



Redefining Our OPAC Computers With **GOOGLE'S CHROMEBOX**

By Melanie Hedgespeth

By using Google's Cloud Platform, we can provide quick access to what patrons want.

The OPAC has been available to patrons for many years. Our library, like others, provided dedicated computers in our building just for the catalog. These traditional, single-purpose computers allowed patrons to browse our entire collection quickly and find the materials they wanted to check out.

Over the years, I watched the use of these fairly expensive machines be restricted to our online catalog, and the computers sat idle a large portion of each day. As a tech person, knowing the power of these machines was being wasted

made me a bit crazy. I knew we could do more with those computers that almost every single one of our patrons used. These devices potentially gave us an opportunity to expose library patrons to all kinds of informational tools and services we offered, not just our catalog.

Today, after all, our patrons are much more tech-savvy than they were when the idea of dedicated OPAC computers came to fruition. Our patrons currently have the skills to use our valuable internet-based services. The patron interface for the catalog had grown and improved through

the years with advanced searching, account access, and online holds. But the computers were stuck in the catalog-only access policy and had not expanded to meet present-day needs. It was time to revise and maximize the opportunities on the computers themselves to fit what internet-knowledgeable patrons expect in our technology-reliant world.

So the challenge began to improve our system. With our library mission in mind, "connecting people to information, learning, and culture," we set forth to rethink and redefine the OPAC computers.

Machine Use History

We started by looking back at the past use of our traditional catalog computers. Historically, the OPAC was used for the library's main purpose of giving access to our entire collection of materials and helping users find those items. The patrons adapted to the online environment and dedicated computers after the card catalog went away and were mostly pleased with the change. As years passed, additional catalog PCs were added to accommodate patrons and make sure there was little or no wait to use the online catalog.

Technology evolved, and we expanded what was available in the library, but patrons knew that the catalog computers remained for one set purpose. Patrons just used the catalog computers for a few minutes to search and find what they needed, before walking away. If patrons wanted to browse the internet, socialize online, create a resume, or search for a job, there were other computers designated for these purposes. So why change?

Why Change?

If we were going to put forth the work of redesigning our catalog computers, we first needed to make sure the change was warranted. The most important reason for a shift of the catalog computers was that our patrons have vastly different skills and expect-



A Chromebox unit

tations than in the past. Patrons many years ago did not have the tech know-how they have today. Now, our users expect to have quick access to all kinds of information when they walk up to a computer or internet-connected device. They do not want to be limited to one specific site. For example, many patrons wanted to check email, find out about the weather, or get driving directions on the catalog computers and were frustrated when access was blocked. Patrons view internet-connected computers as multiaccess machines, not single-function devices.

Another impetus for change was that all of our beneficial library services could be accessible and marketed on these devices. Patrons are overwhelmed with information today, and many aren't familiar with all of our services. A new system setup would help them gain awareness of our other informational tools and learning opportunities and possibly captivate a new audience. We, of course, realized we would continue the use of the computers for the online catalog, since that is an important tool for our patrons. We just needed to help the patrons see more of what was available to them and guide them to those services.

The maintenance and upkeep of the catalog computers was another area that needed to be vastly changed. The computers we had were locked down tight and had to be updated on a regular basis. The complicated group policies, security software, and OS updates absorbed staff time, drained resources, and needed to dramatically be improved. Technology continues to grow, and that increases workload.

Therefore, finding a way to be more efficient would assist and help us immensely.

Chromebox: The Small Box With Everything We Needed

During my extensive hunt for new devices, we ordered Google's Chromebox (a fast, compact, personal computer running the Chrome OS and operating with cloud-based applications) for our "techie toolbox." My department

orders a few devices each year to work with so we can continue to learn and easily help the public with questions. After working with the Chromebox, we loved the simplicity, the ease of use, and the fact that Google secured and updated the device seamlessly. At that point, we began telling patrons who came in frustrated with their laptops and computers to try the Chromebox and see how easy it is to use.

I was now hooked and became highly interested in the cloud-centric Chrome OS to run our OPAC due to its uncomplicated, browser-focused interface for the public. I just needed to find out if we could implement safeguards for our users. We wanted the devices set up so patrons could access our numerous library services, our catalog, and information outside of our domain. We did not want the machines to be taken over for internet browsing and socializing.

I dove in to investigate the Chromebox as a public device. I contacted Google and spoke with a salesperson regarding the pricing for a public library and administrative capabilities for a Chromebox device. I also joined several Google forums to learn more about how the devices could be set up and maintained in a public environment.

