UC2B Policy Board Agenda

Special Joint Policy Board and Technical Committee Meeting
January 11, 2012 – 12:00 noon
Council Chambers, 102 N. Neil Street, Champaign, Illinois

I. Call to order

II. Roll Call – Determine Quorum

III. Approve agenda

IV. Approval of Minutes from December 21, 2011 Policy Board Committee
(Only Policy Board members may vote on this issue)

V. *Action/Discussion Items: (In this section, items will be presented to the board and opened for technical questions, then we will go to the audience for comments – audience comments are limited to five minutes per person – then we will return to the board for general discussion and questions)

a) Business and Operations Planning Consultants - Introduction and Presentation – Diane Kruse of NEO Fiber, LLC and Mark Ansboury of Gigabit Squared
b) Presentation of NEO Fiber's "Evaluation and Recommendations for Pricing and Positioning Strategies, Best Practices for Retail Service Offerings, Residential and Business Services" (Kruse, Ansboury)
c) NTIA/Grant Report (Smeltzer)

VI. Tasks to complete for next meeting

VII. Items for next meeting's agenda

a) Consideration of the FTTP Procurement Process

VIII. Public Participation

IX. Adjournment

X. Next Meeting:
Wednesday, January 18, 2012, 12:00 p.m. to 1:30 p.m.
Council Chambers, 102 N. Neil Street, Champaign, Illinois

UC2B Policy Board Minutes

Regular Meeting
December 21, 2011

Location:
City of Champaign Council Chambers
102 N. Neil Street
Champaign, IL 61820

Committee Members Present: Abdul Alkalimat, Brandon Bowersox, Michael DeLorenzo (arrived 12:10 p.m.), Deb Feinen, Pete Resnick (arrived 12:08 p.m.), Richard Schnuer, Tracy Smith.

Members Absent: Rev. Zernial Bogan, Minor Jackson

I. The meeting was called to order at 12:05 p.m. by Chair Feinen.

II. Roll Call

III. Approve Agenda: Smith moved, Alkalimat seconded the motion to approve the agenda. The motion was passed by voice vote.

IV. Approve Minutes: Smith moved, Alkalimat seconded the motion to approve the minutes of the November 16, 2011 meeting as written. The motion was passed by voice vote.

V. Action*/Discussion Items:

A. **Marketing Committee Update**: Bowersox stated the Marketing Committee has not met recently so there is nothing new to report from that group. He did note that UPTV has produced some You Tube videos from the Technology Demonstration presentations that were held earlier in the fall. Those videos are available at youtube.com/UC2Bfiber. Bowersox and Kersh will have a more in depth report in January after their next meeting.

B. **Canvassing Update** – Gant distributed a written report (attached) summarizing the work conducted by the canvassing team. Currently, over 400 people have signed up for the wait list indicating that they are interested in receiving UC2B services. Schnuer asked why the canvassing team is not going to go out from now through February. Gant stated that they are focusing more on indoor activities during January and February and will attend more civic and school functions as well as planning and conducting several community events with focus groups, including our anchor institutions. Additionally, Gant noted that it is dark and cold with a potential for inclement weather which are not ideal for ensuring the safety of the canvassers.

Gant indicated that they will reassess this though if the weather is warmer and dry and will adjust the schedule if needed. The canvassing team has focused its efforts on getting the UC2B website updated and operational for people to sign up online. Additionally, it was noted that the canvassers enjoy public speaking opportunities, so several of these opportunities will be scheduled during the winter months. Many were present and participated in the City of Champaign's STAR Leadership Institute on December 10 to share information about their experiences.

Public Comment: Reverend Barnes mentioned that the City of Champaign's Neighborhood Services Department is in the process of developing a redevelopment plan for the Bristol Place neighborhood. Some existing homes are going to be removed and new homes built. Rev. Barnes wants to be sure that this change in residents does not affect anyone's opportunity to obtain UC2B service. Legner agreed and noted that staff had scheduled a meeting with Neighborhood Services and others to discuss the impact of this project on UC2B construction and subscriptions. They will be working on a plan to make sure everyone is included.

Feinen asked for a motion to accept Gant's report and place it on file. Motion made by Resnick, seconded by Alkalimat. Board approved via voice vote.

Feinen reviewed the process for presentation of items to the Policy Board as is articulated on the agenda. Staff will present the agenda item. Board will ask technical questions, then Feinen will recognize audience members for public comment, following that, the Board will have another opportunity to make comments and ask questions on each item before taking a vote.

C. **NTIA/Grant Update**: A written report was provided in the packet. Smeltzer stated that crews from Western Utility are now working in Champaign and the campus area while the students are gone and the weather is holding. Construction is going well. John Burns Construction crews continue to work in Urbana as well. Champaign contractors are approximately one fourth of the way through with the installation of their conduit. Urbana contractors are moving along as well. Feinen asked for audience participation. There was no response. Representatives from NEO Fiber (business consultants) plan on being here in early January to meet with UC2B stakeholders. They will be gathering input and sharing information that will be used in the development of the business plan and operational modeling process. At the January 4th Policy Board meeting staff hopes to have a recommendation from the Tech Committee for the core network design and equipment purchases. There is going to be a special joint Policy Board/Technical Committee meeting set for January 11th so that members can meet with the business and operations planning consultants. Staff is currently working on a schedule of meetings for them to ensure they meet with all three member entities, Councils, local companies that may have an interest in partnering with UC2B in the future, key stakeholder groups and the public. Audience comments: none

D. ***Resolution 2011-9 - Endorsing the Use of Contingency Funds for the Purchase of Splice Cases:** Approval of this Resolution will endorse Urbana's use of $30,000 in contingency funds for the purchase of a specific brand of splice cases. Tracy Smith stated that Bob Miles

presented this issue to the Technical Committee and the Committee fully supports this decision. Schnuer moved, Alaklimat seconded approving Resolution #9. Board approved by voice vote.

E. **FTTP Procurement process update and discussion**: Feinen noted that there is a report in the packet that presents the draft proposed procurement process and stated that there are several items in the report that need more specific direction from the Board. Legner noted that the FTTP procurement process team has met since the last Board meeting and the members of that team have articulated a plan which was included in the agenda packet. The team would like feedback on the proposal and specific direction on the 4 items noted in the report. The process as proposed tries to balance providing more opportunities for more minority contractors to participate that are in a variety of sizes and scope and providing a manageable number for staff to coordinate given limited resources. There is also a concern that the more complex this process becomes in terms of bidding on individual pieces and/or combinations of pieces, the more likely it may be that there are fewer contractors interested in participating or taking the time to submit bids. Legner noted that the City has not utilized a process such as this as proposed where it provides incentives to companies that make a pledge and follow through with a more diverse workforce. It is a process that we will be taken to the public for input so that UC2B can provide the best opportunity possible to increase minority participation in the construction of this infrastructure. Once input is received and addressed, staff will bring back a plan that is more complete so that the Board can make a recommendation to the City Council as to how this should look. It is expected that it will be ready by the end of January so that the Champaign City Council can review it and adopt it for this particular procurement process shortly thereafter.

Technical Questions: Resnick asked if the six proposed packages have been reviewed by the Technical Committee yet. Smeltzer responded that the Tech Committee has actually spent a couple of meetings on this issue and what is being presented includes its feedback. Smith confirmed that the Tech Committee endorses this breakdown.

Public Input: Champaign Council Member Kyles stated that he definitely appreciated the work that is going into this plan. He is definitely concerned about the technology piece, but is also concerned about who is working and who is getting contracts. After the successful implementation of this piece, he stated he is hopeful that this process can change the face of hiring in both cities and the University of Illinois.

Folk stated that he had been working in the trenches of getting minority contractors involved for some time and feels that this is by far the best idea he has seen in the past two years. The only issue he feels that it does not address is the bonding issue. Folk stated that the bonding issue must be structured well to reduce the barriers for smaller contractors. Folk supported the proposed focus on workforce diversity as well and in conjunction with ownership. Including a preference for diverse workforces makes the project more attractive to larger companies to contract with local labor. He stated that it does not necessarily solve the problem, but it helps get people involved.

Rev. Barnes stated it is good to hear the developments that are being considered and implemented. He has been working with the City and UI since 2005 toward this end. This might

be the impetus and the project to help us solve the problem. The perception of the community is once again it is left out – it seems lopsided. Staff is to be commended on the effort you are putting together right now.

Feinen asked Board members for general comments. There were none. Feinen stated that the first decision point as raised in the report is whether the City's current performance bonding requirement should be lowered to further reduce the barriers that small contractors experience in the bidding process.

Audience Participation: Peter Folk stated that the purpose of the bond is to protect the City in the event a contractor is unable to complete the work. He noted that insurance covers damage caused by a contractor and it is much easier and more common to have in place for smaller contractors. These projects as broken down are even much smaller in parts. Folk suggested that there is differing risk to the City depending upon the type of work being done even. Resnick asked if he is suggesting having lower bonding requirements based upon the type of work being done rather than the amount of the contract. Resnick stated that he was thinking about a sliding scale of bonding requirements depending on the cost of the contract, e.g. the larger the contract amount, the higher the bond amount because the City's responsibility to complete the work is financially more costly. Small jobs would be a smaller amount of bond because, while the risk of failure still exists, the associated cost to complete the work is lower. Folk suggested we look at the risk per job or connection, which is a little more complicated, but might get a better result. The cost of the bond has to do with the entity, similar to a credit score. Feinen thinks this is a creative idea, however wants to remind the Board that there is still a smaller contingency on this project than would normally exist. If the bond amount is lowered as well, there is greater risk in both areas. Lowering the bond makes complete sense, but the Board does have a responsibility to the community to make sure the work gets done. Schnuer stated that there are potential costs and risks whichever way we choose to go. Less than 100% is generally good, but there are always some risks to be aware of. Smeltzer gave a scenario in which one contractor was selected for the entire project and defaulted on its work. The partner agencies would then be responsible for rebidding the project and hiring an alternate company which takes time. Hopefully, by breaking down the job into smaller portions, there is at least an alternative(s) that could pick up that unfinished work by another company without rebidding and causing further delay in completing the project by the imposed deadlines. Bowersox had to leave the meeting, but stated that he is really glad that staff is pushing the envelope and proposing new things to make a difference. Alkalimat stated he is in a very positive frame of mind regarding this issue. He feels this information should be made public so the community has an opportunity to applaud it. Feinen invited everyone to come to future discussions on this issue.

Feinen encouraged staff to develop a reasonable split in the bonding risk based upon the packages and to explore the possibility of developing an even further reduction based upon the type of work being done. Board members agreed.

Regarding the question of having, and in what proportion, weighted bid evaluation criteria addressing price and workforce diversity – This breakdown was confusing and warrants further exploration. Board members asked staff to prepare sample scenarios with various prices and

diversity pledges to see how the weighted evaluation criteria might impact selection or the "winner". Tentatively, the Board agreed that a 75%/25% split for price vs. diversity seemed reasonable subject to the review of the sample scenarios.

Regarding the question of whether or not bidders would be allowed to bid on all 6 component pieces or not – The Board supported the Bidders ability to bid on all pieces so long as the bonding requirements were lower for the smaller projects.

Regarding the idea of making a bonus or incentive payment to contractors that successfully complete the contract with the pledged workforce diversity – Legner noted that this payment would need to be approved by all entities because it would most likely come from start up funds rather than grant funds. DeLorenzo thought it would be unlikely that the University would agree to pay its share of this payment. Schnuer questioned why that bonus needed to come from the start up costs rather than grant funds. Smeltzer stated that using grant funds for a bonus would probably be prohibited by University Grants and Contracts Department. Resnick wondered if we would get the same response if we stated it as a "completion bonus".

F. Verbal Update of Work Underway by NEO Fiber, LLC: Legner reviewed the call with NEO Fiber last week. They have a very rough preliminary draft report regarding rates and service tiers. We should have a revised draft back by the end of this week for Policy Board review at the next meeting. NEO Fiber will be visiting Champaign for meetings with potential customers and anchor institutions on January 9-11.

Feinen asked for items for the next meeting beyond what has already been discussed. There were none.

Public Participation: Rev. Barnes questioned why the incentives to encourage minority participation on the fiber to the premise project, has to be in dollars. He suggested that perhaps there could be hiring preference given for work on future projects in the community. On a separate note, he indicated that it has come to the public's attention that Minor Jackson and Rev. Bogan have not been regularly attending the UC2B Policy Board meetings, and those absences should be viewed as resignations. Replacements should be appointed by the Board. Feinen asked for Board input. Alkalimat stated that Brian Bell also represents Parkland and is very involved in the community. Alkalimat stated he would support a nomination of Brian Bell to replace Minor Jackson. DeLorenzo questioned if the Board has a process to confirm that Jackson and Bogan have in fact resigned. Feinen stated she would contact both and inquire as to their status. The Board may make recommendations for these positions as follows: one member from the non-governmental sector and one from small or specialized governmental users.

Feinen adjourned the meeting at 1:40 p.m.

UC2B Door-to-Door Canvassing Outcome Report
November 21, 2011-December 17, 2011

The Canvassing Operations team visited 2034 premises in a three week period.

- Of the total visits, 857 visits reported no one was at home. Return visits will be made to these homes during the next canvassing blitz.

