



**BURLINGTON
TELECOM**

Business Analysis

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Introduction

This document contains the Stratum Broadband (hereafter called Stratum) analysis of the Burlington Telecom (BT) business to the BT Blue Ribbon Committee.

The deliverables below are taken from and listed unedited from BT's correspondence of January 7th, 2010. The final presentation from Stratum Broadband will include all deliverables:

- ***Deliverable #1 –Business Plan Review and Assessment*** – We would like from Stratum Broadband, LLC an analysis of the 2009 Business Plan, focusing on the inherent risks and opportunities facing BT as a Fiber to the Home (FTTH) business. We seek a sensitivity analysis based on sales projections, Average Revenue Per User (ARPU), trends, customer churn, head count analysis, operating expense analysis, Capital Expenditures (CapEx) requirement and technology trends.
- ***Deliverable #2 – Debt Load Analysis.*** Based on the current financials and the 2009 business plan as well as industry benchmarks, we would like Stratum Broadband, LLC to evaluate the debt load capacity of BT and its ability to meet the debt service obligations. Based on the plan we seek a maximum debt capacity amount that BT could sustain over the next 5 years assuming the proposed Piper Jaffray financing proposal (this maximum may be greater than the financing proposed by Piper Jaffray).
- ***Deliverable #3 –Present and Future Valuation.*** Based on the business plan and industry standards an estimated valuation of BT today and potential valuation if business plan is executed.
- ***Deliverable #4 - Strategic Partner/Buyer Analysis.*** The Blue Ribbon Committee seeks a recommended solution for potential partners and/or buyers based on the defined business model.
- ***Deliverable #5 - Excess Capacity Analysis*** – Define the excess capacity that BT has that could leverage its expansion into other communities to provide FTTH services. Develop a pro forma financial statement that would indicate if expansion outside of the City of Burlington could be financially viable.
- ***Deliverable #6 – Viability Analysis*** – Based on all of the above deliverables, is BT a viable business that should continue operations? If so, under which proposed model is it most viable? If not, what changes need to be made to make it viable?
- ***Deliverable #7 – Results and Recommendations Presentation.*** Present the above deliverables in person to the Blue Ribbon Committee on January 29th, and participate in an interactive Q&A session to ensure they fully understand your analysis and conclusions.

When Stratum started developing this material, we did not know exactly the format the BRC wanted for its presentation. As a result we have provided a set of concise PowerPoint-like bullets that can be easily pulled into presentation format, followed by narrative that provides additional context for those bullets.

To analyze the BT business and provide the deliverables requested, Stratum drew from their extensive experience in the telecommunications industry and from available information about comparable corporations. Stratum has come up with several general conclusions regarding successful municipal network providers. These are summarized briefly as follows:

- Some *apparently* successful municipal network providers:
 - Carefully manage published information to appear successful.
 - Are still new and ramping-up.
 - Co-mingle costs and asset base with a municipal utility.
- Success depends on:
 - Heavily leveraging existing plant, assets, organization, and goodwill of the existing municipal utility.
 - Local government as a committed anchor tenant.
 - Fully leveraging local presence and community commitment.
 - Maximizing penetration and aggregate traffic across all sectors and all services (voice, video, data triple play).

As always the devil is in the details. The BRC has discussed Alameda as an example of a failed FTTH initiative, mainly because of the amount of debt the utility was left holding. Other examples of municipals left with substantial debt include:

- The Lebanon, Ohio FTTH initiative was sold to Cincinnati Bell and the city was left with a \$9.8M debt.
- Marietta, Georgia had a loss of \$24M when it sold its initiative to American Fiber Systems.

Even with these failures a growing number of municipal governments have decided to build FTTH networks themselves. As of last October, the FTTH council had identified 41 municipals with significant FTTH builds. One of those is the city of Burlington. A common theme among all the municipals is that they do not want to be left behind economically. If the incumbent does not build the FTTH infrastructure, economic development for that community will lag behind the communities who do have a strong broadband infrastructure.

