

**Prepared testimony of Stephen Whitaker to the Senate
Committee on Finance
September 2, 2020**

Prefatory notes in response to questions to Peter Bluhm:

VIT should be restored asap to support these planning processes and citizen participation in government!

VTA had an obligation to charge broadband providers for use of the right of way. When VTA was mothballed, most went to PSD but the RoW fee charge obligation went to VTrans. Fiber GIS makes this calculation of fair and reasonable charges possible. TPPT, USF and RoW can and should be studied as one.

Broadband can also be taxed for support of USF and 911, sufficient to support regional dispatch.

Do not allow the \$500k Covid Response and Recovery Plan to get spent or squandered in the next three months. Immediate action is needed to make clear in the vendor contract that the process is to be guided by an interagency steering committee with expanded oversight and coordination to lay a foundation for the 10 year plan due next June.

Session law required to assure that PUC shall not approve any Incentive Regulation Plan until the Ten Year Plan is completed and found to be consistent with any proposed IRP.

Pole harvesting proposal is unproven, secret, unvetted, unlikely to be sufficiently accurate nor clean enough images to resolve pole ID tags. Start with an RFP and a smaller pilot.

Senator Brock's Questions:

1. In your opinion does Vermont have a broadband strategy? Can you articulate it and does it make sense?

No! - The state has only a fragmented "aspirational" document, not a real plan. We have a muddled patchwork of federal subsidies for incumbents and state subsidies in the form of loose plans and no regulation, i.e no enforcement of open access fiber and double pole removal. There is too much ability for the incumbent telcoms and for-profits like GMP and even VELCO to rake off the desirable locations will further inhibit the ability of CUD's to be successful.

CUD, municipal and cooperative management salaries are generally ½ what the private industry is making and private industry salary information is protected by confidentiality. It is much harder to peer into the tent.

- The legislature should demand the CUD's take responsibility and be held accountable. Same with Velco, half owned by V-LITE.

Our Statutory policy now begins with " the purpose of this chapter is to strengthen the state's role in Telecom planning". It's about time!

2. How important is a statewide telecommunications plan? How many years should such a plan cover? What are the essential elements of

such a plan, who should be in charge of commissioning it and who should do the work (state employees, independent firm, etc.)? What are your thoughts about the state's last draft plan?

Very! Fundamental - A state-wide strategy and ten year plan is critical. Experience demonstrates this should be compiled by a professional, independent engineering firm. It ought to be looking out ten years and updated every three years with three year commitments and time-lines. Status reports should be sent out monthly or quarterly. The 2018 first and final draft, (combined) was a cynical farce, a background paper, not a plan. We need an oversight board to adopt a plan after finding it to be complete and in conformance with statute. Do NOT allow the department to adopt a deficient plan again.

Our legislative representatives ought to be requiring any proposed subsidized projects and legislative action to be referenced to and consistent with the plan, policy and goals.

- Long term goals are the result of looking out 10 years. Those goals are fine. Need to have the 3 year time-lines and commitments to hold people responsible and measure actual progress toward the goals.

An oversight body/steering committee should be appointed to manage the \$500K immediate Covid response and recovery plan should be comprised of ALL of these:

- Public Safety
- VTrans
- ACCD
- Public Service

- VCGI
- A CUD rep, possibly Hallquist
- A Velco rep.

3. Vermont has created a short-term broadband plan to expand coverage using federal COVID-19 funds as a result of the pandemic. To the extent that you are familiar with all or part of that plan, what are your thoughts about it?

- Unfortunately "it is what it is". Emergency spending on a broadband roll-out is likely to now be counterproductive. Cable Line extensions are a waste unless open access fiber is built along these same routes as a condition of the public funding. Otherwise we are increasing a monopoly of obsolete tech and damaging CUDs.

The earlier proposed statewide fixed wireless strategy may now have missed the window of opportunity unless all DUs, GMP, VEC, WEC are all mobilized by executive order and wireless designs begin NOW to be "auger ready."

Even more important that these efforts be integrated and not counterproductive as in missed opportunity for mobile wireless and shared fiber.

4. Please comment on Vermont's Communications Union District initiatives. What are the obstacles to success of CUD's and what, if anything, should the General Assembly do to help make them

successful? How should conflicts between CUD's and legacy providers be resolved?

Should CUD's have veto power over expansion by other providers in their areas?

- We are missing the integration of mobile wireless. CVFiber squandered \$20k worth of fixed/mobile wireless design work only to reject relying on VTel spectrum. CUDs feel no obligation to integrate plans with public safety radio, FirstNet, LMR backhaul or mobile wireless. If we could designate that a CUD owns and is responsible for a defined, regulated territory, that might be the answer. Short of that, put everything in place as possible to make that happen. Hold the CUDs responsible, just as the regulators hold the electric utilities responsible. The good news about CUD's is they are required to be transparent but even this will require legislative clarification to remedy current practices of secrecy.

That does not happen with VELCO and GMP. If we don't demand accountability from the CUD's we might as well not have them. While the CUD's lack technical competence now, they will build it. Demand accountability and the CUD's will ultimately build their expertise.

The state should define that statewide strategy and architecture with a focus on resilience, disaster planning, coordination and best use of existing g infrastructure, including Velco fiber. Locally solutions and plans will fit together and be different in different parts of the state. Provide state level engineering support to build local capacity. The

PSD has not hired a telecommunications engineer since the late and dear Charlie Larkin retired in 2006 or so.

CUDs should probably not have veto power but should inform and propose conditions to be attached to public funding of commercial network projects.

5. How can short-term installation of fixed wireless best integrate with fiber or other long-term solutions?

- Service locate fiber and backhaul solutions, fiber connected buildings, build vertical assets, even if temporary poles, to support fixed wireless, WiFi, LMR and LTE small cells as neutral host service for mobile wireless. As long as they CUD's own the installations as part of their asset bases.

6. What are your thoughts regarding Vermont's regulatory environment? What should management of broadband deployment look like and what agencies of government, if any, should be involved?

- The PSD and PUC are for the most part captured by those they are supposed to be regulating. Earlier, I referred to governance reform,(a bill is drafted) integrating Connectivity, state owned microwave, E911, VIT, VTRANS fiber.

The state needs to clarify the authority needed to control and make maximum use of the fiber assets of VELCO and maintain necessary transparency as they are mostly owned by VLite.

7. If you wanted to bring broadband at 100/100 to every Vermonter, how would you go about it?

1. Fixed wireless
2. Small cells serving both fixed and mobile
3. Resilient rings assembled from all carriers and Velco
4. Shared fiber aggregated to build otherwise non-economic paths
5. CUDs build laterals, evolving into a mesh architecture.

8. To what extent should our thoughts about broadband include cell phone access and availability?

Are these technologies so independent of one another that there is no crossover or common denominators in planning?

Fundamental! It is Not economical to build ubiquitous mobile wireless in rural areas otherwise. No, they are not independent.

Neutral Host shares build and maintenance costs across all carriers.

9. How should electric utilities be involved in broadband expansion?

Is information about pole attachments and provisioning public or proprietary?

Build engineered fiber in the electric space and then lease to CUDs.

Maintain and restore as necessary. Integrated planning for rapid restoral.

No, infrastructure located and clearly visible in the public Right of Way is absolutely not a secret. Set this policy explicitly in statute!

10. What else should we be thinking about concerning broadband expansion, economy and execution? What are the major impediments to these and what recommendations do you have for us to address them?

See numerous whitepapers already submitted.