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

FCC 96-39

In the Matter of	)	
	)	
Amendment	)	**CC Docket No. 96-28**
of Part 68 of the Commission's	)	**RM-8621**
Rules	)	

NOTICE OF PROPOSED RULEMAKING

Adopted: February 2, 1996 Released: February 29, 1996

Comment Date: April 1, 1996
Reply Comment Date: April 16, 1996

By the Commission:

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I. INTRODUCTION

1. In the spirit of the North American Free Trade Agreement (NAFTA), the amendments to the Part 68 rules that we propose today are designed to promote barrier-free trade between Canada and the United States.[1] Manufacturers in one country will be able to test terminal equipment to a single, consistent set of technical standards accepted in both the United States and Canada. Harmonization of terminal attachment rules across the United States and Canada will also provide a "baseline" to foster other harmonization efforts throughout the Americas and with other countries including those in Europe and Asia.[2]

2. In this Notice of Proposed Rulemaking, we propose amendment of Part 68 of the Commission's rules. The purpose of these amendments is to harmonize U.S. and Canadian requirements for connection of terminal equipment to the public switched network.[3] Part 68 governs the terms and conditions under which customer-provided terminal equipment may be connected to this nation's telephone network.[4] It is designed to ensure that customers and manufacturers can connect terminal equipment to that network without causing harm to

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[1] On December 17, 1992, the United States, Canada, and Mexico signed NAFTA. NAFTA is the most comprehensive free trade pact ever negotiated by regional trading partners, and the first reciprocal free trade pact between a developing country and industrial countries. NAFTA became effective January 1, 1994, upon ratification by the legislatures of the member countries.

[2] For example, the mandate of the Organization of American States' Inter-American Telecommunications Commission (CITEL) Working Group on Standards Coordination is to promote harmonization of telecommunications standards in the Americas. In 1994, leaders of the Asia Pacific Economic Conference (APEC) adopted "Guidelines for Regional Harmonization of Equipment Certification" that includes principles on "openness" in standards development. In Europe, discussion of harmonization of national telecommunications standards is ongoing. Each of these activities, aimed at eliminating barriers to trade, may benefit from review of the U.S.-Canadian harmonization.

[3] In Canada, certification means the right to attach terminal equipment to the public switched network. Certification requires submission of an application that includes a technical description of the equipment and a measurement report showing compliance with CS-03, the Canadian terminal attachment standard. Canadian requirements for terminal attachment are issued by Industry Canada (IC). Under the direction of IC, the Terminal Attachment Program Advisory Committee (TAPAC), a government and industry advisory committee, reviews and recommends changes to equipment certification programs. Canada has not yet amended CS-03 to harmonize Canadian standards for terminal equipment with those set forth in Part 68.

[4] See 47 C.F.R. Part 68.

the network.[5]

II. BACKGROUND

3. On March 9, 1995, Telecommunications Industry Association (TIA) filed a Petition for Rulemaking (Petition) to amend Subpart D of Part 68, 47 CFR Sections 68.300-68.318, and portions of 47 CFR Section 68.2 of the Commission's Rules to harmonize U.S. network protection standards and corresponding Canadian CS-03 certification regulations.[6] TIA is a national trade association with more than 570 member companies engaged in the manufacture, sale and distribution of telecommunications equipment including terminal equipment. TIA's Petition is the culmination of four years of technical effort by U.S. and Canadian industry. In September, 1990, TIA's Engineering Subcommittee TR-41, sponsored by its User Premises Equipment Division, proposed a project to "address differences" between Canadian and U.S. terminal attachment rules.[7] The Subcommittee created a joint working group co-chaired by the United States and Canada to develop a harmonized set of rules to

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[5] For a history of Part 68, see Proposals for New or Revised Classes of Interstate and Foreign Message Toll Telephone Service (MTS) and Wide Area Telephone Service (WATS); Revision of Part 68 of the Commission's Rules to Specify Standard Plugs and Jacks for the Connection of Telephone Equipment to the Nationwide Telephone Network; and Amendment of Part 68 of the Commission's Rules (Telephone Equipment Registration) to Specify Standards for and Means of Connection of Telephone Equipment to Lamp and/or Annunciator Functions of Systems, Memorandum Opinion and Order (CC Dockets 19528, 20774, 21182), 70 F.C.C. 2d 1800 (1979).

[6] Subpart D addresses "Conditions for Registration" including requirements for environmental simulation (simulation "mimics" stresses that terminal equipment undergoes in shipment and handling that could potentially damage it), leakage current limitations, hazardous voltage limitation, signal power limitations, longitudinal balance limitations, on hook impedance limitations, billing protection and hearing aid compatibility. Section 68.2 addresses the scope of FCC rules for terminal attachment.

