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**Preview - Wireless Spectrum: Invisible Real Estate**

In the near future, just in time for the ongoing 700 MHz auctions, Near Earth LLC will be releasing its new whitepaper: "Wireless Spectrum: Invisible Real Estate", which provides an overview of the rationale and mechanics for licensing. As a preview, here is the executive summary page from that forthcoming release:

**Executive Summary**

All radio transmissions use spectrum, but have the potential pitfall of interfering with each other. As a consequence, a regulatory regime has emerged to control the use of spectrum to ensure that the public good is achieved. In some cases, this involves rules (e.g. power limitations, usage limits, etc.) that prevent interference. But in many cases, portions of the spectrum, in defined geographic areas have been set aside for the exclusive use of parties through a licensing process.

Although it is intangible, spectrum, or more correctly the licenses to use it, has very tangible value – sometimes in the billions of dollars. The reason is that when spectrum is combined with network hardware, service providers can provide a wealth of broadcasting and telecommunications services, with competition limited by the finite amount of licenses that are available.

Given this substantial valuation, in many cases regulatory bodies around the world have moved towards spectrum auctions, where exclusive use of public assets (i.e. spectrum) are sold to private companies. Regardless of how spectrum licenses are obtained, a lively secondary market has emerged for trading in this valuable asset, and valuations vary over time, location and service.

Some of the more notable (and thus valuable) uses of spectrum include cellular telephony, satellite TV, broadband wireless service and of course broadcasting. We include a more detailed summary of these and other services later in this paper.

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Finally, we consider the growing pressure from some parties to not license spectrum at all, and some of the technical approaches in development.

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