



**Public Notice**  
**Technical Committee Agenda**  
*Public Notice for the Policy Committee*

**Regular Meeting**  
**May 8, 2012 – 3:30 PM - City of Champaign Council Chambers**

1. Call to Order
2. Roll Call
3. Approval of Agenda
4. Approval of Minutes
5. Policy Committee Updates
6. Action & Discussion Items:
  - a. Construction Update
  - b. Subcommittee Reports and Actions
    - i. OSS/BSS RFP (Fred)
    - ii. Marketing and Outreach
    - iii. FTTP Procurement Process/Status Update (Mike Smeltzer/Teri Legner)
  - c. Technical Issues Relating to Private Investment in Network Expansion (Mike Smeltzer) – continued discussion.
7. Discussion items:
  - a. Tasks or Items for the next meeting
  - b. Next Meeting:
    - May 22, 2012 City of Champaign Council Chambers, 3:30 PM
8. Audience Participation – 5 minute limit per person
9. Committee Member Comments and Announcement
10. Adjourn

# UC2B

## MINUTES

5-1-2012

12 P.M.

CHAMPAIGN COUNCIL CHAMBERS

MEETING CALLED BY	Tracy Smith, Chair
TYPE OF MEETING	UC2B Technical Committee – Special Meeting
GENERAL ITEMS	<ul style="list-style-type: none"> <li>Tracy Smith, Chair called the meeting to order.</li> <li>Quorum was verified – Verbal Roll call was taken (see Roll Call sheet).</li> <li>Approval of Agenda. Mark Toalson made motion. Fred Halenar 2<sup>nd</sup>. Approved.</li> <li>Approval of 4/3/12 Meeting Minutes. Bill DeJarnette made motion. Mark Toalson 2<sup>nd</sup>. Minutes approved.</li> </ul>

#5. POLICY COMMITTEE REPORT UPDATES TRACY SMITH/MIKE SMELTZER

DISCUSSION	<ul style="list-style-type: none"> <li>Tracy Smith reported that the Policy Committee has charged the Technical Committee with providing them a recommendation on the issues (if any) related to the private network expansion.</li> <li>Tracy Smith also reported that the Policy Board approved 3 tiers of bandwidth for the businesses in the census block groups as opposed to metered at this time but metered service may be addressed again in the future.</li> <li>Mike Smeltzer explained that if someone wanted beyond the tiered service, they would be able to receive an expanded tier option at a higher rate and it had pricing for IP addresses.</li> </ul>
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#6A. CONSTRUCTION UPDATE BOB MILES

DISCUSSION	<ul style="list-style-type: none"> <li>Bob Miles reported that it's moving a little slow this week due to the rain, but they are pulling fiber &amp; tying ends together; will be moving forward into Champaign in the next couple weeks. Node 9 is prepped and ready for the splicer's to come in; then onto nodes 2 &amp; 8.</li> </ul>
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#6B. SUBCOMMITTEE REPORTS & ACTIONS

DISCUSSION	<p><b>OSS/BSS RFP (Fred, Chair)</b></p> <ul style="list-style-type: none"> <li>No new update</li> </ul> <p><b>Marketing &amp; Outreach</b></p> <ul style="list-style-type: none"> <li>No new update</li> </ul> <p><b>FTTP Procurement Process/Status Update (Mike Smeltzer/Teri Legner)</b></p> <ul style="list-style-type: none"> <li>Mike Smeltzer reported they had the Mandatory Meeting for the Prime Contractors yesterday, there were 15-18 people in the room and approx. 30 people online. Lots of questions &amp; answers, but no real show stoppers one way or another. Upcoming events are Friday (May 4<sup>th</sup>) the Addendum 1 will come out which will reflect answers to questions researched. John Kersh has been updating the maps (based on visits to anchor institutions) determining where people want the equipment and the best way to get into the building; what the path is &amp; structure of the buildings. So a whole new set of maps will be released on Friday including this information.</li> <li>Tracy Smith asked what the timeline is.</li> <li>Mike Smeltzer said the bids are due a week from Friday, May 11<sup>th</sup> at noon and publically opened at 2 p.m.</li> <li>Mike Smeltzer reported that there are not many firms registered yet as prime contractors. Many people in the room were interested in being subcontractors for a prime contractor. There was a lot of networking going on in the room.</li> <li>Mike Smeltzer said he would assume the afternoon of May 15<sup>th</sup> the evaluation committee will determine who the semi-final winners are and the following week determine who the winner is.</li> <li>Teri Legner said it's tentatively scheduled for Council authorization on June 5<sup>th</sup>. That means the Policy Board would have to consider it before then.</li> <li>Teri Legner stated completion is slated for December 1<sup>st</sup>.</li> <li>Bill DeJarnette stated that the meeting went really well, with issues &amp; logistics it was done very professionally and smooth as it can be with people dialing in; a very positive atmosphere. The front work done ahead of time was beneficial.</li> <li>Mike Smeltzer said the streaming went flawlessly; Fred Halenar's IT staff set it up along with an email address for questions prior to the meeting.</li> <li>Teri Legner stated this was the first time that allowed for participation online at a meeting that</li> </ul>
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	<p>had mandatory attendance. There were concerns about what would happen if someone's internet access went down or if ours went down and we could not provide that access. Fortunately those situations didn't happen and this may be a process we can adopt for the future. Fred Halenar's staff and Safiya Noble, City hired outreach person arranged &amp; coordinated everything and kudos to them.</p>
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#6C.	TECHNICAL ISSUES RELATING TO PRIVATE INVESTMENT IN NETWORK EXPANSION	COMMITTEE
DISCUSSION	<ul style="list-style-type: none"> <li>○ Tracy Smith started the discussion by asking how do we want to proceed with expanding the UC2B network footprint; how do we want the private expansion of UC2B to play out and from the technical side, she provided possible questions for the group to consider. We are going to want to know about the fiber a private entity would use to connect to UC2B. What kind of fiber characteristics are we interested in, in terms of maintenance, what makes sense from the UC2B perspective and in terms of splicing, and how big should the fiber be. Look at this through that lens as Mike Smeltzer provided an overview.</li> <li>○ Mike Smeltzer said the 10,000 ft. version is we really have 2 issues we're looking to solve. One is we'll just call it the Lincoln Square, that sums it up; Champaign Telephone agreed to pay \$15-\$30,000 to put a lateral connection into Lincoln Square, they own that lateral, there maybe somebody else that comes along that would like to use the lateral fiber that was installed in Lincoln Square, and if we are trying to maintain an open access approach to doing this, which we have a firm belief in, what's the fairest way to make that happen and perhaps compensate Champaign Telephone, for the fact they paid for this upfront and if somebody else is going to come along and use it, find some way of doing that in a fair way. Both cities have long since done this with roads, somebody builds a road out to a new subdivision, they front the full cost of the road, and then somebody else comes along and builds next door, there's a recapture process the cities have used in Public Works for a long time, that kind of essentially tries to do that same thing. Somebody shells out the money upfront to make an investment, other people are going to share in that investment, and the people that come along later help compensate the person or organization that made the original investment. That is one scenario and that one already exists. We've not have anybody knock on our door and ask for fiber in Lincoln Square, but we want to be ready for that day when that happens.</li> <li>○ Mike Smeltzer said the 2<sup>nd</sup> issue is certainly Champaign Telephone, perhaps Volo, Pavlov, will be interested at some point in connecting their fiber assets to the UC2B backbone rings. And that's great, but at the same time, again, we would like to end up in a situation where UC2B is promoting an open access network universally throughout the community. Mike referenced the example of Prairie Gardens provided in the packet materials (using dual providers and compensating that original provider). The first company that comes in pays for it, they deed it to UC2B in exchange for an IRU that is essentially free, and then they agree to pay UC2B to maintain that fiber. So that becomes UC2B's asset, part of the network, and part of UC2B's responsibility to maintain, but then UC2B has access to half the strands to provide to company B, company C, ect...or for UC2B to use on its own. Prairie Gardens could call us and say, we have Champaign Telephone doing some work for us, we'd like to buy bandwidth from UC2B; at that point, UC2B would compensate company A anyway that any other organization would; assuming we had some money to compensate from, but hopefully someday we will have that.</li> <li>○ Mike Smeltzer said the percentages are generally designed in here so that at the end of the day, each of the companies paid roughly a third, the company that originally had put it in, ends up spending about 35% of their original investment, and the other two have about 40% and then UC2B gets a little extra money out of the deal because we want to be sustainable. It simplifies things from a management point of view, from a JULIE point of view, if we ended up with 15 different companies in town that all built their own laterals, JULIE locates &amp; repairs would just be much more complicated than they would otherwise be if we just had a single entity owning and controlling all the fiber. The details can be tweaked one way or another, but Champaign Telephone is looking at doing some additional expansion and so they'd like some clarity on what are UC2B's policies going to be, and Mike thinks it's in UC2B's interest to have some policies so ultimately that fiber becomes available to more than one provider. If we end up with a situation where this provider owns this subdivision and this provider owns that subdivision and that provider owns this business complex; that's not what we want. We want competition available throughout the community, where people are investing their own money; we need to give them a nice path so that they can recover some of that if we're going to make it open access.</li> <li>○ Mike Smeltzer said in terms of some of the technical stuff, the material talks broadly about testing the fiber &amp; accepting the fiber, and that's some of the things you maybe want to talk about today.</li> <li>○ Tracy Smith said before we launch into the discussion, she is going to track our time, and that one suggestion was that we have subcommittees that tackled some of the IRU issues, but due to the time constraint with making a decision, she wants to keep it at the Technical Committee level. So if we get far enough in our discussions today, that we feel comfortable voting on any</li> </ul>	

of the issues, that's fine, if we just need to discuss it this time and at our next meeting, next week continue that and then vote, that's fine too. But she wants to keep it at the Technical Committee level.