[7] TIA's technical work is conducted through its Engineering Committees, which develop, maintain and publish voluntary standards and technical reports. TIA encourages these committees to work cooperatively with members of the American National Standards Institute (ANSI), as well as international standards bodies outside the United States, to harmonize telecommunications equipment standards to avoid duplicating standardization work already successfully completed. TIA's stated trade policy goals include "removal of barriers to market access, full participation of U.S. government and industry in the standards setting process worldwide, and achievement of a minimum level of standards required to ensure interoperability and proper function of the international network." See TIA Petition at 2.

comply with both countries' requirements for terminal attachment.[8] After analyzing the differences between the U.S. and Canadian terminal attachment requirements, TIA's bilateral working group proposed a set of harmonized rules.

4. On March 27, 1995, the Commission solicited comment on TIA's Petition.[9] Many Part 68 rules were developed more than twenty years ago when terminal equipment contained discrete electronic components rather than integrated circuitry characteristic of today's designs. TIA's proposed amendments also accommodate these changes. We summarize them briefly below.[10]

III. DISCUSSION

A. Proposed Technical Amendments

i. Environmental Simulation (Section 68.302)

5. Currently, Section 68.302 requires that registered terminal equipment be subjected to various environmental conditions designed to simulate stresses occurring during shipment and usage.[11] The purpose of the rule is to ensure that, despite receiving such stresses, terminal equipment will continue to conform to Part 68 and not cause network harm.

6. TIA proposed to delete vibration, temperature and humidity stresses from Part 68, asserting such stresses do not produce failures causing harm to the network. TIA further proposed that mechanical shock stresses be applied only to equipment that might be affected by such stress. For example, arguing that equipment weighing over 5 kilograms would be unaffected, it proposed elimination of shock requirements for such equipment.[12] Finally, TIA proposed surge testing requirements be changed to allow for a "less harsh" test for today's terminal equipment. Applying the existing surge requirement to certain equipment, it said, could destroy fuses and mask other potential network harms. TIA proposed that two surge

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[8] According to TIA, a wide range of interest groups in the United States and Canada were represented including carriers, manufacturers, laboratories, consultants and government personnel.

[9] See Public Notice, "Pleading Cycle Established for Comments on TIA's Petition for Rulemaking to Amend Part 68, Subpart D", 10 FCC Rcd 4548 (March 27, 1995).

[10] TIA 's proposed Part 68 Subpart D amendments are extensively detailed in Appendix A along with supporting rationales.

[11] Such stresses include subjecting the equipment to various vibrations, temperatures and humidity conditions.

[12] TIA Petition at 6.

tests be included in this section, one for equipment that might be damaged by the current surge test and another for equipment that would be not be harmed. This approach, TIA said, should achieve the goal of Part 68 to help prevent network harm and lessen consumer frustration with damaged equipment.

ii. Leakage Current Limitations (Section 68.304)

7. Under Section 68.304, leakage current limitations ensure that telephone connections are adequately insulated against hazards to telephone company personnel caused by voltages within the equipment itself or as a result of accidental contact with commercial power sources. Such insulation is defined in terms of current leakage under the application of test voltages. Section 68.304 requires testing using a 60 Hertz test voltage. TIA proposed that the 60 Hertz value be changed to include either 50 *or* 60 Hertz to harmonize with international frequencies used for this purpose and with Underwriters Laboratories and Canadian Standards Association dielectric standards.[13]

iii. Hazardous Voltage Limitations (Section 68.306)

8. Section 68.306 sets forth "fail safe" requirements on hazardous voltage. The stated limits are generally employed throughout the telephone industry as voltage limitations below which special protection of telephone craft personnel is not required. Equipment must be designed to avoid creating voltages exceeding these limits under normal operation.

9. TIA proposed that this section be revised to delete hazardous voltage requirements for Message Registration (MR) and Automatic Identification of Outward Dialing (AIOD), arguing this technology is obsolete. To date, it said, no equipment has been registered for these services.[14] TIA further proposed changing the current voltage limitation from 80 to 60 volts to harmonize it with international safety standards. It proposed numerous editorial changes to the section for clarity.

iv. Signal Power Limitations (Section 68.308)

10. Signal power limitations are designed to protect the network from interference caused by excessive signal power. TIA proposed revising this section for ease of reference, updating it, and rewording it for clarity. To update the section, TIA proposed revision of the "Through Gain" Table to reflect new services such as Integrated Services Digital Networks (ISDN) and to delete references to the 4-wire Conventional Terminating Set interface because,

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[13] Id. at 7. A dielectric is a nonconducting or insulating substance that resists the passage of electric current. Dielectric standards are insulation standards.

