allow the

1266 ratepayers to pay for new construction; it may require that

1267 new technology costs be allocated in accordance with public  
1268 benefits. This last power may be most effective since it  
1269 increases the costs of the utility if the service is not  
1270 adequate.

1271 With respect to the adequacy of telephone service, the  
1272 D.C. Commission has taken a number of steps. We have  
1273 established a digital deployment reporting group to discuss  
1274 the C&P planned deployment of digital facilities on a  
1275 regular basis and to develop a digital deployment reporting  
1276 system.

1277 Second, we have reviewed C&P's plans for deploying  
1278 equipment.

1279 Third, the D.C. Commission has before it the issues of,  
1280 one, the reasonableness and prudence of C&P's construction  
1281 program, and, two, the costs and benefits of digital  
1282 switches, fiber optics, SS-7 and other new technologies.

1283 The D.C. Commission is very concerned with the recent  
1284 outages. While up to this time telephone service has been  
1285 adequate, the recent events warrant investigation to make  
1286 sure that they do not reoccur. At this time, the D.C.  
1287 Commission staff is conducting its investigation in an  
1288 informal manner and is in contact with C&P, the FCC and  
1289 other State commissions. Should the informal investigation  
1290 warrant a hearing or action in a rate case, the D.C.  
1291 Commission will take such action.

1292           At this time the D.C. Commission has only partial  
1293 information as to the reason for the outages. Based on the  
1294 information we have from C&P, it appears that there was not  
1295 a capacity problem that led to the overload of maintenance  
1296 messages which resulted in the outage.

1297           The SS-7 signal system has been designed to carry the  
1298 signaling required by the long distance calls to or from the  
1299 District of Columbia as well as signaling requirements of  
1300 new digital services. Neither the long distance signaling  
1301 load nor the load for these new services is currently  
1302 carried by the SS-7 network, so the system is currently  
1303 lightly loaded.

1304           Therefore, the problem appears to be related to the SS-7  
1305 software provided by DSC Corporation. Bellcore issues the  
1306 specifications for signal transfer or point switches and the  
1307 SS-7 software and tests the delivered hardware and software  
1308 from regional companies.

1309           Bell Atlantic does not have an independent capability to  
1310 fully test SS-7 equipment provided by DSC, but rather relies  
1311 on Bellcore.

1312           It is yet unclear whether the problem is with Bellcore  
1313 specifications in testing or with the equipment and software  
1314 provided to meet those specifications by DSC. Based on  
1315 recent reports, it appears the problem is with DSC software. ✓

1316           I am pleased to say that Bellcore and Bell Atlantic have

1317 established working groups to address problems and this  
1318 hopefully will result in improved performance of the system.

1319 For the present, Bell Atlantic is making temporary fixes  
1320 such as monitoring and blocking the maintenance messages  
1321 which overload the SS-7 network. It is also working to  
1322 identify and make corrections to the existing software and  
1323 considering an addition of back-up facilities to eliminate  
1324 signaling system outages in the future.

1325 I particularly want to commend Mr. McDonald who suggested  
1326 that we may need to go to back-up systems.

1327 However, there is some consideration which must be given  
1328 to how much of a cost is involved, a cost-benefit analysis  
1329 would be appropriate before adopting fully back-up systems.

1330 However, the underlying reasons for the outage,  
1331 particularly why there was not <sup>sufficient</sup> ~~such efficient~~ testing of the  
1332 software and its long-term solution have not been  
1333 determined.

1334 In our investigation, there are a number of matters to  
1335 consider. For example, it may be necessary to investigate  
1336 how Bell Atlantic gives the proper personnel adequate  
1337 guidance to take the necessary steps to isolate and cut off  
1338 a problem before it spreads.

1339 It may further be necessary to investigate whether the use  
1340 of existing network architecture along with new technology  
1341 may exacerbate the problem and cause it to spread.

1342 Certainly with the development of software which enables  
1343 telephone companies to provide beneficial services,  
1344 telecommunications systems have become far more complex and  
1345 difficult to test than before.

1346 In any event, the D.C. Commission in conjunction with  
1347 other commissions will follow through to make sure that C&P  
1348 maintains its reliability. We have asked C&P to provide us  
1349 with copies of its deployment plans for SS-7 and asked to  
1350 participate in its planning for network emergencies. With  
1351 this information, the D.C. Commission will be able to take  
1352 whatever actions are necessary to assure the C&P meets its  
1353 responsibilities to provide adequate and safe service to the  
1354 public.

