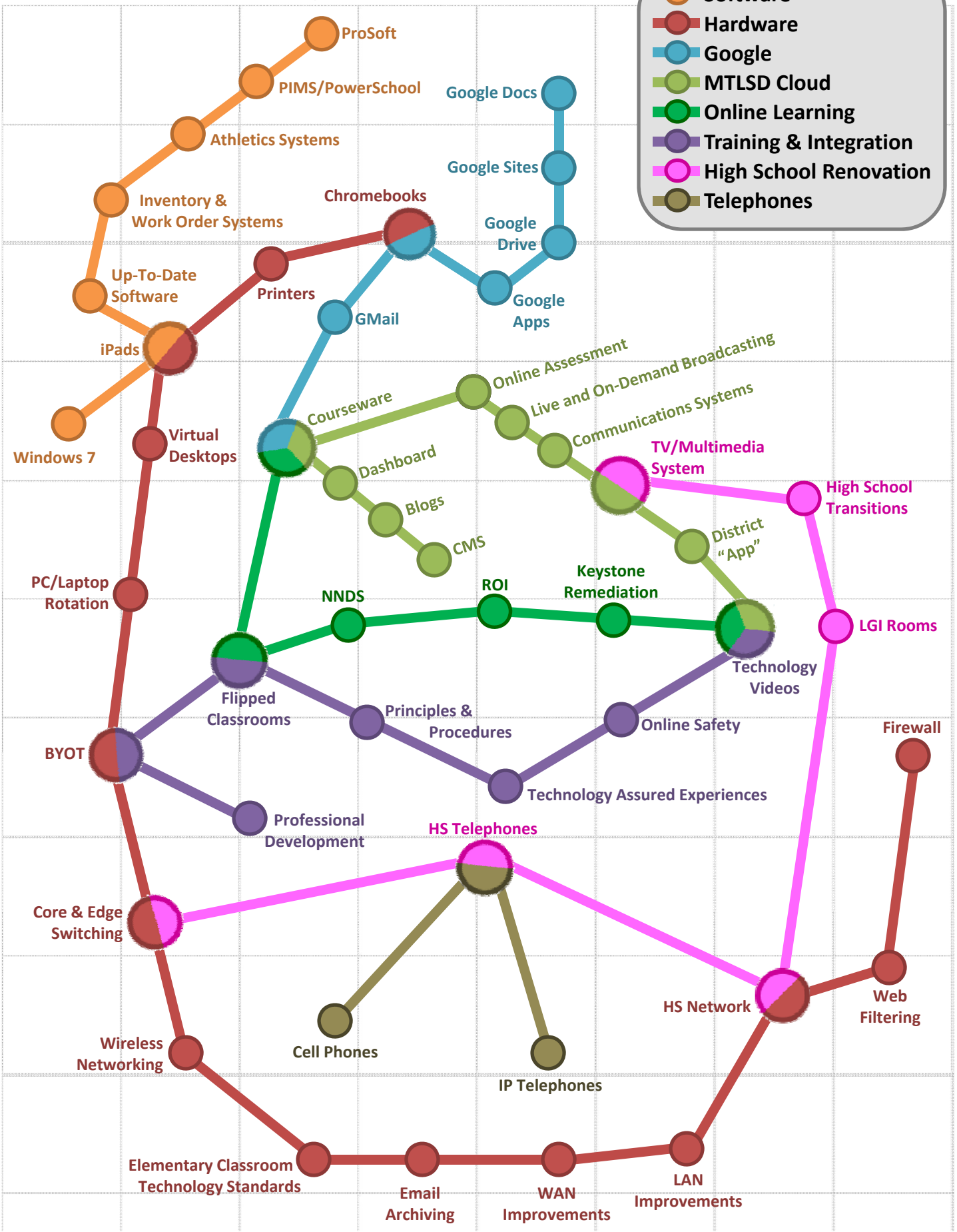


# MTLSD Technology Map (Rev. 2013.07.01)

- Software
- Hardware
- Google
- MTLSD Cloud
- Online Learning
- Training & Integration
- High School Renovation
- Telephones



# Software (1)

## Prosoft

Throughout the year, we review our ProSoft subscriptions and support to make sure that we are utilizing it the best way possible. This year, we added a number of improvements:

- Employees can now view their benefits and paystubs online.
- We added online requisitions to allow account owners greater ability to automate the purchasing process.
- We switched from SubFinder to Aesop for our substitute system, requiring our *MTLSDHome* page interface to be rewritten. This interface provides a centralized look at absence information for all faculty and staff. It is also the portal through which our non-teaching staff make and approve time off requests.
- We implemented clock-in/clock-out system for facilities, food-service, and other hourly employees. These employees use their ID badge at one of a number of specific workstations to sign in and out every day. This information feeds directly into Payroll.