[14] Id.

it claims, the equipment is no longer used.[15] TIA proposed expanding subrate digital channel rates to include all rates presently used by industry.[16] Finally, it proposed harmonizing the pulse template for the 1.544 digital pulse with the ANSI T1 standard pulse template.[17] TIA proposed to deleted references to MR and AIOD, discussed above, as obsolete.

v. Transverse Balance Limitation (Section 68.308)

11. Section 68.308 addresses crosstalk interference, a potential source of harm to the network. TIA proposed the section be renamed "Transverse Balance Limitations" to harmonize it with internationally recognized Institute of Electrical and Electronic Engineers' (IEEE) terminology.[18] TIA also proposed rewording the section for clarity.

vi. On-Hook Impedance Limitation (Section 68.312)

12. This section addresses the impedance that must be maintained on a telephone line.[19] TIA proposed this section be reorganized and reworded for clarity. It proposed that "ringer-types C-Q" be removed as obsolete and the 40,000 Ohm maximum alternating current impedance be deleted for the same reason.[20] TIA proposed revision of the definition of ringer equivalence to apply only to the alternating current impedance during ringing.[21] It proposed that those sections addressing message registration be deleted because this technology is no longer in use.[22]

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[15] The Through Gain Table shows the maximum net amplification permitted in multiport systems between ports. The 4-wire Conventional Terminating Set interface was an older technology used for connection of customer provided equipment to analog voiceband private line services.

[16] Subrate digital channel rates presently used by the industry range from 2.4 to 64 kilobits/second (kbps).

[17] ANSI's T1 Committee develops technical standards and reports supporting interconnection and interoperability of telecommunications services.

[18] TIA Petition at 8.

[19] Impedance is the resistance a circuit offers to alternating current.

[20] Ringer "types" were earlier classified by their operational frequency range, which was denoted by a letter of the alphabet.

[21] Ringer equivalence is a measure of energy used by telephone ringers.

[22] Message registration was a specific traffic recording system provided by certain older types of telephone systems.

vii. Billing Protection Section (Section 68.314)

13. This section ensures that transmission of signals in the network does not interfere with proper operation of network billing equipment. TIA proposed rewording the section for clarity and deleting operating requirements for AIOD, because the technology has been replaced.[23] It further proposed a new section to clarify reverse battery billing requirements.[24] TIA proposed rewording the direct inward dialing billing requirements for clarity.[25]

viii. Additional Limitations Section (Section 68.318)

14. TIA proposed deleting references to 1.544 kbps digital "keep-alive" requirements because they are no longer in effect.[26] It proposed modifying the requirements for automatic dialing equipment to limit automatic calls to avoid harm to the network by tying up the network unnecessarily.

ix. Miscellaneous Amendments

15. TIA proposed changes to definitions in Section 68.3. It would modify the scope of Part 68 to delete references to MR and AIOD, discussed above, as well as other sections of the rules. TIA further proposed to grandfather any MR and AIOD equipment that remains connected to the network under existing grandfathering provisions.[27] In addition, it proposed a rule to grandfather currently registered equipment and to require registration to show compliance with harmonized requirements only for new equipment.

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[23] TIA Petition at 8.

[24] Reverse battery refers to a type of loop signaling.

[25] Direct inward dialing allows callers outside a company to call an internal extension without the need of an operator.

[26] "Keep-alive" refers to constantly present direct current voltage formally provided from the central office. Section 68.318 currently states that "[u]ntil December 18, 1989, terminal equipment connecting to 1.544 Mbps service shall contain circuitry that assures continuity of output signal."

[27] Grandfathered equipment is equipment that is connected to the network and that may remain connected for life without registration unless subsequently modified. Modification means changes to the equipment that affect compliance with Part 68 rules. Grandfathering provisions are contained in Section 68.2.

x. Process for Continuing Harmonization

16. TIA emphasized that tremendous technical efforts have been expended to create its proposed harmonized requirements and that a process must be developed that will keep them harmonized over time. This, asserted TIA, means that the processes used to change rules must have similar national timeframes to maintain the same requirements in each country. TIA stated that the Consultative Committee on Telecommunications, a trilateral group of private and public sector standards experts addressing harmonization issues arising under NAFTA, may prove a useful forum for industry dialogue on how to provide for continued harmonization of the terminal attachment rules.[28]

B. Positions of the Parties

17. Commenters unanimously supported TIA's petition.[29] BellSouth claims that "consumers will benefit from greater choice in terminal equipment availability that harmonization of registration requirements may foster."[30] IDCMA, a manufacturers' trade association comprised of major manufacturers of equipment used to effectuate and manage data communications, states that "the time has now come to adapt the Part 68 registration program to harmonize the United States and Canadian registration/certification requirements."[31] Northern Telecom "supports this Petition without reservation, and urges the Commission to commence a rulemaking...."[32] NYNEX supports the petition because it "believes the proposed amendments are in the public interest because they will encourage free trade, lead to greater efficiencies in manufacturing terminal equipment, assure the continued reliability of the public switched network, and streamline the Part 68 registration process."[33]

18. According to AT&T, the most significant decision in the harmonization process was agreement by Canada that technical requirements for terminal attachment should be designed to prevent network harms, defined as technical damage to the network, technical

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[28] TIA Petition at 9.

