

From: Robert H. Jackson

To: Behnam Ghaffari

Date: May 08, 2017

Subject: Request for Info - File # 0226-EX-CN-2017

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Message:

OET has asked Carnegie Mellon University (CMU) the following question: "Please justify the need to use 200+20 devices. Can this be done with 50 devices? Please bear in mind these licenses are for the experimental purposes and 220 devices is an excessive number for experimentation."

One of the major purposes of CMU's White Spaces experiments at both its Main Pittsburgh and Silicon Valley campuses is to test scalability of infrequently transmitting radios. Can satisfactory performance obtained on a small scale, i.e., one or two fixed units and several mobile units, be replicated when the number of fixed and mobile units increase? Are there limits to scalability? Can a user with a pressing need for a larger system quickly expand from a smaller system quickly and successfully? CMU believes that its proposed 20 fixed and 200 mobile units will allow for such controlled experimentation. Moreover, the fixed stations will be operated at low power—2.43 Watts.

Also, there is recent precedent for an experimental White Spaces license that has a total of 300 stations. Please see File Number: 0492-EX-PL-2016 Call Sign: WI2XMI, Adaptrum Inc. The Adaptrum radios are authorized to operate at higher power than the CMU request, 7.94 Watts (ERP).

Accordingly, CMU believes its request is justified as filed. Should you have further questions, please contact me. Thank you for your time and consideration.

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