

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

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF SECRETARY

In the Matter of )  
)  
Amendment of Parts 2 and 15 of the )  
Commission's Rules to Deregulate )  
the Equipment Authorization )  
Requirements for Digital Devices )

ET Docket No. 95-19

To: The Commission

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COMMENTS OF GATEWAY 2000, INC.

Gateway 2000, Inc. ("Gateway") by its undersigned counsel, hereby submits its comments in response to the Commission's Notice of Proposed Rulemaking ("NPRM") in the above-captioned proceeding, released February 7, 1995, 60 Fed. Reg. 15116, published March 22, 1995.

INTRODUCTION

As one of the world's leading suppliers of personal computers, Gateway is familiar with the Commission's equipment certification requirements set forth in Parts 2 and 15 of the Rules, and has reviewed with great interest the Commission's two proposals to streamline the equipment authorization requirements for personal computers and personal computer peripherals and to relax the requirements for testing of completed systems. Gateway agrees that the equipment authorization requirements for personal computers and personal computer peripherals should be changed, and Gateway applauds the Commission's first proposal to change

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the procedures for these devices from the present certification regimen to a new authorization process based on a manufacturer's declaration of compliance.

The second of the Commission's proposals -- authorization of personal computers based on tests and approval of their individual components without further testing of the completed systems -- is somewhat problematic. Although this approach may reduce the "time to market" and may have positive economic effects on the industry, Gateway has reservations as to whether the system of component testing proposed by the Commission will actually work in practice.

#### Equipment Authorization Process

Class B approvals currently are the bottleneck factor in Gateway's engineering process. Generally, the testing portion of the certification process takes 25 to 40 days and FCC grant authorization takes an additional 28 to 35 days. Gateway's selling and shipment dates are directly tied to the FCC grant date. If the proposed rule changes were to be adopted, Gateway could deduct the 28 to 35 days for the issuance of the grant from the product development cycle. This could mean the difference between being first to market or simply an also-ran with a given concept or product design.

Allowing personal computer manufacturers to demonstrate compliance by conducting the appropriate testing and issuing a declaration of conformity would definitely reduce the time to market. This approach is very similar to the requirements with

which many personal computer manufacturers (including Gateway) must comply in order to market their products in the European Community. Requiring that the Declaration of Conformity (DoC) be executed prior to the importation or marketing of the equipment would not add any significant time to the product development cycle. Providing the FCC with a copy of the Declaration of Conformity and test report within fourteen days, upon request, should not be a problem for manufacturers if they are indeed creating the DoC and generating their test reports before they ship products. This is the same general procedure that is followed for the CE Mark.

The Commission has acknowledged that, because it is proposing no longer to require certification of personal computers, there may be no easy way for consumers to inspect a specific device and determine whether it complies with the Commission's testing and authorization requirements. NPRM at para. 7. Accordingly, the Commission has suggested that some sort of compliance labelling may be required, and has proposed that personal computers and peripherals be required to display a small logo, similar to the UL or EC logo, to indicate compliance with FCC rules. Shown below are two examples of an appropriate type of label for each class of FCC certification.

**FC<sub>A</sub>**

**FC<sub>B</sub>**

FCC CLASS A LABEL

FCC CLASS B LABEL

Gateway believes that logo identification is necessary if there is to be any meaningful level of consumer acceptance of products which comply with the Commission's two different emission level criteria. Naturally, this type of labeling program would have to be explained to the public in order to gain widespread acceptance. Gateway believes that the costs of such a labelling program (which is similar to those required by the UL or for the CE Mark) are more than outweighed by the consequent recognition by (and support of) end consumers. If the requirement for FCC IDs will be eliminated, then there must be some reassurance to the consumer that the product does meet relevant standards.

Many foreign countries recognize the FCC ID and the standards that it represents. In this regard, there would appear to be no reason to develop a new label or set of standards for North America. Both Mexico and Canada currently accept the FCC ID for radiated and conducted emission conformance. For purposes of marketing products in those countries, the statements that are currently required to be placed in the user's manuals by the FCC regulations can be translated into both the French and Spanish languages. This approach would meet the current Canadian requirement to have a French translation of a statement similar to the FCC statement in the user's manual.

As an original equipment manufacturer of personal computer systems, Gateway currently requires that the external and internal peripherals that are sold with or contained inside its systems have FCC ID's. If the proposed changes are implemented, Gateway could more easily ensure that a peripheral is compliant with the applicable standards. This would also allow Gateway's customers to clearly see that Gateway is providing them with quality peripherals.