[29] Six comments and one reply comment were filed. On May 1, 1995, AT&T, BellSouth, Communication Certification Laboratory (CCL), Independent Data Communications Manufacturers Association (IDCMA), Northern Telecom, and NYNEX filed comments. On June 1, 1995, TIA filed a reply comment.

[30] BellSouth Comments at 1-2.

[31] IDCMA Comments at 2.

[32] Northern Telecom Comments at 1.

[33] NYNEX Comments at 1.

degradation of service, malfunction of billing equipment and safety risk to craftspeople.[34] Although this has traditionally been the Part 68 standard, AT&T notes that Canadian CS-03 standards currently contain many provisions designed not only to prevent network harm but also to guarantee equipment performance.[35]

19. CCL and others strongly assert that the US must provide timely review and revision of FCC rules to permit harmonization between the US and Canada.[36] In order to reduce the burden on the Commission's limited resources and to permit the rules to reflect current technology, NYNEX suggests that the Commission look to standards bodies and industry to develop appropriate standards to guide evolution of technology in a timely manner.[37] Tariffs and references to public technical specifications, says NYNEX, can more than adequately introduce new guidelines on a national, regional and local basis.[38] In its reply comments, TIA urges that in light of unanimous support for its petition, the lack of controversial issues in the record, and the already extensive public input to its proposed Part 68 changes, the Commission should "move right to a final Order and omit the Notice of Proposed Rulemaking phase, as permitted by 47 C.F.R. Sections 1.407 and 1.412(c)" and grant its petition.[39]

C. Request for Comment

20. We tentatively conclude that TIA's proposal for amendment of Part 68 to harmonize these rules with Canada's CS-03 standard should be adopted. We set forth our proposed rules in Appendix B. We tentatively conclude that, if adopted, these rules would not only update the Commission's current Part 68 registration program, but also foster greater efficiencies in manufacturing terminal equipment without threatening the reliability of the public switched network. We also tentatively conclude that they would meet NAFTA's requirement that "standards-related measures for authorized equipment" of member countries be made "compatible".[40] Finally, to allow interested parties, especially consumer groups and

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[34] AT&T Comments at 2-3.

[35] Id.

[36] See e.g., CCL Comments at 1.

[37] NYNEX Comments at 3 note 2.

[38] Id.

[39] TIA Reply Comments at 2.

[40] Authorized equipment is equipment that is approved for attachment to public switched network. NAFTA Article 1304: Standard-Related Measures states..."each party shall ensure

(continued...)

users that did not actively participate in industry discussion of harmonized terminal attachment rules, an opportunity to comment on TIA's proposal, we tentatively conclude that the Notice of Proposed Rulemaking phase of this proceeding should not be omitted.

21. At present, as described above, terminal equipment manufactured for use in the United States must comply with technical requirements contained in Part 68.[41] Similarly, terminal equipment manufactured for use in Canada must conform to technical requirements contained in CS-03. Each country's respective technical requirements differ sufficiently so that terminal equipment complying with one set of regulations does not necessarily comply with the technical requirements of the other country. As commenters unanimously agree, and we tentatively conclude, the result is unreasonably burdensome to manufacturers, and a de facto barrier to trade inconsistent with the goals of NAFTA.[42] Parties are asked to comment on whether the proposed rules will reconcile differences in standards and testing in NAFTA member countries, particularly in the area of terminal attachment.

22. Under the rules we now propose, the technical requirements of Part 68 and CS-03 would be harmonized so that a manufacturer in one country could design terminal equipment to a single, consistent set of technical standards accepted in either the U.S. or Canada. Additionally, a manufacturer could test equipment to establish compliance for certification or registration in either the U.S. or Canada.[43] These efficiencies may create an even more competitive marketplace, resulting in lower costs for equipment, thus benefitting U.S. and Canadian consumers. We request comment on whether the proposed rules will lower costs for consumers by facilitating greater efficiencies in the manufacturing and testing

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[40](...continued)
that its standards-related measures relating to the attachment of terminal or other equipment to the public telecommunications transport network, including those measures relating to the use of testing and measuring equipment for conformity assessment procedures, are adopted or maintained only to the extent necessary to: (a) prevent technical damage to public telecommunications transport networks; (b) prevent technical interference with, or degradation of, public telecommunications transport services; (c) prevent electromagnetic interference, and ensure compatibility, with other uses of the electromagnetic spectrum; (d) prevent billing equipment malfunction; or (e) ensure users' safety, and access to public telecommunications transport networks or services."

[41] See supra at para. 2.

[42] See AT&T Comments at 2; BellSouth Comments at 1; IDCMA Comments at 1; Northern Telecom Comments at 1; NYNEX Comments at 2.

[43] To be connected to the public switched network, terminal equipment must be tested and shown to be compliant with network protection rules. In the U.S., this process is known as "registration" and the FCC is the approving authority. In Canada, the process is called "certification", and Industry Canada gives approval.

of telecommunications terminal equipment and encourage interested parties, especially user groups that did not join in TIA's bilateral harmonization activities, to participate.

