



SMS IT Group

www.smsitgroup.com

213.222.5182 or info@smsitgroup.com

The Truth About Chromebooks

10.27.2014

CHROMEBOOKS CAME OUT OF NOWHERE

Truth be told, not many people expected the meteoric rise of the Chromebook. In the past few months, the Infrastructure Division of SMS IT Group was installing a new medical billing system for one of our medical clients and the owner asked us to try and incorporate Chromebooks into their practice. Why? Because they were cheap, lightweight, the battery lasted all day, and they were cheap (yes, I mentioned that twice). On top of it all, they had a disdain for all the time and effort the Windows PCs took to keep running. So the owner handed my PC tech 2 new Samsung Chromebooks and asked him to find a way to make them work in their environment.

So, as usual, we took on the challenge. Because very few of us had little to no experience with Chromebooks, it was a learning experience. We needed to find out the strengths and limitations of these machines to make sure they would fit in the environment properly. I decided to write this article for the simple fact that I couldn't find any straightforward articles that covered the Chromebook related to business use.

THE UNFILTERED TRUTH ABOUT THE CHROMEBOOK

Before writing this article, I bought and carried a Chromebook around for two weeks to ensure I had enough hands on experience to properly write this article. I put my MacBook Air running Windows 7 aside and used the Chromebook as my primary laptop. In fairness, I did carry the MacBook around with me in case I hit an obstacle on the road the Chromebook couldn't handle. I also went on site with my techs and worked with them to figure out what the Chromebooks could do and if they were a viable alternative to some of our customer's situations in place of a standard Windows PC. Because of Windows 8, many of our clients are trying to move away from Windows. Often times, they ask us to disable the "metro" interface on Windows 8 for them right away. On top of it all, Windows licensing is expensive, confusing and difficult to deal with. Our people spend hours trying to make Windows keys work on reinstalls.

One of the Chromebook's strengths is the OS layout. The Chromebook has a simple and elegant layout. There is a bar that resembles a Windows start bar and a simple click and run icon interface. The Chromebook doesn't allow you to store any icons or shortcuts on the desktop. When we placed the Chromebooks in front of our 1st client, we didn't provide any training to see if they would figure out how to use the laptop. Not one person asked us how to use it or how it worked. People simply started using it and had no problem figuring out how to navigate around. This is big in our world because we have spent countless hours (written off of course) helping people learn and integrate Windows 8 into their environment. It was nice to put a product in place that just worked.

PHYSICAL LAYOUT & TRAITS

Chromebooks are generally made out of cheaper plastics and materials and don't feel like a high end MacBook or high end aluminum Windows PC. The construction is very minimalistic and designed to keep the price tag low. With that said, the cheaper construction really didn't bother me as much as I thought it would. The keyboards are responsive and the screens are generally pretty good. The screen quality definitely is not on par with a high-end laptop screen and the purpose is

not to use a Chromebook to play high-end games or design a watch using AutoCAD. The purpose of the machine is to browse, create documents and handle everyday tasks.

The upside of the Chromebook is the battery life. The batteries generally last between 8-14 hours depending on the model you have. I am using an Asus and I get about 10 hours out of the battery under pretty heavy use. I absolutely love the battery life the machine provides especially when traveling or on the road. No more searching endlessly for power outlets. The Chromebooks are also much lighter than a standard laptop which makes it great to carry around. Overall, it is an outstanding laptop to travel around with and take with you because of the weight and battery life.

I definitely see a screen and keyboard quality difference when switching between my MacBook and Chromebook but not enough to bother me. It's a small tradeoff for a cheaper price and hours of battery life.

STRENGTHS

Google pulled off something Microsoft has been struggling for years to put in place which is the ability to have all your preferences follow you around with the machine you are using. The great thing about the Chromebook is when you login with your Google account, the Chromebook downloads your favorites, applications, documents, printers, etc. It's like having Windows Roaming Profiles but your profiles follow you anywhere you go - not just around the local network. This even includes printers!