1355 This concludes my statement. I will be happy to answer  
1356 any questions the subcommittee may have.

1357 Mr. WISE. Thank you very much, Mr. Davenport.

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1359 [The testimony of Mr. Davenport follows:]

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1361 \*\*\*\*\* INSERT 2-2 \*\*\*\*\*

2214 signaling system problem in that case that was software  
2215 driven that resulted in the outage for that day of the AT&T  
2216 network.

2217 So there are some parallels, some lessons that were drawn  
2218 from them.

2219 Mr. WISE. Mr. Davenport, we focused a lot on the FCC and  
2220 your Public Service Commission has significant jurisdiction  
2221 also over C&P of the District, as C&P of West Virginia and  
2222 other C&P systems. We sometimes get, I think, into  
2223 conflicts of jurisdiction.

2224 I would ask you whether you consider the situation such as  
2225 what happened in these outages, particularly as it affected  
2226 the District of Columbia--is this something that is strictly  
2227 within the purview of your Public Service Commission, or is  
2228 there, do you feel, a role for the FCC?

2229 Mr. DAVENPORT. There is a definite role for both the FCC  
2230 and state utility commissions to play. We are talking about  
2231 telecommunications equipment which is involved with the  
2232 provision of interstate traffic and intrastate traffic, so  
2233 there is dual jurisdiction.

2234 In addition, quite frankly, the FCC has expertise which  
2235 you, for the most part, will not find in state utility  
2236 commissions, which is why we are, of course, working  
2237 cooperatively with the FCC as the investigation moves  
2238 forward.

2239 Mr. WISE. Do you feel that the FCC is assertive enough in  
2240 trying to work with the state public service commissions and  
2241 do you think there are some things the FCC could be doing to  
2242 head off these problems such as we experienced before they  
2243 occur more so than what they are doing?

2244 Mr. DAVENPORT. From what I have seen, I think Chairman  
2245 Sikes and Mr. Firestone and others are doing a splendid job  
2246 of going forward with the investigation.

2247 They have reached out and gotten the D.C. Commission  
2248 involved and other state utility commissions involved, so I  
2249 have no reason to quarrel with the FCC investigation at all.

2250 Mr. WISE. That is after the event happened. That doesn't  
2251 go to the question of what could have been done to prevent  
2252 it or whether there were warnings that could have been  
2253 heeded and the FCC could have played more of a role in  
2254 disseminating.

2255 Mr. DAVENPORT. I don't want to say anything to impair the  
2256 cooperative spirit in which we are all progressing.

2257 Mr. WISE. I had a feeling I was putting you on the spot.  
2258 Mr. Firestone, we are not going to resolve our basic  
2259 differences.

2260 I do note with interest the FCC's opinion that, for  
2261 instance, the cutting of the cable was a sign of progress  
2262 and what happened was a sign of progress versus a sign of  
2263 degradation of the system.

2264           When my long distance system went out that day, I did not  
2265 say that is progress, and I am so happy, nor did I when the  
2266 phones in my state went down for seven hours.

2267           What concerns me is I understand progress. I got caught  
2268 in traffic the other day as they narrowed four lanes down to  
2269 two to re-pave. But I knew what was at the end.

2270           I know that we are getting improved telecommunications,  
2271 but there is some concern that we don't know what is at the  
2272 end, that there are not adequate standards, that there is  
2273 not adequate attention by the FCC to network reliability,  
2274 not adequate oversight.

2275           So it is going to be hard to get people to accept the fact  
2276 that we are going to have larger and larger outages and that  
2277 we ought to be satisfied that this is progress.

2278           That is a basic difference, I think, we are going to have  
2279 between us for a while.

2280           Delegate Norton.

2281           Ms. NORTON. Thank you very much, Mr. Chairman.

2282           I want to thank you for providing me the opportunity to  
2283 appear in this morning's hearing. As a result of our own  
2284 experience here in the District of Columbia two weeks ago, I  
2285 have followed the development crisis intensely.

2286           Our country is experiencing an increasing number of  
2287 serious disruptions in telephone service which cannot be  
2288 allowed to continue.



2289           Here in Washington, members of the public and the business  
2290 community, vital government agencies and the Congress  
2291 itself, lost their primary monies of communication.