23. While fostering trade, the proposed rules do not appear to impair the reliability or integrity of the U.S. public switched network.[44] Nor do they appear to impose burdensome costs by requiring any undue alterations to the network. Indeed, as AT&T points out, TIA's initiative has been undertaken without losing sight of Part 68's goal of protecting the network against potential harm from terminal equipment.[45] Where substantive rule modifications have been proposed, therefore, those proposed modifications have been analyzed from the standpoint of potential network harm rather than solely from a terminal equipment trade perspective.

24. We emphasize that the proposed harmonized rules are designed only to prevent network harm, not to ensure technical performance of attached equipment. We tentatively conclude that such rules, consistent with the traditional Part 68 approach, will be as simple and easy to administer as is reasonably possible with a minimum of government intervention.[46] Moreover, as noted supra, NAFTA standards for attachment of private equipment to public switched networks require member countries to adopt or maintain rules "only to the extent necessary" to prevent technical damage or interference to the public switched network and to protect users' safety. As the general thrust of the proposed rules is only to preclude attachment of private equipment that threatens technical damage or network interference, we tentatively conclude that the proposed rules are consistent with these NAFTA standards. This consistency, we further tentatively conclude, may make the proposed rules a model that will encourage Mexico and other countries to develop similar harmonized requirements for terminal attachment, limiting connection of private equipment to the public switched network only if such connection threatens "network harm".[47]

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[44] See, e.g., AT&T Comments at 2; BellSouth Comments at 2.

[45] See, e.g., AT&T Comments at 2.

[46] Canada's CS-03 (unharmonized) standard currently includes many provisions not designed merely to prevent network harms, but to achieve good equipment performance. As AT&T pointed out, during the industry sponsored harmonization process, the Canadians agreed to delete performance-oriented provisions from their CS-03 standard. See supra para. 18.

[47] To implement its directives in the area of terminal attachment, NAFTA (Article 913) established the Telecommunications Standards Subcommittee (TSSC) to create a work plan for "making compatible the standards-related measures for authorized equipment." On July 3, 1994, the TSSC released its work plan which contains specific provision for harmonization of terminal attachment rules among member countries. It is possible, for example, that the proposed rules might guide efforts to harmonize Part 68 rules with Mexican terminal attachment standards and potentially be incorporated into the TSSC work plan.

25. That the proposed harmonized rules could well serve as a model for harmonization in other international standard-setting fora is widely recognized. On May 22, 1995, Mickey Kantor, United States Trade Representative, wrote Chairman Reed Hundt that U.S.-Canadian harmonization "will not only facilitate harmonization in the North American market, but will advantageously position the United States in its discussion to promote international harmonization in other fora, such as in the Asia Pacific Economic Cooperation forum and the Summit of the Americas Action Plan." Kantor further stated that "[t]he potential for U.S. suppliers to design to requirements harmonized in a number of countries, and test for compliance only once for a number of markets, will significantly increase U.S. access to telecommunications markets around the world."[48] Industry, too, has been quick to grasp the advantages associated with international harmonization of terminal attachment rules.[49]

26. While terminal equipment meeting a single set of "harmonized" rules will satisfy the requirements of both countries in a manner consistent with the interests of United States industry and international obligations of the United States under NAFTA, we recognize that the utility of any such harmonized standard will be compromised if the regulatory process fails to permit the standard to evolve as technology does. Otherwise, over time "harmonization" with updated Canadian rules will be at risk. For this reason, we tentatively conclude that the Commission should rely, whenever possible, on standards bodies composed of industry experts to analyze the technical effectiveness of the harmonized rules and to resolve related complex technological issues. For example, we acknowledge the invaluable assistance provided by the Consultative Committee on Telecommunications (CCT) acting as a standards advisory body to the United States, Canada and Mexico in various harmonization activities.[50] We tentatively conclude that CCT could productively continue to serve as a

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[48] On June 6, 1995, Chairman Hundt, on behalf of the Commission, replied that a rulemaking to harmonize U.S.-Canadian telecommunications terminal attachment rules could be an important step in achieving NAFTA goals and that such harmonization will facilitate such efforts in other fora.

[49] For example, TIA states that " [t]rade agreements like NAFTA that reduce trade barriers abroad are critical to US telecommunications equipment suppliers." See supra at note 7. According to TIA, diminishing trade barriers between the U.S. and Mexico, achieved by successful implementation of NAFTA, advantageously positions U.S. suppliers to enter Mexico's burgeoning telecommunications equipment market.

