

Spectrum Allocation Reform To “Wire” American Consumers By “Unwiring” Them

“Silent Cal Coolidge” policy silenced new communications products and services.

Parsing of the airwaves began in 1927 with the establishment of the precursor to the FCC, the Federal Radio Commission. This agency was given the authority to dole out spectrum to avoid interference and allow critical communications to get through, spurred by the recent sinking of the Titanic. Although with 1920’s technology this was a real concern, it is simply no longer with “smarter” use of “spread spectrum” and Qualcomm’s code division multiple access (CDMA) technology that is possible today. Smart devices are able to disassemble data, transmit over a wide array of bands, and be reassembled at the user end. This frequency sharing allows for vastly more efficient use of spectrum and mitigates concerns over interference.

Welcome to the underutilized and unfriendly skies.

Newcomers to the spectrum marketplace find rigid rules, inflexible government policies, and entrenched players slowing innovation, use, and development. For example, television broadcasters control 15% of the prime radio spectrum in the US to serve only 11 million households or 12%, while the remaining 88% of households are served by cable and satellite services that don’t use any spectrum at all. What’s more, cellular carriers serve over 137 million customers but must do so with half the space of broadcasters, resulting in irregular service and limited prospects for expansion. Spectrum doled out decades ago for obsolete or little-used technologies must be redeployed in line with new technologies, services, devices, and consumer needs for a new generation of data services.

Unlicensed airwaves: the interstate highways of the 21st century.

Referred to as a “cauldron of innovation,” unlicensed spectrum, free from onerous regulation and licensee rules, is spawning a new breed of innovative services and devices. Unlicensed spectrum should therefore be made more widely available, to the near term benefit of 802.11b (or “Wi-Fi”) services. This incubator-like model provides a robust environment of competition and invention.

Broadband: the great wireless hope.

The unresolved, economics, politics, and regulatory uncertainty surrounding landline deployment of broadband using satellite, DSL, and cable modem technologies means that these technologies are unlikely to satisfy consumer demand anytime soon. Economists at the Brookings Institution have estimated that widespread, high-speed broadband access would increase our national GDP by \$500 billion annually by 2006. This kind of catalytic economic growth might be best served by wireless high-speed data technologies, avoiding the logistical and regulatory hurdles currently constraining terrestrial broadband.

Policy recommendations for wireless spectrum reform.

In order to more effectively use this great natural resource, ACT makes the following policy recommendations:

- **Work to free the spectrum.** No other natural resource or public asset is so tightly controlled and locked down. Incumbents, who often don’t most efficiently make use of spectrum, control far too much and effectively lock out innovators and upstarts. Let’s force incumbent spectrum owners to “*use it or lose it.*”
- **Reform the process.** Both camps in the debate—exclusive rights and commons advocates—insist on reform and describe the current system as an unmitigated disaster. Make the opportunistic use of spectrum possible to allow better access to the resource while maintaining the proper balance of licensed and unlicensed use.
- **Smarter devices can make smarter use of spectrum.** Understand and encourage the further development of devices and technologies that can make more and better use of available spectrum.