- The team talked directly with 734 people, who were 18 years or older and a representative of the household. Of those 734 residents:
    - 420 completed the survey
    - 221 indicated to come back later
    - 93 refused

    - *400+ indicated that they are interested in the UC2B service

Community Ambassadors canvassed during daytime hours, primarily from 10am-4pm

- Canvassing is helping to improve the quality of information, the occupancy status, existence of premises, and the classification of a business versus residence.
- Over 400 premises in the provided tax records were either abandoned, not a residence (ex: business, parking lot, vacant lot), have addresses that were unable to locate, or unoccupied. Unoccupied units were tagged for a return visit in the Spring.
- 208: businesses; or parking/vacant lot
- 173: abandoned, vacant, or unoccupied
- 17: other issue in classification

RESOLUTION NO. 2011-09

A RESOLUTION

ENDORSING THE USE OF CONTINGENCY FUNDS
(Urbana FTTC Project – Splice Cases)

WHEREAS, the City of Urbana received the low bid for the Fiber to the Curb construction from John Burns Construction Company in June, 2011 in the amount of $5,411,000; and

WHEREAS, the total of all bids received for the Fiber to the Curb construction project was $17,922,574 and was approximately $2,670,000 over the project budget; and

WHEREAS, the City of Urbana authorized staff to negotiate a revised scope of work and associated pricing with John Burns Construction Company in an effort to reduce the overall cost of the Fiber to the Curb project; and

WHEREAS, the City of Urbana accepted and approved a revised bid for Fiber to the Curb construction project from John Burns Construction Company in the amount of $5,020,000 in August, 2011; and

WHEREAS, the revised bid as submitted and accepted did not include pricing for the intended standard splice case as was specified in the original bid documents; and

WHEREAS, the UC2B Technical Committee has reviewed a request to utilize contingency funds in an approximate amount of $30,000 to purchase the splice cases as were originally specified in the bid documents in June, 2011; and

WHEREAS, the Federal Subaward Agreement between the City of Urbana and the University of Illinois includes contingency funds of $401,600 which have not been utilized to date and are available for this purpose; and

WHEREAS, the Federal Subaward Agreements approved among the UC2B member agencies contains a clause as follows: "At the end of the Project construction phase, if one of the UC2B members has exceeded its construction budget, ILLINOIS will transfer to that UC2B member any unexpended funds that were originally assigned to the Construction Budgets of the other two UC2B members. If two of the UC2B members exceed their Construction Budgets, any unexpended funds in the Construction Budget of the third UC2B member shall be applied proportionately to the budget deficiencies of the two."

NOW, THEREFORE, BE IT RESOLVED BY THE UC2B POLICY BOARD, as follows:

Section 1. The Policy Board endorses the use of contingency funds in the estimated amount of $30,000 to purchase splice cases as were originally specified in the Fiber to the Curb bid documents for the City of Urbana.

RESOLUTION NO. 2011-09
PASSED:

APPROVED: _____
Policy Board Chair

NEO Fiber
Evaluation and Recommendations for Pricing and Positioning Strategies Best Practices for Retail Service Offerings Residential and Business Services

Submitted by:

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Email: dkruse@NEOfiber.net
Website: www.NEOfiber.net

Background Information

Purpose of the Report.

The purpose of this report is to provide market information and analysis, data and insight into competitive service and pricing offerings in the marketplace, and to provide strategies and best practices for retail residential and business service offerings and pricing considerations for UC2B.

This report will address the following questions:

- Provide recommendations on current pricing proposals and associated bandwidths with particular attention paid to offerings in the FTTH areas.
- Provide an evaluation of and recommendations for UC2B's options for pricing retail services for business v. residential customers.
- Should UC2B consider non-profit pricing alternatives?
- Provide alternatives, advantages and disadvantages, and recommendations for UC2B to consider related to FTTH equipment deposits.
- Identify the terms and conditions for consideration and inclusion in retail customer service agreements for all types of customer classifications, i.e. business, residential, non-profit. Provide draft agreements for UC2B to consider.
- Identify UC2B's options, the associated advantages and disadvantages, and recommendations for addressing/providing service to multi-use or multi-family structures. Should UC2B contract with landlords or the tenants? Provide draft customer service agreements if different than above.

Methodology

NEO has access to a comprehensive, broadband Internet transactions database. This database is the result of collecting and analyzing over a half a billion Internet transactions from all over the country. We use proprietary analytical modeling, which includes demographic information, speed tests, Internet order information, the physical addresses of subscribers and the IP addresses of subscribers. These transactions come from hundreds of sources including e-subscription services, and various other sources where the consumer submits their address information and the database captures the consumer's IP address which the database tool then discriminates between residential carriers and business carriers.

For this study, NEO analyzed database data for all of the zip codes and census tracts by block in the Champaign-Urbana area from January through September 2011. The Champaign-Urbana communities represent over 48,761 households and 1,760 businesses. The sample data was

scrubbed for duplicate transactions (in other words, we eliminated the returning customer data records in information regarding churn rate) and then we analyzed 5% of the total households (1,845 discrete sample households) and 5% of the businesses (77 discrete sample businesses) to determine providers or carriers, type of services, pricing information. A slightly smaller sample (1,111 households and businesses) was analyzed to determine actual speed tests.

On the following pages, actual market data in the Champaign-Urbana area was captured. This data was used to make intelligent pricing, product, positioning and marketing recommendations.

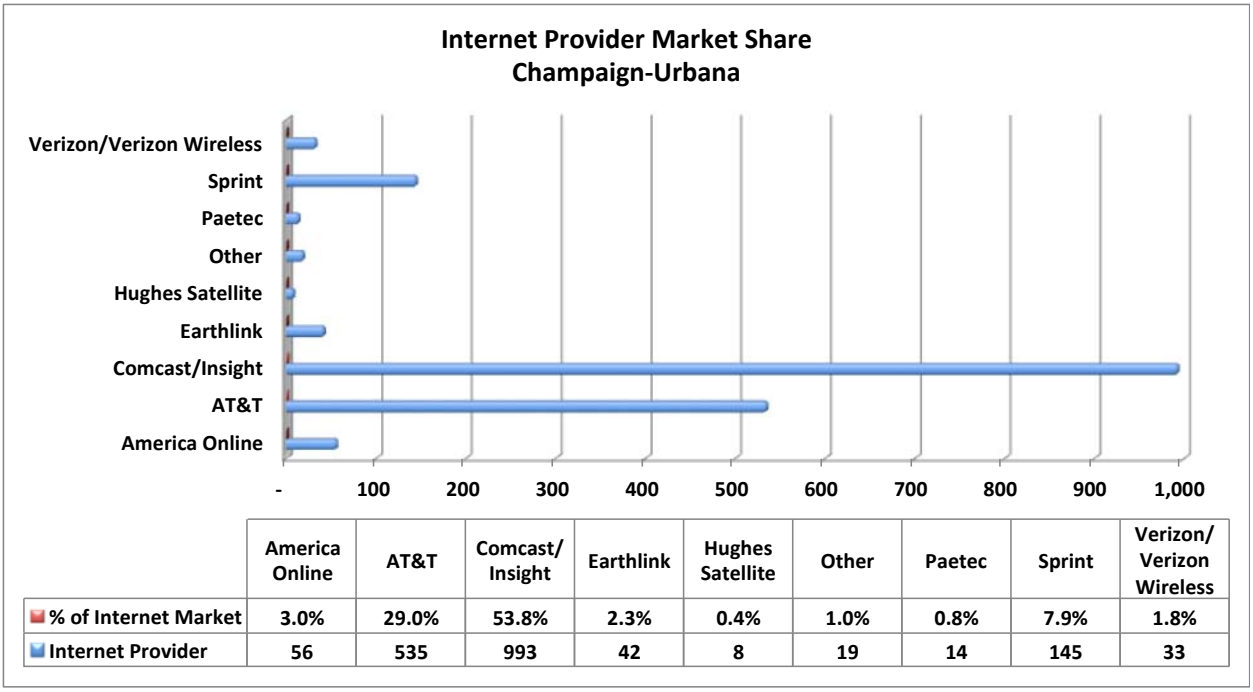
A complete business plan should be provided before UC2B finalizes its pricing and product sets in the market. This way, a sustainable approach can be established that provides a path to profitability. However, UC2B could use the information in this report to understand the market, the strategy, the positioning and initial pricing that can be offered in the marketplace, with the understanding that the pricing may need to change based upon the other findings in the business plan.

Market Analysis

Existing Providers and Market Share

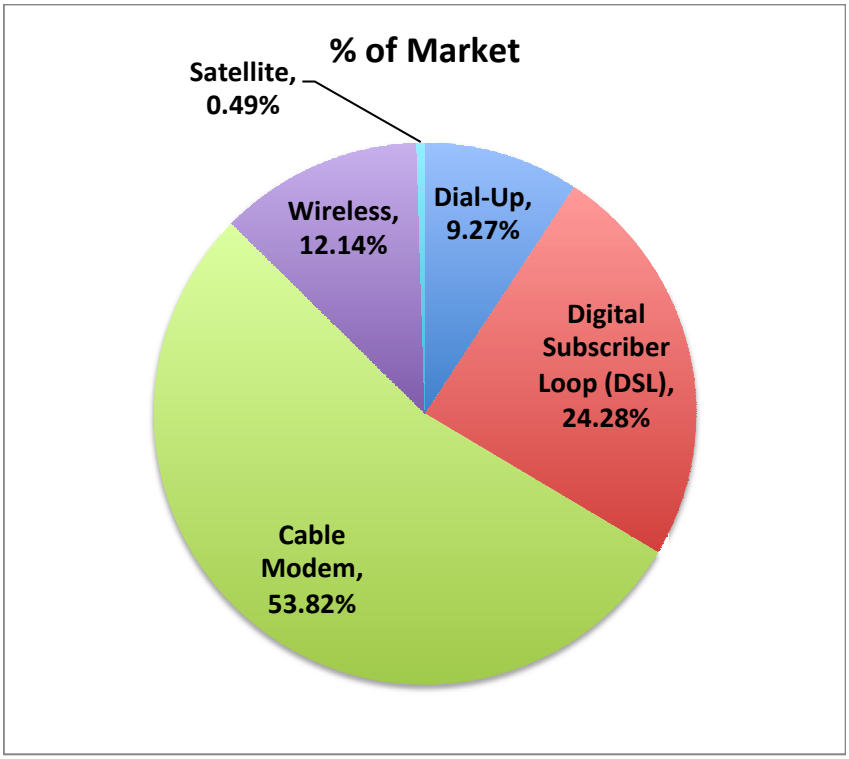
Provider	Internet Provider	% of Internet Market
America Online	56	3.0%
AT&T	535	29.0%
Comcast/Insight	993	53.8%
Earthlink	42	2.3%
Hughes Satellite	8	0.4%
Other	19	1.0%
Paetec	14	0.8%
Sprint	145	7.9%
Verizon/Verizon Wireless	33	1.8%
Total	1,845	100%

Comcast is the market leader with 53.8% of the market share. AT&T follows Comcast with 29% of the market share. Third party providers such as America Online, Volo, Juno, Earthlink and others make up over 6.4% of the market. Third party provdiers use DSL/Cable partners and fixed wireless to deliver network access. Approximately 1.8% currently relies on wireless as their sole Internet access service.



	America Online	AT&T	Comcast/ Insight	Earthlink	Hughes Satellite	Other	Paetec	Sprint	Verizon/ Verizon Wireless
% of Internet Market	3.0%	29.0%	53.8%	2.3%	0.4%	1.0%	0.8%	7.9%	1.8%
Internet Provider	56	535	993	42	8	19	14	145	33

Type of Service Delivery



Service	Subscribers	% of Market
Dial-Up	171	9.27%
Digital Subscriber Loop (DSL)	448	24.28%
Cable Modem	993	53.82%
Wireless	224	12.14%
Satellite	9	0.49%
	1845	**100%**

With Comcast/Insight having 54.6% of the market share, it makes sense that a similar percentage of the service delivery is cable modem.

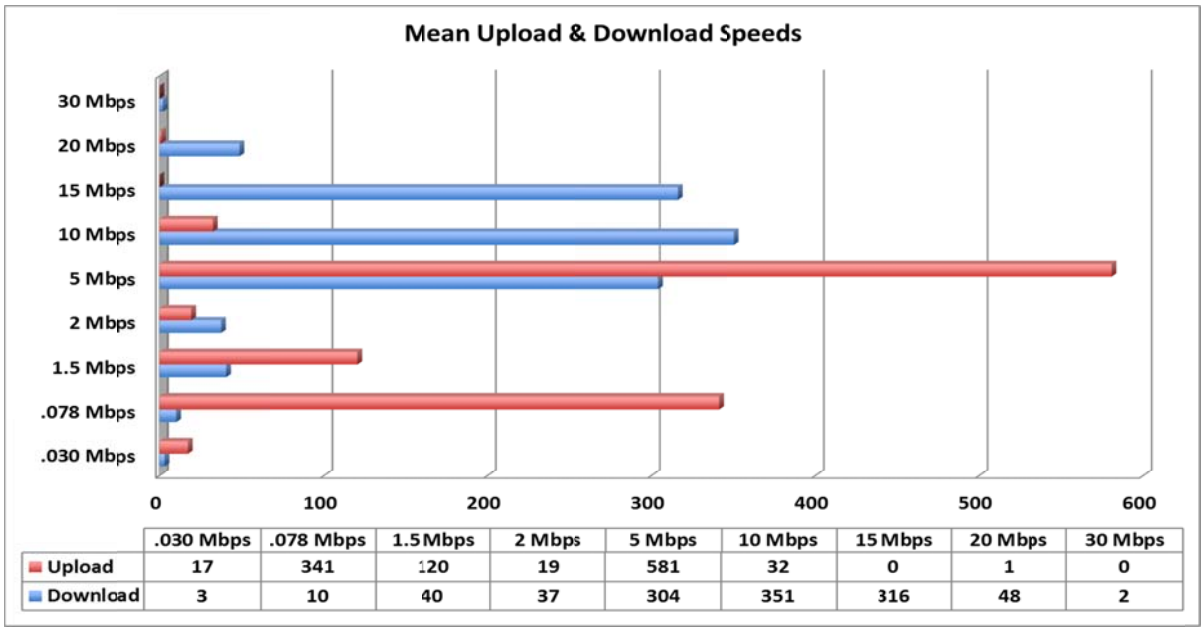
AT&T is offering their service via Digital Subscriber Loop (DSL) services. No one is currently offering services via Fiber to the Home technology. As no other company is currently offering their services using Fiber to the Home technology, UC2B should highlight this as a main selling point and advantage of its service offerings. The benefits and applications only available on Fiber to the Home are provided later in this document.