[50] CCT operates under the auspices of the American National Standards Institute (ANSI), the Standards Council of Canada (SCC), and the Instituto Mexicano de Normas (IMN) represented by the Camara Nacional de la Industria Electronica y de Comunicacions Electricas (CANIECE) pursuant to an initiative of the Camera National de la Industria de Tranformacion (CANACINTRA). CCT's membership is open to trade associations, manufacturers associations, standards associations, service providers associations and regulatory agencies that

(continued...)

forum for information exchange on matters of technical interest, including the continuing utility of harmonized U.S.-Canadian terminal attachment rules. We are reluctant, however, to rely solely on industry consensus as a substitute for our Part 68 rulemaking function, as such consensus may or may not, in an individual instance, promote the public interest. Standards bodies, we note, often lack the Commission's authority to ensure fair rules supporting safe and direct electrical connection of subscriber's terminal equipment to the public switched network. We seek comment on this tentative conclusion.

D. Conclusion

27. We tentatively conclude that our proposed rules will eliminate unnecessary differences in terminal attachment requirements and thereby promote barrier-free trade between the United States and Canada. We believe this is consistent with the spirit and letter of NAFTA, which mandates elimination of trade barriers through reconciliation of differences in standards and testing procedures. Moreover, we believe our proposed rules will become a guide for harmonization efforts around the world and will benefit consumers by creating a more competitive equipment marketplace, thereby lowering equipment costs. Furthermore, we believe that our proposed rules are consistent with the Commission's longstanding commitment to ensure that no public harm results from attachment of private equipment to the public switched network. We do not believe, however, that the continued utility of the proposed rules will depend exclusively upon industry standards bodies to update them. We tentatively conclude that, while standards bodies may most expeditiously resolve complex technical matters, the Commission must retain ultimate responsibility, which it exercises in its Part 68 rulemakings, to ensure subscribers' continued ability to make beneficial use of interconnected devices and communications systems. We encourage all interested parties, especially consumer groups and users that were not involved in industry discussion of harmonized terminal attachment rules that led to the proposals now before us, to comment on our tentative conclusions.

IV. Procedural Matters

A. Ex Parte

28. The Notice of Proposed Rulemaking is a non-restricted notice and comment rulemaking. Ex Parte presentations are permitted, except during the Sunshine Agenda period,

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[50](...continued)
have an interest in harmonization of telecommunications standards. CCT's stated objective is to promote and foster the development of harmonized telecommunications standards. In particular, it provides technical assistance to the Telecommunications Standards Subcommittee tasked under NAFTA (Article 913) with developing a work plan for harmonizing standards-related measures for authorized equipment. See supra at note 47.

provided they are disclosed as provided in Commission rules.[51]

B. Initial Regulatory Flexibility Act Analysis

29. An Initial Regulatory Flexibility Analysis is contained in Appendix C.

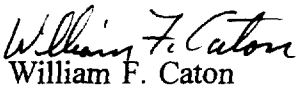
C. Notice and Comment Provision

30. Pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. Sections 1.415 and 1.419, interested parties may file comments on or before **April 1, 1996**, and reply comments on or before **April 16, 1996**. To file formally in this proceeding, interested parties must file an original and four copies of all comments, reply comments, and supporting documents with the reference number "CC Docket No. 96-28" on each document. Parties wanting each Commissioner to receive a personal copy of comments, should send comments and reply comments to the Office of the Secretary, Federal Communications Commission, Washington, DC 20554. Comments and reply comments will be available for public inspection during regular business hours in the FCC Reference Center, Room 239, Federal Communications Commission, 1919 M Street, N.W., Washington, DC. Copies of comments and reply comments are available through the Commission's duplicating contractor: International Transcription Service, Inc. (ITS, Inc.), 2100 M Street, N.W., Suite 140, Washington, DC 20037 (202/857-3800).

V. ORDERING CLAUSES

31. ACCORDINGLY, IT IS ORDERED, pursuant to Sections 1, 4(i) and (j), 201-205, 218 of the Communications Act as amended, 47 U.S.C. Sections 151, 154(i), 151(j), 201-205, and 218, that NOTICE IS HEREBY GIVEN of the proposed changes to Part 68 to harmonize it with Canada's CS-03 certification requirements and COMMENT IS INVITED on this proposal.

FEDERAL COMMUNICATIONS COMMISSION



William F. Caton
Acting Secretary

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[51] See generally, 7 C.F.R. §§ 1.1202, 1.1203, and 1.1206(a).

APPENDIX C

INITIAL REGULATORY FLEXIBILITY ANALYSIS

Reason for Action

This rulemaking is initiated to obtain comment on whether the Commission should adopt amendments to Part 68 of the Commission's rules to harmonize it with corresponding section of the Canadian certification regulation, CS-03.

Objectives

The Commission seeks to not only update its current Part 68 registration program, but also foster greater efficiencies in manufacturing terminal equipment while maintaining the continued reliability of the public switched network.

Legal Basis

The proposed action is authorized under Sections 1, 4, 201-205, 218 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154, 201-205, 218.

Reporting, Recordkeeping and Other Compliance Requirements

None.

Federal Rules That Overlap, Duplicate or Conflict With These Rules

None.

Description, Potential Impact, and Number of Small Entities Involved

None.

Any Significant Alternatives Minimizing the Impact on Small Entities Consistent with the Stated Objectives

None.