## PIMS/PowerSchool

With this year's hiring of a new Student Information Systems Administrator and the creation of a district Student Data Administration Specialist, we've been able to keep pace with the ever-changing requirements of the PDE (PIMS) and continue to make improvements to our PowerSchool interfaces, keeping them updated and valuable for our administrators, teachers, parents, and students.

## Athletics Systems

We are working with Athletics to implement a system that will enable both forms collection online as well as "pay to play" initiatives. We also work closely with athletics to integrate their rosters and other data with our student information systems to minimize the need for duplicate and/or inefficient processes.

## Inventory & Work Order Systems

We have spent majority of the year developing and utilizing an online work order system as well as a digital inventory system: both of which allow us to more efficiently manage and report on our support efforts as well as our equipment. Integrating these two custom applications provides us with 2 benefits:

1. Allows us to more efficiently plan and perform our annual equipment replacement projects.
2. Provides us with a maximum amount of information related to a work order so we can best service the user's needs.

# Software (2)

## Up-To-Date Software

We work to keep our software relevant to what our students are learning and doing in the classroom. This includes an annual review of the software that is installed on our systems. When software is considered "out-of-date," we work with principals and curriculum leaders to identify and implement alternative solutions. We also work closely with the BIT department throughout the year to ensure that office productivity software installed on our devices is in synch with their requirements.

One of our guiding philosophies is that software needs to be current not just in terms of release date, but in terms of what our teachers and students need to be able to do with that software. As an increasing number of "online" products becomes available to our schools, we need to ensure that we are making software choices that are based on ***what we need our students to be able to do...both inside and outside of the classroom.***

## iPads

We just completed our first year with iPad carts in the elementary schools with great success. This year, we were able to in-service elementary teachers through flex-shops and a formal "Tech Half Day" in May to help teachers more effectively utilize apps on these student iPads.

The majority of our teachers in grades K-12 have been issued a district iPad to use as a teaching device. The iPad can be both a powerful learning tool as well as a powerful teaching tool. It will be neither if we ever stop focusing on the value it can provide a classroom and how teachers can best unlock that value for their students with the right apps and the right training.

## Windows 7

We were not the first district to move from Windows XP to Windows 7, but now that we've committed to it, we are one of the fastest districts to migrate every one of our machines onto the Windows 7 operating system. This move will enable better performing machines, greater abilities to support these machines, and a greater experience for users of installed and cloud-based applications.

By the end of the summer of 2013, nearly every one of our production PC's and laptops will be running the Windows 7 operating system.

# Hardware (1)



## Chromebooks

With successful pilots of Chromebooks at elementary, middle, and high school level last year, we are putting a number of Chromebooks into our schools this summer. While not a complete replacement for a laptop, they illustrate that for the most common uses of a laptop (word processing and online research), a Chromebook represents a great solution at a third of the price. Our schools are excited to have more of these devices next year.

As a technology department, we are excited to discover the value they may hold in situations which previously were "laptop only." At such a small fraction of the cost, we can get more devices into the hands of our students more often...and still realize a cost savings over traditional laptops.

## Printers

Printer management continues to challenge us. Wherever possible, we are pushing for the elimination of costly personal printers and the funneling of print jobs to larger, networked printers that can be operated by the district at lower cost. We continue to explore ways to find savings with our printer costs: this summer we will consolidate toner purchases from numerous supply budgets to allow us to enter into a managed print services contract that will save us money on supplies and repairs.

## iPads

We just completed our first year with iPad carts in the elementary schools with great success. We are finding more efficient ways to manage these devices on our network including pushing apps and updates. We currently support 270 student iPads across our 7 elementary schools.

In addition to elementary student devices, the majority of our teachers in grades K-12 have been issued a district iPad to use as a teaching device. The iPad can be both a powerful learning tool as well as a powerful teaching tool. It will be neither if we ever stop focusing on the value it can provide a classroom and how teachers can best unlock that value for their students with the right apps and the right training.