Service Offerings

Existing Bandwidth and Speeds Available

Mean Speeds	Download	Upload
.030 Mbps	3	17
.078 Mbps	10	341
1.5 Mbps	40	120
2 Mbps	37	19
5 Mbps	304	581
10 Mbps	351	32
15 Mbps	316	0
20 Mbps	48	1
30 Mbps	2	0
Subtotal Speed Samples	**1111**	**1111**

Existing service offerings are asymmetrical; meaning, the download speeds are not the same as the upload speeds. The competitors are providing service offerings where the upload speeds are much slower than the download speeds. Most of the customers are subscribing to download speeds between 5 Mbps and 15 Mbps. The upload speeds that customers are subscribing to are between less than 1 Mbps up to 5 Mbps.



The charts above show what service offerings are being ***subscribed to*** by customers.

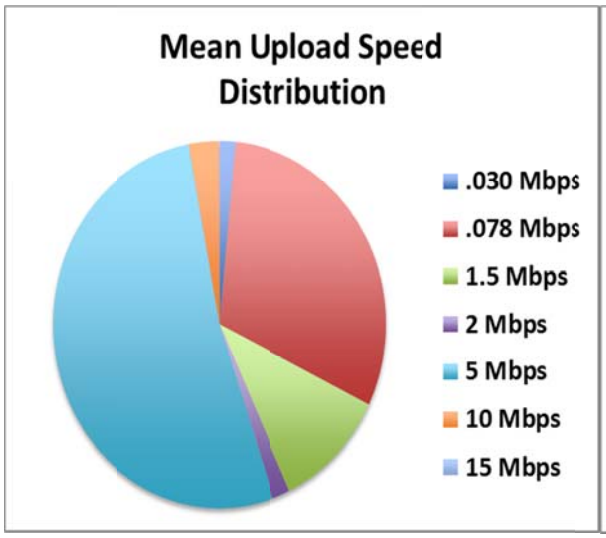
The charts on the following page show what actual speeds are ***available to*** customers.

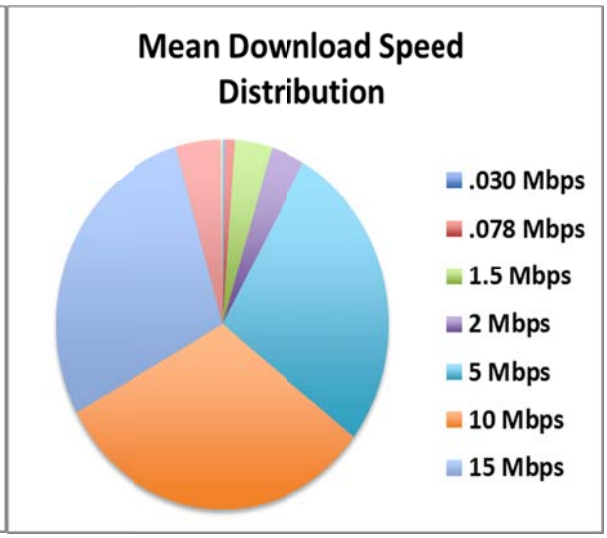
The actual speed available is less than the advertised speed of the service. Another significant point to be made is that customers are paying for bandwidth that they are not currently getting. This is another differentiator of Fiber to the Home networks; more speed is available for both

upload and download applications, and should be emphasized as another selling point of UC2B's service offering.

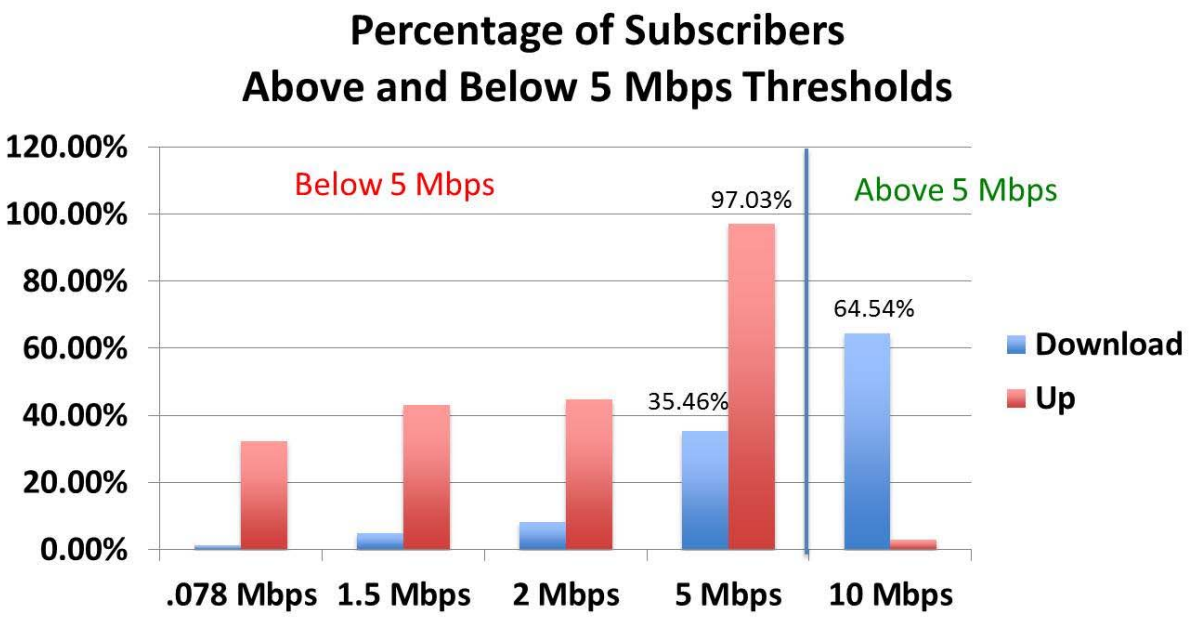
Mean Upload Speeds	Upload
.030 Mbps	1.53%
.078 Mbps	30.69%
1.5 Mbps	10.80%
2 Mbps	1.71%
5 Mbps	52.30%
10 Mbps	2.88%
15 Mbps	0.00%
20 Mbps	0.09%
30 Mbps	0.00%
Subtotal Speed Samples	**100%**

Mean Download Speeds	Download
.030 Mbps	0.27%
.078 Mbps	0.90%
1.5 Mbps	3.60%
2 Mbps	3.33%
5 Mbps	27.36%
10 Mbps	31.59%
15 Mbps	28.44%
20 Mbps	4.32%
30 Mbps	0.18%
Subtotal Speed Samples	**100%**





Actual speed test samples were taken. The actual mean upload speeds are between less than 1 Mbps and 5 Mbps, with most of the upload speeds at 5 Mbps (52.3%). The actual download speeds range between 5 Mbps (27.36%), 10 Mbps (31.59%) and 15 Mbps (28.44%).



Over 35% of the subscribers are below 5 Mbps which is the threshold established by the Rural Utilities Services as underserved. Over 97% of the subscribers are capped by download speeds lower than 5 Mbps. Due to the predominance of cable and DSL within the urban communities of Champaign and Urbana, over 64% of the broadband consumers have access to 5 Mbps or higher, 12% lower than the national norm.

Residential Pricing, Service Offerings

Note: These are mostly Asymetrical Services with a cap of around 5 Mbps upstream.

Residential/SMB	AT&T	Comcast/Insight DOCSIS Cable	OneEleven Wireless	OneEleven DSL	Conxxus DSL	Volo DSL/Wireless	Consolidated DSL	HughesNet Satellite
1.5 Mbps								
6 Month Introductory Price								39.99
12 Month Intorductory Price								
Post Introductory Price			$ 40.00					79.99
Bundled Price								
3-4 Mbps								
6 Month Introductory Price								
12 Month Intorductory Price	$ 19.95							
Post Introductory Price	$ 38.00		$ 50.00	$ 69.95	$ 39.95	$ 32.00	$ 19.95	
Bundled Price								
5-8 Mbps								
6 Month Introductory Price								
12 Month Intorductory Price	$ 24.95							
Post Introductory Price	$ 43.00		$ 75.00	$ 89.95				
Bundled Price								
10-12 Mbps								
6 Month Introductory Price		$ 19.95						
12 Month Intorductory Price	$ 29.95							
Post Introductory Price	$ 48.00	$ 59.95		$ 101.95				
Bundled Price		$ 44.95						
18 Mbps								
6 Month Introductory Price								
12 Month Intorductory Price	$ 39.95							
Post Introductory Price	$ 53.00							
Bundled Price								
20 Mbps								
6 Month Introductory Price								
12 Month Intorductory Price								
Post Introductory Price		$ 69.95						
Bundled Price								
24 Mbps								
6 Month Introductory Price								
12 Month Intorductory Price	$ 49.95							
Post Introductory Price	$ 63.00							
Bundled Price								

UC2B is proposing to offer 20 Mbps for $20 per month. UC2B's initial proposal at the time of the grant applications was to offer 5 Mbps at the $19.95 price. After a more diligent market analysis, it is clear that this offering 20 Mbps of bandwidth for the same price will encourage current subscribers to move to UC2B, especially when it is pointed out that the customer is not always receiving the level of bandwidth from the current providers that the customer is subscribing to. In other words, the customer is not getting what they are paying for from the competition.

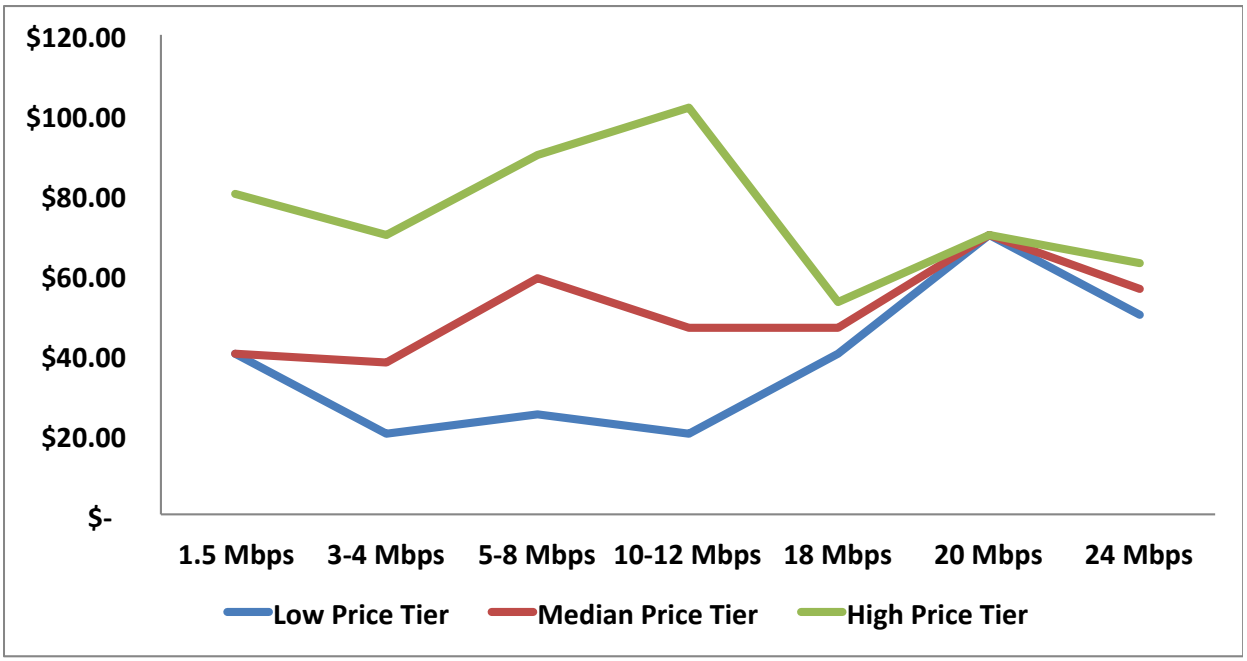
With UC2B offering 20 Mbps for $20 per month; the competition is offering the same amount of bandwidth for 2-3 times this price. AT&T is offering 18 Mbps for $39.95 initially; with the price increasing to $53 per month after 12 months. Comcast/Insight is offering 20 Mbps for $69.95. Most of Comcast's customers are on the 10-12 Mbps offering, receiving 5 Mbps of service for a price of $19.95 for six months, then jumping to $59.95 per month. Other competitors are offering 3-4 Mbps for $19.95 to $69.95.

