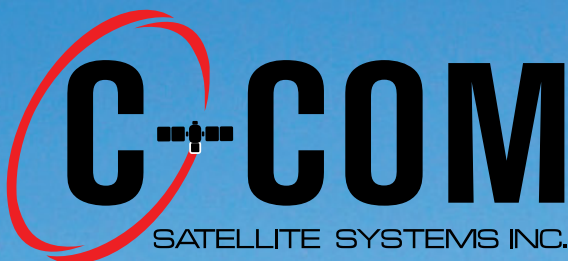


The Future of Mobile Communications



AS FEATURED IN BUSINESS IN FOCUS CANADA
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The story begins in the middle of the Mojave Desert where the sun relentlessly scorches the earth and everything on it. There is nothing around for miles save for a few sand dwelling scorpions and cacti. The lone adventurer flies over a dune in his well equipped SUV, his thick tires sending sand and dust up into the air, creating a trail behind him. His mission is clear; he is looking for a relic that may have been lost here, but to be sure that he is in the right place he needs a data connection.







▶ In the stories, our lone adventurer would push a button and from the top of his vehicle would appear, folding up as if from nowhere, a satellite dish that rotates and tilts, establishing a connection with a space dwelling satellite that sits in orbit just outside of our atmosphere. Suddenly the whole world becomes accessible from one of the most remote parts of the world.

Let's strip this technology down and take a look at the complexity of a system such as this. When a consumer purchases a satellite dish from the local satellite TV provider there is more to setting it up than screwing it on to the

side of their house. The dish must be facing a certain direction at a certain elevation for the signal to be strong. Any deviation from that position will cause the signal to be problematic. Satellite systems that are used for data connec-

“The difference between a system like this and a conventional 3G or 4G data network is coverage and speed.”


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tions typically take over two and a half hours to install and require the installer to have a great deal of expertise and the proper tools to do this.

The most common form of internet connectivity is available in our homes through a broadband network that is delivered through cables or telephone lines. There are also systems that enabled stationary setups to have satellite internet connectivity in a building, but there were very few plausible attempts made at creating a system that could connect from a vehicle at broadband speeds.

In fact, broadband connectivity was available through a satellite system far before it was available in our homes, but the problem was that the hardware was extremely expensive to acquire and the cost of the broadband service was also very expensive. Also, even though this system was highly advanced and expensive it wasn't really much faster than a common dialup connection.

As it happens, a C-COM manufactured iNetVu Mobile satellite antenna system actually does resemble something out of a sci-fi thriller, because it will in fact pop up as if from nowhere, point itself at the sky and find an available satellite to connect to. This enables the user to connect and have access to a data ▶



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► network within minutes from anywhere in the world. “It can be used by a teacher, a soldier, a firefighter, whoever, with a simple push of a button,” says Leslie Klein, President and CEO of G-COM Satellite Systems Inc.

Mr. Klein is a professional engineer with a degree from The University of Waterloo. He is a co-founder of G-COM and had personally financed the development of this technology at the early stages from its inception in 1997 and assisted in the design and development process of the iNetVu Mobile antenna systems. The company went public in 2000 on the Toronto Venture Exchange (TSXV:CMI) and raised sufficient funds to be able to complete the development of its iNetVu Mobile antenna systems. The idea behind the company was to develop an easy to use and easy to transport antenna system that would be capable of delivering high speed data

connectivity into any vehicle or structure via satellite from anywhere in the world.

The company designs and develops its own products and contracts out the manufacturing to other Canadian companies. G-COM has around 400 authorized dealers, located in over 112 countries around the world. These authorized dealers/integrators purchase the iNetVu mobile antenna systems, integrate them with other applications and then sell them to end user customers such as NASA, US Army, US Navy, Canadian DND, RCMP, NATO Forces, Russian Military, Chinese Military, Border Patrol, Police Forces all over the world, disaster management companies, telephone companies, mobile medical applications, health and welfare agencies, provincial and state governments worldwide as well as oil and gas companies around the world.