## Virtual Desktops

With the expiration of the lease schedules for our classroom computers in 5 of our 7 elementary schools this summer, we are transforming our model from standalone PC's in the elementary classroom to "Thin Clients" (aka Virtual Desktops) which will allow us to rapidly support and even deploy new desktop configurations to classrooms. This shift also allows us to move much of our processing power back to our "racks" so it can be more effectively utilized by all of the district's devices.

# Hardware (2)

## PC/Laptop Rotation

We maintain an average of a 4 year life cycle on our PC's and laptops. Every summer we seek to replace approximately 25% of those devices. While we do switch out Teacher PC's, we have maintained the CRT monitors rather than replacing them with flat screens to maximize our spending power and focus more technology dollars on student devices. Student computers will be the first computers in the district to be switched from CRT to flat screens as needed.

## BYOT

BYOT continues to be a growing success at all ten of our buildings...a growing number of outside devices (both teacher and student) have been utilizing our new wireless infrastructure. We worked with a group of high school students this year piloting the use of outside devices in different types of classes and non-class timeslots and got some great feedback that we will use to refine our BYOT infrastructure. We plan to work with a group like this every year.

At the middle schools, we noticed a sharp increase in the number of teachers and classes that made use of students' devices (cell phones, tablets, laptops, etc.) in a productive way to allow the class to move beyond recall of fact and into the application of that fact towards creative and collaborative work products and solutions.

BYOT can have a place at the elementary schools as well. We have been working with a number of elementary teachers who last year allowed students to bring devices in from home for classroom use. Our plan is to work with principals to instill a broader appreciation of the potential benefits to a program like this in their school.

## Core & Edge Switching

We successfully obtained and implemented a new switching structure this year that will provide not only for the new high school, but the district as a whole. Our technicians continue to receive professional development on this equipment so it can be effectively maintained and improved over time. This equipment is essential in providing a platform on which we can run our new virtual desktops (see above) at the elementary school. If this model proves to be a success, our new network infrastructure will allow us to easily apply at our middle schools and high school in later years.

## Wireless Networking

Our new wireless infrastructure has provided for a number of learning opportunities throughout the district. For example, teachers can now take 4-6 laptops/iPads/etc. from a cart and use them in their class in a collaborative or center-based manner rather than needing the entire cart to provide wireless to their room. Future improvement plans include reporting capabilities and expanding into large spaces like gymnasiums and auditoriums at our High School as well as our other buildings.

# Hardware (3)

## Elementary Classroom Standards

We are working with the Elementary Principals to establish a "technology standard" for each grade level and subject area that goes beyond the current "six student PC's in every regular ed classroom." This new standard will be coupled with a budgetary account which can provide for additional sections being created as well as non-PC equipment repair and replacement. Examples of such equipment go well beyond the teacher computer and six student computers. Everything from document cameras to projectors to interactive whiteboards and beyond must be considered if we are to establish a budgetary account that will provide stability for the way these classrooms are equipped.

## Email Archiving

We archive every email that comes to or goes out from a mtlsd.net account. Our current retention policy is to archive "everything" which negates us having to ensure the deletion of emails that would extend past a certain established timeline. We monitor our archiving and storage equipment constantly to ensure we can provide for this policy.

## WAN Improvements

With the recently acquired switches and phone equipment, we are now able to change all of our phone traffic between buildings to be VoIP (Voice Over IP) which means that we can use the fiber we had previously dedicated to voice traffic to be data traffic. With this new ability, we will have a 10G star network connecting all of our buildings to the high school in addition to the previously utilized 1G ring network which will continue to exist and be utilized but now more so as a backup to the 10G network.

## LAN Improvements

We continue to make improvements within our buildings to ensure that the switching and networking are up-to-date. As our older equipment begins to fail, we replace it with new equipment that works well with our new core switches back at the High School as well.

## HS Network

With such a large scale renovation project as ours, there is an added challenge of keeping one functioning network that is comprised of two functioning "sub-networks" (old HS and new HS). We are currently able to achieve this by maintaining two server rooms which are connected through a fiber-optic patch panel. As we move parts of the building from the "old" sub-network to the "new" sub-network, we will transition that traffic from one server room to the other until the project is completed and we can decommission the server room in C Building.

