

BIA Meeting about High Speed Internet
July 5, 2016

Cool and Connected – an early program to develop a proposal, possibly in its last year as the money would have been spent. Email has gone out soliciting proposals and we received a notice that we were not high on the list. Funding was for the plans, not the doing of it.

Minutes have list of people who may be helpful in this (see minutes):

Challenge:

1. Infrastructure is costly and no one wants to pay for it
2. Fiber: dense forest and costly last few miles
3. Point to point works from line of sight so that will create some challenges in maintenance
4. Radio technology provides speed (near fiber or higher) but is very costly and the denseness of the forest will create issues

Example: Hooking up IU, Purdue, Ball State. Universities could be connected up as non-profits. The rest depended on businesses coming in and being willing to spend the money to bring it into the rest of the area (BI isn't well positioned).

MERIT Network, with huge capacity, is being sold in Michigan, but the challenge is getting across the lake. Then the distribution comes into play. TDS Network as installed but high capacity is defined as about 5. On island, have some technology, but no capacity from mainland. Many of the islanders have phone lines still. DSL if it exists – hire an electrician from point of presence (where the box is on the house). Can't do it from more than a half-mile. Getting bandwidth across the lake is the big issue.

What CMU is doing may or may not help.

- If running separate microwave across for CMU, will relieve some capacity

We can improve the service and make it better than it is now just by increasing the band with across the lake. But quality broadband will need to be done wirelessly with high capacity channels or with fiber.

Two issues:

- If talking with TDS – service from 1999 DSL Reports which allows us to log to a device typically to PC and register with DSL Reports and it keeps a history of support. Can then post to Forum (well respected) and it runs quality and speed and jitter, etc. Test results and TDS monitors and doesn't like bad reports, and then they address the problems. A start.
- Can also see the PEAK, and can say we are fine as we only have 900 residents, but the weekend like the 4th – can have up to 6000 people and then can't get on.

Issue:

- No vacation days, as people set their own schedule and work as you need to get it done. Need to have service to support that. Many want a lifestyle to live where they want to live.
- Cell phones don't work on most of the island
- Challenge to do high capacity work
- Will need 'fiber to the curb' – we don't have that, as we have fiber in a loop around the island. It's a big issue and will only get bigger
 - Can make things better by adding capacity across the lake but isn't a long term solutions
 - Probably goes up and down West and East side drive. That is fiber. Would require interface boxes. Have to have a place where fiber is running to have non-fiber talk to fiber. Have to have an interconnection point. Want to be within a mile of these interconnection points. Point of presence, then the box, checking card within the box, and then the box itself.

Things to consider:

- Longer the distance, slower the speed and it's distant dependent. Goes over copper which isn't great.
- Speed over the lake is an issue as well.

Recommendation:

- Go to TDS to find out what we can do as a community to build the high speed over the lake and then they can use that to deliver service. Person Kevin talked with goes between Madison and Washington. Said there was no incentive to spend capital to help us because they won't get anything back. They want to make money with video, etc. Phone service and DSL is not what they would find economic incentive. The only reason we have is that they were part of a grant from Department of Agriculture.
- We won't meet challenge to say we are underserved as federal oversight would say we 'are served' – would need a lot more data to make the case (would be a long term project to get the data and then would have to deal with federal regulatory systems and personnel).
- Only approach is to work with TDS and see what can be added to what we have.
- Ball State has a department called Center for Information and Communication Science. They do research on large telephone companies and their services. We should use organizations like that to pressure TDS. – It would be better to stay in Michigan to get funding and gather data to use to pressure the phone company. Alan will talk with his contacts at Ball State to talk about starting points, contacts at TDS, etc
- Satellite technology – not cost effective. Individuals can do that, but it is a rate limited service. Won't work for anyone using significant data.

- Minimum cost for increasing bandwidth across the lake is \$50K-\$200K – depending on towers. Should we do a BIA led capital campaign? If we could get grants, matching grants, etc.
- There is a single pipe coming over and there are service agreements that may not be being met. When people have ‘committed service’ then if things get tight, they get priority.
- Have to get TDS’s attention.

Strategic issues:

- Get TDS to talk with us
- End game can’t be getting more bandwidth but depending on old copper lines
- Short term solutions won’t solve anything in the long term. Doubling a slow speed still leaves us with a slow speed. While useful to help around the margins, Plan B is the one that needs the most long term attention. Need to move beyond maximizing 20th century technology. Won’t solve remote worker problem.
- Probably can meet with TDS and have them walk us through step by step what needs to be fixed from mainland to the island. Identify the constraints for the short term. Bigger issue is how to get fiber here. That’s the 21st century solution. When 5G hits it will take some pressure – involves Verizon (example), rather than TDS.
- Way to get into university systems, would need people signing up for extension courses (e.g., NMU)

Plan A: Get bandwidth increased

Plan B: Longer term solutions

When CMU system goes up, it will have T1 service for the university, the school, and potentially the community center. But we probably won’t notice the effect.

School and library have committed bandwidth.

Another issue is the tower on the mainland with the sufficient structure to address the wind issues that can knock towers over. Issues have to do with age of current technologies. Using technologies original designed for voice.

Information available from FCC data base, national tower companies. Can Google sites that will tell you who owns which towers. American Tower leases to AT&T.

Jason Schrieber – long time island resident who does internet services. Fiber (Go LightSpeed). Building his third company like this. Makes it seem possible to lay fiber across the lake. Still have the issue of getting to the house, which requires fiber. Having our own Co-op is where the pressure comes to TDS, because if the island can do it, other communities can as well. They don’t want to lose phone as

that's where all the subsidies are. TDS will need to see that we are serious on the island and pursuing the right directions.

Similar to when phone lines first came here.

Strategy:

1. Enhanced TDS
2. Build our own and do something with CMU
3. Combine the two – have it for safety and other purposes
4. Next step: Want to have fiber to the home on the island and use wireless across the lake
5. Putting fiber (or wireless – but that won't give us 1G) under the lake

Need to keep TDS playing with us at the beginning. But in the end we may not need them. Need to think about who will help out those who need subsidy for those who can't pay \$100/month in the summer.

BIA – would need to work out pricing strategies. What is the underlying capacity of people to pay for services. Survey of people and businesses. Get people to sign up for DSL reports. If we can change VOIP and others areas, may be able to combine into service that island might provide with co-op.

- (1) What do we have as annual income from the things paid for for services on the island
- (2) What is gap to grant for what it costs to run this?
- (3) Could be year-round (e.g., monitoring service)

John's contact with municipal bonds – another way to create income for the project.

Groups to educate:

- BIA membership
- Townships

ACTION ITEM:

- What can we learn from TDS?
 - Kevin will adapt letter
 - Run letter by John (who will call his contact first to let them know a letter is coming)
- Survey of community with data about services
 - Survey monkey (Bob, Taffy to draft; share with John when he's back on the island)
 - Then build revenue model (Jason, Patrick) – Alan will identify a base template that we can adapt for our revenue model. A guy from M-Guard might be a good contact for that. Check with Bois Blanc and their model that was successful, and they should also have a budget for their operation.
 - Island Institute may be a resource
 - Isleborough may have a budget

- Michigan Public Service Commission
 - 911 out four times in the past 2 weeks
 - Kevin Boyle will revise the letter responding to the problem in February 2016 will do so by July 8th
- CMU contact: Kevin will talk with him as they will be talking about link from CMU to school/community center on July 18th
- Need a map of where the actual link/fiber is (in the road) – Bob T. and Kevin will check)

INFORMAL NOTES