

## Wireless Innovation Forum Announces Broad Support of the PCAST Recommendations on Spectrum Sharing



### For Immediate Release

Washington, DC, 20 July 2012 – [The Wireless Innovation Forum](http://www.WirelessInnovation.org) (<http://www.WirelessInnovation.org>), a non-profit international industry association dedicated to driving the future of radio communications and systems worldwide, announced today broad support for the report released on 20 July 2012 by the United States President’s Council of Advisors on Science and Technology (PCAST) entitled “Realizing the Potential of Government-Held Spectrum to Spur Economic Growth.”

“The Forum applauds the embrace of innovative wireless technologies like spectrum sharing and small cells presented in the PCAST report to solve the pressing demand for increased wireless bandwidth,” said Lee Pucker, CEO of the Wireless Innovation Forum. “In doing so the Forum wishes to reiterate the need for a more flexible regulatory framework allowing temporary, cooperative and opportunistic access to spectrum as stated in the Forum’s [Top 10 Most Wanted Wireless Innovations](http://groups.winnforum.org/d/do/5000) (<http://groups.winnforum.org/d/do/5000>). Such a framework is necessary to facilitate the business decisions that will enable the realization of the PCAST vision.”

The report found that “clearing and reallocating Federal Spectrum is not a sustainable basis for spectrum policy due to high cost, length of time to implement and disruption to Federal mission” and continued on to recommend new technologies and paradigms that address the emerging spectrum crisis. Many of these recommendations have been supported by the work of the Forum, its members and its partners over the past several years including work by the Forum’s Cognitive Radio Work Group on quantifying the benefits of cognitive radio technologies including spectrum sharing (<http://groups.winnforum.org/d/do/3839>), the use cases developed by the Forum’s Public Safety Special Interest Group for cognitive radio that explore spectrum sharing (<http://groups.winnforum.org/d/do/2325> and <http://groups.winnforum.org/d/do/1565>) and the report done by the Public Safety Special Interest Group identifying advanced radio technologies as key to realizing innovative partnerships that would allow public safety to benefit from more efficient spectrum utilization (<http://groups.winnforum.org/d/do/1579>). These latter reports acknowledge spectrum sharing as an important component of future public safety communications capabilities, given the unique incident-based spectrum and capacity requirements of the public safety community.

Other innovations supporting the PCAST vision appearing in the *Forum’s Top 10 Most Wanted Wireless Innovations* include:

- low cost wide spectral range RF front-ends,
- techniques to minimize power amplifier spectral regrowth in non-contiguous spectral environment, and
- maintaining communications in emergencies and after disasters.

In evaluating the Federal Spectrum Access System (FSAS) proposed in the report, the members of the Forum agree with the recommendation to manage spectrum access via networked databases, as this would allow regulations and services to adapt over time and vary by band while protecting incumbent users. In doing so, the Forum believes that spectrum sensing technologies may also play a role in augmenting these database systems to better enable cooperative, opportunistic access and as such the Forum recommends that advances in these technologies not be discounted in future planning.

The Forum further recommends that existing and emerging standards should be leveraged to the greatest extent possible in developing the FSAS interfaces. This includes database work that has been done within the Forum, along with the work of other standards bodies including the IEEE DySPAN Standards Committee, IEEE 802.19.1 and IETF PAWS. The Forum believes that alternative implementation of database concepts and architectures should be explored through test beds and trials that stress performance under different scenarios as a way to validate and prove viability.

Finally, the Forum cautions PCAST to be careful in taking into account security considerations including defense communications in the FSAS, and offers the products and services of the Forum's Security Work Group in evaluating the associated requirements.

The Forum membership applauds the concept of regulating receiver performance as they believe much benefit can be achieved in terms of spectrum efficiency through such regulation while at the same time reducing risk for new market and new technology entrants. The Forum believes that long term the entire range of both transmitter and receiver characteristics must become an integral part of spectrum regulation and management. The Forum recognizes the need to mitigate and phase the cost of evolution to more accurate receiver devices for suppliers by aligning incentives so that incumbents continue to improve receiver interference rejection capabilities. In the interim, however, the Forum believes that initial gains can be achieved simply by registering accurate receiver characteristics with the FSAS database.

The members of the Forum will continue to work to advance the technologies necessary to achieve the PCAST vision and stand ready to assist PCAST and the Spectrum Sharing Partnership Steering Committee in better understanding the current state of the technologies, the issues that are most critical to their wider deployment, and the ways in which the government can help spur their development.

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#### **About the Wireless Innovation Forum**

Established in 1996, The Wireless Innovation Forum (SDR Forum Version 2.0) is a non-profit mutual benefit corporation dedicated to driving technology innovation in commercial, civil, and defense communications worldwide. Members bring a broad base of experience in Software Defined Radio (SDR), Cognitive Radio (CR) and Dynamic Spectrum Access (DSA) technologies in diverse markets and at all levels of the [wireless value chain](#) to address emerging wireless communications requirements. To learn more about The Wireless Innovation Forum, its meetings and [membership benefits](#), visit [www.WirelessInnovation.org](http://www.WirelessInnovation.org).

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