Consumer	Basic Services Best Effort Upstream	Upgraded Upstream 1-2 Mbps Max	Upgrade Upstream 2 to 5 Mbps Max
Price/Service Tie	**Low Price Tier**	**Median Price Tie**	**High Price Tier**
1.5 Mbps	$ 39.99	$ 40.00	$ 79.99
3-4 Mbps	$ 19.95	$ 38.00	$ 69.95
5-8 Mbps	$ 24.95	$ 59.00	$ 89.95
10-12 Mbps	$ 19.95	$ 46.48	$ 101.95
18 Mbps	$ 39.95	$ 46.48	$ 53.00
20 Mbps	$ 69.95	$ 69.95	$ 69.95
24 Mbps	$ 49.95	$ 56.48	$ 63.00
Upstream	<700 Kbps	1 to 2 Mbps	2 to 5 Mbps
Low	**$ 19.95**	**$ 38.00**	**$ 53.00**
Median	**$ 39.95**	**$ 46.48**	**$ 69.95**
Max	**$ 69.95**	**$ 69.95**	**$ 101.95**

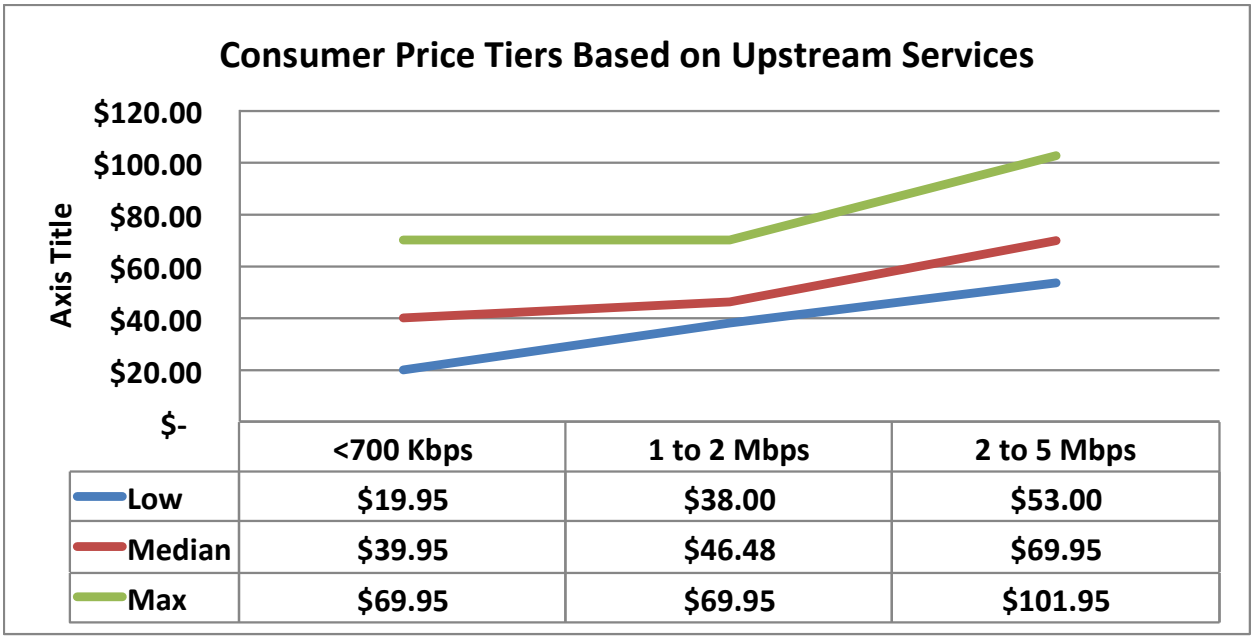
All of the service providers offer a "best effort" service; meaning, they will make their best effort, yet do not guarantee the level of service or the amount of bandwidth the customer will actually receive. To receive a higher level of service and to upgrade the available bandwidth for uploading data, the existing service providers charge the customer more. This could be a differentiating feature of UC2B's service offering. With Fiber to the Home, the minimum bandwidth received by the customer could actually be guaranteed by UC2B.

UC2B should be aware that many of the consumers of broadband are currently purchasing bundled services from cable/DSL providers. Comcast currently offers a bundled Triple play service at $99 which is the predominate bundle within the underserved community. Since UC2B is competing with bundled and unbundled services it will have to consider that the bundled offerings will be tougher to compete with unless there is a VoIP/IPTV alternative. Comcast

unbundled VOIP/TV will increase in price to as much as $112 for VoIP/TV without the data component making the UC2B and Cable package more expensive for the existing consumers of these services. Comcast has already announced that it will be lowering its price for bundled services.



What is interesting is that there are currently very few high bandwidth providers and only one above 18 Mbps. So, the convergence of low, medium and high pricing at the 20 Mbps service level around $66 per month is based on the fact that there is no competition above 18 Mbps. In addition, there is a wide variance in pricing across the Cable, DSL and Wireless providers.



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Summary of salient points:

- Comcast/Insight is the market leader with 53.8% of the market share. AT&T follows Comcast/Insight with 29% of the market share.
- With Comcast having approximately 54% of the market share, it makes sense that a similar percentage of the service delivery is cable modem. AT&T is offering their service via traditional Digital Subscriber Loop (DSL) services as well as U-Verse, which bonds DSL copper pairs for greater bandwidth. No one is currently offering services via Fiber to the Home technology. In addition, Comcast/Insight and AT&T have not upgraded their data cable network infrastructure to support the next tier of services (100 Mbps). UC2B should market the advantages of its Fiber to the Home offering, being the only service provider using this technology.
- 97% of the Upload Speeds are less than 5 Mbps. Over 35% of the download speed is less than 5 Mbps, now considered underserved. Approximately 64% within the urban setting have speeds greater that 5 Mbps, 12% lower than the national average. The actual speeds are typically 20 to 30% less than advertised and because of oversubscription, often are less than 50% of the advertised rates at peak periods. No other provider is marketing symmetrical services or any kind of service level agreement. This is an advantage for UC2B.
- Customers are paying for a service level that they are not actually receiving. All of the other service providers are offering their service as a "best effort." In order to actually receive the advertised bandwidth, especially for uploading data, the customer needs to pay higher rates. UC2B could offer a guarantee on service levels as a differentiator in the marketplace.
- Comcast has a 6-month introductory price of $19.99; after than it reverts to $59.99 or a bundled price of $44.95 for bandwidth speeds of 10 Mbps of download,

asymmetrical of 5 Mbps or less upload. AT&T has a 12-month introductory price of $29.95; after that it reverts to $48.00.

- Comcast/Insight does provide bundled services (Triple Play) that reduce the overall cost based on the uptake of the additional product offers. Both Comcast and AT&T will be able to offer bundled rates, simplifying the "triple play" decision and providing the appearance of lower rates for similar services. As UC2B does not have this capability, this is a disadvantage for UC2B. UC2B could partner with other VoIP/IPTV providers to mitigate this disadvantage. Groups like Roku, Boxee, and others are building a portfolio of Over-The-Top applications to compete with the local cable operators. UC2B will continue to negotiate with companies such as Netflix and Google as peering partners to offer movies and content on demand.

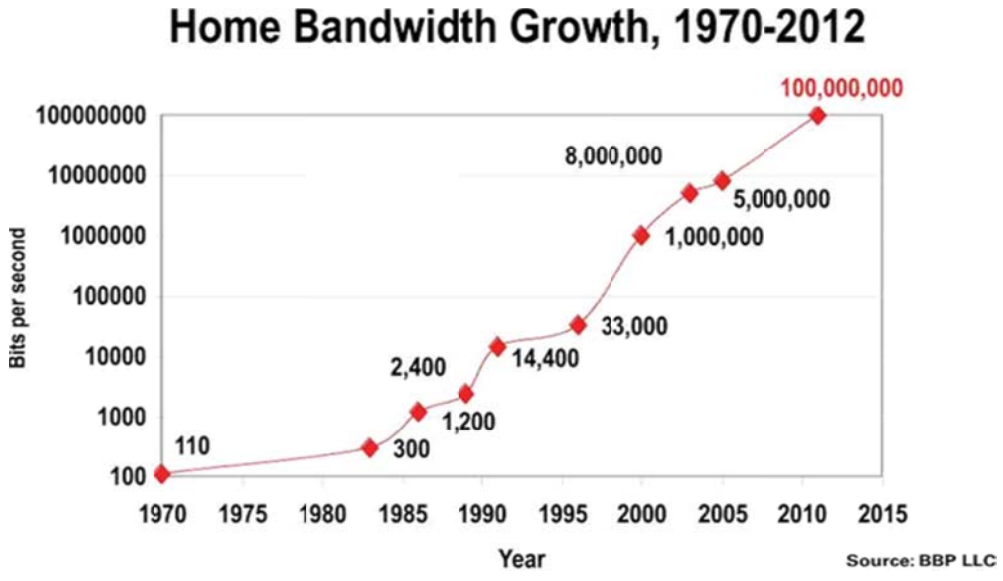
Recommended Positioning and Pricing Information to Consider including in Sales Materials

Positioning, Fiber to the Home Benefits

Advanced Fiber-To-The-Home (FTTH) Networks

There are many advantages that UC2B can provide as the only company that is offering Fiber to the Home as a network service delivery technology. These advantages include:

- The future demand for more bandwidth is expected to increase to over 1 Gbps within three years (by 2015). Fiber to the Home is the only service delivery that will be "Future Proof," offering virtually unlimited capacity for accommodating "bandwidth hungry" emerging technologies and consumers. With You Tube and Skype, cable modem and DSL are not adequately meeting the bandwidth needs of today, let alone the projected need for bandwidth in the near future.



- The current trends are already beginning to push the boundaries of existing home area networks and will continue to drive the applications bandwidth and home consumer services beyond the limits of the existing provider networks. The average in home user profile is more than one stream of video and basic applications.
- FTTH architecture eliminates all "last mile" copper limitations; bottlenecks.
- Using an all fiber network extended directly to the end-user premise will deliver higher customer satisfaction and superior performance surpassing anything in the Cable or DSL experience today. A survey conducted by the market research firm, RVA, LLC found that overall satisfaction amongst FTTH users is far greater (74% stating "very satisfied") than cable modem users (54% stating "very satisfied") and DSL users (51%).
- Greater bandwidth speeds, for both uploading and downloading data can be provided only by Fiber to the Home. Comcast/Insight and AT&T have not upgraded their network technology to accommodate the higher bandwidth applications that are being seen in the marketplace today. Fiber to the Home can accommodate 100 Mbps – 1 Gbps speeds; DSL and cable modem networks cannot support these speeds.
- This investment in technology will enable the delivery of new products and content while delivering cost savings through reduced operational and maintenance expense for UC2B. UC2B can then pass on the reduced operational and maintenance expenses to their customers. With regard to cost of service relative to download connection speed, the RVA national survey results showed FTTH subscribers paying $2.91 a month per megabit of bandwidth, compared to $3.83 for cable subscribers, $16.40 for DSL, and $49.38 per megabit for fixed wireless services. It is understood that fixed wireless services in the Champaign-Urbana area are more competitively priced; these results reflect national survey information.
- With FTTH, customers will be able to more easily telecommute, with a direct connection to the business' data applications. Many of UC2B's customers will be anchor tenants (the University, hospitals, major employers, the City and government offices) with a direct connection to the Fiber to the Home network. Having the ability to connect directly to UC2B's network over a fiber optic connection gives the appearance to the computer user that they are simply an extension or "on" the corporate or university network, given speeds and access as if they were working in the corporate or university office.

Fiber to the Home can more readily support Symmetrical Service; Why Do We Care About This?

There is a significant emergence of advanced, bandwidth-intensive applications that not only require large availability for download speeds, but also upload speeds as well. Customers are creating videos, pictures, and CAD files that need to be uploaded, requiring large bandwidth upload speeds. **In addition, over-the-top TV applications, gaming and cloud-based services are driving up the need for available capacity and the move towards expanded two-way communications. These over-the-top frameworks are also increasing the need for attaching and sharing home/business access creating the need for greater two-way service access.**

The Fiber to the Home Council, a non-profit organization whose mission is to promote and educate about the need for more Fiber to the Home connections, cites research concluding that consumer demand for symmetrical bandwidth, with the increasing use of applications such as cloud computing and a host of essential services in the areas of education and healthcare will "easily exceed 25 Mbps within just five years."

What are the applications that are available only on a Fiber to the Home network?

Application	Rate
Personal communications	300 to 9,600 bits/sec or higher
E-mail transmissions	2,400 to 9,600 bits/sec or higher
Remote control programs	9,600 bits/sec to 56 Kbits/sec
Digitized voice phone call	64,000 bits/sec
Database text query	Up to 1 Mbit/sec
Digital audio	1 to 2 Mbits/sec
Access images	1 to 8 Mbits/sec
Compressed video	2 to 10 Mbits/sec
Medical transmissions	Up to 50 Mbits/sec
Document imaging	10 to 100 Mbits/sec
Scientific imaging	Up to 1 Gbit/sec
Full-motion video	1 to 2 Gbits/sec

Service	Bandwidth	Number of Devices	Bandwidth Home Area Network	Bandwidth Residential Gateway to Network
TV	2 to 20 Mbps	3.5	2 to 70 Mbps	2 to 70 Mbps
DVR	2 to 20 Mbps	2	2 to 40 Mbps	0
Home Theater	1 to 6 Mbps	1	1 to 6 Mbps	0
Internet Browsing	1 to 20 Mbps	1 to 5	1 to 100 Mbps	1 to 10 MBPS
Printer	.5 to 1 Mbps	1 to 5	.5 to 5 Mbps	0
Digital imaging	1 to 20 Mbps	1 to 3	1 to 60 Mbps	0
On-line Gaming	.2 to 1 Mbps	1 to 3	.2 to 3 Mbps	.2 to 1 Mbps
Video Capture	.1 to 1 Mbps	1 to 10	.1 to 10 Mbps	.2 to 3 Mbps
Portable Audio	.1 to 20 Mbps	1 to 3	.1 to 60 Mbps	0
Total	**70 to 100 Mbps**		**12.5 to 354 Mbps +**	**4 to 84 Mbps +**

The average household in the Champaign-Urbana area is 2.3 persons. The average service consumer is becoming a multi-tasker and a mobile user of devices in the home. The estimated home user has multiple active devices as shown in the table above and depending on the applications is estimated to consume 70 to 100 Mbps in the near future requiring on average 4 to 84 Mbps services through a residential gateway. As technology such as 3D takes hold it is entirely possible that the Home Area Network and certainly the residential gateway will become the limiting factor to the delivery of these new services.

Fiber to the Home can also support Potential Partnering with Triple Play Services, Bundling of Services

The benefit of having one provider for voice, Internet and cable TV, and "bundling" these services into one invoice, with the added incentive of additional savings for cable TV and voice services is often an advantage for subscribers. UC2B, as the network owner, may decide to utilize the network to support triple play services, as well as a number of other applications. This may be provided through compensated access agreements and partnerships with alternative service providers to offer a bundled, triple play service.