# Hardware (4)



## Web Filtering

Per the requirements of the FCC for us to receive our E-Rate funding, there is a component of policy IJND which states that we must filter our Internet traffic to block sites that would be harmful or otherwise not helpful to student learning. Our current Web Filter subscription is expiring in the fall and the product has not kept up to date with current web technologies such as secure sites and Google/YouTube's Safe Schools initiatives. We are currently evaluating a number of web filters which will allow us to remain compliant with CIPA (Child Internet Protection Act) and provide improved online learning experiences for our students.

## Firewall

Our firewall does an adequate job of blocking unwanted traffic into our district...once we know of that unwanted traffic. This fall we will be evaluating different firewall options that will also block unwanted traffic before we even know it exists (netbots, foreign packets, proxies, etc.)

# Google (1)

## Google Docs

Google Docs offer true collaboration between our students and our teachers in the creation of documents, spreadsheets, and presentations. We utilize this free-to-education resource frequently and ever-more so in our classes by connecting our existing student accounts to Google and working with teachers to explore and understand the value that such a tool offers. Many colleges and corporations make use of Google Docs as well so this turns out to be a valuable skill to have both in and out of the classroom for our students of all ages.

## Google Sites

Google Sites offers what Wikispaces always promised: true and real-time collaboration between our students and our teachers in the creation of web pages. We are working with classrooms, teachers, and administrative departments to utilize Google Sites as their "page" from which they can share documents, links, and other information.

## Google Drive

Google Drive is the logical replacement for our "NDrive," a product that we developed in 2007 to allow students, faculty, and staff to have a secure place for files that was accessible anywhere there was an Internet connection. Now that we have Google for Education at Mt. Lebanon, students, faculty, and staff have access to the Google Drive which offers a greater amount of storage and better integration with their Google Docs.

The notion of "sharing" a document instead of "sending" it to someone is a paradigm shift that we need to spend more time working with our folks to get accustomed to.

Additionally, we are utilizing this collaborative tool amongst our School Board by transitioning the weekly board packets into a shared Google Drive folder.

## Google Apps

There are a growing number of "apps" that Google allows users to add to their Chrome Browsers and Chromebooks. Now that we're implementing Chromebooks throughout the district, we are learning how to best manage these additions and we are working with early adopters to develop processes that provide for an efficient growth in the use of these "apps."



# Google (2)



## Chromebooks

With successful pilots of Chromebooks at elementary, middle, and high school level, we are putting a number of Chromebooks into our schools this summer. While not a complete replacement for a laptop, they illustrate that for the most common uses of a laptop (word processing and online research), a Chromebook represents a great solution at a third of the price. Our schools are excited to have more of these devices next year.



## GMail

One of the greatest impacts of our foray into Google Docs has been establishing GMail accounts for all of our students in grades 1-12. With the introduction of BYOT, many students with their cell phones and other outside devices began having access to email services regardless of whether we provided them or not. Providing email accounts to our students allows us to ask students to use their GMail to receive notices, communicate with teachers via email, and create accounts on web-based services that our teachers utilize in the classroom. Email-based communication is now a tool that's available to every teacher and every student, so we expect to be working with our teachers on a number of great projects in the coming years that take advantage of that fact.



## Courseware

As we investigate courseware, or Learning Management Systems, one of the crucial elements in our evaluation has to be the ability to integrate with our existing Google Drive and Google Docs accounts. As we pilot and eventually implement courseware solutions, we work to integrate them with our Google accounts to users can take advantage of their documents and space in the cloud.

# MTLSD Cloud (1)



## CMS

Our website is driven by a custom-created interface called CMS. While the user interface is not the best, the cost to the district to use it is zero, so as we evaluate ways to keep our district website up-to-date in both form and function, we keep the cost element strongly in mind. One of the avenues we are investigating includes a simple redesign without having to purchase a new system, transition our content from the old system to the new system, and train users on the new system. We redesigned and re-released the technology "subweb" this year as an example of how redesign could be accomplished within the existing CMS framework (<http://www.mtlsd.org/technology>)



## Blogs

We are proud to have been blogging at Mt. Lebanon since late 2006. We have developed an in-house blog engine that provides much of the same functionality as commercially available blog engines but with the added features of security and privatization to just our community (parents, students, etc.) at the discretion of the blog's owner. We have hundreds of active blogs and we continuously enhance the product with upgrades to make it more valuable to our teachers and students. Our most recent upgrade we plan to release is "nested comments" in support of discussion threads.