Gateway agrees with the Commission's position that it will still be necessary to include an informational statement in the user's manual. This statement serves to inform customers of the types of solutions they should implement if they encounter what they believe to be interference from their personal computer. Although interference is a rare occurrence given the state of compliance in the industry, consumers can save time and effort if they follow the steps outlined in the informational statement before they resort to calling the manufacturer.

The Commission specifically invited comment on the desirability of requiring accreditation of manufacturers' and independent laboratories. Gateway believes that laboratories should be accredited and that the accreditation should be reviewed periodically to ensure that the labs perform the testing in accordance with the appropriate standards. These reviews should be conducted on an annual basis, at a minimum, with semi-annual reviews being preferred, and should be conducted on an unannounced basis, similar to the follow-up service used by UL.

The responsibility of conducting the reviews of test labs should not be given to a single entity (as was done originally in the case of Underwriters Laboratories in the context of safety standards for personal computers and peripherals). Instead, a standard should be developed or adopted against which test labs can be measured. The European Community has adopted the use of EN 45001 and EN 29000, which is administered under the National Measurement Accreditation Services (NAMAS). Under this program, the test lab must have the following items in place: a quality assurance manual; details of the test facilities; calibration policy of laboratory's test equipment; qualifications of key personnel; and details of any accreditation approvals. Each test lab must be accredited for each of the tests that it performs. Germany has a similar program administered through the DAR. Gateway encourages the Commission to look into the policies that are being used with regard to laboratory certification in other parts of the world.

The Commission has proposed to maintain for a period of two years the option of FCC certification to allow laboratories time to receive accreditation. Gateway believes this is more than sufficient time for test labs to obtain such accreditation. Labs that are indeed interested in obtaining accreditation are likely to pursue it promptly and be able to comply within a much shorter period of time. Twelve months would probably be acceptable, but may be very aggressive from the NIST's perspective, since NIST

may not be able to accomplish certification of all of labs within that period of time.

The Commission has proposed to increase its examination and testing of sampled equipment in the marketplace in light of the streamlined procedures under consideration. NPRM at para. 10. Gateway agrees that increased examination of personal computer equipment will be necessary to ensure compliance with relevant standards after the initiation of the new program.

The Commission acknowledged that its proposal is similar to product approval programs for digital devices being used in other parts of the world. NPRM at ¶12. Indeed, Part 15 (Sections 107 and 109) allows the use of International Special Committee on Radio Interference (CISPR) Publication 22 (1985) as an alternative to the conducted and radiated limits published in CFR.47. Gateway recommends that the Commission consider adopting full harmonization with the European Community with regard to radiated and conducted emissions at this time. Many manufacturers are already conducting testing to the CISPR 22 standard in order to place the CE Mark on their products. Compliance with only one set of standards would be much easier for the test laboratories and the manufacturers to manage.

#### Authorization of Modular Personal Computers

The Commission's current rules require that every combination of enclosure, power supply and CPU board that is marketed as a personal computer be tested and receive equipment

authorization prior to marketing.<sup>1/</sup> At the present time, individual enclosures, power supplies and CPU boards are treated as subassemblies that are not subject to testing or equipment authorization requirements until they are assembled into a personal computer. The Commission has proposed to change the current regulatory environment in this regard by allowing personal computers to be authorized based on tests (and Declarations of Compliance) of the individual components, without further testing of the completed assembly.

Gateway supports the Commission's goal of modifying the rules with respect to authorization of components so as to eliminate unnecessary regulatory burdens. However, Gateway has some serious reservations, based on its actual experience with the idiosyncracies of component combinations, regarding the efficacy and workability of the Commission's proposal. Gateway assembles personal computers to meet specific requirements of customers, using modular components such as enclosures, power supplies and CPU boards. This results in a wide variety of possible configurations, all of which require testing and authorization. The changes proposed by the Commission certainly will result in decreased regulatory burden, reduced time to market, greater design flexibility and lower costs for manufacturers and consumers. But the essential test is whether the program will result in emission-compliant completed systems, and it is not clear that this test will be met.

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<sup>1/</sup> 47 C.F.R. Section 15.101(c) and (e).

The Commission has proposed to require that all CPU boards, power supplies and enclosures designed for use in personal computers and marketed to the public be authorized to demonstrate compliance with the technical standards contained in Part 15 of the rules (NPRM at para. 17).

With respect to the testing levels for emissions from CPU boards, the Commission has invited comment on the two-step testing approach described at paragraph 20 of the NPRM. Under this approach, the first test would be conducted with the CPU board connected to a power supply with the oscillator circuit for the microprocessor operating with the output coupled to the microprocessor circuit, as would occur during normal operation. No peripheral devices would be connected during this first test, and only radiated emissions would be measured. Under the first test, the Commission would permit the radiated emissions to exceed the limits specified in the rules by a specified amount, for example, 6 dB. The second test of the CPU board would take place with the board installed in a representative enclosure, with a representative power supply, and configured in the manner currently specified under Section 15.31(a) of the rules. In the second test, the CPU board would be required to comply with the appropriate standards for both radiated and conducted emissions.

