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Board Report - Technology
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Looking Back

K8 Library Computers

The hardware upgrade to the computers in the K8 library has been completed by Brian Mangus. The previous 1.8Ghz CPUs were replaced with fastest CPU that the motherboard can accept (3.06 Ghz Pentium 4). In the name of full disclosure, I should also mention that additional RAM was also purchased to "max out" the RAM Windows XP can recognize (2 GB). The costs for adding RAM and an upgraded processor was just about $32 per machine (We got some very good pricing). Needless to say, they are much more capable machines at this point.

In addition to the processor upgrade, all network cabling was replaced and the former networking gear (a collection of small 10 and 100 baseT hubs) were replaced with a single 100baseT switch to increase the network speed and efficiency. In short, the processing power of the machines have been maxed out, interiors cleared of some very sizeable dust mouses, networking was cleaned up, power strips have been replaced with a single power bar, and the physical layout of the workstations has been reorganized to allow easier access by both students and the technical staff who may need to work on them. It was quite pleasing to note that watching a video from Youtube on those computers has gone from a jerky, almost unwatchable experience to one of almost sublime enjoyment.

What's Current

Wireless Contractor

I have been working with Jeff Andrews of ESD112 to help vet a wireless networking contractor familiar with our system. While the final selection is not yet done, it has been great to find a group in the Northwest that has experience with gear like ours. I have also been following up on a lead given by Apple's regional Systems Engineer, Marc Melkonian. He has been a great asset through much of the last year or so in clarifying the issues which may (or may not, depending on your point of view) be of special consideration in a mixed device environment such as ours. I hope that by the time of the board meeting that I will have the gotten the final details squared away and can have their technicians begin to dissect everything I did wrong along the way. I look forward to it. Kinda.

Looking Forward

Server Virtualization

I have begun researching server virtualization as a way to increase performance as well as control costs for our path forward. Mark asked me what virtualization was and I suppose it may help to include this brief excerpt from http://www.techrepublic.com/article/introduction-to-server-virtualization/ for your edification as well:

> Virtualization is a method of running multiple independent virtual operating systems on a single physical computer. It is a way of maximizing physical resources to maximize the investment in hardware. Since Moore's law has accurately predicted the exponential growth of computing power and hardware requirements for the most part have not changed to accomplish the same computing tasks, it is now feasible to turn a very inexpensive [server] into eight or even 16 virtual servers. This slashes the majority of hardware acquisition and maintenance costs that can result in significant savings for any company or organization.

District Internet Connection

On another front, we have long recognized the need to have an improved connection to the Internet so that we can continue to grow in our use of Internet-based resources. This process has been plagued by many problems causing frustration for our users, me, and the K20 networking group who is responsible for providing service to every district in the state. We have been in a uniquely difficult situation and, while other districts were upgraded several years ago, we are still lagging. Josh Soske has also been involved and has helped to move the discussion along quite nicely by communicating with several of the key players in this project. I appreciate his advocacy for getting the best solution available to us. I have included here an excerpt from a recent email which describes the current solution:

> *As I have mentioned before, the solution proposed will be a DS3 line installed on our site. The timeline for that was recently given as 1/15/2014 but has now slipped to 2/15/2014 . Jeff suspects there may be additional delays if the current pattern continues.*
>
> *Jeff and the K20 folks recognize the dire need we have to increase bandwidth and have developed an interim plan at (what I understand to be) pretty significant expense and for (hopefully) a relatively short duration. The interim plan is to upgrade our router with an additional 4 port card and bring in four additional T1 lines. This should carry us over until the DS3 is available and, even if it the DS3 install dragged on into the summer, it is expected to provide us with reasonable relief at least until the end of this school year. The planning for the router upgrade and four additional T1 lines is just getting underway and so there is not yet an established time line for this project*

I hope that you find the information of interest and that it will be gratifying to know that a specific plan is in place and that we should see action on this within the school year.