For example, the industry touts the city of Bristol, Virginia's OptiNet project as a success, but fails to mention that grant funding was provided by the Economic Development

Administration (EDA) of the US Department of Commerce and the Virginia Tobacco Indemnification and Community Revitalization Commission.

Municipal broadband (FTTP/H) networks are usually designed and implemented to serve all the needs of a fixed local geography and population. The network design and technology used (i.e. compared to wireless) deliver very high capacity at a high fixed (sunk) cost. In many ways, this parallels a large steel or auto plant, which has to do everything possible to utilize capacity and maximize contribution to overhead. For this reason, successful municipal broadband networks do everything they can to maximize and aggregate traffic from every sector within their fixed territory – the community. They must “fill the plant.”

Finally, Stratum strongly believes that each project has to be looked at individually to understand the rationale behind its success or failure, and drawing conclusions from them can be misleading.

1. Business Plan Review and Assessment

This section provides an analysis of BT's 2009 Business Plan, focusing on the inherent risks and opportunities facing BT as a fiber to the home (FTTH) business. The analysis is based on sales projections, average revenue per user (ARPU), trends, customer churn, head count analysis, operating expense analysis, capital expenditures (CapEx), and requirement and technology trends.

In a short time, Stratum has reviewed a lot of information; including industry and market data, BT's current unaudited financial statements, and several versions of reasonably complex business plans, each varying assumptions.

Even with realistic assumptions, it is difficult to achieve break-even cash flow (including debt service and capital requirements) within the forecast time horizon. At the suggestion of BRC members, and in the interest of your time; Stratum has tried to distill that complexity down to the key factors we believe are essential to the BRC reaching its recommendation to the City. In short, the issues with the business plan include:

- A new emphasis on commercial business slows residential market penetration and will take time to materialize because businesses have existing long-term provider contracts and make up the most competitive portion of the Burlington market.
- Assumes Burlington Electric agreements that are not currently in-place.
- De-emphasis of retail/residential marketing and expansion caps the largest market segment.
- BT has used a typical operationally-oriented service provider focus that does not develop a strategy or marketing plan to fully leverage its community ties and loyalties.
- The business plan demonstrates technical and operational excellence, but is deficient in producing the market penetration and revenues needed to support it.

The most important issue facing BT is *revenue*. BT's management has been very competent from a technical and operational perspective, but their approach has resembled a typical service provider "from anywhere." As a result, BT's take-rate, market share, and revenue stream are currently insufficient to support its operation. It seems as if BT implemented a network for city government and assumed the residential and commercial market would naturally follow. As seen in the following table, only the take-rate, which determines the total subscriber and revenue base, from Burlington's limited market area makes a material difference in a sensitivity analysis. While this is only a single year snap-shot analysis of take-rate and pricing (and correspondingly also ARPU), increased take-rates, which would occur over several years, in many ways also mimics a multi-year analysis.

