Before the Federal Communications Commission

Washington, D.C. 20554

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| In the Matter of  Technical Advisory Council (TAC) Technical Inquiry into Reforming Technical Regulations | ) ) ) ) ) ) ) | ET Docket No. 17-215 |

COMMENTS ON TECHNICAL INQUIRY

International Business Machines Corporation (IBM) respectfully submits the following comments in response to the TAC’s inquiry into reforming the FCC’s technical regulations. IBM appreciates the opportunity provided by the Federal Communications Commission (FCC or the “Commission”) to comment on the Commission’s technical regulations and the processes by which they are developed. IBM supports the Commission’s mission to regulate interstate and international communications. It is no small task to regulate spectrum usage; promote competition and innovation in rapidly evolving technologies and applications of those technologies; prevent interference between users of spectrum; and support the U.S.’s economic interests. The Commission continues to demonstrate its competence and unique ability to effectively balance all of these responsibilities and the needs of the, sometimes competing, interests of affected parties.

In particular, IBM appreciates the opportunity to comment on the portions of the Rules that apply to radiofrequency devices, in Parts 0, 1, 2, 15 and 18, and related to human exposure to radio frequency electromagnetic fields in, for example, Parts 22 and 24.

**Introduction**

IBM has a long history of innovation and invention under the Commission’s rules for the authorization of radiofrequency (RF) devices, dating back to the expansion of the rules to include digital devices in 1981. The breadth of products to which we have applied the rules ranges from physically small devices, such as notebook computers, to large mainframes housed in multiple equipment racks. IBM has operated multiple test facilities located in several countries. IBM’s comments on the present technical inquiry are based on our experiences over these many years.

**Responses to the categories included in ET Docket No. 17-215**

**1. Regulations that should be removed because they have become outdated, inhibit innovation or would be better handled by the involved parties. What would replace such regulations if they are removed?**

None.

**2. Regulations that should be retained because they promote competition, protect incumbents from interference, regulate unlicensed frequencies, are necessary to comply with international agreements, or support the purpose of the FCC.**

In light of the amendments to Parts 0, 1, 2, 15 and 18 recently adopted by the Commission in the matter of ET Docket No. 15-170, these parts of the Rules are well positioned to fulfill their intended purposes and are needed. As with all regulations, some minor adjustments or refinements could be considered to enhance the efficiency, effectiveness, or application of these parts; however, these parts of the Rules should be retained.

**3. Regulations that should be modified because technical reporting requirements are too burdensome, data contained in the reports are no longer used, or existing regulation does not fully apply to new technology. If the technical requirements are too burdensome, should the FCC automate existing reporting or leverage other data or reporting from third parties or organizations?**

None.

**4. Processes to resolve competing interests: Is there a better way to mediate conflicts between different parties, perhaps that is quicker and does not require as many resources from interested parties? Is there potential for a ‘body’ other than the FCC to host this role and what are the legal impediments, if any, to delegating certain conflict mediations to other parties? How would a new process work?**

IBM does not have any suggestions to offer for modifying processes to resolve competing interests. In our limited experience in resolution of competing interests, the processes seem fair and reasonable, affording all affected and interested parties adequate opportunity to participate and be considered.

**5. Regulations that can be combined: What general principles that apply to all forms of a type of communication?**

IBM is satisfied with the existing organization and arrangement of the FCC Rules and has no opinion for FCC regulations to be combined.

**6. How should the FCC approach coordination between regulations and standards bodies or industry consortia? Should regulations be written by leveraging industry standards? How should the regulatory process (which must be available to all parts of our society) be tied to the standards update process? How would the requirement for public availability of documents related to federal rules be met when referenced standards are copyrighted? How can regular changes to standards upon which regulations are based be propagated to the rule making processes that are required when regulations are changed?**

A) IBM suggests that the FCC more often integrate international standards into their rules. In cases where good international standards and practices exist and can adequately protect spectrum usage, promote competition and innovation, and foster economic growth, they should be applied. Unilaterally applying unique criteria and test standards instead of international standards creates undue burdens on manufacturers of affected equipment while, in many cases, providing no significant, tangible benefit to U.S. consumers.

Two examples of internationally accepted standards or practices that should be applied instead of unique U.S.-only ones are: 1) alignment to IEEE C95.1-2005 for human exposure to radio frequency electromagnetic fields; and 2) allowing the use of the radiated emission test methods defined in CISPR 32 for RF equipment that is within the scope of both the FCC rules and CISPR 32.

IEEE C95.1-2005 is the most up-to-date version of the standard. It incorporates many science-based improvements over IEEE C95.1-1991. It is also better harmonized with the ICNIRP guidelines than the previous edition. Its use would align the FCC limits with the corresponding values used internationally. Adoption of uniform standards is also beneficial to consumers and industry.

The electronics industry and its consumers would realize significant benefits if the FCC would allow the use of the test methods defined in CISPR 32 for radio frequency equipment that is within the scope of that international standard instead of only accepting test results based on ANSI C63.4. The U.S. is the only country having electromagnetic emission regulations on radio frequency equipment that does not accept the use of CISPR 32 or its predecessor CISPR 22. While the scopes of equipment covered by CISPR 32 and the FCC rules for RF equipment and the frequency ranges of the associated emission limits are not fully aligned, workable options could be adopted that would reduce the testing burden on manufacturers of products marketed both inside and outside the U.S. IBM suggests the FCC consider allowing the use of the measurement methods of CISPR 32 for equipment within the scope of that standard over the frequency range common to both FCC Rules and CISPR 32. A closer alignment in the frequency range of 1 to 6 GHz would be most beneficial.

B) IBM believes the requirement for public availability of documents related to federal rules when a referenced standard is copyrighted works best when the standard is available for purchase by interested parties from the owner or publisher of that standard, whether the standard is published by an American standard developing organization (SDO) such as ANSI or an international SDO such as the IEC.

C) The process of promulgating changes to standards upon which regulations are based should continue to rely on public notice and comment periods. Providing a reasonable transition period, as opposed to automatically adopting and enforcing revisions to existing referenced standards, is also needed to allow manufacturers of affected equipment sufficient time to retest their equipment and develop and implement any design changes that might be required for compliance.

**7. How can FCC work processes best be improved? Increasing use is made of external multi-stakeholder groups to develop complex technical requirements, systems, and procedures necessary to implement Commission service rules. How can the Commission leverage these efforts to accelerate the introduction of new technologies and services?**

IBM has no comment on these questions at this time.