



POSITION STATEMENT

Voice Over Internet Protocol

***Adopted by the IEEE-USA
Board of Directors, 12 February 2010***

IEEE-USA supports the growth of Voice over Internet Protocol (VoIP) services in the evolution of the Internet and the beginning of broadly accessible IP-based services. IEEE-USA recommends that the Chair and the Commissioners of the Federal Communications Commission (FCC) use all mechanisms at their disposal to gain a better understanding of the capabilities and limitations of VoIP technologies. To ensure the full spectrum of VoIP capabilities are achieved, IEEE-USA encourages the FCC to use the *Pulver* Decision¹ in defining the nature of VOIP services in how it regulates such services.

Some Voice over Internet Protocol (VoIP) services are marketed as Public Switched Telephone Network (PSTN) equivalent services. In the past, the Federal Communications Commission (FCC) has regulated these services. The *Pulver* Decision addressed the degree to which such regulations should apply.

VoIP is ancillary to many innovative Internet-based applications. Examples include chat in multiplayer online games, instant messaging with voice and video, and voice-enabled, Web-based customer service.

Given the significant differences that exist in VoIP applications, -- namely those that purely seek to replicate the PSTN experience, but simply replace the switched infrastructure with IP (versus those that happen to carry voice) -- IEEE-USA recommends that the FCC should:

- Clearly define the nature of VoIP services that require regulation in the public interest.
- Announce a policy of regulatory forbearance for those VoIP services that promise innovation.
- Have its Technology Advisory Committee (TAC) address means to foster innovation in the use of VoIP technologies in the evolution of the Internet.

This statement was developed by the IEEE-USA Committee on Communications Policy and represents the considered judgment of a group of U.S. IEEE members with expertise in the subject field. IEEE-USA advances the public good and promotes the careers and public policy interests of more than 210,000 engineers, scientists and allied professionals who are U.S. members of IEEE. The positions taken by IEEE-USA do not necessarily reflect the views of IEEE or its other organizational units.

BACKGROUND

Voice over Internet Protocol (VoIP) has moved from experimental research applications and hobbyist applications to become a part of commercial and overlay voice services. Virtually, all wired communications carriers provide consumer and business VoIP. Most mobile operators today use VoIP for their back-haul (base station-to-backbone) network connections. One of the stated goals for the migration to fourth-generation (4G) wireless technology, such as LTE (e.g., Verizon) and WiMax (e.g., ClearWire/Sprint) is to transport Voice over IP, instead of using dedicated, circuit switched circuits. These and other uses of VoIP technology seek to replicate, or replace, the legacy switched-circuit network. However, many Internet-based services happen to carry voice and video. Examples include chat in multiplayer online games; instant messaging with voice and video; voice-enabled, Web-based customer service, and so on.

IEEE-USA supports migration to and growth of VoIP services as a key step in the evolution of the Internet, and the beginning of broadly accessible IP-based services. Throughout the world, VoIP services are becoming a major application for, driver to and service of the Internet. IEEE-USA believes that VoIP presents substantial new opportunities for user-driven innovation in both hardware and software. Examples of such innovations include video telephony, high-fidelity audio conferencing and communications, enhanced emergency services, and enhanced communication management features. Moreover, the market has shown that such innovation has resulted in efficiency-driven reductions in the cost of ordinary voice communications.

The FCC has issued regulations on some aspects of VoIP services that are marketed as public switched telephone network-(PSTN) equivalent services. Just as these VoIP services mimic the PSTN, the regulations broadly follow PSTN regulations, such as for lawful intercept and emergency (911) services. This statement will not take a position on VoIP services that are marketed as, or are substantially equivalent to, voice services marketed over the PSTN.

IEEE-USA urges the FCC to avoid regulating innovation on the Internet by considering any voice-enabled Internet application as a "voice service," in the regulatory sense. Unquestionably, some individuals may use voice-enabled Internet applications as a substitution for legacy voice services. Historically, such substitution of legacy technology by innovative technologies may carry disruption to legacy business models. Nevertheless, the combination of new, innovative applications -- and the reduction in price for legacy services -- is of benefit to the economy at large. In particular, the Commission needs to be mindful of attempts by carriers to restrict applications based on the potential for those applications to impact services offered by the carrier and to

forestall such restrictions. For example, the Universal Service Fund or other regulations should not cover these VoIP services.

IEEE-USA recommends that the Chair and the Commissioners of the Federal Communications Commission use all mechanisms at their disposal to gain a better understanding of the capabilities and limitations of VoIP technologies. Developing a fuller understanding of VoIP technology requires more than a request that interested parties submit written comments and reply comments, supplemented by ex-parte meetings with advocates for particular positions.

At a minimum:

- The FCC should use the *Pulver* decision, which establishes that person-to-person communication over the Internet *not* emulating the PSTN is an information service and not a telecommunication service.
- The FCC should make clear that voice-enabled Internet applications are not to be regulated as PSTN voice services replacements. The Commission should have the TAC address how to foster innovation in using VoIP technologies in developing the Internet.

IEEE-USA members stand ready to assist the Members of Congress, congressional staff, the Federal Communications Commission and other policy-makers in understanding both the enormous potential and the impact of VoIP.

Notes:

1. *Pulver* Decision: On February 12, 2004, the FCC decided to classify Pulver's VoIP service as an unregulated information service. This decision is known as the "*Pulver* Decision." In this decision the FCC determined that Pulver's VoIP service, which is a directory that informs its members when other members are using the Internet so that they can talk to each other. The Pulver VoIP service gives user's information (IP addresses) of how to reach other members and offers a voice mail service. The Pulver VoIP service does not itself offer broadband service but rather the members themselves must bring their own broadband service with them when they sign up to the Pulver VoIP Service. The FCC concluded that Pulver's service offers various computing capabilities that enable the acquisition, use and storage of information. After performing these various functions, the Pulver VoIP service did not actually participate in the exchange of the information taking place and as such, was determined to be an unregulated information service.