Take Rate	Planned FY10 36.1%	38%	41%	43%	45%	50%	55%
Step-up Take Rates Only							
Total Revenue	\$7,639,166	\$8,846,378	\$9,746,205	\$10,493,130	\$11,240,055	\$12,445,685	\$13,945,396
COGS+Operating Expenses w/ Step-up*	\$6,164,807	\$7,139,027	\$7,865,187	\$8,467,956	\$9,070,724	\$10,043,668	\$11,253,935
New EBITA \$ After Cost Step-up	\$1,474,359	\$1,707,351	\$1,881,018	\$2,025,174	\$2,169,331	\$2,402,017	\$2,691,461
Cost Percentage	80.7%	80.7%	80.7%	80.7%	80.7%	80.7%	80.7%
Step-up Take 3.5% Price Increase							
Total Revenue	\$7,906,537	\$9,185,886	\$10,133,186	\$10,922,233	\$11,711,280	\$12,975,087	\$14,553,921
COGS+Operating Expenses w/ Step-up*	\$6,380,575	\$7,413,010	\$8,177,481	\$8,814,242	\$9,451,003	\$10,470,895	\$11,745,014
New EBITA \$ After Cost Step-up	\$1,525,962	\$1,772,876	\$1,955,705	\$2,107,991	\$2,260,277	\$2,504,192	\$2,808,907
Step-up Take 7% Price Increase							
Total Revenue	\$8,173,908	\$9,530,077	\$10,525,931	\$11,358,181	\$12,190,431	\$13,513,495	\$15,173,253
COGS+Operating Expenses w/ Step-up*	\$6,596,343	\$7,690,772	\$8,494,427	\$9,166,052	\$9,837,678	\$10,905,391	\$12,244,815
New EBITA \$ After Cost Step-up	\$1,577,564	\$1,839,305	\$2,031,505	\$2,192,129	\$2,352,753	\$2,608,105	\$2,928,438
Step-up Take 10.5% Price Increase							
Total Revenue	\$8,441,278	\$9,878,951	\$10,924,441	\$11,800,974	\$12,677,508	\$14,060,910	\$15,803,392
COGS+Operating Expenses w/ Step-up*	\$6,812,112	\$7,972,314	\$8,816,024	\$9,523,386	\$10,230,749	\$11,347,154	\$12,753,338
New EBITA \$ After Cost Step-up	\$1,629,167	\$1,906,638	\$2,108,417	\$2,277,588	\$2,446,759	\$2,713,756	\$3,050,055
Step-up Take 15% Price Decrease							
Total Revenue	\$6,493,291	\$7,444,390	\$8,153,000	\$8,731,643	\$9,310,286	\$10,278,829	\$11,459,845
COGS+Operating Expenses w/ Step-up*	\$5,240,086	\$6,007,623	\$6,579,471	\$7,046,436	\$7,513,401	\$8,295,015	\$9,248,095
New EBITA \$ After Cost Step-up	\$1,253,205	\$1,436,767	\$1,573,529	\$1,685,207	\$1,796,885	\$1,983,814	\$2,211,750
Step-up Take 18% Price Decrease							
Total Revenue	\$6,264,116	\$7,174,315	\$7,847,063	\$8,394,432	\$8,941,801	\$9,865,308	\$10,986,555
COGS+Operating Expenses w/ Step-up*	\$5,055,142	\$5,789,672	\$6,332,580	\$6,774,307	\$7,216,033	\$7,961,303	\$8,866,150

As such, the real focus going forward must be to increase take-rate, and with it, the subscriber base in all sectors. This then provides a foundation for incrementing ARPU and significantly increasing the revenue and cash flow needed to cover OPEX, CAPEX, and cash flow requirements.

This statement is supported by the recent study, *Municipal Fiber to the Home Deployments: Next Generation Broadband as a Municipal Utility*, updated October 2009 by the Fiber-to-the-Home Council North America. The study states, “In the case of muni systems, which are not-for-profit enterprises, one measure of “success” is defined as the level of their “take-rate” – that is, the percentage of potential subscribers who are offered the service that actually do subscribe. Nationwide, the take-rates for retail municipal systems after one to four years of operation averages 54 percent.”

2. Debt Load Analysis

This section evaluates the debt load capacity of BT and its ability to meet debt service obligations. The analysis is based on the current financials and the 2009 business plan, as well as industry benchmarks. Based on the business plan, it recommends a maximum debt capacity amount that BT could sustain over the next 5 years, assuming the proposed Piper Jaffray financing proposal (this maximum may be greater than the financing proposed by Piper Jaffray).

Stratum does not believe that the current business plan, with its current assumptions, is viable or will reach cash flow break-even within a reasonable timeframe. In these circumstances, BT's existing debt exceeds its ability to service it. We therefore do not recommend a maximum 5 year debt capacity for BT under these circumstances.

