iRobot and Observatory in dispute over radio frequency for use with robot lawnmower

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Robot vacuum maker iRobot, and the National Radio Astronomy Observatory (NRAO) are, according to *IEEE Spectrum*, engaged in a dispute over a radio frequency band. iRobot is apparently working on a way to build a robot similar to its Roomba vacuum, for outdoor use—to cut lawns. While many may consider that an admirable goal considering how much a lot of people hate mowing their lawn, and the obvious

technical hurdles, one part of its current design has run afoul of the NRAO.

Rather than build in enough brains for a robot lawn mower to recognize the constraints of a given lawn, iRobot has apparently decided that the best approach to keeping an automated lawn mower in its own yard is to have homeowners install little beacons around its edges (having them dig a trench and lay an electric wire was deemed too intrusive.) To that end iRobot filed for an exception with the FCC, asking for permission to sell such a product. Exceptions must be requested to allow the FCC to review bandwidth ideas to prevent the development of networks that could disturb existing systems, such as phones and GPS. But then, representatives of NRAO caught wind of the request and filed a waiver of their own, hoping to curtail iRobot's plans. NRAO has a lot of observatories some of which are dedicated to spectral line observations of methane in space, which just happen to be sniffing in the same frequency range (6650-6675.2 MHz) as that requested by iRobot. If a lawn bot's beacons began emitting near such an observatory, the NRAO pointed out, the observatory would not be able to operate—and that of course is why they are asking the FCC to deny iRobot's exception.

Thus far the two sides have laid out their arguments as to why they should win this little war—iRobot has noted that most observatories are in remote areas, and has said that it would advise buyers to not operate their lawn bot near an observatory, while reps for NRAO have argued that not all observatories are in remote areas, and that simply requesting buyers not run their bots near an observatory would not stop them from doing so.

At this time, it is not clear which side the FCC will favor, though the battle is likely to attract a lot of attention in many technology sectors as it could set a trend regarding outdoor frequency band use.