As a neutral network owner, UC2B could also partner with the power and other utility companies to provide automated meter reading, load balancing, and remote energy management services. UC2B could also partner with the local police for security monitoring and video surveillance services. There are a number of applications that can be supported on UC2B's FTTH network and our meetings with key stakeholders can help in the discovery of potential partnership opportunities for UC2B. This ability to be a neutral provider and not a typical service provider is an excellent advantage for UC2B. UC2B has the unique ability to look at what behavior they would like to incent; i.e. what areas of influence could UC2B provide in terms of automated meter reading, energy management, healthcare initiatives, public safety, and economic development initiatives? As many of these anchor tenants will be directly connected to the UC2B network over a fiber optic connection, what other applications could be packaged with UC2B's Internet services to help solve many of the communities' problems or initiatives?

What Price/Service Offering will get Residential Customers to Change?

Typically, a 25-30% price reduction will incent a residential customer to change providers, if all other things are equal. If the price reduction is coupled with greater bandwidth speeds, enhanced services, and symmetrical bandwidth, this may provide an even greater incentive for customers to make a change to UC2B.

UC2B's initial thoughts regarding pricing and bandwidth offerings are provided on the following chart, along with a side-by-side comparison of pricing and bandwidth offerings available from the competition:

Comparison of UC2B Pricing vs. the "Market"				
Consumer	Symetrical	Basic Services Best Effort Upstream	Upgraded Upstream 1-2 Mbps Max	Upgrade Upstream 2 to 5 Mbps Max
Price/Service Tiers	UC2B's Pricing	Low Price Tier	Median Price Tier	High Price Tier
1.5 Mbps	NA	$ 39.99	$ 40.00	$ 79.99
3-4 Mbps	NA	$ 19.95	$ 38.00	$ 69.95
5-8 Mbps	$ 19.99	$ 24.95	$ 59.00	$ 89.95
10-12 Mbps	$ 29.99	$ 19.95	$ 47.95	$ 101.95
18 Mbps	NA	$ 39.95	$ 46.48	$ 53.00
20 Mbps	$ 39.99	$ 69.95	$ 69.95	$ 69.95
24 Mbps	NA	$ 49.95	$ 56.48	$ 63.00
30 Mbps	$ 49.99			
40 Mbps	$ 59.99			
Upstream		**<700 Kbps**	**1 to 2 Mbps**	**2 to 5 Mbps**
Low		**$ 19.95**	**$ 38.00**	**$ 53.00**
Median		**$ 39.95**	**$ 47.95**	**$ 69.95**
Max		**$ 69.95**	**$ 69.95**	**$ 101.95**

Conclusion and Recommendations

UC2B has an ambitious goal of gaining 50% market share in the underserved areas within six months. As an initial introductory and incentive program, offering a price/service delivery of 20 Mbps symmetrical service for $20 per month would seem to be an aggressive and impressive offering that would incent customers to change to UC2B. The service offering is 2-4 times better than the 5 Mbps – 15 Mbps "best effort" service offering for 50-75% of the price.

The initial feedback from UC2B's door-to-door canvassers is that between 50% and 60% of all the people they have talked to are interested in the service and want a follow-up "sales" visit. "20 Mbps for 20 bucks" would help close those sales. If UC2B hits a 50% penetration level, UC2B's initial financial model is sustainable and the two cities will have the ability to consider broader expansion plans of their network.

Coupled with the other benefits mentioned above, we at NEO believe this is an excellent price/ service delivery to introduce into the marketplace to meet UC2B's goal of gaining as much market share as soon as possible within a relatively short amount of time. We recommend a term agreement is needed to secure this pricing to reduce churn and to lock-in customers. Something else to consider may be to offer this service and pricing coupled with other initiatives that UC2B would like to incent, working in partnership with UC2B's anchor tenant community. This may be another way to lock in a customer in the long-term and gain market share quickly. This second option may take longer for UC2B to put in place; however, having the ability to be a neutral player and not a typical service provider, coupled with the fact that UC2B is a local provider that can focus and provide a hyper-local offering, will be an excellent competitive advantage over what other providers can offer in the marketplace.

Dealing with Landlords, MDUs, Apartments, Master Planned Communities

Key Objectives:

The principal objective in negotiating a private communications transaction is to install a high quality Fiber to the Home (FTTH) infrastructure platform capable of delivering a broad array of best-in-class high-speed internet access (HSIA) and communications related services. This FTTH platform will serve as an amenity of the property that will help market the property / community and enhance the pace and revenue associated with occupying units. A secondary objective of the transaction is to derive a mutually beneficial revenue stream from the sale of these communications products and services.

A notable aspect of the arrangement is that the Property Owner is not required to fund the full cost of the infrastructure. The arrangement also ensures that the services provided to the property are of the highest quality, and includes service and performance standards that exceed the best of what is otherwise currently available, as well as provisions for service and system upgrades in light of changing technology and end user demand for greater amounts of bandwidth.

The Product:

High-Speed Internet Access (HSIA)

Typical service tier offerings based on the competitive marketplace for MDU's:

- 5 Mbps download / 1 Mbps upload - basic service, lowest product in marketplace. Good product to bulk.
- 8 Mbps / 2 Mbps - competitive product, usually Cable lowest speed available, also good product to bulk
- 15 Mbps / 3 Mbps - generally highest tier that is typically offered in the marketplace
- 25 Mbps / 5 Mbps - only FTTH providers are able to offer this level of service
- 50 Mbps / 10 Mbps – unmatched in marketplace, super user status; again, only available with Fiber to the Home

The Sales Strategy Options: To provide services on a "Bulk" service plan or not? What are the advantages and disadvantages of a Bulk Plan?

Offering a Bulk Plan typically means contracting with the landlord of the MDU or master planned community for 100% of the tenants in the apartment or community. Usually there is one invoice that is sent to the landlord for 100% of the tenants; the landlord then bills the end users or the price for services is included in the Homeowners' Association fee or in rent. Generally, pricing is established on a bulk per unit price; however a flat monthly price for the building or for the community is also an acceptable practice. Bulk price discounting typically reflects a 20-30% reduction off of the retail marketplace pricing for like or similar service tiers. Typically as an incentive to offer a Bulk Plan, the landlord receives a percentage of the revenue (i.e. a "revenue share") or an up-front door fee based upon the number of subscribers.

Offering a Bulk Plan – Advantages to UC2B:

- 100% take rate. UC2B eliminates its competition in the building or community.
- The Property purchases the desired HSIA product tier from UC2B in bulk and provides service to individual units as a part of their rent or as a separate service.
- Marketing rights are typically included in the contract with the landlord. UC2B is able to provide marketing collateral to the end user in the community or common areas; and most likely receives move-in customer information, and has exclusive rights to market its services to tenants of the building.
- UC2B has opportunity to up-sell higher tiers of HSIA service or other services directly to end-users. Base pricing could be bulked through the landlord or HOA and customers who elect for higher tiers of HSIA service or other services would be billed directly for the upgraded service.
- Minimal UC2B cost associated with end-user "churn" (move-in/move-outs)
- Minimal UC2B debt collection issues, one primary commercial grade client, one invoice, one collection point
- Limited customer billing requirements and marketing cost
- Potential for the provisioning of other communication services that can be carried on FTTH infrastructure including voice, traditional video and over-the-top, home security, etc.
- Bundling of all products to create higher penetration/ higher margin returns.
- Opportunity to up-sell higher tiers of HSIA service, billing the tenant directly for these upgraded services
- Incremental business from other adjacent commercial clients that require higher bandwidth capacity and incorporating marketplace economies of scale.

Offering Bulk, the Disadvantages to UC2B:

- In many cases, the landlord is not technology-savvy and dealing with the landlord versus working with each individual tenant can be cumbersome. The landlord acts as a gatekeeper to the tenant.

- The Cat 5 wiring within most buildings built over five years ago or longer is often sub-par. If UC2B decides to have one demarcation point and one common Ethernet switch within the building, the existing inside wiring must be upgraded. With the early entrants of Fiber to the Home service providers (i.e. Verizon, Connexion Technologies and Zoomy Communications) the number one trouble issue could be blamed on existing sub-par inside wiring.

- The landlord often has trouble keeping power to the shared Ethernet switch.

Non-bulk or Subscription; Contracting directly with the Tenants – Advantages to UC2B

- Pricing for services is the same as dealing with any other customer. No special pricing is offered to the tenants.

- No "deal" is needed with the landlord; no door fees, or revenue share.

- Individual end-users subscribe with UC2B for the provision of HSIA service. Product is priced at retail rates competitive within the marketplace.

Non-bulk or Subscription; Contracting directly with the Tenants - Disadvantages to UC2B:

- Must compete against other providers on property (or wireless carrier) including their introductory or special offers.
- Must support all end-user churn. Apartments can churn at 40% annually, student housing 100%.
- Higher bad-debt from individual users (possible solution is to require auto-pay with use of credit card on file).
- More billable accounts to support and higher marketing cost to attract subscription.

Landlord Deal Strategies / Benefits to the Landlord

- The Fiber to the Home or to each unit becomes another property amenity, providing the best infrastructure (FTTH) and HSIA product in marketplace which will contribute directly to the Property establishing and maintaining higher occupancy levels thus more rent.

- Highly reliable network.
- Offer Service Level Agreement (SLA) superior to incumbents.
- Ability to bundle with other service providers offering better value to end-user.
- Competitive advantage as the Property can market itself with a premiere broadband service offering.

Other common offerings as part of the deal to the Landlord:

- Establish demonstration center / kiosk in community center or leasing office.
- Free service in Business Center.
- Free service to property management office.
- WiFi "hot spots" in common area locations; community centers, pool, fitness center.

Other Common Practices in Dealing with the Landlord.

A common practice in Bulk Subscription Agreements is to offer a revenue incentive where the Landlord has the opportunity to earn incremental revenue based upon the number of subscribers that participate in the program. These revenue incentives are typically structured in the following manner:

- Door Fee (Marketing Assistance Fee), one-time payment per servable unit (door) for the right and privilege to serve property, typically $200 - $300 per door. Higher door fees have been paid (up to $750) for longer deal terms in excess of 15 years. These Door Fees are not covered by the grant; NEO's comments regarding Door Fees are provided below.

- Revenue share incentive. Should be combined with an *Exclusive Marketing Agreement* and tied to service penetration on the property. EXAMPLE revenue share penetration formula (based on 100% of units):

  (Service penetration = Revenue Share)

  0 – 49% = 0%

  50 – 59% = 3%

  60 – 69% = 5%

  70 – 79% = 8%

  80%+ = 10%

NEO's Input and Recommendations

For UC2B, the vision was to run fiber into each apartment unit, and to be able to treat each tenant as if it was a single family home. This strategy will eliminate the very likely risk of needing to use sub-par inside wiring. As the grant will pay for the ONTs and the installation costs, this seems to be an excellent strategy. To UC2B's network management system, the unit at the MDU would have the same appearance as a single family home, and therefore, there would be no need to establish different operational and trouble resolution processes for MDU's.

Perhaps a strategy of providing a bulk rate to the building could be incorporated to obtain 100% take rate (the primary advantage of Bulk Rate Programs), yet the customer relationship for customer service, billing upgrades, trouble resolution would be between UC2B and the end user (mitigating the primary disadvantage of Bulk Rate Programs.) UC2B would bill the landlord or HOA directly for the base pricing for 100% of the tenants. Customers who elect to upgrade their HSIA and/or obtain additional services would be billed directly by UC2B. Additional services may be wi-fi, a community intranet, a computer concierge service or through a partnership with a VoIP/IPTV player, voice and TV services. It may be negotiated with the landlord which services are incorporated into the Bulk Rate Program in addition to the base HSIA services. Obviously bulking as many services as possible through the Bulk Rate Program is an advantage for UC2B. These negotiations are usually on an individual case basis; the same program for one apartment/MDU program may not always be replicated with a different landlord.

Although it is common practice to offer the landlord a door fee or a revenue share, the benefits to the landlord of having fiber to each unit may outweigh the need to provide compensation. As Door Fees are not grant eligible, and as UC2B is currently the only Fiber to the Home based service provider in the market, coupled with the fact that UC2B is providing fiber to each tenant (a substantial investment from UC2B; an excellent amenity for the landlord), NEO recommends that UC2B avoid the practice of revenue sharing or Door Fees. We believe the benefits of Fiber to the Home, UC2B's competitive price offer to tenants, and bringing fiber to each unit are more than sufficient reasons for the landlord to grant building/apartment access to UC2B and engage in negotiations of Bulk Pricing.

Agreements typically required to facilitate transaction:

- Construction Agreement (terms of FTTH infrastructure placement)
- Service Agreement (Bulk or Subscription) **SAMPLE AGREEMENT PROVIDED**
- Exclusive Marketing (includes Landlord incentives)
- Right-of Entry / Perpetual Easements (establishes rights to be on property)

Items to be contemplated, mitigated or negotiated:

There are a number of other considerations that need to be "thought through" in terms of implementing strategies with landlords. These items are highlighted below.

- Training for leasing agents and property managers
- Inside wiring - older existing wiring can have limitations:
    - CAT5E or better required. Buildings over 15 years old may require some re-wiring.
    - Business deal could be to offer rewiring as an alternative to door fees or revenue share
    - FTTH building and wiring specifications for distribution to Landlord

  (These issues regarding FTTH specifications and addressing older inside wiring standards are not a concern if, in fact, UC2B installs fiber directly to each unit)
- Student Housing challenges: hacking, gaming, bandwidth utilization, heavy customer transaction activity twice annually associated with beginning and ending of school term.
    - Require a student surcharge; student user application monthly base support fee
    - Put in place strong provider *"Terms & Conditions"* that allow you to shut down any end-user for reasons you deem necessary to protect the network
    - Consider not allowing the use of wireless routers in dorm rooms
- CPE (customer-owned premise equipment), i.e. switches, routers, gaming devices
    - Offer additional maintenance products to support
    - Sell common wireless router that you can support
- WiFi "hotspots"
    - Open or secure requiring authentication?
- Ongoing Client Relations / the Property Support Team
    - Free service to the Property Manager and on-site superintendent
    - Develop program to incent the Property Manager for monthly move-in lists
- Service Activation Specialist to support new activations
    - Many users will need on-site set-up support
- Managing Email and Storage requirements
    - Possible outsource to a "gmail" type solution
- End of *Service Agreement* term alternatives

        - Renew
        - Buy out of infrastructure
- Competitor use of infrastructure
- Compensated access

Business and Commercial Services

Pricing Strategies for Business and Commercial Services

Pricing is typically significantly higher for business services versus residential services, and this is certainly the case with the Champaign-Urbana market.

