

Upper Perk Tech Pulse

Keeping You Informed on UPSD Technology

Special points of interest:

- Review of the 1st Month of Printing Quotas
- Email cleanup
- Increases in technology costs

The purpose of this newsletter is to keep everyone informed of the goings-on of Technology in Upper Perkiomen School District. Each month the status of projects and challenges will be updated and any new changes will be announced. We hope you find it informative and beneficial!



Ticket System

In February, we announced that the new tech support ticket system must be used to request tech help. Thank you to everyone who has used it. There is already some interesting data being generated.

In the whole month of February, 150 support tickets were opened and 154 were closed, which means the Technology Department is keeping up with the demand. Early in February the volume was relatively low because not everyone was using it, but it picked up in the second half of the month. It will be interesting to see what March looks like.

So far there isn't enough data to see any trends or draw conclusions, but there are some things starting to emerge. One is that a lot of system batteries on older staff laptops are failing. These batteries are different from the Li-ion batteries, and are buried deep in the internals of the laptops. They're known as CMOS batteries. Due to the age of the computers, replacement CMOS batteries are very scarce but we're trying to find a supply.

Overall we are happy with the new system and hope you are too.

Inside this issue:

Printing Quotas—The First Month	2
Email Outage on February 22	3
New COPPA Letter	3
Computer Prices are Increasing	4



Did you know?

One of the original inventors of the lithium-ion battery, John Goodenough, now 94-years old, just worked with Maria Helena Braga at the University of Texas at Austin to invent a solid-state battery that has longer battery life, more energy density, and faster rates of charging and discharging than current lithium-ion technology.

Printing Quotas—The First Month

February marked the first month of the printing quotas. There were a few growing pains at the beginning but they've been resolved.

We discovered that when we log into a copier, Papercut put a lock on our account until we logged off. That was unexpected. It took several days of working with Edwards and Papercut to finally remove that. During the process of troubleshooting it, Edwards recommended a setting change that had the unintended side-effect of limiting us to \$5 of printing within a timeframe. We fixed that too.

Several times the copiers malfunctioned while processing a job, and then debited the account. If that happens, please enter a support ticket immediately and show an example of what happened to either your principal or the tech assistant. Your account can be credited. That said, it's a good practice to try a test print before running a large job. If you have 20 pages, first run 1 page to make sure it looks correct. Then run the remainder. That will save you the headache of getting credited and may save your colleagues from the same fate if you report a problem with the device before someone else

tries to use it. If you notice a problem with a copier please report it immediately so it can be fixed before someone else is snake-bitten.

By the end of the month, our overall printing/copying was down by 50,000 pages from January, which represents a savings of \$500. Only 3 people actually hit the full quota, though several others came close.

On March 1, people who print B&W were reset to \$50. On March 2, people who can print color were reset to \$100.

Email Outage on February 22

On February 22, at approximately 1:15pm, our email system halted. People started receiving messages that Outlook wasn't able to connect, and no email was flowing.

Upon investigating, we discovered that the storage of the email database was full. When that occurred, the email server stopped everything to protect the data.

Due to the way our storage and servers are setup, we can dynamically move free storage from one server to another fairly easily. Unfortunately, at the time the email server filled up, we were also in the process of upgrading the software that allows us to

manage the servers (called vmware). We couldn't connect to the management software in the normal way, so we had to get creative and find another way in.

Eventually we got in, re-assigned storage, and brought the email server back online.

We learned from all of this that we've been too flexible in allowing people to request more storage. One of the main purposes of email quotas is to prevent a situation such as this. Moving forward, we will have to be more strict with enforcing those quotas.

So what can you do? First, please delete old emails. It's

a chore, but it's just as necessary as cleaning out the garage. When you delete items, be sure to delete them from your Deleted Items folder too. Items in there count against the quota. Take a look at your Sent items too. That tends to be overlooked, but Sent items count just as much as any other message.

Finally, if you have emails that you have held onto because they have important attachments, save the attachments to your H drive and delete the email.