As long as your printer supports Google Cloud Printing, your Chromebook can fully print anything. Some printers have this built in right out of the box and others require a software program to run on a Windows PC. Either way, it does require some configuration.

Strengths - Printing

Most of the newer HP printers support Google Cloud Printing right out of the box. All you do is go into the printer's configuration and follow an HP web-based registration process to register the printer as a Google Cloud associated printer. Once it is setup, you can then associate that printer with your Google account. When you login, the printer will be there by default so you can print.

The nice feature of Google Cloud Printing is that you can print to any printer wherever you are. Printing is not limited to your local network. I can be sitting in India and send a print job to my printer at home in Los Angeles. Theoretically if you setup all your printers on Google Cloud Print, you can print using either your Chromebooks or Windows PCs. Cloud Print also allows you to print from Windows-based machines. You can use Google Cloud Printing to manage your entire printer environment.

Either way, yes you can print from a Chromebook and it works great! It just requires setup on the printers you have. Even if your printer doesn't support Google Cloud Printing out of the box, you can load a Windows-based program on one of your Windows machines to allow all your printers to be managed by the service.

Strengths - Browsing and Performance

By default, you have to use Google Chrome on the Chromebook as your browser. Google Chrome syncs all your favorites to the Chromebook so everything you have saved shows up when you login. It also syncs any extensions or apps you have associated with your Google account.

Browsing performance is reasonably good but you do notice some delay when pulling up demanding web pages. It does support Java out of the box and performance is good - not great. You do see the processor start to get bogged down when performing demanding tasks and it does sort of remind me of the netbook days when the machine would slow down under heavy load. With that said, the Chromebook is nowhere near the slowness or performance of a netbook. Most of the time, the machine is fast and responsive. You will see it slow down a little but nothing to the point it will frustrate you like Windows netbooks did.

The applications run well and multi-tasking is fast and responsive. Since the machine is based on your Internet connectivity, if you have a bad connection, you can see slow down if working on a Google Document when your connection is bogged down. When I was typing on a slower connection at a presentation, Google Docs had a tough time keeping up with my typing speed because the connection was so unstable.

Strengths - An Alternative to Microsoft Office

As you probably know, Microsoft Office is expensive. Even if you pay per month for its online version, it still requires you to pay for access to the apps. The Chromebook is a nice alternative to Microsoft Office in the fact that Google provides access to their office suite including Google Docs for free. Although Google Docs doesn't have all the bells and whistles of Microsoft Office, it is pretty close to it and I find it very easy to use.

Google's office suite also lets you collaborate on a spreadsheet or document in real time with others which is a feature Office sorely lacks. You can have three people working on the same document and Google's apps will show you who is working on what within the document. The collaboration features are amazing. If you don't use the heavy features of Excel or the hardcore Word features, Google's office apps probably will work for you.

I personally like the convenience of being able to sit and type a document and know the document is being saved in real time. I can close my browser or shut down the computer at any time and I don't have to worry that my document was not saved. Unlike Microsoft Office, Google Docs will save your document as you type. It's a great feature and one I really enjoy over Microsoft Office. I also like the convenience of accessing your documents from anywhere you can login to your Google account.

After using Google Apps for a few months, I am finding that I really don't miss Microsoft Office much. I have trained myself to use our web-based email client and Google Docs so there is really no need for me to use Microsoft Office anymore.

Strengths - Thin Client

The Chromebook also makes a great thin client machine. If you need to access remote systems, the Chromebook is an excellent candidate due to the low price and high availability of thin client software. The Chromebook can be used for browsing and document creation/editing

locally and connect to remote machines to run software not currently supported by the OS. For example, I often use Remote Desktop to connect to my servers and LogMeIn to connect to my desktop.

WEAKNESSES

Because the Chromebook is fairly new and Google chose to restrict it, there are many weaknesses with the laptop that need to be factored into your purchasing decision. One of the biggest issues I had with the Chromebook was file management. Because the Chromebook doesn't allow much in the way of file management, this is probably one of the most restrictive and challenging issues with the OS.

