

FCC TASK FORCE PRESENTS RECOMMENDATIONS FOR SPECTRUM POLICY REFORM

On November 15, 2002, the Federal Communications Commission's Spectrum Policy Task Force released its report to the FCC containing its findings and recommendations for spectrum policy reform based on its research and extensive public input.

The highlights of the report are presented here. If you wish to view the entire report, you may do so at www.fcc.gov/sptf/report.html. On November 25, 2002, the FCC issued a Public Notice seeking public comment on the Spectrum Policy Task Force report with comments due by January 9, 2003 and reply comments due by February 10, 2003.

On December 3, 2002, the IEEE 802.18 Radio Regulatory Technical Advisory Group filed a motion for an 18-day extension of time in which to file comments. On December 11, 2002, the FCC granted an extension for comments to January 27, 2003 and reply comments due by February 28, 2003. (Ed.)

On November 7, 2002, The Federal Communications Commission's Spectrum Policy Task Force presented recommendations to modernize the rules that guide how the nation's spectrum is managed and utilized and to evolve from a traditional government "command and control" model to a more flexible, consumer-oriented approach. On November 15, 2002, the Task Force delivered its recommendations in a report presented to the full Commission. The Task Force's Report will provide a starting point for a long term review of spectrum policy approaches that could be implemented by the Commission.

The Task Force, created by FCC Chairman Michael Powell in June 2002, has conducted a comprehensive review of spectrum policy at the FCC. Based upon its research and extensive public input, the Task Force concluded: "[T]he time is ripe for spectrum policy reform. Increasing demand for spectrum-based services and devices are straining longstanding, and outmoded, spectrum policies. While the Commission has recently made some major strides in how spectrum is allocated and assigned in some bands . . . spectrum policy is not keeping pace with the relentless spectrum demands of the market."

Task Force key findings:

- **Access.** Based on preliminary research and review conducted by the FCC Staff and the Task Force, some spectrum bands are heavily used, but many are not in use in all geographic areas or are used only part of the time. Thus, there may be opportunities for spectrum-based services or devices to operate in the resulting "white spaces" – including both those that result from variability in the operations of existing spectrum users over time and those that result from the geographic separation of existing spectrum users.

- **Technology.** While technological advances are contributing to the increased diversity of spectrum-based consumer applications and greater consumer demand for spectrum-based services, technological advances such as the increased use of digital technologies and the development of software-defined radios are providing some potential answers to current spectrum policy challenges. These technological advances enable spectrum rights to be parceled as a function of time, in addition to the currently-used parameters of frequency and geographic area. Also, they allow systems to be much more tolerant of interference than in the past.

- **Rights and Responsibilities.** Spectrum rights and responsibilities are not always clearly defined – users need more certainty. In addition, the rights and responsibilities that are defined need to better reflect more market-based models and policies.

Task Force key recommendations:

1. **Migrate toward more flexible, consumer-oriented policies.** The Task Force recommends that the Commission evolve its spectrum policy toward more flexible and market-oriented spectrum poli-

cies that will provide incentives for users to migrate to more technologically innovative and economically efficient uses of spectrum. Specific recommendations include:

- Provide incentives for efficient spectrum use by both licensed and unlicensed users through flexible rules and facilitating secondary markets. This would enable spectrum users to make fundamental choices about how they use spectrum, taking into account market factors such as consumer demand, availability of technology and competition.

- Clearly and exhaustively define spectrum users' rights and responsibilities.

- Investigate rule changes that promote more flexible power limits in rural or less congested areas.

2. **Adopt quantitative standards to provide interference protection: interference temperature.** The Task Force recommends the creation of a quantitative standard for acceptable interference that provides both greater certainty for licensees and greater access to unused spectrum for unlicensed operators.

Specifically, the Task Force recommends that, on a going forward basis, the Commission adopt a new metric – the "interference temperature" – to quantify and manage interference. The Commission could use the interference temperature metric to establish maximum permissible levels of interference on a band-by-band basis, thus placing a limit on the noise environment in which receivers would be required to operate. To the extent, however, that the interference temperature in a particular band is not reached, users who emit energy below that temperature could operate more flexibly – with the interference temperature serving as the maximum cap on the potential RF energy they could introduce into the band.

3. **Improve access through the time dimension.** The Task Force found that new technological developments now permit the Commission to increasingly consider the use of *time*, in addition to frequency, power and space, as an added dimension permitting more dynamic allocation and assignment of spectrum usage rights. This would provide access to unused or underused spectrum through time-sharing of spectrum between multiple users and lead to more efficient use of the spectrum resource.

4. **Shift from "command and control" model to exclusive and commons models.** The Task Force recommends that the Commission base its spectrum policy on a balance of three spectrum rights models: an exclusive use approach, a commons approach and, to a more limited degree, a command-and-control approach. While the command-and-control model currently dominates today's policy, the Task Force recommends altering the balance to provide greater use of both the exclusive use and commons models throughout the radio spectrum and limiting the use of the command-and-control model to those instances where there are compelling public policy reasons, such as some public safety applications. To the extent feasible, more spectrum should be identified for both licensed and unlicensed uses under flexible rules and existing spectrum that is subject to more restrictive command-and-control regulation should over time be transitioned to these models. **Ω**