

## **Comments on the NTIA's Comprehensive Policy Review of Use and Management of the Radio Frequency Spectrum**

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Both on grounds of justice and on grounds of efficiency, a market-based system of allocating rights to use the radio frequency spectrum, with public collection of the value of rights granted, is best. The right to use the frequency spectrum is a scarce resource, whose value is derived primarily from the mere existence of the spectrum and not from the efforts of those who might be granted use. Thus the whole population has equal respectable claims to use. But efficient use of the resource requires exclusive assignment of frequencies within particular geographical areas. Therefore justice is served by requiring those who receive the privilege of use to compensate the rest of the population for that privilege.

The most practical way to assess the value of spectrum use is to create an options market in spectrum use rights. If every user were required to pay the amount that some other would be willing to pay for the use of a similar resource, that would achieve simultaneously the public appropriation of the value of the frequency spectrum, the efficiency of continuity in assignments, and private retention of the component of the value of frequency allocations that arises from the labor and capital that have been invested in particular applications.

The required options market could be created in the following way. Once a year or so the NTIA would solicit bids for spectrum use from anyone who wished to participate. These "spectrum assessors" would be required to make offers on a wide range of frequencies, perhaps as many as would typically be allocated to several dozen users. To avoid appropriating the value resulting from the labor and capital of users, assessors would be required to provide assessments that did not take sudden jumps at particular frequencies, and that varied geographically according to reasonable factors such as population density and income. Each assessor would post a bond, guaranteeing that if a frequency allocation became available, someone could be found who would be willing to pay the assessed rent. If no one wished to pay the assessed rent, the frequency would be assigned to the person who bid the highest rent, and the assessor's bond would be docked for the shortfall. For his services, an assessor would be given something like 1% of the rent collected from those allocations for which he was the assessor who stated the highest value. This mechanism would have the virtue of what is called in economic theory a "second-price auction."

To achieve the greatest economy in use of the spectrum, it would be best that all spectrum users--military, scientific, non-profit, etc., be charged for their use. With the revenue that would then be collected it would be possible to provide money with which all such users whose activities are socially valued could pay their rental charges. The routing of the funds through the Treasury and back to the users would serve to alert all decision-makers to the value of the resources in alternative

activities, which could be expected to lead to more economical use of these scarce and valuable resources.

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