

Kutztown et al.

This is in three parts

- Kutztown
- Recent assertions
- Business plan model – key next step

SUMMARY, ACROSS THE THREE PARTS

FTTH on a business-like basis is viable; management is what counts. We need a detailed business model which accounts for the headsup strategy. Business-like, here, only works together with a spirit of public service.

I. – Kutztown, PA¹ Hometown Utilicom – FTTH²

LESSONS FOR CONCORD, MA

Assertions, in our discussion, that ‘the FTTH industry is not ready’ are simply not correct on their face. If even one town can successfully implement FTTH on a business-like basis, another town can also. Yes, the industry is new and undergoing change; but that is not the salient issue. The issue is a management that can successfully implement FTTH on a business-like basis – as Kutztown has done.

To repeat: The existence of even one case of successful implementation means that another town can also. And Kutztown has blazed a solid trail for us, for two-going-on-three years ahead of where we are; there are others. My understanding of the visits to Taunton and Provo suggests that those two, instead of aiming for a business-like startup, took an experimental approach, or perhaps it was ‘let’s see what we can do without intending to finish on any fixed schedule.’ Clearly now it is possible to succeed on a business-like basis, with the proper strategic mandate and quality management.

Kutztown had to overbuild against an incumbent HFC provider, Service Electric, which already offered cable modem access to the Internet. That of course is the situation Concord faces. In response to the FTTH, the incumbent lowered its main price for cable TV by about 30 percent. The result was an incumbent price for cable TV \$3 *cheaper*

¹ <http://www.kutztownboro.org/> Our inquires were graciously welcomed by Frank Caruso, Director of Information Technology.

² <http://www.hometownutilicom.org/>

than the price which Kutztown had set and maintains.³ Despite this, Kutztown's subscriber uptake exceeded by 60 percent its end-of-2002 target of 250.

Kutztown, in Pennsylvania Dutch country, began construction in November, 2001, and completed in nine months. Service began August, 2002.⁴ In the first five months Hometown Utilicom, the Kutztown entity offering its FTTH, has signed up about 400 customers, on a 2,200 (electric) meter base⁵ – 18 percent.⁶ The Kutztown manager expects 700 by the end of the first operational year, mid-2003 – 32 percent.⁷ That will be a third of the town within roughly a year-and-three-quarters of the construction start, accomplished while flying in the teeth of an aggressive HFC incumbent.

In this industry environment it is entirely possible to succeed with FTTH in a business-like fashion.

Is this the only such case so far?⁸ – *only* if we do not remove US-centric blinders.⁹ There are a number of successful FTTH installations around the world, including one in a country not ordinarily considered the technological or economic equal of the US, that is China (and that particular FTTH has to succeed while competing against DSL).

However only one case is necessary to confirm viability of FTTH on a business-like basis. The state of the supplier industry, though obviously developing as it should be, is not the issue. But strategic mandate and quality management, to respond to that industry, surely *are* the essence.

Strategic mandate and direction come from the town, via this committee and the rest of town leadership. Management as the essential ingredient has been highlighted by

³ It is differentials, not absolute values, which are relevant for Concord's purposes. We need to consider differentials from price levels that we will find in our specific market environment. Service Electric dropped its price from \$36 to \$25. Kutztown does offer more channels – 101 in total – than does its competitor – 57 channels, if I remember. However, Kutztown chose not to offer a key Philadelphia sports channel because of the expense to do so. That has prevented Kutztown from signing several hundred more subscribers.

⁴ They viewed themselves as 45 days behind their target date. When a newly elected mayor opposed the effort, it took the borough council the extra time to override. So they count their anniversary as in June I believe. *Be sure to take a look at the visual timeline with graphics and photos, on their web site* – click here: <http://www.kutztownboro.org/TelecomWeb2001.htm> .

⁵ Meters are proportionately slightly more numerous than in Concord, the result of apartment houses where some meters may serve an entire building but others may attach to individual units.

⁶ Click HU Customer Statistics at the hometownutilicom URL.

⁷ Because I misremembered a number when I hurriedly wrote the email Christmas Eve, the percentage there was misstated.

⁸ Bristol, VA, <http://www.bvu-optinet.com> , has taken a different approach. First it provided a fiber backbone and connected government and school facilities. A month ago, in November, they turned on consumer Internet access via FTTH; they will turn on cable TV and telephone when they get through some of their incumbent's obstructionist tactics, the sort of thing with which we have become familiar in other locales. Their cable TV offering will include 215+ channels, so it will be interesting to learn how they are sourcing that large number of channels.