## Dashboard

The Dashboard has been an integral part of our Teacher-Parent-Student communications plan since 2003. Over the last 10 years, we have continued to increase its effectiveness and value to each of those groups. Most recently, as we switched to PowerSchool from SASI as our Student Information System, our Dashboard began to show "live grades" and eliminate the need for printed report cards at every grade level. Our most recent additions to the Dashboard include integrating the parent login with our Blog engine so parents can see the blogs that their children view and participate in. We also provide account balances (integrated with our food system), student participation in activities and community service, integration with IGP's, and parent-teacher conference scheduling online.



## Courseware

Due to our increase in online course development, we investigated a number of Learning Management Systems and we are planning to move forward with Canvas as our platform. Online lessons developed in Canvas will integrate with our Google Docs and PowerSchool's Gradebook which will encourage a far greater number of teachers to utilize this online resource.



## Online Assessment

In addition to developing an in-house online assessment tool in our "Forms" engine, we selected Canvas as our future Learning Management System based in part on its online assessment piece which offers conditional release which allows a student only a certain number of lessons based on the assessment of their readiness for those additional lessons.

# MTLSD Cloud (2)



## Live and On-Demand Broadcasting

With this year's restructuring of our former "AV Department" into a "Multimedia Specialist" role, one of our primary foci has been the digitizing and digital broadcasting of the events in our schools that were formerly filmed and burned onto a DVD. Since many of our events happen during the school day, there is a great service we can provide to parents and community members when we live-stream these events online and upload them afterwards to our multimedia website for on-demand viewing.



## Communications Systems

We use SchoolMessenger for communication to home. Currently, we utilize only the telephone calling features for delays and cancellations, but we have been working this year to make it the "mass email" tool for the district as well...transitioning from our custom in-house solution called "PowerMail." The SchoolMessenger system can also be configured to make phone calls to homes when a student is absent or tardy, but currently only the High School makes use of this feature.



## TV/Multimedia System

Part of the renovation project that pertains to technology is the creation of a TV/Multimedia system which will allow the district to provide television over data lines to our classrooms as well as multimedia content from both external and internal sources. We are investigating a number of potential solutions for this system and expect to make a choice and begin implementation of the system next year.

At the high school, we are moving forward with large flat screen televisions instead of projectors. We believe it to be an up-front cost neutral proposition and a long term savings for the district when we don't have to do preventive maintenance and replace bulbs which can be quite expensive. Additionally, we have found through our pilots that teachers prefer the brighter screen that a television offers without having to dim the lights to show something to their students.



## District "App"

We have been developing a district "App" for the better part of this year. By the start of the 2013-2014 school year, we intend to have an app that can be searched for and downloaded from the App Store (Apple or Android) that will provide a number of news, information, and broadcast feeds for the district as well as useful links for parents with students in the district to navigate to the mobile version of their Dashboard.



## Technology Videos

As our opportunity to provide technology training during in-services continues to shrink, we are working to find alternative ways to provide instruction on technology and the best ways to use it in teaching. To that end, we have created a number of instructional videos to provide specific technology training as well as a series of "Inspirational Videos" which encourage teachers to understand that continuing to learn about new technology is in their students' best interests. Our most recent example of such a video can be found at <http://www.mtlsd.org/iremember>

# Online Learning



## Courseware

Due to our increase in online course development, we investigated a number of Learning Management Systems and we are moving forward with Canvas as our preferred platform. Online lessons developed in Canvas will integrate with our Google Docs and PowerSchool's Gradebook which will encourage a far greater number of teachers to utilize this online resource.



## Flipped Classrooms

We are developing and supporting a growing number of teachers who are utilizing or experimenting with the flipped classroom approach to their instruction. It's an exciting model...allowing students to watch lectures at home (more than once, if needed) and then work with their teacher in class to better comprehend the material. We spent the past year reaching out to teachers who have not yet experimented with that model, but who are either interested or who we think should be interested. We have provided and will continue to provide in-service training as well as one-on-one training sessions with such teachers.



## NNDS

We have successfully created two online AP courses for NNDS this year. While future projects with NNDS have not been defined, we learned a lot about creating online courses through this work:

- Collaboration between peers in creating online material helps produce a higher quality product.
- We are able to more effectively judge the tools used in creating other online coursework.



