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By David Brooks
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A shortage of something that to a certain extent doesn't even exist – the broadcast spectrum – is contributing to a clash between efforts to improve Internet coverage in New Hampshire's rural areas and the need to keep the Global Positioning System operating accurately.

"In a vacuum this makes sense; it's a good idea," said U.S. Rep. Charlie Bass during a Wednesday press conference about the issue held at Concord Airport, partly because private pilots like Bass depend on GPS to fly safely. "Any possibility of harm to GPS is too great to go forward until we're certain there won't be a problem."

At issue is a plan by a new company called LightSquared, which wants to create a national wholesale wireless Internet and 4G phone network by bouncing signals between satellites and among 40,000 towers on the ground, using a portion of the spectrum known as the L Band. The firm says this service, a type called LTE, would allow it to spread broadband Internet service to places where it hasn't been economical to build wires, such as parts of the Monadnock region and the state's North Country.

The problem is that the LightSquared signals are in a portion of the airwaves adjacent to the frequencies used by satellites to send signals to GPS devices.

A growing number of industry and law enforcement officials expressed concern that because LightSquared wants to use much more power than the band was originally conceived for, its signals will bleed into, or even overwhelm GPS signals.

This produces a quandary for people like Carol Miller, director of broadband technologies at the New Hampshire Department of Resources and Economic Development, and former owner of North Country Internet Access, a private Internet provider in Berlin.

Miller has spent much of her adult life trying to get companies to bring Internet access North of the Notches, but now finds herself objecting to plans from a company that has proposed a new way to do just that.

"The drawbacks are just too great," she said.

The Virginia-based LightSquared says it can make sure interference won't be a problem in most cases. In recent months, however, opposition has arisen from a wide range of sources who are asking the FCC to halt the process and look at it more closely. Even the government's main web site for GPS, www.gps.gov, discusses the issue on its home page.

The extent of the concern was reflected by the variety of people who attended Bass' press conference. They included the president of the Airline Owners and Pilots Association plus the manager of a North Country airport; members of the New Hampshire Land Surveys Association;

and Maj. Kevin Jordan from New Hampshire Fish and Game Department, who spoke as a representative of public safety agencies such as police, fire departments and ambulance services.

"Any interference with GPS signals would be a big problem," Jordan said, noting that GPS is used for such things as responding quickly to 911 calls or finding lost hikers. "This is a basic tool we have come to depend upon."

For their part, surveyors are worried because they used specialized GPS units that can cost $20,000 or more because they are accurate to within a few inches, rather than the accuracy of a few yards that exists in commercial GPS units.

The surveyor industry, as well as other industries that use what is known as sub-meter GPS units , is concerned an agreement might be reached that allows LightSquared to preserve 99.5 percent of the GPS signal. That might be good enough for safety services, pilots and auto navigation systems, but it is not good enough for their systems.

"We want to make sure we're not thrown under the bus," said Mark Sargent, manager of Richard Barlett and Associates of Concord.

Bass is one of a number of federal lawmakers trying to get the FCC to halt the waiver that was given to LightSquared in January, allowing it to – in Bass' words – take spectrum designed for use in orbit and also use it on the ground. He thinks FCC should hold more hearings.

"The problem is, we don't know what it would do," Bass said. "The FCC should not be passing judgement on this plan. ... It would be irresponsible to go forward without more testing and study."

A private consortium is doing field and laboratory tests to see how much interference the LightSquared plan might bring. Its members include TomTom, a maker of GPS systems and software that has a major office in Lebanon,.

LightSquared has been working on this system since before 2006. In that year, it built its wireless network, while in 2009 it announced it would use LTE technology to build a nationwide broadband network. That year, it also received permission to hike the power levels of its base station by 10 times, compared to the permission of the firm that first owned the spectrum.