

Doug S. Arnold
W0DIE
5000 Woodland Ave. #230
New Orleans, LA 70131

Re: RM-11681

Esteemed FCC representative,

I'm writing to you today regarding the proposed spectrum sharing arrangement of the 1675-1680 MHz band by LightSquared.

Simply put, this is a terrible idea.

As a resident of New Orleans—a part of the country which has received more than its fair share of severe weather—I am one of many millions of citizens who rely on the timely public broadcast of weather information by National Oceanic and Atmospheric Administration entities like the National Weather Service and National Hurricane Center. For these organizations to do their jobs, they must have secure and interference-free communications with assets like radiosondes, dangling from weather balloons released twice daily from sites all across the country, and earth observation satellites hanging 22,000 miles over the equator. Neither of these assets are merely nice-to-have toys. They are critical and indispensable components of accurate weather forecasting and, with the upcoming launch of the GOES-R series of satellites, represent billions of dollars of investment in the future. A temporary loss of communications with either of these assets would not be simply an annoyance; it could be a disaster.

Consider numerical weather models, used by many customers worldwide with meteorologists being one of the primary users. These models, generated several times a day by supercomputers, can increasingly accurately predict the weather hours, days, and weeks into the future. In order for these models to function, they require accurate data of current weather conditions. These data come, in large part, from radiosonde-equipped weather balloons and geostationary satellites. Should the radiosonde's or satellite's communication with the ground station be interrupted by terrestrial radio interference, data could be missed, which may result in the current state of the atmosphere being misrepresented in weather models.

Perhaps you've heard one of the permutations of the phrase, “a butterfly flaps its wings in the Amazon, and there's a tornado in Texas”? Coined by noted mathematician and meteorologist Edward Lorenz, it refers to weather models, and means that small changes in starting conditions lead to vastly different outcomes at a later date. Without having robust data on the atmosphere, delivered by radiosondes and satellites, a weather model may fail to accurately predict a severe weather event.

For now, both of these assets have exclusive use of the 1675-1680 MHz band for communication with ground stations. Opening up the band to sharing by commercial terrestrial wireless companies presents an unacceptable risk to the lives and property of American citizens, as well as those of other nations in the Western Hemisphere. Therefore, I urge the FCC to deny the proposal.

Thank you.

-Doug S. Arnold, W0DIE