## ROI

We facilitated a single class with ROI (Regional Outreach Initiative) this year, "Linear Algebra" that taught us a lot about video-conferencing for online synchronous instruction. While only slight changes to instruction were required to allow for the video camera and other equipment, there were great additions to the class on both sides in terms of having the classrooms be connected and interacting. We are preparing to share our "Arabic" course with students from Char Valley next year.



## Keystone Remediation

By July 1, we will have created 3 online remediation modular courses for students who fail to achieve a passing score for the Literature, Algebra 1, and/or Biology Keystone Exams. We learned a lot about creating online courses through this work:

- Collaboration between peers in creating online material helps produce a higher quality product.
- We are able to more effectively judge the tools used in creating other online coursework.



## Technology Videos

As our opportunity to provide technology training during in-services continues to shrink, we are working to find alternative ways to provide instruction on technology and the best ways to use it in teaching. To that end, we have created a number of instructional videos to provide specific technology training as well as a series of "Inspirational Videos" which encourage teachers to understand that continuing to learn about new technology is in their students' best interests. Our most recent example of such a video can be found at <http://www.mtisd.org/iremember>

# Training & Integration (1)



## Professional Development

As a technology department, we are challenged to provide quality technology training to our employees when so little of their in-service time is officially scheduled as such. To meet that challenge, we offer and facilitate flex shops, department meetings, grade level meetings, and one-to-one sessions as well as a cadre of online help videos.

## BYOT

BYOT continues to be a growing success...a growing number of outside devices (both teacher and student) have been utilizing our new wireless infrastructure. We have developed a number of training sessions surrounding the concept of BYOT that should help teachers see the potential benefits to their students' learning.

## Flipped Classrooms

We are developing and supporting a growing number of teachers who are utilizing or experimenting with the flipped classroom approach to their instruction. It's an exciting model...allowing students to watch lectures at home (more than once, if needed) and then work with their teacher in class to better comprehend the material. We spent the past year reaching out to teachers who have not yet experimented with that model, but who are either interested or who we think should be interested. We have provided and will continue to provide in-service training as well as one-on-one training sessions with such teachers.

## Principles & Procedures

As technologies change and as technology becomes an increasingly significant part of student life both in and out of the classroom, we must stay focused on our policies as well as our principles and procedures that govern our students, faculty, and staff. In as much as policy sets the rules, we need effective documentation that helps people understand the rules and the reasoning for having such rules. This year we released a revision of the principles/procedures document that accompanies the Student Communications Policy. Next year, we intend to do the same for Network/Acceptable Use and Website policies.

## Technology Assured Experiences

We work hand-in-hand with both the leadership and the teachers in our elementary schools to create the set of "technology assured experiences" for our students. To effectively realize these assurances, we need to work with teachers to help them understand the technologies involved as well as the reasons why it is important for students to have these experiences. Whenever we provide professional development opportunities to elementary teachers, we map and reference the opportunity back to these experiences so the teachers can see where the training fits with what is being asked of them. If teachers don't see the value proposition for the students' learning, they will not be inclined to learn the technology practice themselves. So we focus on this when we develop and deliver training.

# Training & Integration (2)



## Online Safety

Online safety is a critical component to our encouraging students to be online with their learning. Through a continuously updated safety resources page (<http://www.mtlsd.org/safety>) as well as formal instruction by our librarian/media specialists, we seek an environment that is free from bullying and open to enriched learning opportunities.

## Technology Videos

As our opportunity to provide technology training during in-services continues to shrink, we are working to find alternative ways to provide instruction on technology and the best ways to use it in teaching. To that end, we have created a number of instructional videos to provide specific technology training as well as a series of "Inspirational Videos" which encourage teachers to understand that continuing to learn about new technology is in their students' best interests. Our most recent example of such a video can be found at <http://www.mtlsd.org/iremember>

# High School Renovation (1)



## Core & Edge Switching

We successfully obtained and implemented a new switching structure this year that will provide not only for the new high school, but the district as a whole. Our technicians continue to receive professional development on this equipment so it can be effectively maintained and improved over time. Our design for networking in the newly renovated high school is revolutionary in that it eliminates the traditional "data closet" in lieu of "zone boxes" which accomplish 3 main objectives:

1. There is no need for cooling and rack space means more space available for classrooms.
2. Fiber-optic cable is effectively "pushed all the way to the classroom" providing for maximum future-proofing of bandwidth demands/capabilities.
3. Instead of traditional "pulled" fiber which does not allow for different or additional fiber to be easily pulled in the future, our fiber is "blown" through tubes and there are many extra tubes in our design providing for whatever type of fiber-optic technology might exist in the future.