The following is the existing pricing and service delivery offered in the marketplace:

Commercial	Speed Tier	Bronze Low-end Internet/Voice	Silver High-End Internet/Voice	
AT&T Ethernet	100 Mbps	$ 475.00	$ 475.00	
	1 Gbps	$ 850.00	$ 850.00	
	CIR-100 Mbps	$ 700.70	$ 818.26	Have seen combine servies for health and education as low as $650 for 100 MBPS PORT/CIR
	CIR - 1 Gbps	$ 1,004.25	$ 1,189.68	Have seen combine servies for health and education as low as $1,100 for 1000 MBPS PORT/CIR

		Low-end Internet/Voice	High-End Internet/Voice
Paetec Ethernet	100 Mbps	$ 425.00	600
	1 Gbps	$ 1,530.00	2000

		Low-end Internet/Voice	High-End Internet/Voice
Comcast	22/5 Mbps	$ 399.00	$ 899.00
	50/10 Mbps	$ 489.00	$ 948.00
	100/10 Mbps	$ 650.00	$ 1,048.00

		Quote
High Speed Solutions	10/10 Mbps	$ 1,076.00
	20/20 Mbps	$ 1,326.00
	50/50 Mbps	$ 1,888.00
	100/100 Mbps	$ 2,735.00

Side-by-Side Comparison, Commercial Services

Mbps	Low-End AT&T	High-End AT&T	Low-End Paetec	High-End Paetec	Low-End Comcast	High-End Comcast	High Speed Solutions
10							$ 1,076.00
20					$ 399.00	$ 899.00	$ 1,326.00
50					$ 489.00	$ 948.00	$ 1,888.00
100	$ 1,175.00	$ 1,293.68	$ 425.00	$ 600.00	$ 650.00	$ 1,048.00	$ 2,735.00
1000	$ 1,854.25	$ 2,039.68	$ 1,530.00	$ 2,000.00			

UC2B's desire is to offer reliable and affordable Internet connectivity for businesses to attract businesses to Champaign-Urbana. UC2B could most certainly break from tradition in its pricing strategy by offering a similarly priced offering to small businesses as it is offering to the residential market, as its entry point in the market. Will a small 8-person office with a 20 Mbps connection use more bandwidth than a two-parent two-kid household with a 20 Mbps connection? Probably, but their demands will be at different times of the day with only overlap in the late afternoon. The demand placed on the UC2B network by business users during the day will not impact how UC2B sizes its upstream connection. It will be the residential users' evening demand that will determine that. Larger businesses that require additional IP addresses, or higher bandwidth needs would be priced competitively in the marketplace.

UC2B's vision for the UC2B network is to be one that does not slow down whenever the kids are home from school or late at night. If a customer is a customer, no matter if they are a family, a home business or a business in its own building, UC2B does not have to care about what the customer does with its Internet connection. The customer signs up for as much bandwidth as is needed (or can afford) and UC2B does not spend any time worrying about whether someone is running a business on a residential connection. There is no gaming the system, because there is no system to game.

UC2B's initial thoughts of offering 20 Mbps for $20 ($19.99) would position itself as the low cost/highest reliability and performance leader. The pricing is extremely competitive; perhaps too low, especially for a business Internet offering. However, this same pricing strategy for businesses will create a shock factor; as the price/performance is far better than what the competition is offering, and will most likely allow UC2B to gain valuable market share quickly.

If UC2B decides this pricing is too low; perhaps UC2B could offer this pricing as an introductory price, which reverts to a higher price after some time. Or perhaps offering this pricing to businesses that are in startup mode (younger than 2 years) or to non-profit organizations, or to companies with fewer than (8) employees might be a good incentive to attract new businesses to the area or to incent small businesses to form. Perhaps this rate is packaged with some other behavior that UC2B would like to incent. Again, as UC2B is in the unique position of being a neutral network provider; not a typical ISP, the question should be asked, what problems are there to be solved and what behavior could UC2B incent with their fiber-based, ultra-high speed network?

UC2B is providing one IP address included in the $19.99 price. Another suggestion may be that the definition of a business customer is one in which the customer has one IP address. If the customer only has one IP address, then the customer qualifies for the residential package of 20 Mbps for $20. With additional IP addresses, the customer receives the higher priced business

rate of $100 (see below). Many businesses will need additional IP addresses, and the pricing could be structured in tiers, something similar to the following:

Proposed Business/Commercial Pricing

IP Addresses	Monthly Price
1 IP Address	Included in the monthly price
2 to 5 IP Addresses	$14.95
6 to 13 IP Addresses	$34.95
14 to 29 IP Addresses	$59.95

NEO also suggests offering businesses the option of subscribing to more bandwidth, again with a tiered pricing approach. The tiered pricing approach would also narrow the gap between what UC2B is offering versus what the competition is offering. Tiered pricing could be the following:

Proposed Business/Commercial Pricing

Speed	Monthly Price
Introductory 20/20 Mbps	$ 19.99
20/20 Mbps	$ 100.00
40/40 Mbps	$ 300.00
60/60 Mbps	$ 500.00
80/80 Mbps	$ 700.00
100/100 Mbps	$ 900.00

The introductory rate of 20 Mbps for $20 could be offered to customer with one IP address, or for a limited time offer with a term plan. For example, the introductory price may be for one year with a three year term plan. After the first year, the rate reverts to $100 per month for the rest of the term.

This pricing would narrow the gap between what UC2B is offering and what the competition is offering, and it is still very competitively priced.

UC2B is also considering pricing for a direct connection or Private VLAN connection on the network. Anchor tenants would be charged this pricing for Ethernet connections to other customers on the network.

Private VLANs are used for connecting multiple locations of an organization to each other. This is sometimes referred to as "Metro Ethernet". There is no Internet connectivity or Community Network Service connectivity included in the Private VLAN Service. In this model, organizations would typically centralize Internet connectivity, and then use the Private VLAN to distribute Internet and organizational data to all remote locations.

UC2B is planning to offer the following pricing:

Business and Anchor Institutions, Private VLAN, Layer Two Service			
	Downstream Mbps	Upstream Mbps	Pricing Plan per Month
Private VLAN 10 Mbps Location	10	10	$ 100
Private VLAN 100 Mbps Location	100	100	$ 400
Private VLAN 1 Gbps Location	1000	1000	$ 1,200

This pricing seems to be competitively priced as well. AT&T is offering a Private VLAN product for health and education applications of $650 for 100 Mbps (UC2B is offering this at $400 per month) and $1,100 for 1Gbps. UC2B may want to adjust their pricing to be more competitively priced with AT&T (UC2B is planning to offer this at $1,200).

Other Issues regarding Contracting, Deposits, and Best Practices

The demographics of the UC2B FTTP service areas include a large number of lower income families and students. There is significant risk of non-payment of invoices. In order to mitigate this risk, the following strategies could be put in place:

1. Deposits on Equipment. A large, one-time deposit on the equipment may be difficult for a lower income household to absorb. The deposit on the equipment could be in the form of a credit card payment that is "held" but not charged unless the customer does not return the equipment, or does not pay their bill. Or another consideration could be to spread the costs of the deposit over a 3-month or 6-month timeframe.

2. Credit Card Billing. In order to have service with UC2B, it could be required to have a credit card on file and have the credit card billed automatically monthly. This eliminates much of the collection efforts and costs associated with billing and collections. This does not eliminate the collection efforts entirely, however, much of the costs are diminished. Although this may be a good process to put in place; the reality of the market must also be addressed. Many other service providers who serve low-income areas have found as many as 50% of the low-income households to not have a checking account or credit card. The ideal may be to do auto drafts or credit card billing; however, this may not be an option for many of the households in the UC2B service area.

3. Billing One-Month in Advance. This is common practice in the telecommunications and cable TV industry. The first month billing would include a pro-rated portion of what is left of the month, plus the following month's service. The customer is essentially billed in advance for services.

4. Temporary and Permanent Shut off of Service. If payment is not received within 7-10 days after the payment due date, UC2B can shut off service temporarily. If payment is not received after 14 days, the service can then be permanently shut off. This practice often facilitates timely payment for services. Another suggestion may be that UC2B customers who pay late may lose their Internet connectivity, but not their Intranet connectivity. This allows children to still do their homework and parents to still be able to work from home; and serves as a gentle reminder that payment needs to be made in order to connect to the Internet.

Draft agreements for end users have been provided to UC2B by NEO.

Indefeasible Rights of Use (IRUs) and Dark Fiber Leases

Dark fiber is optical fiber infrastructure that is currently in place but is not being used. Optical fiber conveys information in the form of light pulses so the "dark" means no light pulses are being sent. To the extent that these installations are unused, they are described as dark.

An Indefeasible Right of Use (IRU) is the effective long-term lease (or often thought of as temporary ownership) of a portion of the capacity of fiber optic cable. IRUs are specified in terms of a certain number of fiber counts for a given segment of a fiber optic network. In most cases, the IRU is a 20- to 25-year agreement to use the fiber count for a segment. Payment for the IRU is typically an upfront fee based upon the fiber count miles. The fiber count miles are the number of miles of the segment times the number of fibers used.

Typically, the per route mile fee can range anywhere between $1,500 to $3,500 per fiber count. These numbers are based upon national statistics. In the State of Illinois, the per route mile fee has ranged anywhere between $500 to $6,500 per fiber count for long-haul fiber routes. For very shorter routes, the per route mile fee can be up to $25,000 per route mile. This large range in pricing is due to a number of factors. Before we discuss these factors, an example of how the pricing for the IRU is shown below.

For example, ABC Company wants a 20-year IRU agreement for a (6) count fiber cable from Location 1 to Location 2. The distance on the network between Location 1 and Location 2 is 100 miles. ABC Company will pay $2,200 per mile. The upfront payment would be:

(6) counts of fiber * $2,200 per mile * 100 route miles = $1.32 Million

Additionally, there is typically an annual maintenance fee in addition to the up-front payment. Annual maintenance fees are typically anywhere from $200 to $350 per mile. In some cases, the annual fee is included in the up-front payment as it is treated as a capital expense from the buyer. In other cases, the maintenance fee is paid monthly or annually for the term of the agreement. Also, in some cases, the maintenance fee is a simple monthly or annual fee per customer and the number of fiber counts is not taken into consideration.

Assuming the annual maintenance fee is $200; the annual maintenance payment would be:

(6) counts of fiber * $200 per mile * 100 route miles = $120,000 annually or valued at $2.4 Million for (20) years.

Pricing for rural-based and long-haul IRU's are thought to be lower than metropolitan IRU's because a metropolitan lease may bring more customers and more revenue potential. Based upon national pricing, the up-front fee for a rural, long-haul IRU may be $1,500 - $2,500; the pricing for a metropolitan IRU may be $2,500 - $3,500. However, pricing is also dependent

upon supply and demand factors. For instance, if there is little fiber available for lease, the pricing will be higher. Many of the incumbent phone and cable companies will not provide IRU agreements, which create a greater demand for IRU's. Pricing for IRUs is also not regulated, and unpublished; and therefore, there is often a large fluctuation of pricing offered to various customers from providers.

In addition to the up-front payment and maintenance fees, additional revenue can be gained through leasing rack-space at UC2B's hub or equipment locations. Collocation is another term used for leasing space for placement of equipment in hub locations along UC2B's fiber network. Collocation fees are typically charged monthly by the rack, by space on the rack, or by chassis or cabinet. Additional fees are typically charged for use of power at the facility. In some cases, additional up-front fees can be charged for make ready use.

UC2B has proposed IRU rates of $1,500 per fiber-strand-mile for a 20-year IRU and has required early IRU customers to purchase entire backbone rings at a time. The rate is well within national averages for similar communities. Requiring full ring purchases increases revenue for UC2B, reduces stranded fiber strands, and encourages best practices in networking with ring-based topologies.

UC2B has proposed an annual maintenance fee of $300 per route mile, which again is within national averages.

NEO has provided sample IRU agreements and language that is often included in IRU agreements to UC2B. NEO also provided feedback for UC2B on its initial agreement with the Illinois Department of Transportation (IDOT).

NTIA and Grant Update – 1/6/12

We had a call with NTIA on Wednesday December 28th[th]. The call was brief and we mostly discussed all the recent construction activity.

Construction – The weatherman has truly smiled on UC2B these past three weeks. The conditions for construction have been far better than anyone would have predicted. By the end of last week 75% of the conduit on campus had been installed. There is still some tricky campus construction left to do, but Western could well complete the campus conduits before the students return. They will then turn their attention back to the City of Champaign.

FTTP Bidding – Attached to this report is a brief demonstration of how the FTTP RFP could be scored. I created 18 imaginary vendors, and completed the financial portion of the bid documents for each one. A few companies bid lots of the options. Some only bid a few. I tried to create some variance in the bids and the diversity pledges, but did not try to engineer any particular outcome. With this particular data, the Combo E ended up the winner. Vendor K got the bid for doing all the outside work for the all the Anchors and MDU's. Vendor F got the bid for doing all the inside work for the all the Anchors and MDUs. Vendor P got the bid for doing all the outside work for the FTTP sites and Vendor F again won the bid for the inside work for the FTTP sites.

That combo had the lowest overall cost and was within two one-hundredths of a percentage point of having the best average weighted Diversity score. The bid numbers I used are all less that what we expect these bids to be. If firms want to copy these numbers and bid them, we will be well under budget.