“We are number one in the world with this type of technology.”

Some of C-COM’s resellers/integrators include Telesat, Hughes Network Systems, Viasat, Yahsat, AT&T, Gilat, Harris Caprock, MCI, BT and many others. C-COM has roughly six thousand antennas around the world in over 112 countries.

The difference between a system like this and a conventional 3G or 4G data network is coverage and speed. There are satellites in orbit all around the planet but it would be impossible

to install and maintain cellular phone towers that span the entire globe. The maintenance of a cellular tower in the most northern parts of Canada or Siberia, for example, would be uneconomical and yet with an antenna from C-COM, cellular, Internet, voice and video communication is possible much the same way as it is in downtown Ottawa within minutes of arrival.

“It is as easy to deploy one of our antennas in Russia as it is to deploy one in China or Mongolia,” says Mr. Klein.

A typical 4G connection, when available, can deliver speeds of ▶▶

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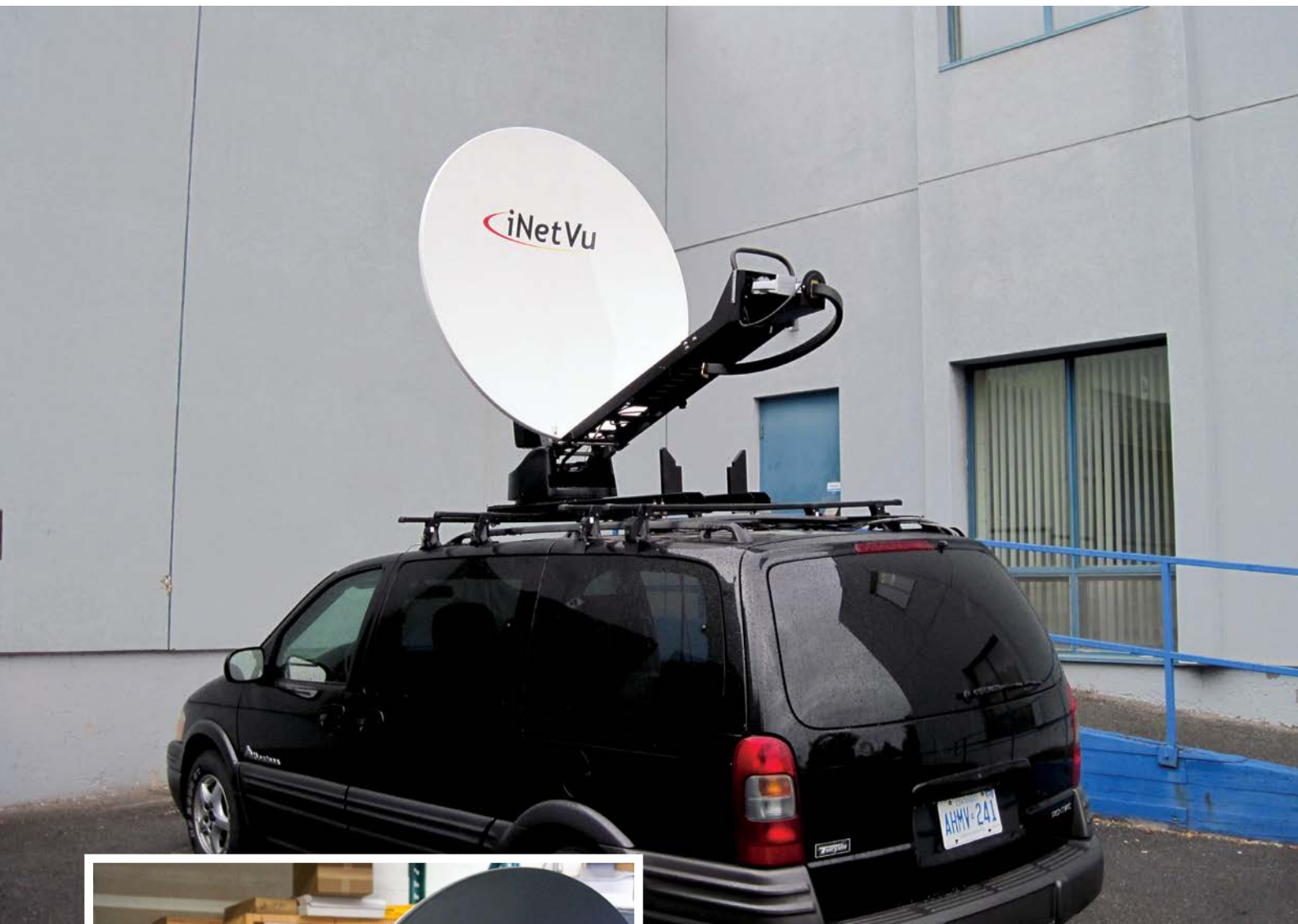
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▶ up to 100mbps but that is in a stationary location about two feet from an LTE tower if you have your lucky cricket handy. According to national surveys, cellular phone users are lucky to receive a 10mbps connection, and most don't believe that this is fast enough. With these mobile networks there are so many variables that it can't ever be determined what kind of connection can be received. A 3G network is often compared to a dialup modem, delivering less than 56kbps at the best of times.

