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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

ORIGINAL
FILE

In the Matter of)
)
Petition to Amend Part 68 of the)
Commission's Rules to Include Terminal)
Equipment Connected to Public Switched)
Digital Service.)

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Federal Communications Commission
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REPLY COMMENTS OF THE AMERITECH OPERATING COMPANIES

The Ameritech Operating Companies^{1/} submit this reply to the comments on their petition ("Petition") to amend Part 68 of the Commission's rules to include terminal equipment connected to Public Switched Digital Service ("PSDS"). Comments were filed by three parties. AT&T supported the Petition, suggesting minor editorial changes in the language of the proposed rule changes. BellSouth agreed "that there is a need to protect the network from harms that may be caused by PSDS CPE,"^{2/} but suggested that the Commission act to amend Part 68 only after the Exchange Carrier Standards Association's ("ECSA's") T1 Committee identified harm to the network issues. The US West Companies ("US West") also suggested the Commission delay action on the Petition "until an appropriate industry standards group such as Committee T1 has had an opportunity to review the subject."^{3/}

1/ The Ameritech Operating Companies are: Illinois Bell Telephone Company, Indiana Bell Telephone Company, Incorporated, Michigan Bell Telephone Company, The Ohio Bell Telephone Company, and Wisconsin Bell, Inc.

2/ BellSouth at 1.

3/ US West at 1-2.

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I. The Ameritech Operating Companies' Proposal
Will Not Limit The Development Of New Technology.

As currently offered by many local exchange carriers ("LECs"), PSDS is a switched digital service that will support rates up to 56 kbps, using a technology called time compression multiplexing ("TCM") that allows utilization of the existing two-wire loop for full duplex 56 kbps digital transmission. There are two existing variants of this technology, AT&T's CSDC and Northern Telecom's Datapath. Some of the reluctance of BellSouth and US West to support the Petition wholeheartedly appears to stem from a concern that adoption of the proposed rule changes will limit development of new technologies to provide switched digital services.^{4/} That was not the intent of the Ameritech Operating Companies. Rather the Petition merely seeks to protect the network from harm that might be caused by CPE that is used with the existing TCM technology.

In order to clarify this, a definition is appropriate. The Ameritech Operating Companies hereby propose the addition of the following definition to section 68.3 (page 4 of the Petition's Appendix):

Public Switched Digital Service/TCM (PSDS/TCM): a switched digital transmission service supporting rates up to 56 kbps utilizing time compression multiplexing ("TCM") technology and two-wire facilities.

In addition, the Ameritech Operating Companies replace all references to "Public Switched Digital Service" and "PSDS" in

^{4/} BellSouth at 2; US West at 3.

their original proposal with the terms "Public Switched Digital Service/TCM" and "PSDS/TCM" respectively.

These amendments clarify that the proposed rule changes will not prevent the development of new technologies. Nor will they codify a two-wire interface for PSDS, notwithstanding US West's claim to the contrary. Rather they will merely provide for network protection in those cases in which switched digital services are provided using existing two-wire TCM technology.

Further, the changes show that the proposal would not apply to the Universal Switched Digital Capability product introduced by Integrated Network Corporation ("INC").^{5/} That product uses a four-wire network interface and, therefore, is not even covered by the Ameritech Operating Companies' proposal. So registration of INC's USDC unit would not be precluded as US West speculates. However, the Ameritech Operating Companies believe that CPE connected to digital services using INC technology would nonetheless be covered by the provisions of Part 68 that apply generally to CPE connected to subrate digital services.^{6/}

Nor would the adoption of the Ameritech proposal interfere with the development of a single PSDS/TCM interface by industry standards groups as US West fears. The proposed rule changes contemplate the two existing variations of PSDS/TCM. In the event that those two variations are rendered obsolete by the

^{5/} US West at 3.

^{6/} It is believed that the INC technology uses digital interfaces already included within the scope of Part 68.

development of an industry standard that changes the network harms situation, Part 68 can be changed at that time.

Presumably, such a rule change would be easily accomplished since it would have industry support. However, as US West admits, the ECSA's T1 Committee has declined to develop a standard.^{7/} While the Ameritech Operating Companies are willing to participate in such an industry effort, they respectfully request the Commission not to postpone implementation of network protection measures for TCM technology that is already in place since the delay could be a lengthy one, if a standard is ever developed at all.^{8/}

II. The Ameritech Operating Companies' Proposal Will Assist in Protecting The Network From Harm.

As noted above, the Ameritech Operating Companies merely seek to include existing technology within the scope of Part 68's network protection framework. Part 68 has been amended in similar fashion from time to time since the Commission's registration program was first adopted.^{9/}

^{7/} Id. at note 15.

^{8/} In the current regulatory/industry framework, Part 68 and industry standards are not mutually exclusive but in fact deal with different but complementary issues -- Part 68 with network harms and industry standards with technical performance.

^{9/} For example, the Third Report and Order in Docket 19528, released April 13, 1978, expanded Part 68 to include PBX and key systems; private lines were added by the Order in Docket 79-143, released March 19, 1980; and subrate and 1.544 Mbps digital services were added by the Second Report and Order in Docket 81-216, released November 26, 1984.

Both AT&T and BellSouth agree that changes to Part 68 are justified to protect the network from harm that could be caused by PSDS/TCM CPE. AT&T, the only manufacturer to file comments on the Petition, supports the need for prompt Commission action in that regard. BellSouth, however, suggests that, prior to any Commission action, the issue of network harm be referred to an industry committee.