From an administrative standpoint, keeping track of two outside construction firms and one inside construction firm would be doable. The second place finisher combo with this data was H, which has six potential vendors, but with this data there were a total of 4 winning firms. Once we have taken input from the public next week and finalized the plan, I believe we have a scoring system ready to deal with this complex bidding process.

I spared you the 36 pages of vendor data and the formulas behind the calculations. We can discuss this at your meeting on the 18th.

Consultant Visit – Teri and Pam Edwards have lined up three days of excitement for our consultants. By the time you meet with them on Wednesday, they should be tired and will have met with many groups.

Core Network Equipment Purchase – The Technical Committee has had two looks at Tracy Smith's team's plan for the core network equipment, and will be taking a final look on Tuesday. Assuming they come to a recommendation on Tuesday, we may ask you to vote on that on Wednesday so that the equipment can be ordered. This equipment will be purchased through the UC2B's and the University's existing standing purchase orders, as has been previously discussed.

FTTP Electronics Purchase – By next Wednesday I will have filed the paperwork for the first wave of ADTRAN FTTP gear. It currently appears that we will use two additional ADTRAN chassis for the parts of the core network as well. That will simplify provisioning and trouble shooting.

See you on Wednesday.

UC2B FTTP Bid Packages

Name of Bidder: Sample Vendor

Only bid the packages or combination of packages that you are willing to do.

Examples: If you are only willing to do Package A1, if you also can do Package A2, then enter bids in lines #1, #2 & #3 (A1 & A2) and do not bid on A1 & A2 individually.

If you are willing to do packages A1, or A2, or both of them and want to offer a better price for doing both, then bid #1, #2, #3, #4, #5, #6 & #7 accordingly.

Your must bid all of the sub-elements of any given package

Example: If you enter a bid for Line #1, you must also enter a bid for Lines #2 and #3.

Failure to bid all the sub-elements of a package will invalidate your bid on that package.

Packages	Number of Locations	Description	Your Bid	Bid Line #	Notes
Packages A1 & A2 (All Champaign Anchors, IRU & Internal Hallway MDU/MTU sites - both Outside and Inside)	132	Champaign Anchor & IRU Sites Inside and Outside		#1	All Anchor & IRU sites in Champaign both Inside and Outside. #2 and #3 must be bid with #1.
	up to 13	Champaign MDU/MTU sites **per Building** Outside work		#2	Must include to bid on #1.
	up to 144	Champaign MDU/MTU sites **per Unit** Inside work		#3	Must include to bid on #1.
Package A1 only (Champaign Anchor, internal hallway IRU & MTU/MDU sites - Outside only)	132	Champaign Anchor & IRU Sites Outside Only		#4	"Outside" Anchor & IRU work includes terminating the OSP drop fiber cable in the building. #5 must be bid with #4.
	up to 13	Champaign MDU/MTU sites **per Building** Outside work		#5	"Outside" MDU/MTU work includes terminating the OSP fiber drop cable in the building. Must include to bid on #4.
Package A2 only (Champaign Anchor, IRU & internal hallway MDU/MTU sites - Outside only)	132	Champaign Anchor & IRU Sites Inside Only		#6	OSP fiber drop cable will already be terminated in the building. #7 must be bid with #6.
	up to 144	Champaign MDU/MTUs sites **per Unit** Inside work		#7	OSP fiber drop cable will already be terminated in the building. Must include to bid on #6.
Packages B1 & B2 (All Urbana Anchor, internal hallway IRU & MDU/MTU sites - both Outside and Inside)	84	Urbana Anchor & IRU Sites Inside and Outside		#8	All Anchor & IRU sites in Urbana both inside and Outside. #9 and #10 must be bid with #8.
	up to 16	Urbana MDU/MTUs per Building Outside work		#9	"Outside" MDU/MTU work includes terminating the fiber in the building. Must include to bid on #8.
	up to 112	Urbana MDU/MTUs per Unit Inside work		#10	Must include to bid on #8.
Package B1 only (Urbana Anchors, IRU & internal hallway MTU/MDU sites - Outside only)	84	**Urbana Anchor & IRU Sites Outside Only**		#11	"Outside" anchor work includes terminating the fiber in the building. #12 must be bid with #11.
	up to 16	Urbana MDU/MTUs **per Building Outside work**		#12	"Outside" MDU/MTU work includes terminating the fiber in the building. Must include to bid on #12.
Package B2 only (Urbana Anchors, IRU & internal hallway MTU/MDU sites - Inside only)	84	**Urbana Anchor & IRU Sites Inside Only**		#13	Fiber will already be terminated in the building. #14 must be bid with #13.
	up to 112	Urbana MDU/MTUs **per Unit Inside work**		#14	Fiber will already be terminated in the building. Must include to bid on #13.
Packages A1, A2, B1 & B2 (All Anchor, IRU & MDU/MTUs sites - both Outside and Inside)	216	**All Anchor & IRU sites Inside and Outside**		#15	#16 and #17 must be bid with #15.
	up to 29	All MDU/MTU sites **per Building Outside work**		#16	Must include to bid on #15.
	up to 255	All MDU/MTU sites **per Unit Inside work**		#17	Must include to bid on #15.
Packages A1 & B1 (All Anchors & MDU/MTUs - Outside only)	216	**All Anchors Outside ony**		#18	"Outside" anchor work includes terminating the OSP fiber drop cable in the building. #19 must be bid with #18.
	up to 29	All Champaign & Urbana MDU/MTU sites **per Building** Outside work		#19	"Outside" MDU/MTU work includes terminating the OSP fiber drop cable in the building.Must include to bid on packages A1 & B1
Packages A2 and B2 (All Anchors & MDU/MTUs - Inside only)	216	**All Anchors Inside only**		#20	OSP fiber drop cable will already be terminated in the building. #21 must be bid with #20
	up to 255	All Champaign & Urbana MDU/MTU sites **per Unit** Inside work		#21	OSP fiber drop cable will already be terminated in the building. Must include to bid on #20.

Packages C1 & C2 (All FTTP sites including MDU/MTU sites with no internal hallway - both Inside & Outside work)	up to 1794	Price **per location** Inside & Outside single location installation (single residential & single business.)		#22	#23 and #24 must be bid with #22.
	up to 267	Price **per single Mobile Home** Inside & Outside installation		#23	Must include to bid on packages C1 & C2.
	up to 859	Price per MDU/MTU sites **per Unit** for Inside and Outside Installation (in buildings with no internal hallway)		#24	Must include to bid on packages C1 & C2.
Package C1 (All Outside installations in the FTTP areas except Anchor, IRU and internal hallway MDU/MTU sites.)	up to 1794	Price **per single installation location** (single residential & single business.)		#25	"Outside" FTTP work leaves the OSP fiber drop cable coiled at the outside of building. Both #26 & #27 must be bid with #25.
	Up to 300	Price **per single mobile home** Outside installation		#26	Outside FTTP work leaves the OSP fiber drop cable coiled at the outside of building. Must include to bid on #25.
	Up to 100	Price **per Outside install per MDU/MTU Unit** (in buildings with no internal hallway)		#27	"Outside" FTTP work leaves the OSP fiber Drop cable coiled at the outside of Unit. Must include to bid on #25.
Package C2 (All Inside installations in the FTTP areas except Anchor, IRU and internal hallway MDU/MTU sites.)	up to 1794	Price **per single location Inside installation** (single residentia & single business.)		#28	"Inside" work includes the building entrance. OSP fiber drop cable will be coiled outside the building. Both #29 & #30 must be bid with #28.
	up to 267	Price **per single mobile home Inside installation**		#29	Inside work includes the building entrance. OSP fiber drop cable will be coiled outside the mobile home. Must include to bid on #28.
	up to 859	Price **per MDU/MTU Unit Inside installation** (in buildings with no internal hallway)		#30	Inside work includes the building entrance. Fiber drop cable will be coiled outside. Must include to bid on #28.
Everything	2700	All Inside & Outside Installation for all FTTP, Anchor and IRU sites.		#31	Total bid for everything
Packages A1, B1 & C1 (All outside work)	216	**All Anchor & IRU sites Outside only**		#32	"Outside" Anchor and IRU work includes terminating the OSP fiber in the building. #37 - #41 must be bid together.
	up to 29	All Champaign & Urbana MDU/MTUs **per Building Outside work** in Buildings with internal hallways.		#33	"Outside" internal hallway MDU/MTU work includes terminating the OSP fiber drop cable in the building. #37 - #41 must be bid together.
	up to 1794	Price **per single location Outside installation** (single residential & single business sites.)		#34	"Outside" FTTP work leaves the OSP fiber drop cable coiled at the outside of building. #37 - #41 must be bid together.
	up to 267	Price **per single mobile home Outside installation**		#35	"Outside" FTTP work leaves the OSP fiber coiled at the outside of building. #37 - #41 must be bid together.
	up to 859	**Price per MDU/MTU Unit** Outside installation (in buildings with no internal hallway)		#36	"Outside" FTTP work leaves the OSP fiber drop cable coiled at the outside of Unit. #37 - #41 must be bid together.
Packages A2, B2 & C2 (All Inside work)	216	**All Anchor and IRU sites Inside only**		#37	Anchor & IRU OSP fiber drop cable will already be terminated in the building. #42 - #46 must be bid together.
	up to 144	All MDU/MTUs with Interior hallways **per Unit Inside work**		#38	MDU/MTU OSP fiber drop cable will already be terminated in the building. #42 - #46 must be bid together.
	up to 1794	**Price per single inside installation location** (single residential & single business.)		#39	"Inside" work includes the building entrance. OSP Fiber drop cable will be coiled outside building. #42 - #46 must be bid together.
	up to 267	Price **per single mobile home Inside installation**		#40	"Inside" work includes the building entrance. OSP fiber drop cable will be coiled outside. #42 - #46 must be bid together.
	up to 859	**Price per MDU/MTU Unit Inside installation** (in buildings with no internal hallway)		#41	Inside work includes the building entrance. OSP fiber drop cable will be coiled outside Unit. #42 - #46 must be bid together.
What percentage of diversity do you pledge to maintain in your workforce assigned to this project throught the life of the project?				#42	See defintions in RFP instructions

Scoring Demonstration Vendors Per Piece Quotes

		Diversity %	A1 & A2	A1	A2	B1 & B2	B1	B2	A1, A2, B1 & B2	A1 & B1	A2 & B2	C1 & C 2	C1	C2	Everything	A1, B1 & C1	A2, B2 & C2
A	Bids on Everything and 6 Pieces	15%	$750	$500	$250	$750	$500	$250	$740	$490	$245	$630	$400	$240	$700	$475	$242
B	Bids on Everything, no pieces	16%													$725		
C	Only Bids Outside work	10%		$490			$490			$485			$390			$450	
D	Only Bids Outside Work	20%		$510			$510			$500			$410			$485	
E	Only Bids Inside Work	12%			$240			$240			$235			$230			$232
F	Only Bids Inside Work	21%			$260			$260			$250			$245			$247
G	Only Bids Outside Anchors	15%		$485			$485			$480							
H	Only Bids Inside Anchors	19%			$235			$235			$230						
I	Only Bids Champ Anchors	17%	$720	$490	$240												
J	Only Bids Urbana Anchors	21%				$710	$480	$235									
K	Only Bids Anchors	18%	$700	$470	$230	$700	$470	$230	$690	$465	$225						
L	Only Bids A1 - Champ Anchors Outside	22%		$515													
M	Only Bids A2 - Champ Anchors Inside	17%			$265												
N	Ony Bids B1 - Urbana Anchors Outside	22%					$515										
O	Only Bids B2 - Urbana Anchors Inside	18%						$265									
P	Only Bids C1- All FTTP Outside	22%											$405				
Q	Ony Bids C2 - All FTTP Inside	19%												$250			
R	Only Bids FTTP (Both Inside and Outside)	20%										$655					

Total $

		Diversity %	A1 & A2	A1	A2	B1 & B2	B1	B2	A1, A2, B1 & B2	A1 & B1	A2 & B2	C1 & C 2	C1	C2	Everything	A1, B1 & C1	A2, B2 & C2
A	Bids on Everything and 6 Pieces	15%	$104,250	$69,500	$51,500	$69,000	$46,000	$35,000	$170,940	$113,190	$84,770	$1,484,280	$942,400	$565,440	$1,890,000	$1,228,825	$653,884
B	Bids on Everything, no pieces	16%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,957,500	$0	$0
C	Only Bids Outside work	10%	$0	$68,110	$0	$0	$45,080	$0	$0	$112,035	$0	$0	$918,840	$0	$0	$1,164,150	$0
D	Only Bids Outside Work	20%	$0	$70,890	$0	$0	$46,920	$0	$0	$115,500	$0	$0	$965,960	$0	$0	$1,254,695	$0
E	Only Bids Inside Work	12%	$0	$0	$49,440	$0	$0	$33,600	$0	$0	$81,310	$0	$0	$541,880	$0	$0	$626,864
F	Only Bids Inside Work	21%	$0	$0	$53,560	$0	$0	$36,400	$0	$0	$86,500	$0	$0	$577,220	$0	$0	$667,394
G	Only Bids Outside Anchors	15%	$0	$67,415	$0	$0	$44,620	$0	$0	$110,880	$0	$0	$0	$0	$0	$0	$0
H	Only Bids Inside Anchors	19%	$0	$0	$48,410	$0	$0	$32,900	$0	$0	$79,580	$0	$0	$0	$0	$0	$0
I	Only Bids Champ Anchors	17%	$100,080	$68,110	$49,440	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
J	Only Bids Urbana Anchors	21%	$0	$0	$0	$65,320	$44,160	$32,900	$0	$0	$0	$0	$0	$0	$0	$0	$0
K	Only Bids Anchors	18%	$97,300	$65,330	$47,380	$64,400	$43,240	$32,200	$159,390	$107,415	$77,850	$0	$0	$0	$0	$0	$0
L	Only Bids A1	22%	$0	$71,585	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
M	Only Bids A2	17%	$0	$0	$54,590	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
N	Ony Bids B1	22%	$0	$0	$0	$0	$47,380	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
O	Only Bids B2	18%	$0	$0	$0	$0	$0	$37,100	$0	$0	$0	$0	$0	$0	$0	$0	$0
P	Only Bids C1	22%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$954,180	$0	$0	$0	$0
Q	Ony Bids C2	19%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$589,000	$0	$0	$0