2292           Clearly we can no longer take our telephone service for  
2293 granted. It is not a convenience. It is a necessity. For  
2294 many, the telephone is a life line.

2295           This reality makes me particularly happy to be able to  
2296 join the Subcommittee's effort to see if we can find an  
2297 effective solution to the problem.

2298           I have some questions for Mr. Davenport. Mr. Davenport,  
2299 here we are in a city where one would have thought that this  
2300 kind of emergency might have had catastrophic effects,  
2301 because while it would have been very serious in any  
2302 community, for this city to be cut off in this manner raises  
2303 not only normal serious considerations but considerations  
2304 that might even go to national security considerations.

2305           I would like your opinion as to the amount of time, seven  
2306 hours, it took to restore service in the District. I  
2307 suppose I am as concerned about the amount of time it took  
2308 as I am about the emergency itself.

2309           If it had happened and sprung back, I would be more likely  
2310 to regard this, Mr. Firestone, as a sign of some kind of  
2311 progress that we will get over in time. But the long time  
2312 seems to me to raise very, very serious--to have very, very  
2313 serious implications.

2314 I think we are all lucky that at least we don't know of  
2315 terribly serious problems that resulted at the time. Do you  
2316 think that seven hours was par for the course? Can you  
2317 explain why it took so long? Do you think it should have  
2318 taken less time to restore service?

2319 Mr. DAVENPORT. Given the unprecedented nature of the  
2320 outage, there is no standard to determine in the District of  
2321 Columbia, at least whether the seven-hour duration is  
2322 unreasonable on its face.

2323 However, I think in the District we are in the unique  
2324 position of being able to take a hands-on look at whether a  
2325 back-up system is going to be effective.

2326 In Congress Heights in the Woodley section of the  
2327 District, they are not served by the SS7 system. They are  
2328 served by an analog system which is still in place, and it  
2329 is due to be replaced by the SS7 system in August of 1992.

2330 What the Commission is going to consider is whether when  
2331 the cutover takes place it is in an engineering sense  
2332 economically feasible to leave in the back room, if you  
2333 will, the system which is currently in place for Congress  
2334 Heights and Woodley.

2335 The short answer is that given the unprecedented nature of  
2336 the outage in the District of Columbia, I have no basis to  
2337 say this morning that seven hours was simply too long.

2338 However, we have a concrete plan to determine whether

2339 seven hours is going to be too much in the future, given the  
2340 fact that we have a system in place now, the analog system,  
2341 which is due to be supplemented by the SS7.

2342 Ms. NORTON. Would that so-called back-up system cover the  
2343 entire city in the event of another such crisis?

2344 Mr. DAVENPORT. It would not. The system which is in  
2345 place now only covers Congress Heights and Woodley.

2346 The SS7 covers the rest of the city. C&P simply has not  
2347 yet gotten around to upgrading Congress Heights and Woodley.

2348 That is the only reason that the analog is currently in  
2349 place for Congress Heights and Woodley.

2350 Ms. NORTON. So they did not experience this problem at  
2351 all?

2352 Mr. DAVENPORT. They did not because they are on a  
2353 different system. In terms of national security, according  
2354 to our briefing from C&P, there were no national security  
2355 implications.

2356 Ms. NORTON. Mr. Firestone, do you have a opinion on the  
2357 amount of time that it took to restore service?

2358 Mr. FIRESTONE. I think Mr. Davenport is correct that it  
2359 is too early to know whether all the steps taken were the  
2360 correct ones. This is a complex system. It is a complex  
2361 series of problems, and Mr. Cox was correct in talking about  
2362 the cutting edge technology that is involved in the  
2363 development of these networks.

2364           So it is not something where a single technician goes out  
2365 and uses pliers and tape and can fix the problem. It is  
2366 more difficult to diagnose and solve.

2367           One of the questions that we will be addressing is not  
2368 merely ways to avoid these kinds of incidents in the future  
2369 but also ways to minimize their impact. And that deals with  
2370 such things as how to diagnose better and resolve better any  
2371 outages in the future.

2372           That will be one of the tasks, if you will, of this entire  
2373 industry group that we are going to be bringing together.

2374           Ms. NORTON. In asking that question, I don't mean to  
2375 imply necessarily that it was too much time. One can  
2376 hypothesize, and there is information that this may have  
2377 been a heroic event.