As noted above, the ECSA's T1 Committee has in the past expressed reluctance to deal further with PSDS/TCM. Moreover, one of the two manufacturers currently involved in producing PSDS/TCM central office equipment (AT&T) has already expressed its support of the Ameritech Operating Companies' proposal. It is difficult to see what additional contribution could be made by an industry committee on the subject of network harms involving existing network technology. Again, the Ameritech Operating Companies would actively support any efforts by the T1 Committee to define a standard PSDS interface. However, any work in that regard would not address the need to protect the network from potential harm until such a standard may be developed.^{10/}

Further, US West is alone in cavalierly dismissing the Ameritech Operating Companies' claim of potential network harm. US West notes that crosstalk is a problem only on metallic facilities and contends that adoption of the Ameritech Operating

^{10/} The Ameritech Operating Companies realize that development of a standard PSDS/TCM interface may necessitate additions, deletions, or revisions to Part 68. However, their proposal should be adopted to allow the industry to move forward with this service in the meantime.

Companies' proposal will interfere with the development of an interface that is technology independent.^{11/} US West's reasoning is flawed. Given the economy of TCM technology that enables a telephone company to provide switched digital services by using the existing two-wire loop, it is highly unlikely that PSDS/TCM will be ever provided over non-metallic facilities.^{12/} Moreover, even if a carrier chooses to use non-metallic loop facilities, CPE that complies with the proposed rule changes will be compatible with the electrical network interface that is currently required.

US West goes on to state that crosstalk may be generated by improper administration of distribution plant by the telephone company.^{13/} US West's point appears to be that, since the telephone company can cause crosstalk in the network, it is unnecessary to protect against crosstalk caused by CPE. The logic of such a position is not readily apparent. That logic, for example, would appear to call for the Commission to eliminate Part 68 completely simply because a carrier might itself accidentally cause harm to the network. The Ameritech Operating Companies submit that US West's argument in that regard should be disregarded as specious.

^{11/} US West at 6.

^{12/} It should be noted that CPE used with the INC four-wire technology touted by US West is currently subject to the signal power limitations for subrate digital services in section 68.308, among other portions of Part 68, in order to prevent crosstalk.

^{13/} US West at 6-7.

Similarly, US West notes that virtually that all PSDS/TCM CPE is also manufactured by Northern Telecom and AT&T and that there is no allegation that these manufacturers have misdesigned their equipment. US West makes this comment apparently to show that the application of Part 68 in this case is not necessary. While the Ameritech Operating Companies do not contest AT&T's and Northern Telecom's CPE designs, they do point out that Part 68 is in fact intended to apply to all manufacturers of CPE and thereby aid rather than hamper the competitive provision of CPE.^{14/}

Finally, US West attempts to dismiss the Ameritech Operating Companies' claim that it necessary to prevent against CPE-induced malfunction of billing equipment. Part 68, however, is clear in including "malfunction of telephone company billing equipment" as a harm that is within its scope.^{15/} US West states only that Datapath does not require a two-second delay.^{16/} However, the fact that Datapath equipment does not require the delay to function correctly does not obviate the fact that carrier central office equipment does require the delay to set up properly. Moreover, the PSDS/TCM equipment produced by both Northern Telecom and AT&T already meet this two-second requirement.

14/ The Ameritech Operating Companies know of at least four other manufacturers of PSDS/TCM CPE. As PSDS/TCM service grows, so should this list of manufacturers.

15/ Section 68.3.

16/ Id. at note 13.

III. The Ameritech Operating Companies Do Not Object to AT&T's Proposed Editorial Changes.

As noted above, AT&T supports The Ameritech Operating Companies' petition with some minor editorial changes.

The Ameritech Operating Companies believe that the changes proposed in this reply implement to the AT&T's proposal for a definition of PSDS service.^{17/}

In response to AT&T's suggestion that proposed section 68.308(h)(3)(ii), Table IVB should contain a range of voltage rather than a single voltage,^{18/} the Ameritech Operating Companies hereby change the first line of Table IVB (page 11 of the Petition's Appendix) to read:

| | |
|--------------|----------------------------|
| Pulse Height | 2.4 volts \pm 0.15 volts |
|--------------|----------------------------|

This is consistent with Northern Telecom requirements.

The Ameritech Operating Companies have no objections to AT&T's proposal that the requirements of proposed section 68.308(h)(3)(i) be split into two separate subsections^{19/} if the Commission feels that it would be more appropriate to state the requirements in that manner.

^{17/} AT&T at para. 3(a).

^{18/} Id. at para. 3(b).

^{19/} Id. at para. 3(c).

Further, the Ameritech Operating Companies agree with AT&T's assumption that, in defining the PSDS loop simulator circuit, the Ameritech Operating Companies did not intend any changes the in meaning of the parallel text of the current definition of a loop simulator circuit.^{20/}

Finally, The Ameritech Operating Companies concur with the AT&T's proposed corrections of typographical errors.^{21/}

IV. Conclusion

As revised herein, the Ameritech Operating Companies' proposed changes to Part 68 to include specific requirements for CPE connected to PSDS/TCM are clearly justified. The proposed changes will help protect against harm to the network as it is currently configured. Both AT&T and BellSouth agree that the potential for such harm is real. US West's claim to the contrary is unreasonable on its face.

Further, adoption of the proposal will not preclude the development of new technologies. Moreover, the Ameritech Operating Companies will support any efforts by industry standards committees to define a single standard interface for a PSDS/TCM. However, interim protective measures are necessary since that process may be a long one and since there exists a potential for network harm with current technology.

^{20/} Id. at para. 3(d).

^{21/} Id. at para. 3(e).

In light of the foregoing, the Ameritech Operating Companies respectfully request the Commission to grant their petition as modified herein.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Mary S. Shuper, hereby certify that a true copy of the foregoing Reply Comments of the Ameritech Operating Companies was this date served by first class mail, postage prepaid, upon each of the following people.

By: 
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DATED: December 22, 1987

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