- Mike Smeltzer said the North Lincoln Avenue Business Association is interested in getting our fiber expanded to all of their businesses. They are actually talking about doing it themselves, but then turning it over to UC2B. And that's kind of a different model than what this anticipates but the same thing could happen. Mike assumes that if they did it themselves and just turns it over to UC2B that it would be open access from the get-go. And whatever providers wanted to use it, could use it to provide services their interested in having multiple providers have access to them.
- Tracy Smith said with that overview of the situation, she would like to start discussion with the last question she posed in her email, why it is important to UC2B to manage and/or maintain or own the fiber.
- Ross Veach asked a question related to the general concept, what happens when someone that put in their own fiber ceases to exist or loses interest in that fiber and wants to abandon it.
- Mike Smeltzer said in this scenario, they would only have an IRU to the fiber, UC2B would own the fiber and if they want to stop using it, that's fine. They would probably stop paying their maintenance fees to UC2B at that point. This would accommodate that nicely.
- Fred Halenar said that if he is the company building that \$18,000 fiber to Prairie Gardens and sure I get a \$1 per year IRU, but I have already spent the \$18,000 to build that lateral, other than the first company coming in and the second, how do I get 100% of my money back.
- Mike Smeltzer said in this formula you never get 100% of your money back. You get 65% of your money back.
- Fred Halenar asked what the incentive for somebody to build a lateral is and here you go.
- Mike Smeltzer said that hopefully you're providing services that you are making money on from the first day you install that. It's facilitating your ability to provide services to Prairie Gardens. That's your real reason for doing it. Say if Champaign Telephone was going to do a deal for Prairie Gardens, they could approach this one of two ways, they could try and charge Prairie Gardens the \$18,000, which probably wouldn't be overly attractive to Prairie Gardens, or they could sign them up for a five year deal, so sooner or later Champaign Telephone conceivably could be made whole, or whomever does the original investment, because most companies would try to amortize that one time cost over a service contract.
- Bill DeJarnette agreed, and also giving back half the strands, well they don't have to go to UC2B and then pay another portion of the build out, I can go to Champaign Telephone and potentially lease a couple of the strands that they own with a sublease agreement and never have to kick into that capitol side. Champaign Telephone as an example would then calculate the payback on that, and say would I rather get my money from part of the construction which some places may say I can't front 35% of that, I don't want to do that, but here's a 2 year agreement at a little higher rate so Champaign Telephone may actually end up leasing fibers of that group that they do; and UC2B may never be in the process of handling that recoupment process. But nobody is going to build out for fun. If they're not going to make money at it, that's an issue.
- Bill DeJarnette said somebody has to build the infrastructure, there has to be enough profit to make it worthwhile doing it, the issue for us is and everything we have here, is going to have to be carrot driven. We have very few sticks we can actually wield in trying to formulate a plan that will make people say what we want to do is also what's good for us in the long term.
- Mike Smeltzer said he did not anticipate the possibility of Champaign Telephone or the original builder wanting to sublease some of their fibers. The whole idea of subleasing an IRU has had some discussion recently and sooner or later, the Policy Board will have to decide if that's something we put into our IRU's that they can or cannot do. This kind of assumed that wouldn't happen, although it never clearly states that.
- Bill DeJarnette said that if it's their \$20, it's going to be pretty hard for us to dictate how they use theirs.
- Mike Smeltzer said IRU agreements can be very restrictive.
- Bill DeJarnette said if we're looking for build out and expansion, then I think we're going to be stuck in that position of being more open to whatever gets more use out there than not.
- Mike Smelter said it would be in UC2B's best interest financially to have them lease additional strands from UC2B because we have the extra maintenance revenue and so forth. So we may want to direct our attorneys to put a clause in all of our area agreements that specifically prohibit subleasing IRU fibers.
- Bill DeJarnette said it's worth mentioning and then they'll be able to tell us.
- Mike Smeltzer said that's a good question that's not addressed yet.
- Tracy Smith asked what is the committee's thoughts from the technical side, what's the benefit for UC2B to own the fiber or to manage and maintain it. What are the committee's thoughts?
- Ross Veach said he personally doesn't see how it's feasible how you've laid it out in the beginning, how it's feasible for us not to own them. I think you create a disastrous mess that nobody can keep up with. It seems like a no brainer.
- John Brighton agreed. Sustainability obviously would be impaired if you are depending on fragmented ownership of fiber throughout the system.
- Bill DeJarnette stated by definition we want to be an open system, that's a given. Organizationally with that we're fairly well carrot driven so if we can define goals and

expectations that make the decision to get there, is the best decision for an organization to do, but usually that means we have to give up something. Often times it's a little bit of profitability. But from a City's perspective, I can talk to say Joe Blow about how his sanitary sewer line attaches to our sewer in our ROW; I can't tell him at all that if he decides to run it in concentric circles and until he finally gets to me, I can't dictate how he does that. So if we're in an open system, I can't say that Champaign Telephone, you're going to build I know where in Lincoln Square; and Volo says actually we would like to get to Lincoln Square, but we think we can do it cheaper than the cost of that percentage of the purchase, then they're going to do it in a cheaper way. So once again, we have to make sure we're in a process that if we think our way is the right way, we clearly want the decision process to lead them down that path and say well monetarily it's in your best interest to do this, both short term investment-wise and long term from our maintenance, access point issues. Lincoln Square could easily all-of-a-sudden have people coming in from a couple different directions, because the rings are all over in that area. Those issues are out there, but we don't have a lot of sticks to wield. Bill DeJarnette spoke to Bill Gray at Public Works and the expectations of the City and clearly that involves the ROW and that's it; most of our laterals don't run down the ROW, they attach and then clearly run down on private property. We have no control over that.

- Mike Smeltzer said if we assume, using the Prairie Gardens example, that it really costs \$18,000 out of pocket to build from our ring to Prairie Gardens the first time, probably somebody coming along the second time can't do it for less than 50% of that, it would still be in their best interest to buy some strands on the fiber that's already in the ground than to spend, maybe they can do it for 75%, but why would they spend \$12,000 when they could spend \$9,000.
- Bill DeJarnette agreed. That's one of the controlling points where we want to make sure our comfort level makes sense to us and makes to the companies looking at that; which also means on our backend, what are we looking to provide them for that. Because if they run their own, they can sell to whomever they want. Clearly that's what drives those issues. There is a real advantage for them to be able to come in run their own split it out & go on, and make that one/two strand connect back to us.
- Mike Smeltzer said that is our stick. If the Policy Board were to make it a policy that if you're going to connect fiber to us and a lateral fiber to us, the only way we're going to let you do that is if you do it on an open access basis and follow this. If we don't want to turn over Lincoln Square or Marketplace Mall for example, whoever puts the first fiber into Marketplace Mall we don't really want force everyone to use the same provider forever. That's our stick, if you want to have access to our rings of fiber and be able to purchase strands on them, any laterals that you build to them you have to conform to this, that's the one stick we have.
- Bill DeJarnette said his point would be, even if I build my own lateral, then otherwise all I have to do is still create an open access agreement and say I will clearly turn over X fiber in this because I'm going to put 144 in. Its fiber rich, but I've got what I want, while this other agreement may position me to only have 2. All I'm saying is we look at that; those are the complexities that we drive this down.
- Mike Smeltzer said one of the things technically we're seeing is that the equipment that allows you to use just one strand of fiber and serve 40 customers with 40 different 1 gig connections is out there, it's available and commonly used. The concept of needing lots & lots of fiber to service lots of customers is not gone but it's evaporating. The network design of some of the people who have fiber on UC2B some are just thinking of using a single strand both directions so its ringed, but to hit multiple locations and using a different color of light on that strand for each different customer that's along that. The technology supports that just fine. So 2 strands in and out of a location maybe overkill for some people. They may want one coming in and one going out to support a ring but after that, that maybe all they ever need and especially a building like Lincoln Square where you'd probably put a small router in the building and then you'd feed all your customers internally within the building.
- Fred Halenar asked Bill about his comment regarding building a lateral not necessarily through a City ROW; but he thinks it would go otherwise, very little of that distance would be on private property, most it would go through the City's Right-of-Ways.
- Bill DeJarnette said using a school as an example, Lowman, my connection on the ROW is about 2 or 3 feet and then I have about 180 feet out to get to that building.
- Mike Smeltzer said that's when you have a ring right out in front of your building. But for the majority of the community they won't have a ring in front of their building so the lateral would have to go down some City ROW and then go in.
- Bill DeJarnette said anything that UC2B has built from a ring to an anchor institution, as far as I'm concerned we're going to call it a lateral, that's an extension of our ring; so all the rules for our rings should follow all those rules on that lateral; and yes, all of those are going down the ROW until it finally turns and flips into the building. Calling it the private piece of it, would not expect a number of places in Urbana are good examples, there very far from rings, but not far from a lateral. The issue is from their building to that lateral on the ROW, that's the only private piece regarding that build out issue; because that laterals already built. The laterals are treated as extensions of the rings, because we own them, they are ours; they follow all the ROW rules. They are in place; what he was looking at was the third level of build out to finally light up that building on private property.
- Mike Smeltzer explained it was written so it was the same whether you were connected to an