2378           Given the fact that nobody knew why it was happening or  
2379 why it occurred, you had to go through a hit-and-miss  
2380 diagnostic procedure to find out. So it may well be that  
2381 seven hours was very good given where you started from. I  
2382 don't have any basis to judge that.

2383           Mr. FIRESTONE. The companies did take a number of steps  
2384 trying different solutions in different parts of the  
2385 network, in Baltimore versus in Washington, separating the  
2386 pieces of equipment and trying different solutions in each.  
2387 And they will be here later so you can ask them about that.

2388           I was not implying that there weren't massive efforts by

2389 the company to try and deal with the problem. I was  
2390 focusing for the future on are there ways to build into the  
2391 system structures that will ease that task should they be  
2392 confronted with it again.

2393 Ms. NORTON. Mr. Davenport, are you totally dependent upon  
2394 the FCC when it comes to a review of steps that might be  
2395 taken to prevent re-occurrence of this problem, or is your  
2396 Commission able to--yourself are in the process of trying to  
2397 monitor and review and identify steps that might be taken?

2398 Mr. DAVENPORT. The D.C. Commission is not totally  
2399 dependent upon the FCC. Seated to my left is the D.C. Chief  
2400 Engineer, who is heading up the D.C. Commission's  
2401 investigation.

2402 The D.C. Commission will probably work in conjunction with  
2403 other state utility commissions in investigating the  
2404 situation. We have our national meeting coming up July 21,  
2405 the National Association of Regulatory Utility  
2406 commissioners, and I am certain that this outage will be one  
2407 of the primary topics on the agenda.

2408 Ms. NORTON. Is yours an independent investigation or is  
2409 your investigation tied into the FCC investigation?

2410 Mr. DAVENPORT. The short answer is that the Commission is  
2411 working both independently and in concert with the FCC. The  
2412 FCC has resources which they are willingly sharing with  
2413 other state utility commissions that we don't have.

2414 Ms. NORTON. What, if any, action will the commission take  
2415 to ensure that C&P's District customers are compensated for  
2416 the loss of service they experienced if such compensation  
2417 would be appropriate?

2418 Mr. DAVENPORT. That is a tricky question in the sense  
2419 that C&P would have to come before the D.C. Commission and  
2420 request rate relief to the extent they have financial  
2421 exposure, and then the Commission would have to determine  
2422 whether it is going to grant C&P that rate relief.

2423 If the Commission allows C&P the rate relief, then it is  
2424 going to come out of the pockets of all District of Columbia  
2425 constituents.

2426 Ms. NORTON. Thank you very much.

2427 Mr. WISE. Mr. McCandless.

2428 Mr. MCCANDLESS. Mr. Firestone, we have a number of other  
2429 panels, but I want to leave you with this thought for you to  
2430 take back and share with the ivory tower from which you  
2431 come, that the time has come--and this has come up before--the  
2432 time has come for somebody to decide who is responsible  
2433 administratively for the operations of the  
2434 telecommunications system.

2435 And the fact that we have had a judicial management,  
2436 administratin of this for somewhere in the neighborhood of  
2437 nine-plus years, and your answer is that it takes something  
2438 here on the Hill to change that is accepted, but it also is

2439 | the responsibility of the FCC now that we have a  
2440 | demonstrated need, as you have testified and as others have  
2441 | testified and will testify, I am sure, a demonstrated need  
2442 | to put this back in an administrative context so that  
2443 | certain things that are necessary can happen without  
2444 | compromising the decisions that are made.

2445 |         That needs to take place, and I would suggest that the FCC  
2446 | do this while the iron is hot and you can show examples of  
2447 | why you need to have this change.

2448 |         I thank the Chairman for the time.

2449 |         Mr. WISE. I wish to thank both witnesses, Mr. Davenport,  
2450 | and we look forward to seeing you next time as Commissioner  
2451 | Davenport.

2452 |         Mr. Firestone, thank you very much for your time.

2453 |         The Subcommittee notes that the FCC has begun to act in  
2454 | what I consider to be a constructive way. The results of  
2455 | the meeting last night, the steps that you have announced, I  
2456 | feel that you can go further; but this is a good first step,  
2457 | and I look forward to working with you in the future as we  
2458 | review these and work with you to make sure network  
2459 | reliability is an uppermost goal.

2460 |         The next panel will be composed of those in the industry  
2461 | that are directly working with this situation. Fred  
2462 | D'Alessio, Vice President of Network Operations and  
2463 | Engineering, representing Bell Atlantic; James R. Young,