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## Can you hear me now?

By MARTIN COHN

My family moved to Brattleboro five years ago from Massachusetts.

This year we found a wonderful home in Newfane. Living here has been a real blessing. We have grown to truly appreciate all that Vermont offers -- from its locally grown food to its incredible arts and music.

However, there is one thing that continually causes frustration -- poor cellphone coverage.

For many us, cell phones are an integral part of our daily life. Mobility, convenience and safety are just three of the tremendous personal benefits that we derive from cell phones.

According to CTIA, the International Association for the Wireless Telecommunications, there are more than 270 million wireless subscribers in America. Eighty-seven percent of the total U.S. population uses a cell phone.

Cell phone service is not simply a convenience for Vermont companies, nor just a luxury for consumers. In today's world, most people can't imagine getting through the day without it. A rapidly growing population has disconnected its landlines altogether. The cell phone-based emergency 911 service is saving lives by automatically directing emergency workers to the scene of an accident, heart attack or crime.

In fact, the CTIA reports that more than 291,000 calls are made to 911 from cell phones every day in the United States.

Sadly, while driving from Newfane to Brattleboro on Route 30, calls are dropped, sound quality is poor, and sometimes there is simply no connection.

What are the reasons for poor cell phone coverage? One reason is that the original network was not designed to provide ubiquitous coverage.

Historically, when the cell phone network was first deployed, the priority was to cover business districts and travel corridors. Tall, industrial-size towers were built along highways and antennas were installed on the roofs of office buildings in downtown areas.

As more consumers bought cell phones, cell phone carriers began building cell sites along major arteries and tried to cover residential communities. But the signal could not reach everywhere and carriers needed to build inside the neighborhoods to fill in the gaps.

Another reason is that the growth in the number of users and the volume of usage is overloading the network. Originally, the cell phone network was designed to only handle voice communications through an analog system.

At the end of 20th century, carriers began converting their networks to digital signals to increase capacity. However, with the increase in new data services, the network is struggling

again. With consumers now using cell phones for e-mail, Web search, mapping, photo exchange and video viewing the system is becoming overloaded.

Poor reception can be caused by inadequate coverage by the cell phone network or inadequate capacity of the network. The density of the antennas that are used to receive and transmit cell phone calls and the topography of the area affects coverage.

So, it comes down to towers. You have to site the transmitters and receivers. But cell phone companies have a hard time siting the towers.

Carriers are applying for permits to expand coverage, but the process can be slow and cumbersome. They get stalled in the approval process because we have a process in which it is easy for anyone at any point for some reason to object.

Cell phone towers often provoke opposition from neighboring property owners. Perhaps the most common objection is that the tower will impair the aesthetics of the area, particularly when the proposed site is in a scenic or historic area. A related concern is that the tower will reduce property values in the area.

These concerns may have been true years ago, but now the carriers design sites that are much smaller in size and disguised to fit in with the surroundings. Cell sites can be hidden in chimneys and church steeples, mounted on park lighting, or even disguised as trees.

Another common worry is that the radiofrequency emissions will harm the health of nearby residents, with a particular concern for children. Countless scientific studies have been conducted worldwide and these concerns have long been laid to rest.

The Federal Communications Commission has ruled that local governments may not deny a permit on the basis of health concerns so long as the equipment meets federal standards.

In June 2007, the Vermont Legislature passed Act 79 that established the Vermont Telecommunications Authority (VTA). Included in the VTA's mission is the ubiquitous availability of mobile telecommunication services including voice and high-speed data throughout the state by the end of the year 2010.

When service is bad, cell phone users tend to blame the carriers. However, they should also be contacting their local elected officials and the VTA to voice their needs and encourage solutions. Letters and phone calls can make a difference.

Bad cell phone service makes us less competitive. It's harder to do business here. We spend millions of dollars promoting tourism but our guests can't use their cell phones in our state. And, there are also security concerns. People want to be able to call for help.

I love Vermont but I don't want to be without my cell phone anymore.

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