Stockbridge Valley Central Schools Network Solutions

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District Profile

Stockbridge Valley Central School District is a small, rural district in Munnsville, NY with a total K-12 enrollment of 484 students, 53% of which are categorized as “economically disadvantaged” (“Stockbridge…” n.d.). The district includes approximately 40 full time teachers and 4 administrators (“Stockbridge…” n.d.). Grades K-12 attend school in one building which was built in 1998.

2014-2015 District Technology Initiatives

In November of 2014, Stockbridge Valley Central Schools welcomed new Superintendent of Schools, Mathis Calvin III, Ed. D. Dr. Calvin has been committed to rapidly improving technology use in the district in alignment with the SAMR model developed by Dr. Ruben Puente Dura which focuses on redefining instruction through technology (Puente Dura, 2009, p.2). Therefore, for the 2014-2015 school year, the Stockbridge Valley Class of 2018 will be the first class to take part in the district’s new 1:1 technology initiative. Freshmen students will be issued Google Chromebooks which will remain in their possession throughout their four years of high school. According to the technology plan, each following school year, the entering Freshmen class will continue to be issued 1:1 technology in the form of Google Chromebooks, until the entire high school student body has access to 1:1 technology by 2018.

Overview of Current Network

The Stockbridge Valley School District is quite fortunate to have a very modern and fairly consistent network already in place. The school’s current network operates through the Madison-Oneida BOCES WAN and District wide LAN. The District’s LAN consists of a combination of Ethernet, T1, and Wireless technologies which encompasses the K-12 building, bus garage, and FFA Sugar House. Time Warner Cable provides the district’s Internet service,
whereas phone service is provided through Northland Communications and Windstream. The network router is located in the main distribution closet in the Library Media Center, in the center of the building. There also are five supplementary closets throughout the district which are connected with fiber optic cabling for faster network speeds. The 35 security cameras are on a separate VLAN in order to separate the camera image traffic from the data traffic. Overall, Stockbridge Valley’s network has great potential due to its high-speed capacity and up to date technology.

**Network Issue**

However, the new 1:1 technology initiative provides some technical issues under the current network when integrating mobile devices in the classroom. Currently, classrooms receive very low wireless signal due to the fact that wireless access points are located in the hallways and the building’s concrete walls with rebar reinforcement block signal and cause interference. Unfortunately, as referred to in Appendix A, this results in strong wireless signal only in the hallways, not in the classrooms. Therefore due to this weak signal in the majority of classrooms, students using their Chromebooks in these classrooms would not only experience inconsistent Internet access, but will also be unable to access printing functions from their devices to the classroom printers. In order to ensure that students have the tools they need to maximize learning opportunities with their new 1:1 technology appropriately in all of their classes, it is important that the committee provide an effective and feasible solution to this issue.

**Recommendation for Improvement**

A relatively simple and cost effective solution to this problem would be to place additional wireless access points in the building, most specifically within classrooms. In addition to the wireless access points that already exist in the hallways, more access points will better
serve students and the district’s technology initiative. The committee recommends adding six wireless access points in the high school wing; one in each of the classrooms most adversely affected by the lack of wireless coverage: 201, 202, 205, 206, and 209. This improvement will ensure that the District’s investment in student 1:1 Chromebook technology will yield the best educational results.

**Rationale**

Stockbridge Valley Central Schools is lucky enough to be operating on a solid network capable of high speed Internet connection in order to provide effective integration of technology in the classroom. However, it is important that the district protect its investment in 1:1 technology by updating the current wireless network so that wireless access points work effectively within the building. Stockbridge Valley has already taken the important steps to move toward 1:1 technology and cloud computing using Google Apps for Education because the district understands the transformational power of technology in a student’s hand. However, the district needs to offer its students a network to support the devices provided by building a “robust WiFi infrastructure” and providing “access points that can perform in high-density environments” (“Building a…” n.d., n.p.).
References


Appendix A

Current WiFi Coverage – S.V.C.S 2nd Floor, High School Wing

Legend
Little, No Coverage – Gray
Some Coverage – Orange
Strong Coverage – Green
Wireless Access Point - **W**
Appendix B

Recommendation to Improve WiFi Coverage – S.V.C.S. 2\textsuperscript{nd} Floor, High School Wing

\textbf{Legend}

Little, No Coverage – Gray
Some Coverage – \textcolor{orange}{Orange}
Strong Coverage – \textcolor{green}{Green}
Wireless Access Point - W