- Current debt load of \$33.5M (Citi Financial at approximately 5.5% interest) and \$15.5M (Pooled Cash Fund at 1.9%)
- Approximate debt service \$4.9M annually (\$2.8M principal repayment, \$1.8 annual interest, \$295K Pool Fund interest)
 - Capital requirements currently running \$1.5-2M annually
- Unsustainable debt load under current circumstances
- Currently supportable debt service approximately \$2.5M annually
- Can not support current debt service and realistic capital requirements without aggressively growing customer base, and then *incrementing* average revenue per user (ARPU) with enhanced value-added services for monthly premium
 - Could result in break-even cash flow in 2 to 3 years

As stated, the current debt load is approximately \$2.5 million annually, but in the minimally realistic case, BT also needs to support approximately \$1.5 million in capital to connect new, already passed, subscribers to the network – for a total of \$4 million.

The table in Section 1 shows that several scenarios can cover debt service and capital expenditures. It is easier and earlier with price increases, more difficult and delayed with price reductions, but the real question is, "What strategy and pricing is required to deliver the take-rates needed?"

Stratum believes that an aggressive strategy and community-oriented marketing program, targeted at already covered areas of the city, could produce the necessary take-rates, revenues, and cash flows to cover base-level debt service and modest capital expenditures within two to three years. Stratum also believes that even with a take rate of 55%, which is above the national average, insufficient cash flow is generated to meet all the forecasted debt and capital obligations.

3. Present and Future Valuation – confidential

4. Strategic Partner/Buyer Analysis

This section analyzes the business model and provides the Blue Ribbon Committee with a recommended solution for potential partners and/or buyers.

This list is based on an analysis of available public information about companies who might be interested in partnering with or in buying BT. No contact was made with any of them to assess their actual possible interest.

BT's business model is significantly different from any potential buyer, and as stated previously, Stratum does not believe that any partner or purchaser would acquire BT as a whole. No contact with potential buyers was made to assess interest because of the risk of signaling severe distress. Potential partners/buyers could include:

- Comcast
 - Local infrastructure in-place
 - BT's core fiber assets will have greatest value to lower cost/increase capacity.
 - Will have to integrate different network architecture.
- Fairpoint
 - In Chapter 11, with limited flexibility
 - Starved for cash
 - Local CO and basic infrastructure in-place
 - BT's core fiber assets will have greatest value
- Level3
 - Lower cost of market expansion for circuit termination and transport
 - Interest in core infrastructure, not service enabling assets
 - Low probability, but could assess some assets at high value.
- Teljet
 - Would complement their current footprint and enable expanded service offering, suggesting higher valuation
 - Test access capital and capacity to expand
- SoVerNet
 - Would complement their current footprint and enable expanded service offering, particularly in Burlington; suggesting higher valuation
 - Have access to capital and capacity to expand
- VTel
 - Would complement their current footprint and enable expanded service offering, particularly in Burlington; suggesting higher valuation
 - Have access to capital and capacity to expand
- Primelink
 - Would complement their current footprint and enable expanded service offering, particularly in Burlington; suggesting higher valuation
 - Test access to capital and capacity to expand

- Waitsville Telecpm
 - Would complement their current footprint and enable expanded service offering, particularly in Burlington; suggesting higher valuation
 - Test access to capital and capacity to expand

These strategic partners/buyers present a diverse set of characteristics that would all impact the value they perceive in BT. The larger, national companies (Comcast, Fairpoint, Level3) would probably only have an interest in BT's fiber runs and aggregation points in order to reach new or existing customers at a lower cost and with much higher bandwidth. The smaller, regional/local companies know the market and have a local connection to it. They are more likely to value a larger portion of BT's operational assets, but they also have less access to the capital necessary to purchase the assets.