## HS Telephones

Our newly renovated high school will bring a number of exciting challenges to our district phone system in terms of operating two "sub systems" simultaneously during the project. Our new phones will be VoIP (Voice Over IP) phones which means they will operate on any data port rather than a dedicated phone port. As new sections of the high school come on line, we need to be able to outfit those new sections with VoIP phones and have those work with our system as well as the phones in the non-renovated sections which are already connected to our system.



## HS Network

With such a large scale renovation project as ours, there is an added challenge of keeping one functioning network that is comprised of two functioning "sub-networks" (old HS and new HS). We are currently able to achieve this by maintaining two server rooms which are connected through a fiber-optic patch panel. As we move parts of the building from the "old" sub-network to the "new" sub-network, we will transition that traffic from one server room to the other until the project is completed and we can decommission the server room in C Building.

# High School Renovation (2)

A vertical pink line runs down the left side of the page, featuring three circular markers. The top marker is a solid pink circle. The middle marker is a pink circle with a white center. The bottom marker is a circle split diagonally, with pink on the top-left and green on the bottom-right.

## LGI Rooms

The new high school floor plans call for 3 "LGI" (Large Group Instruction) rooms which present some really interesting and exciting possibilities for both large group lecture/presentation as well as workgroup collaboration. The first of these rooms will come online in the Fall on the 6th floor of B-Tower and we have been working with education technology thought leaders as well as a handful of furniture companies and designers to come up with a plan that we think is flexible enough to accommodate both configurations.

This year we submitted a grant proposal to the AIU's Center for Creativity for the furniture that would have helped us to realize this vision, but we failed to obtain this funding. This year we will work to "value engineer" and find funding elsewhere to see this vision through. It is important to the educational value of this room that it can be able to do more than simply serve as a room full of chairs.

## High School Transitions

The High School renovation project is replete with big transitions. Subject areas moving from one part of the complex to another...sometimes in rapid fashion. Every one of these moves involves technology and we have been working very hard to be a helpful part of every such transition. This summer we will move the majority of the technology department's staff and equipment into the partially renovated F Building and then shortly thereafter into the newly renovated space where our permanent offices will be on the 2nd floor of F Building.

## TV/Multimedia System

Part of the renovation project that pertains to technology is the creation of a TV/Multimedia system which will allow the district to provide television over data lines to our classrooms as well as multimedia content from both external and internal sources. We are investigating a number of potential solutions for this system and expect to make a choice and begin implementation of the system next year.

At the high school, we are moving forward with large flat screen televisions instead of projectors. We believe it to be an up-front cost neutral proposition and a long term savings for the district when we don't have to do preventive maintenance and replace bulbs which can be quite expensive. Additionally, we have found through our pilots that teachers prefer the brighter screen that a television offers without having to dim the lights to show something to their students.



# Telephones



## Cell Phones

The district continues to maintain cellular devices for a number of its employees in the facilities, health services, athletics, technology, and food services areas. This year we began a stipend program for those who need to have a smart phone instead of a regular cellular phone. This program saves the district over \$10,000 annually.

## HS Telephones

Our newly renovated high school will bring a number of exciting challenges to our district phone system in terms of operating two "sub systems" simultaneously during the project. Our new phones will be VoIP (Voice Over IP) phones which means they will operate on any data port rather than a dedicated phone port. As new sections of the high school come on line, we need to be able to outfit those new sections with VoIP phones and have those work with our system as well as the phones in the non-renovated sections which are already connected to our system.

Another challenge will be establishing dialing codes for the new spaces that can be integrated into the dual system years and stand alone once the old system is brought offline.

## IP Telephones

The district will begin to maintain a number of IP telephones next year. As we roll these devices out on our network, we will be able to utilize the digital phones they replace in some of the other areas of the district. While it is exciting to have these new types of devices in the district, it also represents an area we have to be mindful of for our own professional development. We have sent our folks to a few trainings already and plan to continue to do so throughout this transition.