If you need help with anything, please enter a ticket and a Tech Assistant will come visit you.

"When you delete items, also be sure to delete them from your Deleted Items folder too."

New COPPA Letter

In February, the District drafted a new COPPA consent letter for parents. The new letter has been added to the Kindergarten Registration process and will need to be sent home to all families with children under the age of 13 at the beginning of next school year.

COPPA is an acronym for "Children's Online Privacy Protection Act." It essentially says that websites and other IT service providers must obtain parental consent prior to collecting any personal information on children under the age of 13. The act defines "personal infor-

mation" very broadly. Email addresses and names are the items that we most often use to identify students in technology systems, and they both qualify as personal information.

Fortunately, the act allows us, as a school, to consent on behalf of parents as long as we have the parents' permission to do so. In other words, the parents can give us permission to consent to using personal information. We don't need to get parental consent for every single new system we might use.

The new COPPA consent letter will serve as the paren-

tal permission we need. The best news of this new letter is that it only needs to be signed once.

COPPA law strongly recommends that the schools maintain a full list of all of the websites and other systems that have personal information. Therefore, the schools will be asking all teachers to please send a list of all systems you use with your students that have personally identifiable information to your school office. The office will need to present that list to any parents who request it.

"Fortunately, the act allows us, as a school, to consent on behalf of parents as long as we have the parents' permission to do so."

Computer Prices are Increasing

It's a common misconception that technology prices decrease over time. In fact, computers and other technology tend to increase at the same rate or faster as any other good or service. The only decreases are seen in old technology that has been superseded, or that have plateaued in development (like TVs). For example, an iPhone X is now \$999.99 (because \$1000.00 is too scary), but an older iPhone 7 Plus can be purchased for \$669.99. When the iPhone 7 Plus was new, it was \$769, so it has decreased by \$100 since it was released, but the cost of the newest model has increased by \$230 over the same time period.

So standard economic principles of inflation still apply to technology. This year, there are other upward pressures on technology prices that together are making devices about 10% more expensive now than this time in 2017.

The biggest factor is an increase in raw materials costs from Africa, particularly cobalt. Electronics use a variety of precious metals, and cobalt is one of the most important. It is used primarily in lithium ion batteries, and is also found in many other technology components.

The largest cobalt mine in the

world by far is in the Democratic Republic of the Congo, and a number of human rights concerns along with ongoing conflict are pushing up the cost of cobalt mining there. Many technology companies are curtailing their use of cobalt mined in the DRC, and pressuring the DRC to reform. DRC mines account for about 58% of total global cobalt production, so mining output from the DRC is very influential in terms of technology prices.

Bitcoin and other cryptocurrencies are pushing prices higher too. Large data centers are built to "mine" cryptocurrency, and the huge surge in prices of Bitcoin and others created a big bump in demand for computer power. Now that crypto prices have crashed and hopefully leveled off, this should be less of an issue in the near future.

Another factor is the uncertainty regarding global trade brought about by the current US administration's policies. Imports from Asia, where most technology devices are manufactured, are more expensive due to that uncertainty. As investors and corporations become increasingly nervous about future trade, they are driving up the prices of goods from overseas.

On Thursday, March 1, the

administration announced new tariffs on imports of steel and aluminum. It still remains to be seen what, if any, impact these tariffs will have on technology prices, but most likely they will push prices higher.

Looking ahead and trying to forecast where prices might go is more difficult now than ever. The level of uncertainty creates a virtual fog that is impossible to see through. Most people hope that prices stabilize soon, but nobody knows if that will happen. The only thing we can safely assume is that volatility will continue for a while.

At UPSD, we face the same issues that an individual would face. We can maintain our purchasing power by increasing expenditures, which requires increasing revenue. On the other extreme, we can keep our expenditures flat and decrease our purchasing power. Or we can find some middle ground. As a result of all of this, we need to analyze our needs more closely and make sure that our resources are going where they will have the most positive impact.

27
Co
Cobalt
58.9332

"As investors and corporations become increasingly nervous about future trade, they are driving up the prices of goods from overseas."