existing lateral or to an existing ring. For instance, in Savoy, on Old Church north on Dunlap, in order to get to City Hall there it passes a fair number of businesses and if any one of those businesses wanted to connect they would actually connect into the lateral cable that's going north there rather in the ring itself. The attempt was to make a connection to an existing lateral or connection to the ring identical in terms of what this looks like.

- Bill DeJarnette said those laterals that we build sit under the same ownership rules that the rings do. UC2B built them, we own them, they're ours, you want to connect to them whether you're connected to the ring or lateral, you have to follow those rights and ownership rules; it's when you step off of that onto private property, who owns that piece of conduit. If they donate that piece, so we're going to JULIE that, on their yard, right.
- Mike Smeltzer said that is the downside to this policy, and that's one of the carrots that we're offering to the original company that builds it, is they are getting rid of their JULIE obligations. We're picking them up, now they're actually paying us some money to do that, but none-the-less, they don't have to be in the 24 hour on-call business.
- Ross Veach said we do not have laterals down every block in the county, what happens when a build out of several blocks half a mile is needed, how does that happen.
- Mike Smeltzer said under this, sooner or later it ties back into a ring and its going to be in the City right-of-way all the way down there; so whomever did that would have to do all the normal permitting with the City to be able to build that, but once done and built, that whole section would be donated.
- Ross Veach said if they only wanted to run 12 strands and we were in the opinion that 144 was a much better idea, do we have influence on that.
- Mike Smeltzer said this addresses a minimum strand count if that laterals going to serve one business it needs to be minimum of 12, if it has potential to serve multiple businesses they need to be 4 strands per business. That may be overkill, maybe 2 strands per business will be fine, but when you're doing all the work to put the fiber in the ground, the cost of the fibers itself is one of the smaller parts of the equation. We are trying to encourage bigger strand counts, enough strands so that coming along later we don't have to pull a cable out and put a new one in, there's enough fiber in the ground. And that's a downside to a company doing this because rather than putting in the 12 strands they need, maybe we're going to require them to put in 48 if they want to go back to us.
- Ross Veach said for my purchase Lincoln Square isn't a good example; I am more concerned about something a quarter of a mile, half a mile from where we already are.
- Mike Smeltzer said in terms of when UC2B planned its original laterals, anytime we were going any kind of distance past a business area, we put way more strands in that cable than we needed to get where our ultimate destination was, that was our design philosophy all along. We want to keep that, example being the Shops of Knollwood, there's no fiber going to that right now, and there are about 12 businesses, these rules would require a 48 count cable to go into the lateral to serve the Shops of Knollwood area. Four for each of the 12 businesses that are there. It's possible that whoever's building that only needs 2 strands initially for their own purposes, but we would force them to put in more strands than they would need for their own purposes, and that's the downside to them. It's a balancing act between your carrots & sticks.
- Bill DeJarnette said that becomes the crux of it, is I want to serve a neighborhood and I'm coming down mostly ROW, out in the middle of nowhere, but it's profitable to get there, for us though the next user through that area maybe someone on the other hand wants to service fiber to the home, the conduits there for one reason, but the next guy in wants to put service into this area, how does he get access to that and the issue is, he may have insufficient fiber count, and that may become part of that whole model issue, but I need this model to drive his desire to use that same lateral so we are not running another 2 inch conduit underneath that same sidewalk..
- Ross Veach asked might we ourselves be expected users of that same long run to do fiber to the home.
- Mike Smeltzer replied we certainly could be, and if I were the original company that paid to put that in, I would expect UC2B to reimburse me for part of my expense in doing that, if UC2B were to use the fiber.
- Bill DeJarnette said but on an open network, nobody says UC2B has to be the organization to do that.
- Mike Smeltzer said no, it could be anybody.
- Bill DeJarnette said it's wonderful problem to have, is if we have this expansion and it's out there and people want to get at it, we just need to make sure we organizationally support it, it follows our primary goal of an open access system and makes sense organizationally so we know how to run it and somebody else knows how to attack it to use it.
- Mike Smeltzer said sooner or later the Cities have an issue with there's just no more space underground. There are some intersections now that you'd have a very hard time putting additional infrastructure in, but there are some places where things are pretty tight.
- Mike Smeltzer said it's not an infinite resource. As a public policy if we can get people to share the same infrastructure either financially or in a user base, that would seem to be good public policy to be promoting.
- Peter Folk, Volo, said in regards to carrots & sticks, as a carrot, the policy to allow people to donate laterals that meet the standards that have been laid out, and under the reimbursement

scheme, seems like a good policy. It seems like an attractive one, it seems like many people would chose instead of maintaining their own infrastructure to donate it to UC2B and that be done and give them an opportunity to make something back if somebody else decided to use it. But to then link that to the stick, of that's the only way you can connect to strands on the UC2B network that you have an IRU on, indivisible right of use, that's the part he has a problem with; as a carrot it's nice, it's a good option to have, but to say that you may not connect to UC2B unless you turn over the assets that you've built to UC2B and unless it meets these technical standards and unless etc...the point of getting an IRU is that I am able to use that fiber to connect wherever I want to and even if it's not an IRU that I have, that's going to be my goal if I were to buy service on a backbone ring it will be to be able to connect that to something. I do not think it counts as an open network, if the only things that I'm able to connect that to are things that I then give to UC2B.

