

Andrea Scherer
East Grand Forks Campbell Library
East Grand Forks, MN
ascherer@egflibrary.org

Omnibars, Burgers, and Boxes: Chrome Boxes in the Library

Things you need to know:

- East Grand Forks, MN
- Rural city in the Northwest corner of Minnesota
- We are a border city – We are a short bridge away from Grand Forks, ND.
- Serves approximately 8,651 (according to a 2014 estimate by the United States Census Bureau)
- This number does not include the approximately 5000 residents of Grand Forks (our North Dakota sister city) who chose to use our library because it is closer or more convenient for them, nor does it include large homeless population that we serve by virtue of being a mile and a half away from the local rescue mission.
- We are a city library, independent of Minnesota's regional systems. We employ three full time staff members, around 8 part time staff members – share two IT professionals with the entire city
- Prior to October of 2014, our public access terminals were thin clients – a stateless, fanless desktop terminal that has no hard drive. Applications, sensitive data, memory is all stored on a server, rather than on the machine itself
 - Advantages: cheaper than purchasing a full desktop computer, they use less energy, can be updated all at once from the server
 - Disadvantages: require a server to run from, not intended to be used all at once (when all thin clients are being used = slow internet, slow responsiveness over all), single point of failure, need to be re-imaged periodically, no disk drive (CD or floppy)
- Chromeboxes
 - Things we considered while looking to purchase
 - Price – Chromeboxes were much cheaper than buying traditional desktop PCs and cheaper than purchasing new thin clients
 - Not only were they cheaper, they are energy efficient, using only 20 watts of electricity while in use (a traditional PC uses 150 watts)
 - Energy star certified
 - Usability – Chromeboxes are web-based. All services are provided in app form, so there are no license fees or additional software purchase or installation required – thus adding to the price difference
 - Google provides access to different apps that are similar to or identical to software that we were currently running on our thin clients (plus a whole plethora of others)

- More telling is the average number of minutes the computers are used – drastically increased (after a short dip in November of 2014 while we were ironing out the wrinkles)
- We also rolled out Google Apps for staff as well – transitioned our staff to a Google based email service
- Our computers
 - Chromeboxes are mounted to the back of the monitor and we have a separate plate mounted on the top of the desk for patrons to plug in their flash drives or headphones
- Inside ChromeOS
 - Patrons have to accept our terms of service – our Internet Usage Policy before they can begin using the computers
 - Landing screen
 - Clicking on the magnifying glass in the corner will give you access to chrome, gmail, and all other apps
 - Here are the apps that we have authorized to automatically open during a public session:
 - Chrome, Webstore, help, gmail, google drive, files, pixlr editor, wevideo, outlook, word online, onedrive, excel online, and powerpoint online
 - Logout screen
- Admin console
 - OMNIBAR – bar at the top of the chrome browser that can be used to type in a URL or to do a search – multifunctional
 - Admin console can be found by clicking the Launcher button – nine boxes
 - In the Admin console, options for editing, we primarily use apps and device management
 - Then to Chrome Management – where you can edit public session settings, device settings, and app management
 - On the left hand side, you can see our organizational units – the Card catalog computer, the children’s computer, our patron machines, and our staff testing box
- Disadvantages
 - There is no way to create a word processing document without having either a Google or Live account
 - Our printer is not a Google Cloud Ready printer – jimmy-rigged print drivers to make it work – we still don’t always get exactly what is on the screen (when we get a Cloud Ready printer, this problem should be alleviated)
 - Some software/apps/websites are not available or supported – some games, job applications
 - Google does not at this time current meet all of the filtering requirements of CIPA – you may still want to have a proxy based, more comprehensive filtering software available.
 - Completely web based – if your internet goes down, so do all of your computers’ functionality

- Advantages
 - Speed – chromebox boots up in 6-8 seconds
 - We no longer need to dedicate staff time to updates or reimaging Anecdotally, fewer IT service calls
 - Each patron session is secure so our patrons are assured of their privacy, and all patron data is deleted at session end.
 - Kevin Mitnick, American security consultant, author, and Cracker, has said that the ChromeOS is the most secure operating system
 - Everything is based in the cloud – documents created at the library are also accessible at home, at school, on your mobile device (we no longer have to loan out or sell flashdrives or blank cds)
 - Can manage policy settings, organizational units, etc, all from one browser-based administrative console – can be managed remotely
 - Already been tested out in several libraries – Rossville Public Library, Palo Alto Library system (chromebooks), EGFL