“There will always be a need for satellite systems in remote areas.”

A C-COM system using the latest high throughput satellites (HTS) can deliver consistent 10mbps upload and 20mbps download speeds from areas served by these satellites around the world, enabling communication in remote areas – good for business, for safety, and for just plain staying in touch. This type of connection makes it possible to perform data and video intensive Internet applications that would not be possible with a standard internet connection. Even a few years ago, a connection from a vehicle (while stationary) to a satellite with this kind of speed was unheard of, but using the latest HTS satellites and the C-COM antennas it is possible to make this happen even in the most remote parts of the world.

According to Mr. Klein, “The existing C-COM antennas can only be used for broadband communication while the vehicle is stopped, but we are working on more advanced



satellite antennas that will make it possible to deliver the above mentioned speeds into vehicles in full motion while you are driving, anywhere in the world."


There will always be a need for satellite systems in remote areas and even within urban areas, for instance when a television news station needs to drive to a location to transmit a live video feed. No matter how evolved the mobile networks get, they may never provide a good reliable business solution. An oil rig, for example, needs a way to connect to the outside world without fail and a C-COM antenna system can make this possible today.

Not only does C-COM provide the most sophisticated mobile satellite antenna solutions in the world, the company also boasts a broad range of accessories such as stationary mounts and solar panels that will power the system when other energy sources are not available. It seems that there is no end to the innovation that this company is bringing to the world.

"We are number one in the world with this type of technology, recognized as having the most advanced, most reliable products," says Mr. Klein.

"When you think about it, an oil and gas company who may have 40 or 50 employees who are constantly on the move prospecting for oil or gas, they need a system that will deliver uninterrupted high quality broadband connectivity they rely on to get their job done; it's very important for them to maintain reliability. For every hour that they aren't connected they may lose thousands of dollars. And that's where we come in."





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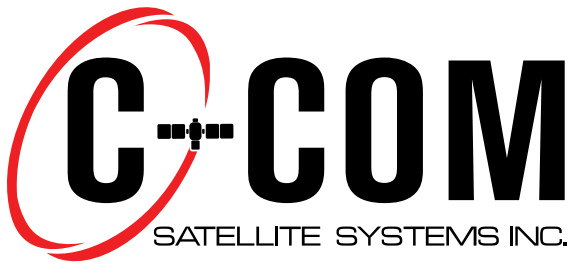
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For more info:

C-Com Satellite Systems Inc. | 2574 Sheffield Road
 Ottawa, ON K1B 3V7 | P: 613-745-4110 | F: 613-745-7144
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