- Mike Smeltzer said this really only talks about laterals from a ring to a customer site. That's the only thing we really care about at this point.
- Peter Folk, Volo, said if I happen to be in a weird position of owning an Internet service provider that has backbone connectivity, and I have a ring that goes right past my house, which I do, and I wanted to run a strand to connect my house into my backbone fiber, it seems the antithesis of an open network that I would not be allowed to do that. And that's what this sound like. It sounds like the only way I can do that is if I give UC2B whatever it is I build, I turn it over to them. I am not saying I don't want to do that, I'm saying as a carrot this policy seems good but as a stick, it being the only way that I can connect to the UC2B backbone, it's not open.
- Ross Veach asked if we could divide this conversation and replace the word lateral with the word lateral and the word drop. Where drop implies dropping straight into someone's private property vs. lateral being going down the street for 3 blocks.
- Mike Smeltzer said that is a good conversation to have, in our discussions with contractors and in the bid documents, we're defining a lateral as being the connection from the ring that pretty much stays in the public ROW to the property of the building we're ultimately trying to get to, there's typically going to be a handhold in front of the building, then the cable that goes from that handhold primarily on private property is the drop cable. So laterals by definition would be in public ROW mostly. Now if the ring happens to go in your front yard, you'd just have a drop right from the ring to the building. But for most situations where you don't have a ring in front of their business, there would have to be some lateral from the ring to the front of their business, and then what happens from that handhold in, we're referring to that as drops.
- Ross Veach asked Peter Folk if that changed his argument.
- Peter Folk, Volo, said no, because fundamentally if I have fiber that goes through public ROW, I can get a permit to do that, nothing can prevent me from getting that permit, and he has talked to both Public Works Departments, while there is some logistical issues with running through some intersections, they're not going to not give me a permit, I just have to pay to move the other utilities if I want to go through there. The point is, you're trying to create an open access network, there's an open access in that, if I have something that I want to connect to that network, pretty much by definition of open access, I should be allowed to do that and by having this as a restrictive policy, instead of an option, it makes it not open. That is my primary issue with it.
- Ross Veach said he understands, but haven't yet gotten to a policy that satisfies your complaint.
- Peter Folk, Volo, said a policy that satisfies my complaint is that you pass a donation of laterals policy that says these are the technical requirements under which if you have fiber infrastructure that you want to donate to UC2B, we will accept it under these terms. That's an inclusive policy. It does not say, unless you have such infrastructure and it meets these requirements you cannot connect it to UC2B. Unless you have it and it meets these you cannot connect it to UC2B, which is as far as I can tell, what this policy says.
- Mike Smeltzer said it was kind of designed that way but again, you referenced your house, can we use a real world business example.
- Bill DeJarnette said let's clarify where we're at here, we clearly worked through these issues of laterals, an appropriate carrot, this thing lays this out very nicely, it makes sense to use the system as it exists. The question I have is, but I think I see two issues, I can build and donate or I can build, not donate, and pay a few to connect, is that doable or are we saying I can't build not donate and not pay a fee.
- Mike Smeltzer said what this policy is trying to avoid is, for example Jimmy Johns in Urbana, UC2B has fiber right in front of that, at this point UC2B has not run any drops from that fiber into the Jimmy Johns building, Teri starts an Internet company and see pays for her own drop cable to go in there that connects to UC2B and she connect Jimmy Johns and then the Mexican Restaurant comes along and says he wants to use a different provider, not Teri. At that point, we don't have a solution for them because the infrastructure there is not open access because Teri owns and operates that exclusively for her purposes, and what this is trying to avoid that type of situation so that we have extra strands to go in there so when it comes time to hook up the Mexican Restaurant, it's pretty darn easy to do and we've got a whole policy in place to allow for that and everyone in theory walks away happy.
- Bill DeJarnette said my question goes back to, or maybe it's a legal question for the powers that be, that do this more than we do, can I actually create that closed, in the grant I've got, can I

close it down like that. I understand the advantages, they are huge, I just don't know if it had a challenge and it's not my place to worry about that, but I don't know if I can shut that door; if an only if you do it my way and donate you're stuff to me, I'll you touch my fiber.

- Peter Folk, Volo, said it is an interesting legal question, but it doesn't seem to me like that's the relevant question. It's not a question of can you do that, it's is that the kind of openness you want to create, where only connect to the network, if the thing your connecting you give to UC2B.
- Bill DeJarnette said truthfully in a perfect world I would want my carrot so tasty that no one would chose any other option but my carrot, yet profitable enough, that it's worth me offering the carrot. But that's all well & good, but experience will help us work through those numbers. I think that's a policy issue more than ours here at the technical, as to this organizations definition of openness.
- John Brighton said isn't this getting into a policy issue and what is our role in advising the policy. So what are the technical issues in the scenarios we're discussing that would be informing those policy decisions? It's philosophical right. What is open, what is the meaning of open, that's not really a technical issue?
- Peter Folk, Volo, said the philosophical aspect of it is not technical and the challenge is how if you're role as a technical committee is to help them sort through that philosophical issue, well from a technical standpoint, here's what it means if it's not open, it means that I can't be sure that I'm going to be able to connect something to UC2B, if I buy a backbone strand or 2 strands, then I can't be sure that I can use them.
- John Brighton said he thinks that is even a policy issue.
- Tracy Smith said if we flip it, and UC2B doesn't own the fiber what are the technical concerns.
- Mark Toalson said thinking of the future management of this system and the OSSBSS that we're go out for eventually, and assuming that to effectively manage the whole thing, everything connected would be in that system. So if you reverse it, and there's private fiber, do we have a way of forcing it into the management system. Or if the owner of private fiber is talking about managing it themselves, are we creating a problem for the overall system if we're allowing pieces of this network to not be in the OSSBSS that's all centrally managed.
- Peter Folk, Volo, said there is always going to be a point at which you stop having visibility and in one scenario it's a UC2B owned router at the end, in another it's a non-UC2B owned router at the end if there my strands, I may connect a non-UC2B router to it.
- Peter Folk, Volo, said in the case of UC2B if it's UC2B electronics that's maybe running over that fiber, maybe that's the distinction that needs to be made. That if it's UC2B electronics that's running over that fiber it needs to be included in the OSSBSS system. If it's not UC2B electronics that's running over that, then UC2B's not generally going to have visibility into whether that electronics is working properly or not. It's going to JULIE the connection up to the handhold, but it's not going to JULIE the stuff beyond.
- Ross Veach said so you are not having a problem with the idea that UC2B is responsible for JULIE up to the handhold, even if you have to build a half mile long lateral to get where you want to go.
- Peter Folk, Volo, asked Ross to clarify the question.
- Ross Veach said for example you want to go a quarter mile down the street.
- Peter Folk, Volo, said he assumes he would have to JULIE that, unless I donate it to UC2B.
- Ross Veach said I want to make it such that your best interests are served by granting that to UC2B.
- Peter Folk, Volo, said I don't see why you require that to be the case.
- Ross Veach said I wish it to be the case and I want to make it tasty enough that you will too.
- Peter Folk, Volo, said without going into philosophical details of why you care whether I decide to grant it to you.
- Ross Veach said it's not philosophical; I want to be able to serve the houses on the street, for other purposes.
- Peter Folk, Volo, said you can, you just have to make a deal with the owner of that lateral at that time or if the owner of that lateral is not willing to make a deal, you have to build it out on your own. We are talking about big amounts of money from a home internet connection standpoint; we're not talking about big amounts of money from a UC2B infrastructure standpoint. But again, were you asking what it would take to make that tasty enough. For me, I don't know that the current plan on the table is not tasty enough. One the other hand, it takes nothing for me to JULIE something.
- Tracy Smith said we are dribbling back away from technical discussions.
- Ross Veach said my issue with that, and I've been saying this for decades, but an engineer's most flexible tool is money and this is all about money.
- Tracy Smith said it's necessarily all about money, because there are the specifications for the fiber, and the work to be done on the fiber, whether it's maintaining, or splicing it. There are other technical components to this. Although I'll give you money, it's the big one.
- Ross Veach said for my purposes, my attitude is I'd just assume that somehow the money worked in such a way that we could build that fiber down the street, the drop from the street into the premises is a whole different issue to me, but getting wherever our infrastructure to in front of the premise, I'd just assume we'd figure out some way to build that and that takes money and that's how I get back to it's all money.



