

# Federal - Commercial Spectrum Sharing Workshop: Models, Application, and Impacts of Incentives for Sharing

Stevens Institute of Technology – March 19, 2015

## Synopsis:

The Wireless Spectrum R&D Senior Steering Group (WSRD SSG) has been conducting a series of workshops on understanding the fundamental issues involved in Federal and Commercial Spectrum Sharing. The seventh workshop in this series will focus on incentives. This workshop titled, “*Federal-Commercial Spectrum Sharing: Models, Applications, and Impacts of Incentives for Sharing*”, will be held on March 19, 2015, from 8:00 AM to 5:00PM, at the [Stevens Institute of Technology](#), Hoboken, NJ. Information gathered from this workshop will be used by the WSRD SSG to develop recommendations for the White House Office of Science and Technology Policy (OSTP). The workshop will also provide a forum for information exchange and to identify relevant research and development.

The genesis of this workshop series stems from the presidential memorandum issued on June 14, 2013, entitled *Expanding America’s Leadership in Wireless Innovation*<sup>1</sup>, to make more wireless spectrum available for commercial use by encouraging shared access by commercial and federal users. One of the directives was to explore and recommend market-based or other approaches that would incentivize Federal and commercial users to cooperate in sharing spectrum. The President's Council of Advisors on Science and Technology (PCAST, 2012)<sup>2</sup>, the Institute of Defense Analysis (IDA, 2013)<sup>3</sup>, and other groups have proposed a variety of budgetary and administrative incentives for Federal agencies. Proposals have included introduction of a spectrum currency and setting aside some portion of spectrum auction revenues to establish a spectrum efficiency or relocation fund. Internationally, the United Kingdom has explored charging spectrum usage fees to government agencies<sup>4</sup>.

Rich and multidisciplinary research questions arise when considering incentives for bi-directional spectrum sharing. Sharing between government and commercial entities will require innovations in technology as well as in business, administrative, and market institutions and practices. Federal, public safety, and commercial users confront different constraints and strategic options, and can be expected to respond differently to opportunities and incentives. We need a better understanding of these factors, including a study of lessons learned, in order to identify incentives that will work.

## Workshop Goals:

- Examine different motives and opportunities for spectrum sharing among different stakeholders
- Examine federal and commercial sector impacts and models for sharing incentives
- Understand research needs in advancing market based or other incentives for spectrum sharing
- Suggest a roadmap with meaningful R&D outcomes in achieving the above goals

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<sup>1</sup> Presidential Memorandum for the Heads of Executive Departments and Agencies, *Expanding America’s Leadership in Wireless Innovation* (rel. June 14, 2013), published at 78 Fed. Reg. 37431 (June 20, 2013), available at, <http://www.whitehouse.gov/the-press-office/2013/06/14/presidential-memorandum-expanding-americas-leadership-wireless-innovatio>.

<sup>2</sup> PCAST Report, *Realizing the Full Potential of Government-held Spectrum to Spur Economic Growth*, available at, [http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast\\_spectrum\\_report\\_final\\_july\\_20\\_2012.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast_spectrum_report_final_july_20_2012.pdf)

<sup>3</sup> IDA Paper P-5102, *A Review of Approaches to Sharing or Relinquishing Agency-Assigned Spectrum*, available at, <https://www.ida.org/upload/stpi/pdfs/p5102final.pdf>

<sup>4</sup> *Perspectives on the value of shared spectrum access, Final Report to the European Commission*, Simon Forge, et al, Feb. 2014, [http://ec.europa.eu/digital-agenda/sites/digital-agenda/files/scf\\_study\\_shared\\_spectrum\\_access\\_20120210.pdf](http://ec.europa.eu/digital-agenda/sites/digital-agenda/files/scf_study_shared_spectrum_access_20120210.pdf)