Gateway believes that this approach may pose some problems. Based on its experience in testing CPU boards, Gateway believes that if a board is allowed to exceed the limits during the first test, it will be very difficult to ensure that, by placing the

system board into any enclosure, it will comply with appropriate limits. The Commission also invited comment as to how to deal with the fact that a CPU board may be capable of accepting microprocessors from multiple manufacturers. In Gateway's view, the fact that the system board can accept processors from multiple manufacturers should not be the determining factor as to the acceptability of a product. The clock speed of the system board has more to do with compliance by the complete system than the source of the particular processor that is installed on the board.

With respect to the proposed test for power supplies (NPRM at para. 21), Gateway agrees that the power supply does determine the ability of the computer to comply with FCC standards or conducted emissions, and that power supplies must contain certain levels of filtering to ensure that conducted emissions are kept to acceptable levels. Gateway notes that filtering also should be installed in power supplies to combat radiated emissions, as well. In certain conditions, radiated emissions have been found to emanate from the power supply AC cord -- emissions that were coupled onto power supply leads from the various peripherals in the enclosure and allowed to pass through the power supply via the power cord.

The Commission also invited comments on the proposed approach for standards or measurement procedures for enclosures used with modular computers. Gateway agrees that CPU boards may emit varying amounts of radio noise and that an enclosure which

causes one board to be compliant may not have the same effect on another. It may be possible to ensure the shielding effectiveness of enclosures by configuring systems in the normal fashion and adding a loop antenna internal to the enclosure. This antenna could be driven at a certain frequency and decibel level, whereupon measurements could be taken on an open area test site to determine the shielding effect of the enclosure at various frequencies. This approach would yield some indication as to the performance of the enclosure across various frequency ranges.

The Commission acknowledged in its NPRM that with respect to enclosures, the issue is complicated because one enclosure, when tested with a CPU board that produces little radio noise, may be considered compliant, and yet may not be compliant when tested with a CPU board that is "noisy." Further, an enclosure that is satisfactory for shielding the frequencies of emissions proposed by one processor (e.g., a 33 MHz "486" chip) may not be adequate for shielding emissions produced by a 90 MHz pentium processor. The Commission's approach was to require that the DoC for the enclosure specify the particular types of CPU boards for which it is authorized. In Gateway's view, this may not be an adequate solution, because certain CPU boards have the ability to utilize both a 486 Class CPU and a Pentium Class CPU. The net result of the Commission's proposal may be to require the industry to carry higher inventories consisting of numerous different enclosures

for different types of motherboard/CPU combinations -- a result that would complicate matters rather than simplify them.

The Commission has proposed to prohibit authorization of CPU boards or internal power supplies that require complex electrical changes to the host system, such as by soldering parts or altering circuitry. NPRM at 23. Gateway agrees. Most, if not all, components are capable of being designed in such a such way that they should not require special accessories in order to achieve compliance with emission limits.

The Commission has proposed to continue its policy of allowing non-authorized devices, including CPU boards and power supplies, to be sold to other manufacturers for further fabrication, in which case the final manufacturer would be responsible for testing and authorizing the product.<sup>2/</sup> NPRM at para. 25. At the same time, the Commission recognized that components that are marketed to the general public must be authorized prior to marketing. In essence, this proposal will create a two-tiered environment for the sale of components: those that are pre-authorized and those that are not. In order to ensure that the benefits of the Commissions' proposed rule

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<sup>2/</sup> In footnote 30 of the NPRM, the Commission proposed to allow the marketing of certain components for product development purposes before authorization is obtained. Gateway notes that Section 2.1204(a)(3) of the Commission's Rules presently allows for a maximum of 200 units to be marketed for testing and evaluation purposes. Gateway recommends that the 200 unit quantity be maintained. Any quantity less than that would make it impractical for original equipment manufacturers to continue their product development activities.

changes applicable to modular devices will be available to companies that assemble complete systems from subassemblies, the Commission should clarify that manufacturers who purchase pre-authorized components from other manufacturers will not be responsible for testing and authorizing the complete system into which those components have been installed.

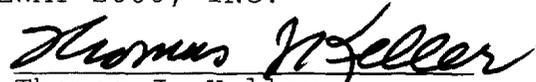
CONCLUSION

In summary, Gateway applauds the Commission for its proposals to modify its equipment authorization rules, and respectfully requests the Commission to adopt rules consistent with the comments set forth herein.

Respectfully submitted,

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