

BCN Advisory Committee
Minutes: September 18, 2008
Room 320, UW Pyle Center

Attendees: Tim Schell, Joan Wade, Jay Jaeger, Tom Taibel, Mike Mietz, Bruce Mathew, Bruce Reines, Jamie Poindexter, Steve Sanders, Larry Bader, Bruce Vande Zande (phone), Carol Nelson (phone), Wayne Utke, Connie Bandt (phone), Ed Meachen, Oskar Anderson, Paul Nelson

Futures

- Review of discussion from August 7th retreat
 - Identified issues from stakeholder groups
 - Needs: Flexibility, lower cost data service, VoIP (& TEACH), better access to bandwidth.
 - Should the next generation network be driven by specific applications or general capacity management? We don't really know what applications might be next (e.g., Telepresence, 15Mbits is a pretty new arrival)
- Updates from DOA & TEACH
 - Meeting set up with DOA Secretary: budget process: discuss budget items, and what can be done shorter term, and general direction, longer term. Based on information from August session.
 - Input desired: longer term discussion (to occur today)
 - Tim Schell attended a meeting via regional video with AT&T and others. TEACH indicated that they felt they would be able, based on demonstrated need, at higher levels of bandwidth than in the past. Would not expect average customers to be that high.
- Discussion on Longer Term
 - As services mature, individual applications have less and less impact, but general growth continues.
 - It is difficult to project specific applications out for as long as these contracts go.
 - UW experience chart. We are likely leaving infancy, and growing into "adolescence". There is nothing that points to diminishing growth. Customers continue to work around / live with limitations, rather than just using what they need, which indicates the price point is still "pretty high". Minimum estimate is, perhaps 30% compounded annually, if network is not unduly constrained.
 - Cost needs to remain fairly constant, due to budget constraints. To meet that, we will need to reduce per Megabit cost by as much or more than a factor of 40.
 - This is not "blue sky" either. Applications that need HD, for example distance education HD, are already emerging. (This would be a CODEC issue, too). Telepresence is not all that far over the horizon, either.

- Currently instructional TV is via traditional cable. That could conceivably migrate to a digitally based solution, e.g. AT&T U-verse™. Could these converge onto an IP based solution? Right now, those seem to take local servers to store content locally and/or server as multi-cast points.
- Also district consolidation into shared data centers sharing physical resources and support resources, at shared points on the network.
- We don't know which applications will come first, but we can be pretty certain that they will appear.
- How do we build in sufficient flexibility and capacity for growth, without over-committing resources?
- Where are issues with core expansion, vs. the issues on "tail circuits"?
- This seems to be more than BCN can do alone. We are embedded in national trends, and national needs.
- At the state level, there are about 1,000 agency sites, 950 or so TEACH sites. Currently we use a subsidized, postalized model to keep costs even. However, customers in low-cost metro areas are sometimes moving away to save money – but that itself puts the subsidized model at risk.
- Estimate of BCN: 2,553 services (may be more than one per circuit), (breakout by vendor). Internet transport: 469 service instances, 3.37 Gb, including WiscNet, 350 sites, 1.59 Gb, and including 96 others served by other ISPs, 340.5 Mbits. On the WAN, 1,571 WAN services (agencies and TEACH). WAN 3.795 Gb. Total is around 7Gb or so.
- Right now, Wisconsin is actually pretty good compared to some states. There are a couple which are even further advanced. For example, Utah at 1Gb per school. Their framework is a little different: one contract for the core (Qwest), and procure, by region or site, to get such sites to the core. Their customer group is also not as far-flung as ours. Utah does not postalize/subsidize. Also, apparently just connectivity, rather than service based, such as video services or managed video.
- How do we work with the legislature and other leaders to understand what funds might be available, and what the priorities might be? Then we can perhaps get an understanding of what kind of resources might be available.
- Once we get fiber to locations, scaling issues change: the issues will be properly scaling the core.
- How many of our sites are currently fiber, vs. copper.
- Vendors are generally moving more towards fiber – based on anchor tenants like BCN and others.
- What penetration (of fiber) is enough? What is that penetration now? Hard data would be useful. What if we did a procurement to find out what the pricing would be?
- Example: Exams / assessments. There are computer-based alternatives, that take less work, and provide more rapid feedback.
- Web site rates will be changing to individually price circuits over 30Mb.
- How much of a factor is competition?
- Are we still giving thought to survey, to ask customers about needs to 2011, or have we moved beyond that idea? Maybe we should wait, until

we see what direction we get from DOA secretary – there isn't any point in surveying about something that might not go anywhere. Will we really get much out of it?

- Relationship to economy may be complex – some things may be inversely tied to the economy, for example.
- Will there be DOA conversations about longer term (beyond 3 years) or the shorter term. Election cycles come into play, too.
- Could we target subsidy (as opposed to postalization) differently? Might urban areas be able to do well even out the subsidy?
- Rural service is partly a matter of distance and people – fewer people paying, so cost is spread over fewer people, so the individual cost is higher.
- Services we need are similar, with higher capacity. There would not seem to be value in going thru the same kinds of needs assessment as we did last time.
- Hopefully we will have a better idea by the next meeting, December 18th.

Meetings for 2009

- The BCN Executive Committee and Secretary will move forward assuming 3rd Thursday – will send out email to get any feedback, and based on that feedback set the dates and reserve the meeting room for our meetings in 2009

Elections Reminder

- Secretary (Incumbent, Jay Jaeger)
- At Large (Incumbent, Bob Bocher)
- Nominations and elections at the December Meeting

Next Meeting

- December 18, 2008, Pyle Center, Room 320

Attachment: UW / WiscNet Bandwidth, Actual and Projected usage for 2001 - 2017