- Fred Halenar said that Ross brought up a great point and I'd agree with him up to the 80% level, back to the example rather than Peter's house, is Peter's nephew's house, and now there's a problem in the network, his nephew call's Peter says it's not my problem, it's UC2B's problem and UC2B says it's not my problem it's Peter's. So now there is a service issue.
- Peter Folk, Volo, asked why my nephew would call UC2B when he doesn't have UC2B service.
- Fred Halenar replied if you are using part of UC2B infrastructure to get from the ring to that location. You are using it to get to the drop point.
- Ross Veach said Peter's customer is going to call Peter, and Peter's going to call UC2B, Peter's customer is not going to have anything to do with UC2B, because it's Peter's customer.
- Peter Folk, Volo, said we get a call about every couple weeks from a customer that has Comcast, they want us to fix their Comcast connection, and for some reason thinking because we're an ISP we're in charge of their connection. Needless to say we're not.
- Mark Toalson, said I understand what Fred's saying, it seems like a potential management nightmare if this things is fragmented and we don't have an overview of the entire system in one place. Logically maybe that shouldn't happen, but things don't always happen logically, especially when people are involved.
- Mike Smeltzer said one of the things we're struggling with is what the definition of an open access network is as it pertains to dark fiber. When it comes to dark fiber, I don't know that there is an industry standard or anything we can fall back on. So this is perhaps a flawed attempted at trying to translate that open access philosophy into how do we expand when we don't have money to expand and we're asking private companies to do the expansion, but we still want the ability, we want the customers that the private fiber goes by, to be able to have a choice of providers and we want other providers to have access to those customers. Open access from both directions. Peter is feeling shut out at some level of this by being forced to give his fiber over, but from the other perspective hopefully if somebody else is you'll be able to do it the other direction; you'll be able to capitalize on this as a provider as well.
- Peter Folk, Volo, said he is not saying that forcing people to do this would not at times benefit me, I'm saying that I guess from a philosophical perspective where it is that, I'm ok, I'm not sure why, with you saying that only you/our contractors do the splicing from your backbone to my fiber. But for you to tell me that once you've done that splicing, you know own that fiber, so if I want to put a handhold in, you own that too. It doesn't seem balanced and open environment. There are situations where you can help the market along and there are situations where you're using too much force and you don't allow the market to do its thing. It feels strongly is one of those situations when you have a great carrot, stick with the carrot; also stick with the moral high ground of this is an open network, if you want to connect to it, and you own fiber in it, great because then you're building out more connectivity and we're getting more broadband access places and more fiber places. It's an equal conversation at that point.
- Ross Veach said if you retain ownership. If you're willing to hand it all over, it's mute; the issue is if you don't want to hand that infrastructure over but wants to maintain ownership of it, then UC2B would have to come to that owner and ask for more strands if needed.
- Peter Folk, Volo, agreed. That forces UC2B to be a good citizen and to provide good value to the 'straw man' just like the 'straw man' has to come up with a reasonable price for UC2B to buy into that infrastructure. It's a back to standard, where the market works well.
- Bill DeJarnette suggested letting this sink in a little bit and move on.
- Tracy Smith agreed. So we have less than 15 minutes left and asked the group if we are going to get at a point of making a recommendation to the Policy Board today or do we need to defer that.
- Bill DeJarnette said he assumes we are going to make a recommendation on the document as a whole.
- Tracy Smith said yes.
- Bill DeJarnette then answered no, there is too much to review and discuss. Two-fold issue that I've got new structures that people want to build new laterals and I have old stuff potentially that exists out there, and how do we look at that because they don't necessarily fit nicely into the models. Having clearly set rules and flexibility built in. The document itself is workable.
- Mike Smeltzer said in the 'straw man' example what we don't have is a guarantee that the 'straw man' is willing to sell fiber to somebody else in the future or provide other connectivity. I could see a situation where somebody built fiber into some place very profitable and they wanted to keep that customer as their exclusive customer forever, and even though they put in a 48 count that the only way to get additional fiber in it was to overbuild it and we're trying to avoid that.
- Peter Folk, Volo, said you have two choices, you can try and force them to come up with a pricing model and be willing to sell that, or you can accept the fact that you may have to overbuild it, and if it's valuable enough to get into that infrastructure, you'll have to overbuild it, and then they're left with the following dilemma; you can overbuild them, are they going to make you spend the money to overbuild them and get nothing; or are they going to buy into your thing reluctantly donate it and now they've made some money back with no loss. You haven't forced them, and you still have a situation where they have a strong incentive once you get the will to overbuild them, now they should do it.
- Mike Smeltzer said if we kept the Mike kept the carrot part of this, but said at some point in the future, we may come back to you and ask you to donate this when we have somebody else that wants to

	<p>overbuild.</p> <ul style="list-style-type: none"> <li>o Peter Folk, Volo, said yes, that seems a win.</li> <li>o Mike Smeltzer said at that point, if they don't, then we do an overbuild, and if they do, this whole thing just kicks in.</li> <li>o Ross Veach said I don't think you ask them to donate, I think you give them the opportunity to donate. We're going to overbuild unless.</li> <li>o Peter Folk, Volo, said you give them ten days and in ten days we're going to do engineering and put permits in to overbuild this thing. You're offer is we'll give you \$10,000 (or whatever) for the lateral; it's how the market works. It's why public rights-of-way are great because they are public, and anybody can build into them. They have to get a permit but they don't have to pass some sort of permission or the City doesn't have to think that the thing that they're putting into that cable is good; it's a public right-of-way.</li> <li>o Ross Veach said he would still like to get it down to that the monetary interest say it's somehow contingent upon us having had our hands greased by money to build what runs down the street and completely separate the matter from dropping into premises even if the premises is at Lincoln Square or Illini Plaza, or pick your complicated large premise.</li> <li>o Peter Folk, Volo, said I think everybody here, including him thinks that's the goal and end game, but we're not anywhere near that at this time.</li> <li>o Ross Veach agreed, we're not there yet.</li> <li>o Peter Folk, Volo, confirmed the time between meetings, one week. He suggests getting the document to the subcommittee, but the thing that the subcommittee does is writes documents; and would be much happier if it came out of a subcommittee.</li> <li>o Tracy Smith said we need to defer this conversation until next week (at the regular scheduled meeting, 3:30 p.m.).</li> <li>o Tracy Smith asked everyone to come prepared to march through and evaluate the technical merits of the packet of materials so we can develop our recommendations for the Policy Board.</li> </ul>
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DISCUSSION ITEMS

DISCUSSION	<p><b>Tasks or Items for the next meeting:</b></p> <ul style="list-style-type: none"> <li>o No new items</li> </ul> <p><b>Next Meetings:</b></p> <ul style="list-style-type: none"> <li>o May 22, 2012 City of Champaign Council Chambers, 3:30 PM</li> <li>o June 12, 2012 City of Champaign Council Chambers, 3:30 PM</li> </ul> <p><b>Audience Participation:</b></p> <ul style="list-style-type: none"> <li>o Bob Miles clarified fiber counts going into businesses; keep in mind you can't build a Christmas tree upside down. He can go anywhere and put a 462 into a building, if I've only got 48 in the lateral coming down, and only 216 in the ring; it doesn't matter what size fiber is put in there. You can only put the size of fiber that you can equal on your laterals and rings. The fiber count makes no difference in size if it runs over what you've got available. If you have customers on an IRU fiber, which is what Peter's talking about, and that fiber gets cut, you have no control to get your customer back on. That is controlled by the 'straw man' the 'straw man' if he is wise will get his customers back on first so you lose control of repair on a cut. It's very important.</li> </ul> <p><b>Committee Member Comments or Announcements:</b></p> <ul style="list-style-type: none"> <li>o Mark Toalson stated there's a philosophical or a policy direction that we need to have before we can deal with this, and is this network literally to be open to the end points, to every end point.</li> <li>o Mike Smeltzer stated that the grant only requires us to be open access on things funded by the grant; so after January 31, 2013 anything we build, we can build anyway we want. Now going back to the Broadband Access Committee, people expressed a strong preference that this be an open access network and that's been said in a very general state; but how that actually translates down to the five foot level of what that looks like in a dark fiber agreement, that doesn't exist. So we're creating policy or an attempt to define what an open access dark fiber network would look like.</li> <li>o Bill DeJarnette said there was a little bit of language, it talked about the issue of stuff developed under the grant, passing through a small bit of area that was private, which then got to stuff that we developed under the grant that was open, and it was the issue about the open accessibility of that private dab had to meet those same requirements. It was a methodology to keep this other piece built under the grant from falling under private rules as opposed to the open access rules. Otherwise, I could hide it behind a little dab of private and achieve private status; but there's language specifically that talks about not allowing that to happen. I don't expect that to impact us but that maybe an issue in the future as we look at potential build out areas and how our lateral we have built may tie into something else and the direction is where you go off of the that new lateral built in 2013, that then potentially back connects to another area that we did build. Because it tends to grow and hook.</li> </ul>
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- Mark Toalson said then you're suggesting that this committee can decide that.
- Mike Smeltzer said his original suggestion was that this was a Policy Committee issue period and there weren't really many technical aspects to this that were in debate. There were members of the Policy Committee that feel that this committee gives them some spiritual and psychological support in their decision making even on things that aren't technical. And so they wanted the Technical Committee to mull this over and come back with some thoughts that they could then incorporate. That was his read of what happened.
- Fred Halenar agreed. They are looking for some support here.
- Ross Veach said the problem is we are in unchartered waters; this is not stuff that is being done routinely everywhere. That is why they want our advice and that's why we owe them our advice.
- Mike Smeltzer said there is a time deadline on this, they put a 30 day window and they'll accept any advice they can get from the consultant or the Technical Committee. It started a week ago.
- Mark Toalson confirmed then next week we need to figure out what we're thinking.
- Tracy Smith agreed.
- Ross Veach asked if Tracy was going to gather the IRU Committee.
- Tracy said we are handling this in the Technical Committee, at this level and working through this next Tuesday.
- Ross Veach asked if we would be able to discuss this before then and how.
- Teri Legner said you can talk one on one, or you can communicate to everyone all at once as long as there is no response, which the City can facilitate. So if you have thoughts you want to share with the rest of the committee, send them to Missy Meade and Teri Legner, and they will make sure they are distributed, but there cannot be any response back to those. No response, which is an open meetings act issue.

**Adjournment – 1:30 P.M.**



**May 3, 2012**

**To: The UC2B Policy Board**

**From: Mike Smeltzer**

**Re: REVISED – Private Expansion Policy for Laterals serving Commercial Locations**

Attached is an updated version of the proposed policy, which incorporates feedback from the Technical Committee meeting this week and other discussions. Hopefully the language in this version is more precise, but the core intent remains unchanged. While I still believe this proposed policy is in the best long-term interest of UC2B and both cities, there are aspects of this proposal that are not universally supported. I will identify three points of contention and explain why I have crafted this proposal the way I have. I will leave it to others to make the case for any changes.

