ArlFiber Coalition

Proposal on Feasibility Study Parameters

8/4/2021

Executive summary

The COVID-19 pandemic showed us how essential high-speed internet at home is. Even before the pandemic, however, an unacceptably high number of households had no access to internet at home, which, given the demographics of those households constituted a serious civil rights and equity issue. The County's attempts to mitigate the impact of this digital divide, while laudable, were largely hampered by the reliance on existing for-profit providers to solve the problem. In order to address this issue once and for all, the County must explore how it can provide futureproof broadband service to all residents at home in a way that treats this as a utility and essential public infrastructure; e.g. like water. To be sure, communities across the U.S. have made tremendous strides in bridging their digital divide by forming a community network that puts public need over private profits. Using the $50,000 set aside in the 2022 budget for a feasibility study of this issue, the County should obtain a certain set of facts through reputable, independent third parties. These facts should be: 1) the legal considerations of establishing a utility authority for this purpose; 2) the technology(ies) most able to meet the U.S. Treasury Interim Final Rule's standard of *scalable symmetrical 100 mbps service*; and 3) the cost of deploying a public network over the broadest possible area, with a focus on the underserved areas already identified by county staff. The findings of this study should allow the County Board, County staff, and the community at large to make an informed decision on whether to create a community network for Arlington.

Why this is needed

The recent COVID-19 pandemic has made it abundantly clear that having affordable access to high-speed, low-latency, reliable internet service at home is essential to participation in modern life. The mass transition of work, school, government services, civic participation, health care, and the like to an online format during the pandemic left many of our fellow citizens behind, often with dire consequences for them. Doubtless, many of these online practices are likely to endure and deepen after the pandemic has finally subsided.

It must be emphasized, however, that there was already a glaring digital divide before the onset of the pandemic – particularly among school-age children – that constituted a crisis in its own right.[1] In the summer of 2020, Arlington's Department of Technology Services published a study that revealed that 16 percent of households in our county had no home internet access, and that these were primarily elderly residents, people of color, recent immigrants, and families with multiple school-age children.[2] In light of the fact that many of the school-age children who lack home internet are from vulnerable and/or minority populations, this state of affairs must be viewed as an unacceptable civil rights violation.[3] Indeed, national research shows that school-age children without home internet struggle to keep up with their internet-rich peers.[4]

The Arlington County government must be applauded for taking swift and decisive action to find and employ an array of stop-gap solutions to mitigate the digital divide during the height of the pandemic, particularly as concerns APS students in need of access to remote learning. That said, these solutions, as should be clear to all now, were neither sustainable nor adequate. This is because those solutions generally relied upon using the existing private telecommunications networks to provide service to those most in need.[5]

This all stems from the fact that the U.S. telecommunications market is dominated by a handful of large, for-profit providers. These large incumbent providers have tended to build networks in densely populated areas where they have little to no competition, which in turn allows them to charge high prices without worrying much about quality of service.[6] These high prices are directly responsible for the adoption issues in urban areas like Arlington.[7] Moreover, incumbent providers use the excess profits generated from these de facto monopolistic arrangements to lobby local/state governments and Congress to reduce consumer protections, fend off competition, and obtain public money for buildouts that often never materialize.[8] Arlington - and Virginia generally

- is no exception to this rule. Outside of certain newer commercial buildings, Arlington's commercial and residential broadband internet market is dominated by two companies and in many places only one. Meanwhile, the state government continues to throw up barriers to community internet solutions and give public money to incumbent providers to continue to build and/or expand legacy networks using outdated technology.

What is needed

Multiple communities across the United States have worked to solve their internet problems by building a community network.[9] Several of these networks are now considered to be the among the fastest and cheapest not only nationally, but globally.[10] Chattanooga's publicly owned and operated fiber-to-the-home network earned that city the title of "best work from home city" in North America during the pandemic.[11] Moreover, many of these networks have implemented nationally recognized digital inclusion programs.[12]

In light of this, Arlington would do well to consider the creation of its own community network. Under the current legal framework in Virginia, it appears the best approach to this is for the county government to form a "broadband authority" to utilize currently unused portions of its existing county owned optical fiber network to provide broadband internet as a utility service.[13] Indeed, multiple municipalities and counties in VA have already formed broadband authorities (individually or as a group) to begin addressing their connectivity problems.[14]

Under the initiative of the current Chair of the Arlington County Board, $50,000 was allocated under the 2022 budget to study the feasibility of establishing a broadband authority to provide broadband internet to underserved households. In accordance with the discussion of the nature of these funds at the budget hearing, such a feasibility study should establish "a common set of facts".[15] While the "set of facts" was not explicitly identified by the board members, we believe this study should explore the following:

1. The legal considerations for establishing a broadband authority in Arlington County to utilize its existing county-owned optical fiber network to provide internet as a utility service;
2. The proper technology to use to provide scalable and reliable broadband internet service *at least* at the level recommended by the U.S. Treasury Department in its Interim Final Rule

on American Rescue Plan Act funds (i.e., service that reliably meets or exceeds *symmetrical upload and download speeds of 100 Mbps* and is *scalable* to meet future data needs);

3. The potential cost/revenue of extending service to all residents in Arlington using currently unused portions of the existing county-owned optical fiber system, while prioritizing the underserved areas already identified by County staff.