Weaknesses - File Management

Simply put, the Chromebook has a weak file management system. When you download a file from the Internet, it is automatically saved in the Downloads folder. My Chromebook has 16GB of storage so I am restricted to downloading or copying anything past 16GB unless I use a USB or SD card to expand the memory. Often times, I would insert an SD card for some additional space and move files to the SD card or USB key. So, realistically, you can add quite a bit of space using external storage via USB or SD cards.

The problem comes in when you need to copy files somewhere else such as your server or file share. Because Google is set on keeping this a "cloud" device, there is no way to connect to a Windows Server, NAS or any other storage device easily. I have a Netgear ReadyNAS in my office and there was no way I could copy a file from the Chromebook to the Netgear without modification. I had to turn FTP on to be able to copy files back and forth and FTP is less than an ideal way to handle files in my opinion.

Compared to a traditional OS like Windows or OSX, the file management on the Chromebook is extremely limited. Yes, you can work around it by enabling HTTP or FTP on your servers or storage devices but this is a clunky and slow proposition compared to being able to simply map a drive. You can also manually move your USB key around from your Chromebook to other machines but this is also very inconvenient. If your office stores files centrally, don't expect the Chromebook to be able to join in the party.

Weaknesses - Printing

Printing is both a strength and weakness of the Chromebook. Yes, you can use Google Cloud Printing to print from the Chromebook and it works great, however, it takes time to setup and for printers that don't have it built in, you have to rely on Windows software to make your other printers work properly. Cloud printing requires IT know how and the average person is probably going to have a hard time figuring it out.

Weaknesses - Privacy

One of the biggest concerns I have personally with the Chromebook is security and privacy. All this convenience comes at a cost. If you use the Chromebook to browse, print, and work on

documents, Google pretty much sees everything you are doing. A print job has to go through their systems and I am sure they have access to reading or analyzing your documents if they wanted to do so.

It does worry me when I have all my documents on Google, they see everything I print, can access all my emails and know every web site I have visited. There is just something eerie about giving a company this much control by using their OS. For some people, privacy is not an issue. For other like me, it is concerning. I think it really depends on how trusting you are knowing your Chromebook gives Google total control over your data.

Weaknesses - Control of your Data

Like privacy, you are also giving up some control of your data when using Google's services. For example, what happens if a few of your critical documents get erased by accident on Google's servers? Will Google go through the effort to restore your documents? Will they care if you lose a few important documents? How long will it take for them to restore your data?

Although loss of data is probably a rare occurrence, it is something to consider. If you save all your documents on Google, you are trusting them to be a good steward of your data. This includes restoring data when it's destroyed. I just have not been able to mentally allow myself to give a company this much trust. When I see a successful break in to cloud data every week on the news, it is concerning. I don't want my companies' intellectual property exposed.

The other issue I possibly see down the road is any changes Google may make to their policies and pricing. Over the past few years, Google has taken away key features and started charging for them if you want them back. For example, you used to be able to sync your Google Calendar with Outlook for free and now it's a paid service. How long until key features of Google Apps will be pay for play? Google also recently changed its Postini email security service with little to no explanation to its customers. Customers have no idea what is happening with the Postini service at this point and many are jumping ship as a result.

This begs the question as to whether you want to go all in with a Chromebook and completely trust Google long term. I think that is a question each person needs to answer.

Weaknesses - Lack of Applications

Although the Chromebook apps library is growing at a steady pace, it is still missing key applications. For example, the apps library still lacks a decent email client that can connect to your IMAP or POP email account. I found several instances where I was looking for an app and couldn't find anything available on the store. You also have to remember that the Chromebook won't run Photoshop, Microsoft Office, Outlook or any other legacy apps. If you have an app you cannot live without, take this into account. If you do everything via the web, then it won't be a concern for you.

I personally have too many Windows-based apps I rely on to completely commit to the Chromebook at this point in time. Maybe vendors will build apps to work with the new OS and this will change soon but who knows.