1. The policy as proposed makes it mandatory for a provider that wished to connect private lateral fiber cable to a UC2B ring or a lateral fiber cable to donate that new lateral cable to UC2B to operate and maintain. It has been suggested that the donation should be optional.

I believe the goals of UC2B and both cities are best served by having a single entity operate the shared UC2B fiber infrastructure in our cities' rights-of-way as much as possible. A provider wishing to connect to a location that already has UC2B connected fiber into it should only have to make one phone call to make it happen.

A customer who has fiber that is connected to UC2B into his or her building should only have to make one phone call (or visit one web site) to change providers. Without the donation of the fiber being mandatory, we could end up with a Balkanized fiber infrastructure that would be difficult for providers or customers to navigate or use.

If UC2B were a private entity, we could do this in an entirely different way that would perhaps be cleaner, but for now the mandatory donation plan is the best we can do to insure that multiple providers will have access to locations that are connected to UC2B fiber.

2. The policy as proposed sets some standards for the fiber being connected to UC2B's network by private providers. It has been suggested that private providers should be able to use whatever grade of fiber they desire when connecting to the UC2B network.

If there is no intention of ever donating the fiber to UC2B, then the quality of the fiber is less of an issue, but at the end of the day, if a provider uses sub-standard materials that result in sub-standard service, some of the blame will always fall on UC2B, whether that is fair or not.

We are promoting something new and different. We are telling people it will be better than what they have now and more reliable. We need to promote and protect our "brand" when possible, and enforcing some standards here is one way of doing that.

3. The policy as proposed and discussed assumes that Champaign Telephone (CTC) "owns" the lateral fiber cables that it totally funded to be built as part of the initial construction and that those lateral cables would be treated the same way as lateral cables that they or others may build later and want to connect to UC2B infrastructure. It has been suggested that any lateral cable constructed through the grant should be open to all providers to use with no compensation to Champaign Telephone for the laterals it funded.

Long before there was a UC2B Policy Board to consider this issue, as principal investigator of the grant, I promised Champaign Telephone that if they would purchase an IRU and pay the full cost of constructing laterals that those laterals would belong to them. Should others want to use those laterals, I assured Champaign Telephone that UC2B would develop a fair way to allow Champaign Telephone to recapture some of its initial investment.

Had I not made those assurances, it is possible that Champaign Telephone would not have agreed to invest close to \$600,000 - that we were then able to leverage almost 9 times in state and federal dollars. That extra \$5 million that UC2B received from NTIA and DCEO based on Champaign Telephone's investment will connect a lot of low-income homes and Community Anchor Institutions.

Would I make that same deal today? Absolutely. Would the Policy Board make that same deal today? I believe you would.

We could however examine what would be involved in charging additional providers the same amount that we charged Champaign Telephone to access any given lateral that they had UC2B construct. We charged CTC \$30,000 per lateral connection, which on average is probably more than what it will actually cost to build them. The proposed policy would allow a second provider to access a "CTC" lateral fiber cable for \$16,500 if they were the only other provider. If they were one of two other providers, their cost would be \$12,000.

If we were to charge all additional providers the same thing we charged CTC to use a given lateral connection, it would cost each of them \$30,000. That might be good for UC2B's bottom line, but it is not a good deal for CTC or the other providers. I believe UC2B has an obligation to live up the commitment I made to CTC in 2009, and that it is also the fairest way to treat additional providers who wish to use the lateral infrastructure that CTC funded.

4. The policy as proposed incorporates one element of the terms that were proposed to our initial IRU investors and adds one new wrinkle. While the Policy Board will be discussing wholesale services and rates and the meeting after this one, these issues affect the expansion policy to some degree and are detailed here. It will not surprise you that not everybody agrees on these issues.
  - a. For the initial IRU investors, we only leased strands of ring fiber in complete rings and only by pairs of fiber strands. Forcing an organization to purchase an entire ring at a time strongly encouraged them to follow a best practice and dually connect its locations with fiber. Sites that have dual diverse connections are much less likely to experience outages that are caused by backhoes or equipment failures.

Again protecting the UC2B “brand” we want any organization receiving service through UC2B fiber to have the least amount of downtime as possible. Also by forcing organizations to lease an entire ring, our tracking of the fiber strands is greatly simplified. Finally, UC2B needs both the one time and the recurring revenue associated with fiber leases, and the greater the length of fiber leased the larger those two amounts are.

If a potential dark fiber customer only wants to connect two locations to each other and they are not worried about redundancy, they are not a good candidate for dark fiber. If they have multiple locations on a ring to connect, this requirement is not a burden at all. For UC2B’s reputation and its sustainability, I suggest we continue this practice moving forward.

Requiring organizations to lease fiber in pairs is however not as desirable today as it was 3 years ago. The strand count on our rings ended up being less than we had hoped for, and single-strand bi-directional electronics are now commonplace and reasonably priced.

So I have not referenced any requirement for leasing dual strands in the proposed private expansion plan. If an organization wants to lease a single strand around an entire ring, we should accommodate that.

- b. The wrinkle is in how we want our IRU and lease documents to read in terms of how the UC2B fiber strands may be used. It is very common for fiber IRU contracts and leases to have restrictions about how the leased fiber may be used. I am suggesting that we will want ours to reference the purposes and activities of the organization leasing the fiber.

The City of Champaign can use its leased UC2B fiber for city business and activities, but we would not expect the City to go into the telecommunications business. Champaign Telephone is already in the telecommunications business, so there is not much that they would be prohibited from doing with their strands in terms of providing telecommunications services.

However, we probably do not want CTC reselling some of “their” dark fiber strands to other organizations. At the end of the day, UC2B wants to have a direct business relationship with every user of its ring fiber.

From a sustainability perspective, we want any dollars that are spent on leasing UC2B’s dark fiber to flow directly into UC2B’s accounts. This issue has not had much public discussion yet, but there is certainly the potential for differences of opinions here. Our attorneys will have some guidance for us on this issue.

I believe that covers the main concerns that I have heard about this proposed policy. I encourage the Policy Board to adopt it as it is currently presented.



5/3/12

## **Proposed Policy for Private Expansion of UC2B for Business Services**

Several private entities have expressed interest in connecting new or existing lateral fiber infrastructure to UC2B backbone rings in order leverage those rings to provide fiber-based services to businesses.

As UC2B does not currently have a plan or funding for the expansion of fiber-to-the-premise to businesses located outside the grant funded FTTP areas, the Policy Board should consider adopting policies that encourage private entities to invest their capital to extend the UC2B network by building additional lateral cables and serve more businesses.

This expansion should always be under certain conditions that promote an open-access network as well as minimize the operational overhead for UC2B and the local municipalities in managing additional infrastructure in their rights-of-way.

For the purposes of this discussion, a “lateral cable” will be defined as a fiber cable connecting to a UC2B backbone ring, or to an existing lateral cable and terminating in a manhole or handhole in the public right of way. By this definition “lateral cables” exist only in the city rights-of-way.

A “drop cable” is a cable that connects to a lateral cable in the city right-of-way in a manhole or hand hole and then goes primarily on private property or in a utility easement on private property to connect to a building. While a few feet of a drop cable may be in the city right-of-way it should be thought of as a cable that is located on private property. There are locations where a UC2B ring cable, manhole and splice case are in the right-of-way in front of a location desiring UC2B service. In those instances, the drop cable would connect directly to the ring cable and there would be no lateral cable in that connection.

It is common for the general term “laterals” to be used to describe both “lateral cables” and “drop cables” – singularly or in combination. This narrative will attempt to make a clear distinction between the two where that distinction is relevant.

The suggested policy that follows would only apply to lateral and drop cables connecting from a UC2B ring cable (or from an existing lateral fiber cable) that are built to commercial locations. Only the specific lateral cable and drop cable infrastructure being donated would be subject to the donation policy. (In some cases there could also be splice cases and handholes or manholes involved on the lateral



cable in addition to the cables themselves.) Any other fiber infrastructure that the donating provider may have would not be affected. An ISP's main fiber connection to UC2B would not be affected. That other fiber infrastructure would remain the sole property of the provider, who remains 100% responsible for its maintenance.

