

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)
)
Model City for Demonstrating and) ET Docket No. 14-99
Evaluating Advanced Sharing Technologies)
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Comments of the Dynamic Spectrum Alliance

August 25, 2014

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COMMENTS OF THE DYNAMIC SPECTRUM ALLIANCE

The Dynamic Spectrum Alliance¹ applauds the efforts of the Federal Communications Commission (“FCC” or “Commission”) and the National Telecommunications and Information Administration (“NTIA”) to “support rapid experimentation and development of policies, underlying technologies, and system capabilities for advanced, dynamic spectrum sharing.” New advanced spectrum sharing technologies are a key element to addressing growing demand for finite yet renewable spectrum resources. To that end, the Dynamic Spectrum Alliance supports the FCC’s and NTIA’s joint proposal to create a Model City (or Cities) wherein government, industry, and the academic community can research, build, design, operate, measure, and evaluate the performance of new advanced spectrum-sharing technologies. The Dynamic Spectrum Alliance welcomes this discussion and endorses the worthy goals of increased spectrum efficiency and sharing that led to the Model City proposal. Below, we address three

¹ The Dynamic Spectrum Alliance is a global, cross-industry alliance focused on increasing dynamic access to unused radio frequencies. The membership spans multinational companies, small-and-medium-sized enterprises, academic, research, and other organizations from around the world, all working to create innovative solutions that will increase the utilization of available spectrum to the benefit of consumers and businesses alike. A full list of members is available at www.dynamicspectrumalliance.org/members.html.

issues warranting further attention: commercial viability, coordination with incumbents, and prioritization.

I. The Model City Initiative Needs to Create Incentives for Experimenters to Participate.

While many members of Dynamic Spectrum Alliance are educational or research institutions, others are for-profit companies. The reality is that all three types of organizations require appropriate incentives in order to develop new technologies. Even in the case of for-profit enterprises, important research into some cutting edge technologies may not be justifiable based on the foreseeable economic return. Past experience has shown that seed funding from the federal government can create incentives for early stage investment in such situations. Targeted funding thus should be among the incentives offered within the Model City program. This is especially true given the FCC's and NTIA's ambitious goal to "facilitate large-scale sustainable facilities for systems level testing in real-world environments across multiple frequency bands, potentially including selected federal and non-federal frequency bands."

II. The Model City Effort Should Prioritize Spectrum Bands Where Advanced Sharing Technologies Are Feasible and Commercially Viable.

The FCC and NTIA should focus Model City resources on areas with commercial potential, but which are not being studied or are not easily studied by the private sector or research institutions. In particular, the Dynamic Spectrum Alliance believes that the FCC and NTIA should focus on one or two bands where use of advanced spectrum sharing technologies can be feasibly deployed and significant commercial opportunities can be created for new entrants. For example, in the 1755-1850 MHz band, Model City studies could focus on whether there is a need for exclusion zones to protect federal incumbent operations. The FCC and NTIA could facilitate field tests using experimental radios that are operated in the presence of incumbent operations. While this example is merely illustrative, the Dynamic Spectrum Alliance

believes the program will be most successful if it targets several discrete possibilities for sharing and tackles concrete problems that are difficult for the private sector to address without federal cooperation and coordination.

III. NTIA and FCC Should Use This program to Improve Experimenter Coordination with Incumbents.

The Commission has recently adopted a number of measures that make it easier for innovators to experiment with new wireless technologies.² Building upon these efforts, the Model City initiative provides a significant opportunity for the Commission and NTIA to improve and streamline coordination with incumbent users. Because the Model City initiative proposes to focus on a discrete number of geographic locations, the Commission and NTIA can readily identify relevant incumbents in those locations. As a result, the agencies should be able to more quickly authorize proposals to test advanced spectrum sharing technologies and techniques while avoiding harmful interference to incumbent users. If the Commission and NTIA devise a well-functioning process for facilitating these interactions, whether through the Center for Advanced Communications – as suggested in the Public Notice – or through some other means, the agencies should consider expanding it to facilitate the grant of experimental authorizations throughout the country.

IV. The FCC and NTIA Should Move Forward With Rulemakings in the 3.5 GHz and 5 GHz Bands Without Delay.

While the Dynamic Spectrum Alliance supports the Model City concept, its implementation should not stall ongoing proceedings in the 3.5 GHz and 5 GHz bands.³ As the

² *Promoting Expanded Opportunities for Radio Experimentation and Market Trials under Part 5 of the Commission's Rules and Streamlining Other Related Rules*, Report and Order, 28 FCC Rcd 758 (2013).

³ *See* Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band, *Notice of Proposed Rulemaking*, GN Docket No. 12-354, 27 FCC Rcd 15594, 15595, (2012) (“the 3.5 GHz

record in both of those proceedings demonstrates, many spectrum sharing techniques could be deployed today, improving overall spectrum utilization while protecting incumbent operations. Learnings from experimentation conducted through the Model City initiative eventually could be applied to many different bands, but the FCC should adopt spectrum sharing rules for the 3550-3700 MHz and 5350-5470 MHz bands without delay.

V. Conclusion

The Dynamic Spectrum Alliance supports the concept of a Model City. While many spectrum sharing technologies are ready for deployment, further experimentation will improve spectrum utilization and spur economic growth. The Dynamic Spectrum Alliance looks forward to working with the Commission and NTIA on these and other spectrum sharing initiatives.

Respectfully submitted,

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proceeding”); *see also*, Revision of Part 15 of the Commission’s Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band, *Notice of Proposed Rule Making*, ET Docket No. 13-49 , 28 FCC Rcd. 1749, (2013) (“*the 5 GHz proceeding*”).