5. Excess Capacity Analysis

This section defines the excess capacity that BT has that could leverage its expansion into other communities to provide FTTH services. In addition, it develops a pro forma financial statement that evaluates whether expansion outside the city of Burlington is financially viable.

The following assets can be leveraged to support growth outside of BT's current footprint without impacting CapEx:

Asset	Description
Network Operations Center	Software can scale up to 100,000 subscribers. Growth would impact operating expenses.
Head-End	According to BT, it can scale to 1M subscribers.

The front end systems for provisioning and billing are outsourced to a service company, so increased scale could reduce costs that would modestly improve margins across the board. Increased scale could also offer the opportunity to bring the systems in-house.

The majority of capital expenditures are driven by the cost of the fiber build. The industry looks at two factors in calculating the cost of that build: homes passed and homes lit. At a high level BT estimates the cost of a home passed at \$1,000 and a home lit at \$750. Stratum looked at geographic data from the Vermont Center for Geographic Information (VCGI) to gauge the costs of expanding to communities that border Burlington. The following table highlights that data.

	Town	Burlington	S. Burlington	Essex	Winooski	Colchester	Totals
	County	Chittenden	Chittenden	Chittenden	Chittenden	Chittenden	
	Population:	38531	17445	19465	6462	17207	99110
Vertical	Site Type	Total Bldgs	Total Bldgs	Total Bldgs	Total Bldgs	Total Bldgs	Total Bldgs
Residential		10421	5936	6486	1658	5592	30093
Commercial		755	565	501	136	364	2321
Public		65	46	71	17	62	261
Health Care		27	15	6	0	7	55
Educational		140	14	21	5	38	218

As an example, to expand to 6,600 sites in South Burlington and to penetrate 30% of the market would require capital expenditures of \$8.1M for the fiber plant alone. Stratum did not develop pro forma's for expansion beyond Burlington, because it believes expansion would be a non-starter with these communities until BT is on stable ground.

The one key asset that BT does have is its intellectual property. The team has learned from its mistakes and is well-positioned to implement a build out if it is in the cards. An effective build out in two years versus five years significantly impacts cash flow.

6. Viability Analysis

In this section Stratum analyzes the data from all deliverables previously covered in Sections 1 through 5 to determine whether BT is a viable business that should continue operations, and under which proposed model it is most viable. It also recommends any changes to the business plan that would make it more effective in the short- and long-term.

Stratum does not believe that BT is a viable business under its current assumptions and with its current strategy and marketing approach. On the other hand, we believe that BT could be made viable with debt re-financing and the city's continued support for another two to three years, if it implements a new, more aggressive strategy and marketing approach (explained more in the recommendations).

- Not viable unless completely change strategy
 - Current network cost and capacity beyond current requirements of subscriber base.
 - Larger subscriber base and greater network demand could be absorbed to cover costs and debt service.
 - BT has already picked low-hanging residential subscribers available with current approach.
 - Debt re-financing required to push off immediate debt service and provide capital for expansion.
 - Aggressive commercial capture program will require time, and City of Burlington backing, to yield significant results.
 - Take-rates and competitive environment suggest that a very aggressive, "leave no prisoners" strategy *could* prove successful.

7. Results and Recommendations

This section summarizes the results learned from the deliverables and makes recommendations for BT's future business strategy.