There are a series of core principles that the suggested policy promotes:

- A. All lateral fiber infrastructure in the cities' rights-of-way that connects to the UC2B network shall be operated as an open-access network by UC2B.
- B. The City of Urbana and the City of Champaign through their Public Works Departments and the University of Illinois through its Utilities department have expressed a strong preference for having all lateral fiber infrastructure in their rights-of-way that connects to UC2B fiber to be owned, managed and maintained by UC2B. The fewer organizations that each city and the University have to track and coordinate with concerning infrastructure in their rights-of-way, the less burden it will be on the cities and University. While the cities cannot limit who can build fiber infrastructure in its rights-of-way, UC2B can set consistent conditions that must be met before connecting private lateral fiber cables to UC2B fiber cables.
- C. UC2B should have total ownership and maintenance responsibility for all lateral fiber infrastructure in the local rights-of-way that connects to its fiber network.
- D. Assuming ownership and maintenance responsibility for the lateral fiber infrastructure that is "donated" by private parties, should not put a financial strain on UC2B, but rather support UC2B's sustainability.
- E. Any donated lateral fiber infrastructure must be located within the city limits of the City of Urbana, the City of Champaign the Village of Savoy, or on the property of the University of Illinois. UC2B has no interest in directly maintaining any donated infrastructure outside of these areas.

The elements of a policy for "donated" lateral fiber infrastructure in commercial areas:

1. Before an entity can connect its lateral fiber infrastructure to a UC2B backbone ring or to an existing lateral cable, that entity must first:
  - A.) Execute an IRU or lease agreement with UC2B for the UC2B backbone fiber ring to which the "donated" lateral fiber infrastructure will connect. Each UC2B ring desired must be leased in its entirety.

- B.) Execute a donation agreement that details the physical location of the lateral fiber infrastructure being donated and the original cost of installing the donated lateral fiber infrastructure on a per lateral cable basis (with each of its associated drop cables.)
- C.) Execute a fiber maintenance agreement for the UC2B ring fiber that is being leased, and also for the lateral fiber infrastructure being donated.
2. The fiber maintenance contract for the ring and donated lateral fiber infrastructure shall be at the then-current UC2B fiber maintenance rates. UC2B will incur all expenses for J.U.L.I.E. locates and fiber infrastructure repairs and routine maintenance for the donated lateral fiber infrastructure. Costs for relocating fiber infrastructure in the event of road construction or some other planned event are typically shared by the “users” of the fiber infrastructure on a prorated basis.
  3. Any lateral fiber infrastructure that is donated to UC2B must be documented in full, be in excellent operational condition, be built to UC2B standards, and be clear of any ownership encumbrances. Manholes or conduits that are shared with multiple entities are not good candidates for UC2B ownership and maintenance. A lateral fiber cable that already has multiple owners is not a good candidate for UC2B ownership and maintenance. A lateral fiber cable that has more than 10% of its strands fail OTDR testing is not a good candidate for UC2B ownership and maintenance. All donated lateral fiber cables must be accompanied by individual end-to-end OTDR reports for each strand, which will be verified by UC2B before acceptance.
  4. An entity donating lateral fiber infrastructure to UC2B will have exclusive rights to use half of the donated lateral fiber cable strands and half of the associated donated drop cable strands via a \$1 dollar 20-year IRU. That IRU shall be renewable for multiple similar terms. The remaining strands of fiber in that infrastructure will be available for other entities to “buy into”.
  5. Any entity leasing fiber from UC2B either through an IRU or a monthly lease will be contractually restricted to using that fiber for its own business purposes only. UC2B dark fiber cannot be sub-leased or sub-assigned. UC2B will have a direct business relationship with all users of its dark fiber.
  6. The lateral fiber cable and the associated fiber drop cables attached to each lateral fiber cable will define each donated fiber segment. Entities wishing to lease dark fiber to a location served by a donated lateral cable and drop cable, must lease the entire fiber segment - the complete lateral fiber cable and all of the drop cables associated with that lateral cable.

7. The donated lateral fiber infrastructure must always provide at least 12 strands of fiber for the drop cable into a commercial building. If there are more than 3 potential tenants in a commercial building the fiber drop cable must have at least 4 strands of fiber per potential tenant up to a maximum of 48 strands. Lateral fiber cables must provide 4 strands for each potential commercial customer served by that lateral cable up to a maximum of 96 strands. Fiber cables that lack the desired number of strands are not good candidates for UC2B ownership and maintenance.
8. The first additional entity that elects to buy into “donated lateral infrastructure” will pay to UC2B a one-time fee equal to 55% of the original installation cost of that infrastructure segment as documented by the original entity at the time of donation and agreed to by UC2B in the donation agreement. UC2B shall then provide 50% of the original installation cost to the original entity that donated the lateral fiber infrastructure (retaining 5% for UC2B overhead.)
9. That first additional user (second total user) of the “donated lateral infrastructure” will be entitled to 2 fiber strands on each fiber drop cable served by the lateral cable. That first additional user (second total user) will also be entitled to 2 strands on the lateral fiber cable. This will allow that second user to connect multiple customers served by that lateral infrastructure by deploying a ringed network topology and bi-directional single-strand optics on the fiber strands.
10. That second user will enter into an IRU or lease agreement for UC2B ring fiber that connects to that lateral fiber cable (leasing complete UC2B rings at a time) at then-current rates, and will be provided with a \$1 dollar 20-year IRU for the lateral and drop cable fibers. Both leases shall be renewable for multiple similar terms.
11. That second user will enter into a fiber infrastructure maintenance agreement for the UC2B backbone ring being leased as well as for the lateral and drop cable fiber being leased at UC2B’s then-current annual fiber maintenance rates. The original entity that donated the fiber will not receive any reduction in the rate of its fiber maintenance agreement should additional entities lease strands in the donated cables.
12. Should a second “additional” (third total) entity desire to use the donated lateral fiber infrastructure, they will pay to UC2B a one-time fee equal to 40% of the original installation cost of that infrastructure as documented by the original entity at the time of donation and agreed to by UC2B in the donation agreement.

UC2B shall then provide 15% of the original installation cost to the original entity that donated the fiber infrastructure and 15% of the original installation cost to the first additional entity that bought into that fiber infrastructure (retaining 10% for UC2B overhead.) At that point, the original entity that donated the fiber infrastructure to UC2B and the first entity that bought into the infrastructure will both be considered to have been “made whole” and will receive no additional compensation from any additional users of that fiber infrastructure. The second additional entity that invested will also not receive any compensation from any additional users of that lateral fiber infrastructure.

13. The third user of the “donated lateral infrastructure” will be entitled to 2 fiber strands on each fiber drop cable served by the lateral cable. That second additional user (third total user) will also be entitled to 2 strands on the lateral fiber. This will allow that third user to connect multiple customers served by that lateral infrastructure by deploying a ringed network topology and bi-directional single-strand optics on the fiber strands.
14. The third user will enter into an IRU or lease agreement for UC2B ring fiber at then-current rates, and will be provided with a \$1 dollar 20-year IRU agreement for the lateral fiber and the drop cable fiber. Those leases shall be renewable for multiple similar terms.
15. That third user will enter into a fiber infrastructure maintenance agreement for the UC2B backbone ring being leased as well as for the lateral and drop cable fiber being leased at UC2B’s then-current annual maintenance rates. The original entity that donated the fiber, and the first entity that “bought into” the fiber will not receive any reduction in the rate of their fiber maintenance agreements as a result of this second entity “buying into” the donated lateral fiber infrastructure.
16. Once two additional entities have bought into a donated lateral fiber cable and its associated drop cables, UC2B shall be free to use the remaining fiber strands on the lateral cable and all of the associated drop cables to provide retail or wholesale services, which could include lambda-based services to accommodate additional entities that wish dedicated access to the locations served by the donated lateral fiber infrastructure. Unless it already has rights to use fiber strands on a lateral cable or drop cable. UC2B will never lease the last two strands of fiber on those cables, which will always leave UC2B in a position to offer lit services on an open-access basis, even if the fiber cables involved are “full”.

17. Should UC2B have funds and the need to do so, UC2B could be the first or second entity to “buy into” lateral and drop cables. Unless there have been two other entities buy into a lateral and its associated drop cable(s), UC2B can only use the additional strands on those donated cables for its own purposes by “buying into” them like any other provider.
18. All splicing at all times to the UC2B fiber backbone rings or to existing UC2B lateral cables will be performed by UC2B staff or contractors working for UC2B.
19. Before donating fiber infrastructure to UC2B, any splicing other than to the UC2B backbone ring or to an existing lateral cable will be performed by the entity donating the lateral fiber infrastructure. Once the lateral fiber infrastructure has been donated, UC2B staff or contractors working for UC2B will perform all splicing.
20. There are also groups of geographically-clustered businesses that are considering building their own lateral and drop cables in order to connect to UC2B. If they then donated that infrastructure to UC2B, it would be open to all entities to lease with no up-front costs.
21. This policy applies only to lateral fiber infrastructure serving commercial locations. A policy covering dark fiber and residential locations can be created later if the need arises.