Appendix A
Proposed Harmonized Subpart D
Part 68
FCC Rules and Regulations

The following Appendix contains the proposed text for the changes to Part 68, Subpart D. Changes are introduced as follows:

Reworded = This indicates a rewording of the Section to clarify the intent of the rule.

Changed = This indicates a technical change in the rule.

Delete = This indicates a deletion of either part or all of a section.

Where minor editorial changes have been made, i.e., replaced "with respect to one milliWatt" with dBm the change was made without notation.

Where text changes were made that could affect the rule ~~strikeouts~~ (for deletions) and underlining (for insertions) have been utilized.

§ 68.300 Labelling requirements.

(New)

(c) When the device is so small or for such use that it is not practical to place the statements specified in this section on it, the information required by § 68.300(a) and (b) shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user. The FCC Registration Number and the model number shall be displayed on the device.

Rationale for Harmonized Requirement:

Section (c) has been added because many devices are either too small or do not have adequate space to display all the information required by Part 68. The Registration Number and the model number will provide sufficient information to identify the device and access the necessary records. This proposed change is part of the NPRM in CC Docket 93-286.

§ 68.302 Environmental simulation.

(Delete)

(a) *Vibration.*

Deleted

(b) *Temperature and Humidity.*

Deleted

Rationale for Harmonized Requirement:

The requirements for vibration, temperature and humidity have been deleted as it is the opinion of the working group that these tests have not produced failures that have caused harm to the network.

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(Reworded)

Unpackaged registered terminal equipment and registered protective circuitry shall comply with all the ~~criteria contained in the rules and regulations~~ rules specified in this subpart, both prior to and after the application of ~~each of~~ the mechanical and electrical stresses specified in this section, notwithstanding that certain of these stresses may result in partial or total destruction of the equipment.

Both telephone line surges, Type A and Type B, shall be applied as specified in § 68.302(b) and § 68.302(c). Different failure criteria apply for each surge type.

Rationale for Harmonized Requirement:

The first paragraph was slightly reworded to add "unpackaged" to the text in order to clarify the requirement. The second paragraph was added to clarify that registered terminal equipment is subject to both surges.

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(Reworded & Delete)

(a) *Shock.* (1) Registered Terminal Equipment and Registered Protective Circuitry Equipment Unpackaged:

Deleted

(b) The drop tests specified in the mechanical shock ...

Deleted

(Reworded)

(a) *Mechanical Shock.*

(1) *Hand-Held Items Normally Used at Head Height:* 18 random drops from a height of 1.5 meters onto concrete covered with 3 millimeters asphalt tile or similar surface.

(2) *Table (Desk) Top Equipment 0-5 kilograms:* Six random drops from a height of 750 millimeters onto concrete covered with 3 millimeters asphalt tile or similar surface.

(3) *The drop tests specified in the mechanical shock conditioning stresses shall be performed as follows:* The unit should be positioned prior to release to ensure as nearly as possible that for every six drops there is one impact on each of the major surfaces and that the surface to be struck is approximately parallel to the impact surface.

Rationale for Harmonized Requirement:

The section has been reworded and renumbered. The proposed harmonized drop shock tests represent the working group's view of the necessary tests for assuring continued compliance of the terminal equipment under test. Any installed equipment that weighs more than 5 kilograms is not likely to experience this kind of shock, however, equipment that is normally either carried or located where it may fall, e.g., desk top, shall be subjected to these tests.

The drop shock for other equipment, 0-10 kg has been eliminated as part of the requirements based on UL/CSA recommendation that a stress from a 3 to 6 inch drop is not likely to produce harm to the network.

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(Changed)

(b) *Telephone Line Surge - Type A.*

(1) *Metallic.* Apply two metallic voltage surges (one of each polarity) between any pair of connections on which lightning surges may occur; this includes (i) tip to ring, (ii) tip 1 to ring 1 and (iii) for a 4-wire connection which uses simplexed pairs for signalling, tip to ring 1 and ring to tip 1.

The surge shall have an open circuit voltage waveform in accordance with Figure 68.302(a) having a front time (t_r) of 10 μs maximum and a decay time (t_d) of 560 μs minimum, and shall have a short circuit current waveshape in accordance with Figure 68.302(b) having a front time (t_r) of 10 μs maximum and a decay time (t_d) of 560 μs minimum. The peak voltage shall be at least 800 volts and the peak short circuit current shall be at least 100 amperes. Surges are applied:

(A) With the equipment in all states that can affect compliance with the requirements of Part 68. If an equipment state cannot be achieved by normal means of power, it may be achieved artificially by appropriate means;

(B) With equipment leads not being surged (including telephone connections, auxiliary leads, and terminals for connection to non-registered equipment) terminated in a manner which occurs in normal use;

(C) Under reasonably foreseeable disconnection of primary power sources, with primary power cords plugged and unplugged, if so configured.

