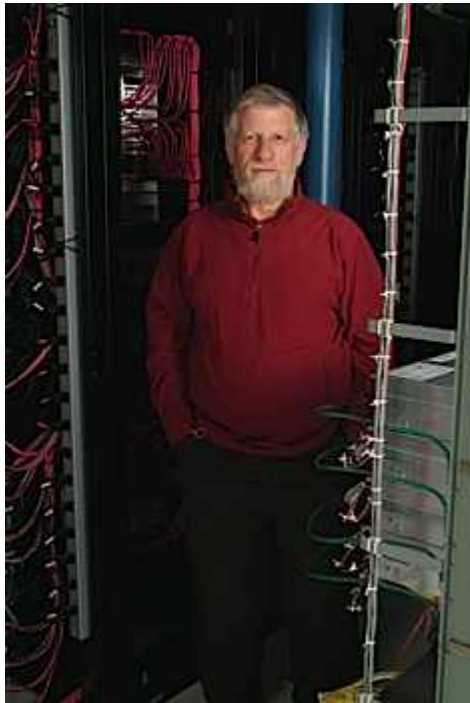




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## Casting A Wide NET

**Burlington got lucky when it went looking for help with its plan to create a municipal telecommunications service**

*by Bill Simmon*

**Tim Nulty, the director of Burlington Telecom, with offices at Church and King streets, found a way to build the most modern, state-of-the-art telecommunications network in the country, without spending a penny of the taxpayers' money.**

Burlington Telecom director Tim Nulty should have retired by now. In fact, the 65-year-old head of the city of Burlington's nascent start-up telecommunications department has tried to retire twice.

The first time he thought he was wrapping up his career, the U.S. Department of Energy drafted him into service to help manage the largest environmental cleanup project in the world. When he was finished with that job in 2001, he retired again, only to be called back into government service a couple of months later — this time, by the city of Burlington.

“They had a telecommunications project that was in the ditch, and somebody told them that a Vermonter had moved back to

the state who actually knew something about this stuff,” says Nulty. The city asked him to take a look at its faltering project. “The fundamental idea was not bad at all,” he says, “but the execution was a disaster.”

Burlington had lucked into tapping the shoulder of a world-class economist and telecommunications expert. Nulty presented the city with a plan to not only build the most modern, state-of-the-art telecommunications network in the country, but do so without spending a penny of the taxpayers’ money.

Burlington benefited from the fact that Nulty and his wife, Leslie, had retired to Vermont because of a long history with the state and strong family connections here. Both had spent illustrious careers that took them all over the world.

It’s not like Nulty didn’t have the stamina to continue working. He was a professional soccer player in England and the United States and played top amateur soccer until his early 50s, when arthritis in his hips stopped him.

He was a nationally ranked triathlete, still goes cross-country skiing, and, he says, “I’m a very keen sailor.” Keen is probably an understatement. He has three sailboats — one here, one in Ireland and one in England. He and Leslie have friends on every continent and visit them often. “I like to hike a lot,” he adds.

Both Nultys earned graduate degrees in economics from Cambridge University in the early 1970s, and after spending time as academics in Great Britain, they returned to the States to take high-level positions with the United Auto Workers in Detroit until a difference of opinion with the union’s president precipitated a change.

In January 1976, Nulty went to Washington, D.C., to be chief economist of the U.S. Senate Commerce Committee. The sea change that ultimately led to the breakup of the Bell Telephone monopoly was just beginning in those days, and the Senate needed a point man.

“Nobody knew anything about it,” says Nulty. “I didn’t know anything about it, either, but I seemed like a smart guy, so the head of the committee said, ‘You! This is your bailiwick. Figure it out.’” For the next 10 years, Nulty was the most senior staff person in Congress dealing with telecommunications.

Halfway through his time on The Hill, the Democrats lost control of the Senate, and Nulty switched to the House and became deputy staff director and chief economist for the Energy and Commerce Committee there.

In a sense, it was a promotion. “Forty percent of all legislation that goes through Congress goes through the House

Commerce Committee,” says Nulty. He was responsible for the policy and substance of all legislation that fell within the committee’s extensive jurisdiction, but it was telecommunications that captured his interest. “I made it sort of my personal hobby horse,” he quips.

Following President Reagan’s reelection in 1984, Nulty left Capitol Hill and spent 10 years working on telecommunications issues for the World Bank as a senior project manager and telecom “guru,” much of the time in central and eastern Europe, working with countries just starting to feel the effects of a weakening Iron Curtain.

Then he decided to try something a little more adventurous. “I raised 57 million bucks and started a venture capital operating company doing telecommunications start-ups in central and eastern Europe,” he says.

Over almost four years, he built up the company’s portfolio until it was independently valued at \$100 million. Ultimately, Nulty and his investors didn’t see eye-to-eye. “They wanted to borrow a lot of money and puff the thing up and then IPO it,” he says, “and instead of \$100 million, which it really was worth, they wanted to flout it for \$2 billion.” This was in the midst of the dot-com craze of the late ’90s, and Nulty could see the writing on the wall. “I don’t blow up balloons, I build real things,” he says.

Nulty and his CFO “checked out. We took our money, or at least as much as we could get out of it,” he says. Eighteen months later, the company collapsed. “The bond holders lost everything; the stockholders lost everything,” says Nulty. “The only people who made any money on it were me and my number two.”

Nulty intended to take his money and retire to Vermont. That’s when the Department of Energy called. A year into his stint there, he was put to work developing an off-budget financing mechanism that would allow the Energy Department to spend \$50 billion over the course of 30 years cleaning up the Hanford, Wash., nuclear waste site.