⁹ The Optical Solutions material that Dan has distributed indicates “approximately 30” installations around the country, though the others may not be muni's per se.

Dave Clark recently, myself previously, and reinforced by Tim Andrews and others. The quality of our CMLP management has been, at least for me, the triggering reason to consider seriously a Concord-provided network. We need to give Dan Sack the opportunity to build a management team for this new industry, then opportunity for that team to practice, expand and hone their skill set.

Along with this main lesson, Kutztown's FTTH offers three related lessons for Concord, as far as I can see. Following that, there are also several other useful pointers.

1. Re technology

Kutztown's schedule is two to three years ahead of Concord's.¹⁰ They chose Optical Solutions technology¹¹ (which is a PON / Passive Optical Network design). We have the opportunity to choose a later design within the FTTH family, an active rather than passive design; and we have already figured out that we should do so.

Quote reflecting Kutztown's experience against the incumbent re Internet access: "No way cable modems can compete with FTTH."

Also from the Kutztown experience: FTTH makes for significant savings in operations and maintenance.

2. Re size and density

Because Concord is larger, its FTTH buildout will take longer (or require more construction crews). Our larger size could possibly combine with our substantially lower density to make for more-than-proportionately higher overheads during startup. The financial implication is that the loss-making prior to the shift to positive cash flow could be more-than-proportionately higher. This in turn implies capital investment from CMLP (such as the financial note already planned) for the purpose. An option already being considered – to buildout a backbone initially with perhaps a little bit from bonding – could fit well with this latter requirement.¹²

At 5,600 population, Kutztown is about a third the size of Concord. With 1.6 square miles, it is also much more dense – about five times more dense.¹³ There are 15 miles of cable in the air (I believe some are underground).¹⁴

¹⁰ Along with electricity deregulation, the impending move of a major electric customer in Kutztown, a foundry, led in the first place to discussions about alternative activities for the utility, in 1996. RFP's began to be let in 2000.

¹¹ They for instance do not use set top boxes, apparently relying instead on VCR's for the cases in which the TV tuner does not go to high enough channels.

¹² Kutztown's FTTH cost about \$4.6 million. Of that \$2.4 million was provided by the electric utility, from reserve funds; the balance \$2.2 million was bonded. The borough's electric utility, founded in 1902 and one of 35 still operating in Pennsylvania, is a major reason "Kutztown's property tax rate hasn't increased since the 1930s" (source: "Wired in Kutztown," Christian Berg, The Morning Call).

¹³ To normalize for the population difference, a proportionate third of Concord's 26 square miles would be 8+ square miles – five times that of Kutztown's.

(These differences in size and density do *not* affect the ability to prevail against the incumbent, with all the positive financial impacts of a subscriber uptake curve rising to solvency.¹⁵)

3. Re sales success

The manager in Kutztown, Frank Caruso, stays in touch with his subscribers. He feels that a key element of their success is a view that “it is our town, let’s keep the money in town.”

So far, my own sense for Concord: that motivation is harder to find in our prospective subscribership. Can we imagine leading Concordians to that sort of local loyalty?

Other pointers:

- Kutztown built its own headend for under a million dollars. At the time they could find no takers to outsource headend ownership. Now two separate parties have come forward with proposals to buy the headend and operate it on a commercial basis.
- Programming is acquired from the cooperative. Also negotiated some channels individually.
- Service, and so revenues, include telephone. Provided together with a CLEC that is 13 miles away.
- Though surrounding towns have not yet joined with Kutztown in its FTTH, there have been and likely will be discussions. Interestingly, there are complaints from subscribers in those towns about the lower price Service Electric charges in Kutztown. Those individuals are likely first adopters, if the FTTH becomes available in neighboring towns.

There is a final point, regarding pricing and overall strategy. That segues into the final, third section below and so is dealt there.¹⁶

¹⁴ Of course our relatively thin, rather than dense, routes are one of the prime factors that impel us to self-provide.

¹⁵ If anything, the larger town, in this case Concord, benefits economically from the very large economies of scale in communications networks.

¹⁶ When we step back from the Kutztown experience, there is also a pivotal lesson about process. The task is to gather information as a basis for action. To do that accurately requires identifying the right cases, in advance. Certainly, to draw premature conclusions based on an incomplete set of cases can seriously mislead the town. Getting the relevant set of cases right is fundamental.