I discovered many advantages for using Chromeboxes as our public catalog computers. There would be no hidden costs or extra software we had to purchase for the boxes. The boxes use the Chrome browser and web apps, and absolutely nothing has to be loaded on the device. All the software, updates, anti-virus, and security issues are taken care of through the Google Cloud Platform.

The boxes themselves automatically update via Google for free, so we would always have the latest system version. No more hours are spent getting OS updates or cleaning off spyware and viruses. This would save us a lot of time on the tech support end, and it would save money because we wouldn't have to purchase licenses for production or security software. The devices could also be secured and customized for us with a multitude of settings through the Chrome management console. This would eliminate complicated group policies and permissions across our network.

Purchase/Physical Description

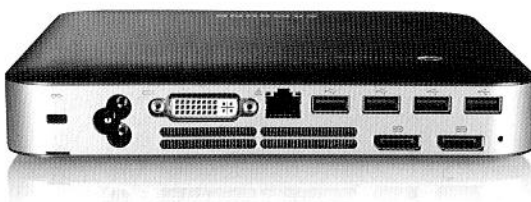
The Chromebox would fit our needs, so it was time to look at costs. I went directly to Google's Chromebox for Education page (google.com/intl/en/chrome/education/devices/chromebox.html) and completed the online form with our library information. I was contacted quickly and connected with a salesperson to order the boxes we needed.

For each device, we paid \$329 and a one-time management console and support fee of \$30. The \$30 fee allowed me to manage all the devices within our domain and easily set up policies to govern the device use. (We already have our email through Google's nonprofit sector, so all I had to do was access the Chrome Management app within the admin console to work on the devices.)

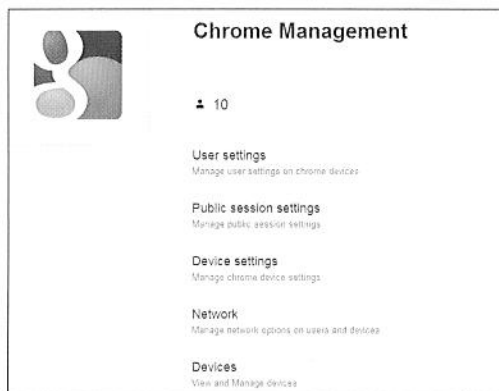
The devices themselves are simple and quite small. All 16 computers could be stacked on a corner of my desk. The boxes have the typical ports you would see on a desktop computer along with a Kensington lock. Chromeboxes use less electricity than the traditional desktop and produce less heat. The best part is that they boot up or shut down in seconds.

Device Setup

After receiving the devices, I began the setup process within the Chrome



Hookups for the Chromebox



Setup pane from the Chromebox app

Management app. First, I had to set up suborganizations within our administrative console to manage the devices. I created the Library Service Computers suborganization for the Chromeboxes that would be in the adult area and a suborganization named Youth Service Computers for devices that would be for children. The two different suborganizations were created so that each area would have different rules and capabilities to fit the ages of those using the devices.

Second, I set the device settings and public session settings that would govern the computers. In the device settings, there were several key elements that I enabled or customized to fit our needs. They are as follows:

- **Cloud printing.** I enabled cloud printing, which allows the patrons to print from the Chromeboxes to any of our main printers in key areas of the library. I had set up cloud printing prior to the Chromeboxes for our staff, so this was easily added for the

public. By using cloud printing, we no longer have to load drivers and set up printers on individual computers. Cloud printing makes it really easy to provide access to printers throughout our building by simply sharing the device.

- **Power management.** Within the power settings, I set the device to not sleep/shut down. This allows the device to always be on and show that it is available for use for our patrons. People expect immediate access, so by not allowing the computer to sleep, it is immediately ready to go, and the patron doesn't have to wait 2 to 3 seconds for the device to wake up.

- **Kiosk settings.** The devices were set to the Public Session Kiosk option. This setting also linked me directly to another area I had to set up later, which was the Public Session settings.

- **Scheduled reboot.** Each day, our devices are set to reboot. The devices do not reboot when a user is signed in, so nothing chaotic will happen!

- **Automatic updates settings.** The devices are set to allow automatic updates. As the tech support, this makes our lives easy. Just let the devices get the latest files as needed.

- **Time zone.** Of course, we set our current time zone, so when daylight savings time happens twice a year, we no longer have to mess with it.

The most extensive time I spent was in the Public Session settings. These settings control what a patron can do on the devices. I will describe how we set up our devices, but these settings are customizable to any library's needs. Our setup is as follows:

- **Session display name.** This name is what the patrons see when they walk up to the computers. We named the

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