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A Better Way to Manage Spectrum

by

Bruce M. Owen*

The mobile telephone industry met last week in Las Vegas for a big CTIA conference. As usual, this booming industry is hungry for more of the radio spectrum. So, there was much talk on the public policy panels about gathering more and better data in order to address misallocated and underutilized spectrum blocks.

The demand for more spectrum is driven by innovations in mobile broadband applications, one of the few growing sectors in a demand-starved economy. What a contrast there is between the sudden blossoming of a competitive industry producing cell phone "apps" for 3G devices and the sluggish response of the "monopoly" agencies that determine not only who can use the spectrum, but what services they can provide.

Any inquiry into the problem of spectrum scarcity turns quickly to the work of FCC and Commerce Department "spectrum managers." Historically, and continuing to this day, spectrum management means using engineering principles to decide which frequencies are best-suited for each use, and what combination of inputs (power levels, antenna heights, modulation schemes) produce the "best" levels of reliability and quality. The result is the orderly-looking federal spectrum charts and maps listing permitted uses by frequency

The Free State Foundation
P.O. Box 60680, Potomac, MD 20859
info@freestatefoundation.org
www.freestatefoundation.org

band. Then the agencies pick and choose among private applicants for licenses, a process nowadays done mainly by auction.

This traditional "management" process is inefficient and unnecessary. The engineers, quite naturally, have no clue how much the spectrum is worth in various uses, which is the primary criterion one needs to know for efficient allocation. Allocation of the spectrum could be done much more quickly and effectively by using market mechanisms. We have taken some baby steps in this direction, without encountering any bad outcomes. In general, subject to antitrust review, licensees in a given band are permitted to sell their licenses, so long as the buyer uses the spectrum for the same purpose. Licensees in newly-allocated bands no longer get windfalls - the government now holds auctions. So far so good. But these really are baby steps, and they are not enough.

Licensees should be able to sell their spectrum rights to others without any restrictions on what the spectrum can be used for, except for stated interference standards. This would be a more expeditious and far more efficient way to permit spectrum to be used for its highest-value purposes. Broadcasters or other spectrum users, private or public, could sell suitable spectrum to others for mobile use, or provide mobile services themselves.

It is a misconception that unrestricted resale of spectrum rights would produce windfalls for current licensees, such as broadcasters. Current licensees, with rare exceptions, bought their spectrum rights from another licensee at some point in the past. They paid market value, including scarcity value, for those rights. Only the original licensees received windfalls from FCC; those were cashed in the first time the license changed hands.

Similarly, it is wrong to think that interference standards present a barrier to efficient markets in spectrum. The government already knows how to establish initial interference standards (the parameters are frequency, flux density, and geographic areas.) The government need not agonize over these specifications, because the interference standards can be changed by mutual agreement (contract or property transfer) of affected rights holders. Other relevant technical standards, chiefly for new services, could be set by private standards organizations, just as they are for virtually every other industry.

The traditional method for allocating the radio spectrum has always been based on false assumptions about the presumed difficulty of market allocation. The immediate result has been pernicious misallocation of the spectrum resource. An indirect result is even worse - spectrum "management" is the crack in the dike through which economic and ideological interests can use the political process to influence regulatory outcomes.

No one familiar with the spectrum management process thinks that it is the engineers who generally have the last word in government spectrum decisions. It is often the politicians, or the politically-attuned agency officials, besieged by various special interests. This is not a good way to run a railroad, a mobile

communication industry, or anything else that could rather easily be governed by an efficient market.

* Bruce M. Owen is a member of the Free State Foundation's Board of Academic Advisors. He is the Gordon Cain Senior Fellow at the Stanford (University) Institute for Economic Policy Research and the Morris M. Doyle Professor in Public Policy and Director of the Public Policy Program at Stanford.