This study is very timely as it coincides with the arrival of American Rescue Plan Act (ARPA) funds that encourage investment in broadband infrastructure in areas that are underserved, especially since the U.S. Treasury's Interim Final Rule on ARPA funds "encourages recipients to prioritize support for broadband networks owned, operated by, or affiliated with local governments, non-profits, and co-operatives—*providers with less pressure to turn profits and with a commitment to serving entire communities*."[16] In addition, President Biden's recent Executive Order on Promoting Competition in the American Economy instructs the FCC to implement policies that would prohibit landlords from entering into exclusive deals with ISPs, which is a major stumbling block in terms of reaching the high-density, high-revenue apartment buildings.[17]

Legal considerations

It is well established that political subdivisions of Virginia have the legal right to create a "wireless service authority", (hereafter: broadband authority). These broadband authorities have wide discretion to directly build, own, and operate telecommunication systems (including optical fiber and wired systems) that provide high speed data and internet access service to customers. Aside from the living practice of existing broadband authorities in Virginia, this right was confirmed by a State Corporation Commission Final Order in 2019[18] and in the guidance that the Virginia Department of Housing and Community Development issued to localities with regard to their options for bridging the digital divide during the pandemic.[19]

Nonetheless, there are legal nuances that should be explored as part of the study, such as the transfer and/or leasing of assets from ConnectArlington to a broadband authority, the negotiation of rights of way, etc. This legal study must be conducted by an independent party with

specific expertise and experience in telecommunications and sufficient experience in advising other broadband authorities in the state.

Technology

The language in the budget authorizing the $50,000 for a feasibility study states that the study shall determine the feasibility of forming a broadband authority to provide broadband internet service to low-income households utilizing Citizen Broadband Radio Service (CBRS) technology.[20]

This stipulation must be amended. A study of this nature must be relatively technology neutral and must instead identify which technology or technologies are capable of meeting the requirements of the U.S. Treasury Department's Interim Final Rule to implement the Coronavirus State Fiscal Recovery Fund and the Coronavirus Local Fiscal Recovery Fund established under the American Rescue Plan Act. That rule stipulates that "projects are expected to be designed to deliver, upon project completion, service that reliably meets or exceeds symmetrical upload and download speeds of 100 Mbps". Per the Treasury's guidance, these speeds are necessary to "ensure that broadband infrastructure is sufficient to enable users to generally meet household needs, including the ability to support the simultaneous use of work, education, and health applications, and also sufficiently robust to meet increasing household demands for bandwidth". Moreover, the Interim Final Rule encourages fund recipients to "focus on projects that deliver a physical broadband connection by prioritizing projects that achieve last mile-connections".[21] As such, any public investment in broadband infrastructure must be focused on technology that is "future proof"; i.e. being the most capable of meeting increases in data demand well into the future, including speeds well in excess of 100 Mbps.[22]

Scope

The current budget language states that the focus of the study will be the feasibility of the "introduction of broadband high-speed internet service to those tenants in committed affordable units".[23] While any project should focus on getting affordable or free service to such households, the digital divide exists beyond committed affordable units, as evidenced by the County's own

project to provide wireless service to several market rate apartment buildings along Columbia Pike.[24] This study must be as broad as possible and should arguably consider the county as a whole – or at the very least the areas closest to the existing county owned optical fiber lines and access points.[25] Signing up full-freight customers along with highly subsidized ones will improve the financial footing of the authority. Moreover, residents and businesses should have the option to be connected by any last mile connection passing them. Indeed, the U.S. Treasury Department's Interim Final Rule encourages projects that expand high-speed access to "businesses", which it interprets as including non-residential users of broadband, including private businesses and institutions that serve the public, such as schools, libraries, healthcare facilities, and public safety organizations.[26] The feasibility study could potentially utilize the Community Network Quickstart Program to obtain preliminary data on the cost of a county-wide buildout.[27]

Conclusion

Arlington County has a unique opportunity to build a digital landscape that provides world-class connection to all, is sustainable, privacy-enhancing, rights-preserving, innovative and democratic by design. The results of this feasibility study, if conducted as outlined above, will provide the "set of facts" we need to make an informed decision about creating a community network that would allow us to accomplish that. With the trend of work from home rising all over the country and the County's desire to attract tech companies and workers, while also ensuring digital equity, it is imperative for Arlington to pursue an earnest investigation of creating a community network that could definitively achieve those goals. Indeed, if we wish to remain a world-class community that is dedicated to fairness, justice, and innovation, we have no other choice.

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