(2) *Longitudinal.* Apply two longitudinal voltage surges (one of each polarity) from any pair of connections on which lightning surges may occur, this includes the tip-ring pair and the tip 1 - ring 1 pair, to earth grounding connections; and to all leads intended for connection to non-registered equipment, connected together.

The surge shall have an open circuit voltage waveform in accordance with Figure 68.302(a) having a front time (t_r) of 10 μs maximum and a decay time (t_d) of 160 μs minimum, and shall have a short circuit current waveshape in accordance with Figure 68.302(b) having a front time (t_r) of 10 μs maximum and a decay time (t_d) of 160 μs minimum. The peak voltage shall be at least 1500 volts and the peak short circuit current shall be at least 200 amperes. Surges are applied:

(i) With the equipment in all states that can affect compliance with the requirements of Part 68. If an equipment state cannot be achieved by normal means of power, it may be achieved artificially by appropriate means;

(ii) With equipment leads not being surged (including telephone connections, auxiliary leads, and terminals for connection to non-registered equipment) terminated in a manner which occurs in normal use;

(iii) Under reasonably foreseeable disconnection of primary power sources, with primary power cords plugged and unplugged, if so configured.

(3) *Failure Modes resulting from application of Type A telephone line surges.* Regardless of operating state, equipment and circuitry are allowed to be in violation of the longitudinal balance requirements of §68.310(b) and (c) and, for terminal equipment connected to Local Area Data Channels, the longitudinal signal power requirements of §68.308(f)(3), provided that:

(i) Such failure results from an intentional, designed failure mode which has the effect of connecting telephone or auxiliary connections with earth ground; and,

(ii) If such a failure mode state is reached, the equipment is designed in such a manner that it would become substantially and noticeably unusable by the user, or an indication is given (e.g., an alarm), in order that such equipment can be immediately disconnected or repaired.

NOTE: The objective of this Subsection is to allow for safety circuitry to either open-circuit, which would cause a permanent on-hook condition, or to short-circuit to ground, as a result of an energetic lightning surge. Off-hook tests would be unwarranted if the off-hook state cannot be achieved. A short to ground has the potential for causing interference resulting from longitudinal imbalance, and therefore designs must be adopted which will cause the equipment either to be disconnected or repaired rapidly after such a state is reached, should it occur in service.

(c) *Telephone Line Surge - Type B.*

(1) *Metallic.* Apply two metallic voltage surges (one of each polarity) to equipment between any pair of connections on which lightning surges may occur; this includes (i) tip to ring, (ii) tip 1 to ring 1 and (iii) for a 4-wire connection which uses simplexed pairs for signalling, tip to ring 1 and ring to tip 1.

The surge shall have an open circuit voltage waveform in accordance with Figure 68.302(a) having a front time (t_f) of 9 μs (± 30%) and a decay time (t_d) of 720 μs (± 20%) and shall have a short circuit current waveshape in accordance with Figure 68.302(b) having a front time (t_f) of 5 μs (± 30%)

and a decay time (t_d) of 320μs (± 20%). The peak voltage shall be at least 1000 volts and the peak short circuit current shall be at least 25 amperes. The wave shapes are based on the use of ideal components in Figure 68.302(c) with S_2 in Position M. Surges are applied:

(A) With the equipment in all states that can affect compliance with the requirements of Part 68. If an equipment state cannot be achieved by normal means of power, it may be achieved artificially by appropriate means.

(B) With equipment leads not being surged (including telephone connections, auxiliary leads, and terminals for connection to non-registered equipment) terminated in a manner which occurs in normal use.

(C) Under reasonably foreseeable disconnection of primary power sources, with primary power cords plugged and unplugged, if so configured.

(2) *Longitudinal.* Apply two longitudinal voltage surges (one of each polarity) from any pair of connections on which lightning surges may occur, this includes the tip-ring pair and the tip 1 - ring 1 pair to earth grounding connections and to all leads intended for connection to non-registered equipment, connected together.

For each output lead of the surge generator, with the other lead open, the surge shall have an open circuit voltage waveform in accordance with Figure 68.302(a) having a front time (t_f) of 9 μs (± 30%) and a decay time (t_d) of 720 μs (± 20%) and shall have a short circuit current waveshape in accordance with Figure 68.302(b) having a front time (t_f) of 5 μs (± 30%) and a decay time (t_d) of 320μs (± 20%). The peak voltage shall be at least 1500 volts and the peak short circuit current shall be at least 37.5 amperes. The wave shapes are based on the use of ideal components in Figure 68.302(c) with S_2 in Position L. Surges are applied:

(i) With the equipment in all states that can affect compliance with the requirements of Part 68. If an equipment state cannot be achieved by normal means of power, it may be achieved artificially by appropriate means.

(ii) With equipment leads not being surged (including telephone connections, auxiliary leads, and terminals for connection to non-registered equipment) terminated in a manner which occurs in normal use.

(iii) Under reasonably foreseeable disconnection of primary power sources, with primary power cords plugged and unplugged, if so configured.