Demo - UC2B FTTP RFP Scoring - Raw Vendor Numbers

Vendors' Raw Responses																		
Bid Line #	**Vendor A**	**Vendor B**	**Vendor C**	**Vendor D**	**Vendor E**	**Vendor F**	**Vendor G**	**Vendor H**	**Vendor I**	**Vendor J**	**Vendor K**	**Vendor L**	**Vendor M**	**Vendor N**	**Vendor O**	**Vendor P**	**Vendor Q**	**Vendor R**
#1	$99,000.00								$95,040.00		$92,400.00							
#2	$500.00								$500.00		$470.00							
#3	$250.00								$250.00		$230.00							
#4	$66,000.00		$64,680.00	$67,320.00			$64,020.00		$64,680.00		$62,040.00	$67,980.00						
#5	$500.00		$490.00	$510.00			$485.00		$490.00		$230.00	$515.00						
#6	$33,000.00				$31,680.00	$34,320.00		$31,020.00	$31,680.00		$30,360.00		$34,980.00					
#7	$250.00				$240.00	$260.00		$235.00	$240.00		$230.00		$265.00					
#8	$63,000.00									$59,640.00	$58,800.00							
#9	$500.00									$480.00	$470.00							
#10	$250.00									$235.00	$230.00							
#11	$42,000.00		$41,160.00	$42,840.00			$40,740.00			$40,320.00	$39,480.00			$43,260.00				
#12	$500.00		$490.00	$510.00			$485.00			$480.00	$470.00			$515.00				
#13	$21,000.00				$20,160.00	$21,840.00		$19,740.00		$19,740.00	$19,320.00				$22,260.00			
#14	$250.00				$240.00	$260.00		$235.00		$235.00	$230.00				$265.00			
#15	$159,840.00										$149,040.00							
#16	$490.00										$465.00							
#17	$245.00										$225.00							
#18	$105,840.00		$104,760.00	$108,000.00			$103,680.00				$100,440.00							
#19	$490.00		$490.00	$500.00			$480.00				$465.00							
#20	$52,920.00				$50,760.00	$5,400.00		$49,680.00			$48,600.00							
#21	$245.00				$235.00	$250.00		$230.00			$225.00							
#22	$630.00																	$655.00
#23	$630.00																	$655.00
#24	$630.00																	$655.00
#25	$400.00		$390.00	$410.00												$405.00		
#26	$400.00		$390.00	$410.00												$405.00		
#27	$400.00		$390.00	$410.00												$405.00		
#28	$240.00				$230.00	$245.00											$250.00	
#29	$240.00				$230.00	$245.00											$250.00	
#30	$240.00				$230.00	$245.00											$250.00	
#31	$1,890,000.00	$1,957,500.00																
#32	$102,600.00		$97,200.00	$104,760.00														
#33	$475.00		$450.00	$486.00														
#34	$475.00		$450.00	$485.00														
#35	$475.00		$450.00	$485.00														
#36	$475.00		$450.00	$485.00														
#37	$52,272.00				$50,112.00	$53,352.00												
#38	$242.00				$232.00	$247.00												
#39	$242.00				$232.00	$247.00												
#40	$242.00				$232.00	$247.00												
#41	$242.00				$232.00	$247.00												
#42	15%	16%	10%	20%	12%	21%	15%	19%	17%	21%	18%	22%	17%	22%	18%	22%	19%	20%

Demonstration - UC2B FTTP RFP Scoring - Calculated Vendor Numbers

Pink shaded cells are the lowest Price or the highest Diversity percentage

		Vendors' Calculated Numbers																	Lowest/ Highest
Description	**Packages**	**Vendor A**	**Vendor B**	**Vendor C**	**Vendor D**	**Vendor E**	**Vendor F**	**Vendor G**	**Vendor H**	**Vendor I**	**Vendor J**	**Vendor K**	**Vendor L**	**Vendor M**	**Vendor N**	**Vendor O**	**Vendor P**	**Vendor Q**	**Vendor R**	**Bid's**
Champaign Anchors & IRU	A1 & A2	$ 120,206.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$116,246.25	N/A	$111,975.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$ 111,975.00**
Outside Champ Anchor & IRU	A1	$ 69,262.50	N/A	$ 67,877.25	$ 70,647.75	N/A	N/A	$ 67,184.63	N/A	$ 67,877.25	N/A	$ 63,540.75	$ 71,340.38	N/A	N/A	N/A	N/A	N/A	N/A	**$ 63,540.75**
Inside Champ Anchor & IRU	A2	$ 50,943.75	N/A	N/A	N/A	$ 48,906.00	$ 52,981.50	N/A	$ 47,887.13	$ 48,906.00	N/A	$ 46,868.25	N/A	$ 54,000.38	N/A	N/A	N/A	N/A	N/A	**$ 46,868.25**
Urbana Anchors & IRU	B1 & B2	$ 80,943.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$ 76,586.88	$ 75,388.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$ 75,388.00**
Outside Urbana Anchor & IRU	B1	$ 45,987.50	N/A	$ 45,067.75	$ 46,907.25	N/A	N/A	$ 44,607.88	N/A	N/A	$ 44,148.00	$ 43,228.25	N/A	N/A	$ 47,367.13	N/A	N/A	N/A	N/A	**$ 43,228.25**
Inside Urbana Anchor & IRU	B2	$ 34,956.25	N/A	N/A	N/A	$ 33,558.00	$ 36,354.50	N/A	$ 32,858.88	N/A	$ 32,858.88	$ 32,159.75	N/A	N/A	N/A	$ 37,053.63	N/A	N/A	N/A	**$ 32,159.75**
All Anchor & IRU - both	A1, A2, B1 & B2	$ 198,207.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$184,492.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$ 184,492.50**
All Anchor & IRU - Outside	A1 & B1	$ 112,945.00	N/A	$111,865.00	$115,250.00	N/A	N/A	$110,640.00	N/A	N/A	N/A	$107,182.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$ 107,182.50**
All Anchor & IRU -Inside	A2 & B2	$ 84,182.00	N/A	N/A	N/A	$ 80,746.00	$ 37,300.00	N/A	$ 79,028.00	N/A	N/A	$ 77,310.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$ 37,300.00**
All FTTP Sites	C1 & C2	$ 1,484,532.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$ 1,543,442.00	**$ 1,484,532.00**
All FTTP Sites Outside	C1	$ 942,560.00	N/A	$918,996.00	$966,124.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$ 954,342.00	N/A	N/A	**$ 918,996.00**
All FTTP Sites Inside	C2	$ 565,536.00	N/A	N/A	N/A	$ 541,972.00	$ 577,318.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$ 589,100.00	N/A	**$ 541,972.00**
Everything Outside & Inside	Everything	$ 1,890,000.00	$ 1,957,500.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$ 1,890,000.00**
Everything Outside	All Outside	$ 1,228,777.50	N/A	$1,164,105.00	$1,254,661.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$ 1,164,105.00**
Everything Inside	All Inside	$ 653,400.00	N/A	N/A	N/A	$ 626,400.00	$ 666,900.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**$ 626,400.00**
Diversity Pledge	Diversity	15%	16%	10%	20%	12%	21%	15%	19%	17%	21%	18%	22%	17%	22%	18%	22%	19%	20%	**22%**

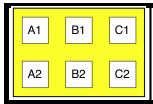
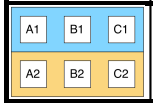
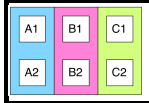
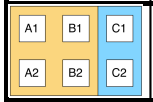
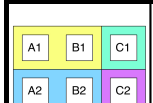
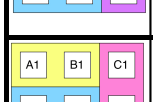
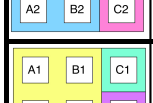
UC2B FTTP RFP Scoring - Calculated Vendor Points

Pink shaded cells are the lowest price or the highest Diversity percentage

		Vendors' Calculated Points (Includes Diversity Points for each calculated point total.)																	
Description	**Packages**	**Vendor A**	**Vendor B**	**Vendor C**	**Vendor D**	**Vendor E**	**Vendor F**	**Vendor G**	**Vendor H**	**Vendor I**	**Vendor J**	**Vendor K**	**Vendor L**	**Vendor M**	**Vendor N**	**Vendor O**	**Vendor P**	**Vendor Q**	**Vendor R**
Champaign Anchors & IRU	A1 & A2	865.3	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	914.6	#VALUE!	954.5	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Outside Champ Anchor & IRU	A1	852.9	#VALUE!	812.5	893.4	#VALUE!	#VALUE!	877.4	#VALUE!	892.0	#VALUE!	954.5	907.9	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Inside Champ Anchor & IRU	A2	855.2	#VALUE!	#VALUE!	#VALUE!	853.8	890.8	#VALUE!	949.6	910.6	#VALUE!	954.5	#VALUE!	829.1	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Urbana Anchors & IRU	B1 & B2	865.2	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	976.7	954.5	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Outside Urbana Anchor & IRU	B1	872.6	#VALUE!	831.7	913.4	#VALUE!	#VALUE!	896.5	#VALUE!	#VALUE!	972.7	954.5	#VALUE!	#VALUE!	928.2	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Inside Urbana Anchor & IRU	B2	855.2	#VALUE!	#VALUE!	#VALUE!	853.8	890.8	#VALUE!	949.6	#VALUE!	972.3	954.5	#VALUE!	#VALUE!	#VALUE!	840.4	#VALUE!	#VALUE!	#VALUE!
All Anchor & IRU - both	A1, A2, B1 & B2	864.7	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	954.5	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
All Anchor & IRU - Outside	A1 & B1	880.1	#VALUE!	830.9	920.8	#VALUE!	#VALUE!	896.3	#VALUE!	#VALUE!	#VALUE!	954.5	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
All Anchor & IRU -Inside	A2 & B2	-22.2	#VALUE!	#VALUE!	#VALUE!	12.8	988.6	#VALUE!	126.9	#VALUE!	#VALUE!	150.1	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
All FTTP Sites	C1 & C2	920.5	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	947.5
All FTTP Sites Outside	C1	901.2	#VALUE!	863.6	938.8	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	971.2	#VALUE!	#VALUE!
All FTTP Sites Inside	C2	887.8	#VALUE!	#VALUE!	#VALUE!	886.4	939.7	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	900.7	#VALUE!
Everything Outside & Inside	Everything	920.5	905.0	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Everything Outside	All Outside	878.8	#VALUE!	863.6	918.9	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Everything Inside	All Inside	888.1	#VALUE!	#VALUE!	#VALUE!	886.4	940.1	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Diversity Pledge	Diversity	170.5	181.8	113.6	227.3	136.4	238.6	170.5	215.9	193.2	238.6	204.5	250.0	193.2	250.0	204.5	250.0	215.9	227.3

UC2B FTTP RFP - Final Scoring of Combinations
(SAMPLE DATA)

Pink shaded cells are the lowest Price or the highest Diversity percentage

	Combo #	Winning Sub Packages	Winning Vendor	Component Price	Total Price	Component Diversity %	Average Weighted Diversity %	Price Points	Diversity Points	Total Points
	A	All of Everything	A	$ 1,890,000	$ 1,890,000	15%	15.00%	654.31	174.78	829.09
	B	All Outside - Vert-1	D	$ 1,254,661	$ 1,921,561	20%	20.33%	640.19	236.93	877.11
		All Inside - Vert-2	F	$ 666,900		21%				
	C	All Champaign Anchors - Horiz-A	K	$ 111,975	$ 1,732,004	18%	19.93%	725.00	232.24	957.25
		All Urbana Anchors - Horiz-B	J	$ 76,587		21%				
		All FTTP - Horiz-C	R	$ 1,543,442		20%				
	D	All Anchors Outside & Inside - Horiz-A & B	K	$ 184,493	$ 1,727,935	18%	19.83%	726.83	231.05	957.88
		All FTTP Outside & Inside - Horiz-C	R	$ 1,543,442		20%				
	E	All Anchors Outside - A1 & B1	K	$ 107,183	$ 1,676,143	18%	21.44%	750.00	249.81	999.81
		All Anchors Inside - A2 & B2	F	$ 37,300		21%				
		All FTTP Outside - C1	P	$ 954,342		22%				
		All FTTP Inside - C2	F	$ 577,318		21%				
	F	All Anchors Outside - A1 & B1	K	$ 107,183	$ 1,687,925	18%	19.91%	744.73	232.05	976.78
		All Anchors Inside - A2 & B2	F	$ 37,300		21%				
		All FTTP Outside & Inside - Horiz-C	R	$ 1,543,442		20%				
	G	All Anchors Outside & Inside - Horiz-A & B	K	$ 184,493	$ 1,716,153	18%	21.35%	732.10	248.81	980.91
		All FTTP Outside - C1	P	$ 954,342		22%				
		All FTTP Inside - C2	F	$ 577,318		21%				
	H	Champaign Anchors Outside - A1	K	$ 63,541	$ 1,719,076	18%	21.46%	730.79	250.00	980.79
		Champaign Anchors Inside - A2	K	$ 46,868		18%				
		Urbana Anchors Outside - B1	J	$ 44,148		21%				
		Urbana Anchors Outside - B2	J	$ 32,859		21%				
		FTTP Outside - C1	P	$ 954,342		22%				
		FTTP Inside - C2	F	$ 577,318		21%				

Least Cost:	$ 1,676,143	Largest %:	21.46%