- BT failure or sale results in the city absorbing \$15-30M loss – probably unacceptable without making an effort to turn it around.
- Provide BT with 2 to 3 year “last chance” window for success in achieving cash flow break-even (with debt service and capital requirements)
 - Provide whatever backing and/or guarantees necessary for debt refinancing and to restore community confidence
 - Establish realistic and rigorous milestones for BT to achieve during window
- BT develops aggressive community-oriented strategy and marketing
 - Execute a “Burlington’s Community Network” campaign to develop loyalty
 - Clearly state goal to “break-even” (not profit from) for the benefit of Burlington’s citizens, government, businesses, and economy
 - Become the price leader, with heavily promoted price reduction (15% on existing services), and a “we won’t lose” attitude
 - Approach every significant Burlington-based organization, institution, and business with aggressive communications proposal
 - For their organization’s communications needs
 - Affinity program with incentives to sign each constituent (employee, patient, student, tax payer, parishioner, etc.) for retail consumer services
 - Partner on developing community-oriented content and services with strong local appeal
 - Increase take-rates, subscriber-base, and ARPU
 - Grow residential subscriber base by 1500 within homes-passed geography and in 3 years
 - Simplify service offering with fewer bundles and added value from new premium features to restore and grow ARPU
 - Yields additional \$900K annual residential revenue in year 3, adds \$300K positive cash flow in year 3, with substantially bigger base for contribution to overhead
 - Implement commercial plan covered in latest “Burlington-only Low-Case” plan presented by BT

As stated above, BT is in a difficult position primarily because of lagging subscriber take-rates and revenues. In most presentations, BT states that its greatest competitive advantage is its modern, high-capacity FTTH network. However, that is only half of its real competitive advantage. The fact that it is local, the community’s network, and the “home town team” is the other half, which it has not been emphasized and upon which it has not capitalized.

BT should be able to parlay its local proximity and role as an integral part of the Burlington community into a significantly larger subscriber and revenue base. Having failed to do this from its inception, BT has to make up ground, but with some time, could become viable, as other municipal FTTH networks have.

Stratum's experience planning and developing community broadband networks has enabled us to develop effective strategies and marketing programs that engage the community and leverage the close relationships that these communities always have. For example,

- Re-brand BT as the home town network that is concerned with community activities and delivers real value to community institutions and subscribers. Think of BT as Burlington **Totally**, not just telecom – but totally engaged and involved with the community of Burlington.
- Part of BT's advantage is local presence and support, but it needs to clearly communicate that BT delivers the best value and the lowest telecommunications prices in a way that only a local, efficient, and low-overhead organization can. BT is going to share its low costs by passing some of them on to the community and to subscribers in the form of very competitive prices.
- Approach Burlington's businesses and institutions to not only satisfy their own organizations' telecommunications needs, but incent them to sign-up all their constituents (employees, tax-payers, students & parents, patients, congregations, etc.) with "friends and family"-type discounts and valuable service enhancements. Stratum calls this the "institutional hook" strategy to achieve maximum leverage from every subscriber and sale.
- Assist Burlington's institutions in cost-effectively developing local programming and content, which BT can exclusively distribute to develop closer ties and deliver really unique local value – setting the hook even deeper.

Stratum believes that if such a strategy is effectively implemented, BT can sufficiently increase both its residential and commercial subscriber base to reach break-even cash flow, including debt service and capital requirements. At break-even, with a significantly larger subscriber base, BT will have the flexibility and greater leverage to drive total Burlington-based revenues, evaluate additional services and geographical expansion options.

The revised Take-Rate Sensitivity Analysis, with its scaled-up COGS/Overhead costs and the resulting lower cash flows, would not alter Stratum's overall recommendation. We still believe it would be unacceptable to abandon BT, without attempting the focused turnaround recommended. The City will still need to visibly stand behind BT, as well as negotiate a re-financing which defers and lowers debt serviced requirements for the next

several years. If the recommended strategy is successful, and BT reaches national muni-telecom take-rates (or even a little better), it should approach cash flow neutrality with respect to debt service and perhaps modest CAPEX. At that point, with a larger subscriber base of 6000 plus, every \$10 in monthly ARPU represents approximately \$750,000 per year of very high margin revenue mostly flowing to cash flow. BT then is positioned with a chance to pay off its debt and achieve long term sustainability.

With a partner to help defray costs and spread them over a larger operational base, to share debt burden, and more rapidly deploy premium services that increases ARPU; this scenario becomes faster and more likely.