

June 5, 2008

The Honorable Kevin J. Martin
Chairman
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Dear Mr. Chairman:

Decision making by the Federal Communications Commission (FCC) is critical to many sectors of the U.S. economy and specifically to the industries in which many of the 215,000 members of the Institute of Electrical and Electronics Engineers-United States of America (IEEE-USA) work. The intent of this letter is to offer suggestions to the Federal Communications Commission to enhance the technical expertise in FCC's decision-making activities.

IEEE-USA recognizes that some of the FCC's regulatory jurisdiction (*e.g.* broadcast content and ownership) is non-technical; however, much of the Commission's regulatory responsibilities require a thorough understanding of all the pertinent technical issues. Currently, the FCC relies almost exclusively on its internal staff and public comments in its deliberation stages. Despite the generally excellent nature of its internal staff, given all of the technical issues within the FCC's jurisdiction, it may be prudent to seek means to supplement the internal technical capabilities of the Commission.

Accordingly, IEEE-USA recommends that the FCC act in the following areas to augment the FCC's in-house technical expertise:

- Reinvigorate the dormant Technological Advisory Council (TAC);
- Seek advice from The National Academies on key long-term policy issues;
- Budget for and contract for supplemental support on novel technical policy issues where staff and capabilities are not available;
- Institute regular dialog with industry and academia to identify out-of-date rules.

The rationale for the above recommendations follows.

Technological Advisory Council (TAC). The FCC created the Technological Advisory Council in 1999 after considering recommendations from both IEEE-USA and the Federal Communications Bar Association. When the TAC was formed, FCC announced that the TAC "will help provide the technical expertise the Commission needs to stay abreast of innovations and new developments in the communications industry." IEEE-USA notes that the **TAC has not met since July 20, 2006, and no meetings are scheduled.** The need for the TAC is just as vital today as it was at the time it was created.

While the FCC has been reluctant to ask the TAC questions about ongoing policy deliberations, IEEE-USA believes that this should be considered in a **non-decisional** context, as in asking for policy options and identifying technical information, including possible experiments that might be needed to resolve a policy issue. Finally, the FCC might ask the TAC to identify existing regulations that have become anachronistic due to technical progress.

The National Academies. In the past FCC, like other federal regulatory agencies with technical jurisdiction, sought advice on long-term policy issues from the National Academies including the National Academy of Sciences and the National Academy of Engineering. However, the last time the FCC asked for studies from the National Academies was in the 1970s when such studies laid the groundwork for two major changes in technical policy: the Part 68 interconnection rules and the sharing of the C band between terrestrial and satellite systems. Both of these issues were tremendously controversial at the time but the basic frameworks suggested by these studies formed the basis for major changes in FCC policy. Such studies are time consuming and expensive and should not be used for routine policy deliberations, but it is clear that in the 30 years since FCC last used such studies there have been multiple cases where they could have been of value. It is not clear why FCC practice differs from other regulatory agencies in the use of the Academies.

Supplementing internal expertise. The FCC has an internal technical staff that handles a wide variety of technical policy issues, both traditional and innovative. For example, FCC staff have done an outstanding job developing the technical foundation for the new DTV allotment plan. However, a modest technical staff does not have the capabilities for every technical question that can arise with new policy deliberations and the Commission's Laboratory does not have the facilities to deal with every conceivable communications technology of policy interest. Other regulatory agencies supplement their internal staff with contract funds to policy-related technical studies and experiments. The FCC has not contracted outside studies except in a few cases where it was ordered to do so by legislation. Several of the various federally funded research and development centers (FFRDCs) have outstanding technical capabilities in the technologies regulated by the FCC and have few, if any conflicts, since their dominant clients are other federal agencies. **FFRDCs, and possibly private firms without conflicts, should be considered for studies in support of policy deliberations where adequate in-house resources are not available.**

Dialog with industry and academia. In recent years, most of FCC's new technical policy deliberations have been in response to requests from corporations. While the FCC should be responsive to such entities, much technical and product innovation comes from small companies and startup firms that are enabled by innovative deregulation. For example, the widespread benefits of the now ubiquitous Wi-Fi technology would not have been possible had the FCC focused entirely on requests it received before taking regulatory action in the 1980s. Then, the FCC made a conscious examination of rules having anachronistic provisions that implicitly discouraged innovation. Selectively deregulating enabled Wi-Fi (and Bluetooth) to emerge. In the rapidly evolving field of telecommunications technology, such anachronisms are inevitable, despite best efforts to make regulations as technologically independent as possible. Not infrequently, technology moves at "internet speed," and

regulations evolve at a much slower pace. **IEEE-USA urges the FCC to institute a regular dialog with industry and academia to identify out-of-date rules.**

IEEE-USA stands ready to work with the Commission and other industry groups to develop more specific plans to implement these suggestions.

IEEE-USA advances the public good and promotes the careers and public policy interests of more than 215,000 engineers, scientists and allied professionals who are U.S. members of the IEEE. IEEE-USA is part of the IEEE, the world's largest technical professional society with 370,000 members in 160 countries. See <http://www.ieeeusa.org>. For more information, please contact Deborah Rudolph at (202) 530-8333, or at d.rudolph@ieee.org

Sincerely,

A handwritten signature in black ink that reads "Russell J. Lefevre". The signature is written in a cursive style with a large, prominent 'R' at the beginning.

Russell J. Lefevre, Ph.D.
President, IEEE-USA

RJL/dr

Cc: FCC Commissioners
Senate Committee on Commerce, Science & Transportation
House Committee on Energy and Commerce