Weaknesses - Poor Offline Support

The Chromebook for the most part is completely dependent on a strong Internet connection. Although you can login to the Chromebook without a connection and access the OS, there isn't much else you can do beyond that. There are some offline applications such as Gmail offline but the options are pretty thin. If you work on all your documents via Google Apps, you are pretty much out of luck without a connection.

If you are someone who is always around an Internet connection, this of course is not an issue. If you are someone who travels extensively and visits areas where Internet connectivity is spotty at best, this will severely hinder your ability to use the Chromebook.

Weaknesses - HIPAA and PCI Compliance

For many organizations, HIPAA and PCI compliance is becoming a big issue. The consumer grade versions of Gmail and Google Apps are not HIPAA compliant by default. In order to be compliant, you need to purchase Google's business version of Apps and sign a HIPAA agreement with Google for compliance. Although there is a solution, it costs money. That covers just Google Apps. Many other apps fall into a gray area or are simply not compliant based on the way they are written.

If you are an organization that falls under HIPAA or PCI, make sure you use the Chromebook in a manner that corresponds to the requirements for each rule set.

SUMMARY

For some, the Chromebook is a perfect solution. We have started installing Chromebooks in patient waiting rooms in doctors' offices because they are the perfect solution for a doctor to pull up a patient's records via their cloud-based patient management system or search the web for a medical answer. To help you decide, refer to the chart below that summarizes the strengths and weaknesses of the Chromebook:

Issue	Strength	Weakness	Comment
Printing	X	X	Both a strength and weakness. For the Chromebook to print, you must setup Google Cloud Printing and configure each printer. In some cases, Windows software is required to operate non-compliant printers. Once setup, Cloud Printing works great.

Browsing	X		Browsing is smooth and efficient and supports all various languages including Java.
Performance	X		Performance is much better than the ill fated WIndows netbooks. For the most part, Chromebooks do a good job of keeping up with the user.
Office Applications	X	X	Both a strength and weakness. Comes with Google Apps which is sufficient for most users. The downside is that you need a decent Internet connection and working offline is almost impossible.
Thin Client	X		Works great for use as a thin client. Very affordable and supports a wide array of thin client software.
File Management		X	Does not allow you to connect to a server or map a drive. You must use primitive protocols like FTP to transfer files. It is not possible to have Google Drive save a local copy of your files to the Chromebook.
Privacy		X	You are dependent on Google for all core services so you pretty much give up any right to privacy in order to gain free access to Google's apps. Google scans your data to present you with custom ads.
Control of Data		X	You are completely dependent on Google to ensure your data is safe and secure. It is unknown how reliable Google is if you lose a document or need data restored.
Offline Support		X	Although vendors are working on better offline support, it is a weakness right now with very little support without a connection.

Price/Value	X		Price and value are outstanding. You get a well-built laptop that runs very fast with a responsive OS.
Future Development/Commitment	X		Because Chromebook sales have been strong, it looks like Google's commitment to the Chromebook is strong. Many other vendors have jumped on board including Adobe and are working on Chromebook versions of their applications.
Battery Life	X		Outstanding battery life averaging 8 to 14 hours of nonstop use.

Who Should Buy A Chromebook?

If you browse, access email via web page, and don't run legacy Windows or Mac applications, you are a good candidate for the Chromebook assuming you are always around an Internet connection. Chromebooks are great for web-based applications or as a replacement for a tablet given it has a keyboard. You also need to trust Google and have no issues with saving your data on their systems. People who are not worried about their privacy or storing their data in the cloud are excellent candidates.

Who Should Stay Away From A Chromebook?

For those who are still dependent on legacy applications such as Photoshop, the Chromebook is not for you yet. Also, if you need to work offline quite a bit, have privacy concerns or don't want to store your data in the cloud, I would advise you to stay away from the Chromebook right now. Power users who work a lot with files or need to connect to servers often should also consider other options.

Article written by Scott McCarthy of SMS IT Group. SMS IT Group can be reached at www.smsitgroup.com or 213.222.5182. You can also email info@smsitgroup.com.