## UC2B Private Expansion to Businesses - Example 1

5/3/12

Existing Private Lateral Fiber and Two Private Companies - to a multi-tenant building

**Champaign Telephone Company (CTC)** paid \$30,000 for a lateral fiber cable and a drop cable into Lincoln Square - a multi-tenant building. That lateral cable is fed from a larger lateral cable serving several anchor Institutions, but it is easily defined. That lateral is connected to **UC2B Ring #7**, on which **CTC** "owns" 4 strands of fiber through its IRU.

\$30,000 Initial investment by **CTC** in a 72-strand lateral cable and a 48-strand drop cable.

**CTC** donates that Infrastructure to **UC2B**, and purchases a \$1 20-year IRU for half of the fiber strands.

**CTC** already has a fiber maintenance agreement for **UC2B Ring #7**, as well as for the lateral and drop cables.

There are now 36 strands of fiber on the lateral cable and 24 strands of fiber on the drop cable available for lease to anyone.

**Company X** also wants to use that drop cable to serve businesses in Lincoln Square via dark fiber.

**Company X** agrees to lease fiber on **UC2B Ring #7** at the current lease rates.

\$16,500.00 **Company X** pays **UC2B** 55% of the \$15,000 initial installation cost of the lateral and drop cables.

**Company X** pays the one-time lease fee of \$8,250 for 2 strands on the lateral cable and 2 strands on each connected drop cable.

**Company X** signs a fiber maintenance agreement for **UC2B Ring #7** as well as for the donated lateral and drop cables.

\$15,000 **UC2B** pays **CTC** 50% of its initial cost for the lateral and drop cables.

**CTC's** cost of the lateral and drop cable is now \$7,500 (not counting the time value of money) - 50% of its original investment.

\$750 **UC2B** keeps 5% of the initial cost for overhead.

There are now 34 strands of fiber on the lateral cable and 22 strands of fiber on the drop cable available for lease to anyone.

**Company Z** also wants to use that drop cable to serve businesses in Lincoln Square via dark fiber.

**Company Z** agrees to lease fiber on **UC2B Ring #7** at the current lease rates.

\$12,000.00 **Company Z** pays **UC2B** 40% of the \$15,000 initial installation cost of the lateral and drop cables.

**Company Z** pays the one-time lease fee of \$6,000 for 2 strands on the lateral cable and 2 strands on each connected drop cable.

**Company Z** signs a fiber maintenance agreement for **UC2B Ring #7** as well as for the donated lateral and drop cables.

\$4,500 **UC2B** pays **CTC** 15% of its initial cost for the lateral and drop cables.

**CTC's** cost of the lateral and drop cable is now \$5,250 (not counting the time value of money) - 35% of its original investment.

\$4,500 **UC2B** pays **Company X** 15% of the initial cost of the lateral and drop cables.

**Company X's** cost of the lateral and drop cable is now \$6,000 (not counting the time value of money) - 40% of the original investment.

\$3,000 **UC2B** keeps 10% of the initial cost for overhead.

There are now 32 strands of fiber on the lateral cable and 20 strands of fiber on the drop cable available for lease to anyone or for use by **UC2B**. Neither **CTC**, **Company X**, nor **Company Z** benefit from any further sales or use of the remaining donated strands of this fiber.

## UC2B Private Expansion to Businesses - Example 2

5/3/12

Three Private Companies - new fiber to a single business

**Company A** spends \$18,000 to build a lateral connection and a fiber drop cable to Prairie Gardens' main facility - a single tenant building.

That lateral cable connects directly to **UC2B Ring #2**

**Company A** agrees to lease fiber on **UC2B Ring #2** at the current lease rates.

\$18,000 Initial investment by **Company A** in a 24-strand lateral cable and a 12-strand drop cable

**Company A** donates that Infrastructure to **UC2B**, and purchases a \$1 20-year IRU for half of the fiber strands.

**Company A** signs a fiber maintenance agreement for **UC2B Ring #2**, as well as for the donated lateral and drop cables.

There are now 12 strands of fiber on the donated lateral cable and 6 strands on the donated drop cable available for lease to anyone.

**Company B** also wants to use that drop cable to serve Prairie Gardens via dark fiber

**Company B** agrees to lease fiber on **UC2B Ring #2** at the current lease rates.

\$9,900.00 **Company B** pays **UC2B** 55% of the \$18,000 initial installation cost of the lateral and drop cables.

**Company B** pays the one-time lease fee of \$9,900 for 2 strands on the lateral cable and 2 strands on each connected drop cable.

**Company B** signs a fiber maintenance agreement for **UC2B Ring #2** as well as for the donated lateral and drop cables.

\$9,000 **UC2B** pays **Company A** 50% of its initial cost for the lateral and drop cables.

**Company A's** cost of the lateral and drop cables is now \$9000 (not counting the time value of money) - 50% of its original investment.

\$900 **UC2B** keeps 5% of the initial cost for overhead.

There are now 10 strands of fiber on the donated lateral cable and 4 strands on the donated drop cable available for lease to anyone.

**Company C** also wants to use that drop cable to serve Prairie Gardens via dark fiber

**Company C** agrees to lease fiber on **UC2B Ring #2** at the current lease rates.

\$7,200 **Company C** pays **UC2B** 40% of the \$18,000 initial installation cost of the lateral and drop cables.

**Company C** pays the one-time lease fee of \$7,200 for 2 strands on the lateral cable and 2 strands on each connected drop cable.

**Company C** signs a fiber maintenance agreement for **UC2B Ring #2** as well as for the donated lateral and drop cables.

\$2,700 **UC2B** pays **Company A** 15% of its initial cost for the lateral and drop cables.

**Company A's** cost of the lateral and drop cable is now \$6,300 (not counting the time value of money) - 35% of its original investment.

\$2,700 **UC2B** pays **Company B** 15% of the initial cost of the lateral and drop cables.

**Company B's** cost of the lateral and drop cable is now \$7,200 (not counting the time value of money) - 40% of the original investment.

\$1,800 **UC2B** keeps 10% of the initial cost for overhead.

There are now 8 strands of fiber on the lateral cable and 2 strands of fiber available on the drop cable available for lease to anyone or use by **UC2B**.

**UC2B** will never lease the last two strands on a lateral cable or drop cable, so that it is always in a position to provide open-access lit services.

Neither **Company A**, **Company B**, nor **Company C** benefit from any further leases or use of the remaining donated strands of this fiber.

### UC2B Private Expansion to Businesses - Example 3

5/3/12

Two Private Companies and UC2B - new fiber to a single business

**Company D** spends \$18,000 to build a lateral connection and a fiber drop cable to Solo Cup's main facility - a single tenant building.

That lateral cable connects directly to **UC2B Ring #6**.

**Company D** agrees to lease fiber on **UC2B Ring #6** at the current lease rates.

\$18,000 Initial investment by **Company D** in a 24-strand lateral cable and a 12-strand drop cable

**Company D** donates that Infrastructure to **UC2B**, and purchases a \$1 20-year IRU for half of the fiber strands.

**Company D** signs a fiber maintenance agreement for **UC2B Ring #6**, as well as for the donated lateral and drop cables.

There are now 12 strands of fiber on the donated lateral cable and 6 strands on the donated drop cable available for lease to anyone.

**UC2B** also wants to use that drop cable to serve Solo Cup with lit services.

\$9,000.00 **UC2B** pays **Company D** 50% of the \$18,000 initial installation cost of the lateral and drop cables.

**UC2B** uses 2 strands on the lateral cable and 2 strands on each connected drop cable.

**Company D's** cost of the lateral and drop cable is now \$9000 (not counting the time value of money) - 50% of its original investment.

There are now 10 strands of fiber on the donated lateral cable and 4 strands on the donated drop cable available for lease to anyone.

**Company E** also wants to use that drop cable to serve Solo Cup via dark fiber.

**Company E** agrees to lease fiber on **UC2B Ring #6** at the current lease rates.

\$7,200.00 **Company E** pays **UC2B** 40% of the \$18,000 initial installation cost of the lateral and drop cables.

**Company E** pays the one-time lease fee of \$7,200 for 2 strands on the lateral cable and 2 strands on each connected drop cable.

**Company E** signs a fiber maintenance agreement for **UC2B Ring #6** as well as for the donated lateral and drop cables.

\$2,700 **UC2B** pays **Company D** 15% of its initial cost for the lateral and drop cables.

**Company D's** cost of the lateral and drop cable is now \$6,300 (not counting the time value of money) - 35% of its original investment.

\$4,500 **UC2B** keeps 25% of the initial cost for overhead.

There are now 8 strands of fiber on the lateral cable and 2 strands of fiber on the drop cable available for lease to anyone or for use by **UC2B**.

Neither **Company D** nor **Company E** benefit from any further leases or use of the remaining donated strands of this fiber.