**January 2007: Nulty’s team has signed up just over 1,000 homes. Burlington Telecom is adding customers at an average of 35 to 40 a week. Valerie DeBrita (left), Sabrina LaCharite and Tonia Zeno are customer service representatives. Nicole Hameline manages the department.**

Nulty left the Hanford site in early 2001, fearing that the culture of environmental cleanup would be adversely affected by the incoming Bush administration. He was

finally able to settle in Vermont (he'd been commuting between Vermont and Washington state up until then). That was when the city of Burlington approached him with the idea of operating a municipally owned telecommunications plant.

At first, Nulty was brought in merely as a consultant to give the city some fresh ideas and opinions. "They were going to build the world's most grandiose thing," he says. "They were going to spend 40 million bucks and do it all at once, and be everything to all people. There were a lot of profound flaws."

Nulty pitched them what he thought was the right approach to take. "You know — the small Vermont farmer kind of way," he says. "You build a barn, you put in 50 cows; it works OK, and you add an extension, and that works OK; gradually, you get to where you want to go."

Where Nulty wanted to go was a rare place, indeed, and having been sold on his ideas and expertise, in January 2002, the city decided to move forward on the plan with Nulty at the helm. Burlington Telecom was born.

Private financiers are funding the building of the network, which they own, says Nulty, "and which we then lease back from them. The lease payment is identical financially to what a mortgage would be. This is a lien on this network, it's not a lien on the city.

"If we should default, this is a capital lease subject to appropriations, which means the financier has no legal right to demand payment from the city in the case of a default."

Larry Lackey, director of telecommunications at the Vermont Department of Public Service when BT was getting started, was impressed by Nulty's triple-threat combination of economics, public policy and technological expertise.

"Tim had a shrewd sense for what tasks were necessary to build the system, get the city to buy in on the plan and meet all of the regulatory requirements," says Lackey. "I wonder if the citizens of Burlington really appreciate what a world-class talent Tim is."

Nulty also recognizes talent when he sees it. "On the engineering and technical side of this operation," says Richard Donnelly, Burlington Telecom's marketing and sales manager, "Tim has assembled a core group of uniquely skilled individuals."

The core group includes Donnelly; Chris Burns, project manager; Jeremy Patrie, technical operations manager; and Nicole

Hameline, customer service manager.

Nulty and his team have so far run wires to about 30 percent of the city, and they expect to complete construction in late 2007. A year or so after that, the plan is for BT to be cash-flow positive. Ultimately, the quasi-commercial city department will pay money into the city coffers. That will make it unique among city departments. “If things go according to plan,” says Nulty, “five to six years from now, we will be giving the city more money than it currently gets from this new local option sales tax.”

Although its services encompass telephone, cable and Internet, BT is no ordinary telecommunications network. There are three ways in which its network is fundamentally different from those operated by its chief competitors, Comcast and Verizon, says Nulty.

First, BT is a “fiber-to-the-home” network, making its bandwidth capacity far greater than copper wire and coaxial cable networks. “Think about the difference between a rowboat with an outboard motor on the back of it and a 25,000-ton container ship,” says Nulty. He insists he’s not exaggerating. “We have the ability to transmit 100,000 cable TV channels,” he says, describing the capacity of a fiber optic network as “effectively infinite.”

Along with that extra channel capacity comes a lot of speed. BT offers Internet upload and download speeds that far outpace its competitors — up to five megabits at the top end. “What we’ve provisioned at this minute is a fraction of what the network is actually capable of doing,” says Nulty. “Nobody has bothered to calculate the absolute maximum capacity of a fiber-to-the-home network. It’s literally infinite.”

The second significant difference is that the BT network is “open access,” meaning anyone who wishes to lease bandwidth from the city is welcome to — even the competition.

Nulty describes fiber-to-the-home networks as a “natural monopoly,” and strongly advocates government ownership and/or regulation of them. He likens his fiber-optic superhighway to a more commonly understood network. “Nobody thinks twice about the roads being in the hands of the public,” says Nulty. “The thought that a private company could own the roads and charge whatever they pleased to anybody who goes on them is ludicrous anywhere in the world. That’s what this is: the public roads.”

The final thing that sets BT apart, he says, is its cost-effectiveness. Nulty believes that the municipally owned network they have built in Burlington can be replicated anywhere in the state. He says this runs counter to conventional wisdom, which

holds that fiber-to-the-home networks are not economically viable in rural areas.

“The people who think that are mostly people who’ve never done it,” he says. “They don’t know what they’re talking about, with all due respect. We know exactly what it costs, and we could economically do this anywhere in Vermont.”



**Burlington Telecom is a fiber-to-the-home network, with bandwidth capacity far greater than copper wire and coaxial cable networks. Jeremy Patrie (left) is technical operations manager. Christopher Burns is project manager.**

Other Vermont towns are already knocking on Nulty’s door. “Everybody else in Vermont can look on our Web site and say, ‘Hey, I’d sure like to be able to get that,’” says Nulty. “We get called up by towns all over saying, ‘Can’t you do that for us?’”

Nulty is trying to find ways that Burlington can partner with other towns in Vermont, or even with the state itself, and extend its cutting-edge network to the rural parts of the state.

Lackey thinks the idea of extending BT’s plan to other parts of Vermont is feasible and points out that there are still many areas in the state without any broadband service at all. “Having a statewide fiber network would be an economic development dream,” he says, adding that the entire state would be ripe for any technology-based business to settle in. “There’s no longer any need to build a specific industrial park in the corner of your town if the state is wired and ready to go,” says Lackey.

If and when that happens, there certainly doesn’t seem to be anyone better qualified for the job than Nulty. Retirement might have to wait a while longer.