Frank Caruso, +610 683 6131, invited the committee to visit Kutztown's FTTH system anytime.¹⁷

II. – Recent assertions

With complete respect for the importance of expressing one's views:

- Assertion: "HFC will meet Concord's bandwidth needs for the next fifteen years."

Dave Clark cited an engineering study, then interpreted it, to illustrate how a shift to streaming video topples the current structure of bandwidth availability on which HFC (for example) depends. Cris Casey then related how his wife turned 'if it happens' into 'it's happening *now*.' This information has been in hand and available to the group for more than a month or two now I believe.

Our experience with the local DSL system OurConcord.net only confirms that further.

Stopping with this point of course ignores all the additional discussion about communications capabilities enabled in town by FTTH, and only available that way. Only one of the many items discussed was better communications to educate Concord's children.

- Assertion: "FTTH provides no competitive advantage over Comcast's HFC."

See the above re streaming.

Recall quote from experience: "No way cable modems can compete with FTTH."

- Assertion: "Demand for broadband in the US is not so strong. Where it has succeeded abroad, *prices are lower*."

The way the US has been leapfrogged re broadband uptake, when it might seem the natural heir, has riveted any number of us interested in these subjects.

Besides price as one explanation for success abroad, I for one see the importance of a culture where widely available big fiber pipes make it possible for 'everyone to do it.' A shared sense seems particularly effective.

But let's zero in on price. Yes, the prices typically are low. So, how can that work? – only one way: with volume, ultimately, to add together many smaller price payments and cover what is an operation that is mainly fixed costs.

¹⁷ I will invite Frank to review this and let me know any changes. Anything significant, I will post it.

And how do you get volume? – with penetration pricing, that is low numbers during startup so that people will try this new thing, then stick when it serves them.

Kutztown is informative again. Their FTTH Internet access starts at \$15 / month with the next level at \$20 / month and other rates as high as \$40 / month.¹⁸

Town demographics for the 5,600 population are “mostly seniors” – that is, net of the 1,600 students who also reside in town and attend Kutztown University, which is just outside. Most of the FTTH subscriptions are at the two lower price levels.

Early in the discussion Frank Caruso pointed out that revenues from Internet access are not enough to support the system. That was also another of the ‘recent assertions’ in the Concord discussion, a couple times in fact: cable TV is the cash cow – at least early on – for penetration, in other words ‘low,’ pricing on the Internet access side.

For our cable TV to succeed as the cash cow, it needs to be very competitive against Comcasts’s. One possibility may be to resell a direct satellite signal, such as from EchoStar. Or Bristol, VA, may have some useful pointers on the subject.

I am entirely respectful of back-of-the-envelope calculations. But as far as I can see there is nothing magical about \$5 million as a ceiling on viable investment.

In fact the whole reason we spent \$20-30 thousand on an elegant model was to get better figures! For some time the discussion has included the headsup scenario for Concord strategy, as above. So:

III. – Headsup strategy

- Penetration pricing for Internet access to attract – seniors! – and others, then build a volume of users who, together, eventually cover all costs.
- Search out and offer a very competitive cable TV package, to serve as cash cow during the early years, while Internet access is reaching for volume.
- Begin by
 - A Build out a backbone that serves town buildings, the schools and local businesses. Be clear the objective is not to cover all costs but to get some of the core investment in place. Crucially, give Dan the opportunity to build his new management team, with a running head start.

¹⁸ As listed in the brochure, anyway. Again, it is differential prices that matter for Concord, not the absolute values here. To calculate those, we need to find out Service Electric’s cable modem rates.

- B Select an active FTTH technology for first installation in a couple neighborhoods, at least Internet access and perhaps cable TV depending on equipment investment necessary at the central office and nodes.¹⁹ Enlist neighbors in the recruiting for initial users.

As far as I can see, the job will be done only when we have taken charge of the model and investigated such a headsup business plan.

A viable business plan, based on cases, is requisite to move forward. Julie Melbin has also called our attention to the other side of our coin – public service. After we figure out how to proceed in a business-like manner, presumably we – as a town – do so only to provide a better set of tools to Concord.

Respectfully submitted,

David Allen

¹⁹ Though not by choice, interestingly Bristol, VA, has begun its FTTH service with just Internet access (important to note though that they have already invested in and installed the cable TV capabilities I believe).