

# Relieving Spectrum Scarcity Through Real-Time Secondary Markets

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Unnecessary scarcity of available spectrum is impeding growth of wireless services and wireless technology. A major contributor to this scarcity is over-reliance on spectrum licenses that provide exclusive access to blocks of spectrum. Exclusivity guarantees adequate quality of service, but it leads to inefficient use of spectrum. This talk will discuss two nonexclusive models, and their relative advantages. Unlicensed spectrum, also known as spectrum commons, can be used to improve spectral efficiency and provide spectrum for some applications, but it is not appropriate for all applications. For applications that need better quality of service, we consider the possible use of real-time secondary markets, where devices explicitly coordinate with license-holders before transmitting, and negotiate quality of service and possibly fees.