Lesson Proper for Week 15

Google Chrome OS

Introduction of Google Chrome OS

The Google Chrome OS is fast. Users rave about Google Chrome's incredible booting speed and other features. To Google, weightlessness means never having to wait for the web. Chromebooks wake up in roughly ten seconds and sleep quickly. Websites load swiftly and smoothly, with full support for Adobe Flash. A fast-changing web. It evolves with it. Your computer automatically updates itself with new features and repairs. No annoying update prompts. The device's operating system will be stored in a read-only memory region. The rest of the OS is integrated with Chrome and, like Chrome, security upgrades need a reboot. Chrome OS can run many Web apps in separate tabs, each isolated from the others.

What is Google Chrome?

Google Chrome is a Google-developed open-source web browser. It debuted in 2008 and has since evolved to become one of the most popular browsers available. When Google decided to create a browser, they wanted to entirely redesign it, as browsing had evolved beyond simply text sites. Now, we use our browsers to email, shop, pay bills, and operate huge applications.

Use of Cloud

No traditional software like iTunes or Microsoft Office will be available for users of Chrome devices, nor will users be able to save files on hard drives.

Chrome-enabled devices will get regular software updates, and most user data will be stored on Google's servers. The device's user data is encrypted. User data is limited to preferences. All other data will be cloud-based. Like a thin client, user preferences will be synced to a cloud account. If you lose your smartphone, you may just log in from another one and your data will remain there.

Google's Chrome OS will be accessible on some netbooks and other PCs before the end of the year. A single installed program - Google's Chrome browser - is intended to accomplish this minimal footprint and outstanding performance. Using Google's cloud computing services and other such tools, users would work, live, and save online. This is a departure from today's computing environment, where most programs are installed locally.

The Google Chrome OS user interface combines applications and regular Web sites into a single tab strip rather than isolating them. Designers are proposing a full-screen-only window management approach. "Panels" are floating windows that dock to the bottom of the screen for secondary functions like chat and music players. Split displays are also being considered for side-by-side viewing.

Chrome OS will use HTML5's offline modes, background processing, and alerts, as does the Chrome browser itself. Proposal: use search and pinned tabs to easily find and access apps.

Advantage of Google Chrome OS

§ **CHROME OS**

Google Chrome OS is a lightweight, cloud-based operating system, as a result we won't be able to run complex programs which is not available on the cloud. Need an internet connection to operate.

§ **Open Source**

The first & the foremost thing is Chrome OS is an OSS, Open Source Software. The source code will be given & you can download it & can start using it & also you can optimize it in the way you want. So no cost.

§ **Internet**

Do you stay online for the whole day??, atleast for the maximum hours, then Chrome OS is meant for you. The OS is focussed for the users who spend most of their computer time on the net.

§ **Speed**

When it comes to speed, Chrome OS will be faster than any other OS, Chrome OS is designed in a manner such that it can run on low powered ATOM & ARM processors. It can also boot faster.

§ **Integrated Media Player & Printing Service**

Google will integrate a Media Player into both the Chrome OS & Chrome browsers, this will enable the user to play back MP3s & also view JPEGs & can also handle other multimedia files while being offline.

Google had planned to create a GOOGLE CLOUD PRINT service which will help the users to print any application on any device to print on any printer without the need of any drivers.

§ **Security Measures**

This Chrome OS is integrated with the Chrome browser, thus this OS will automatically update the security system by default. One more thing, most of your work & your data are gonna be stored online, since it is an Cloud based OS.

§ **Other Services**

Google's service like Gmail, Google Docs, Picasa etc, all these services will be built-in and also we can have offline access via Google Gears. At this point of view no net connection is needed.

Limitations of Google Chrome OS

Chrome OS is tethered to the Web

What happens if a user becomes disconnected from the Internet as a result of the operating system's extensive engagement with it? Despite significant Internet penetration, a traveler to a foreign nation may desire to avoid paying for internet access, which may be extremely costly in some countries.

While a Chrome-based Netbook is capable of loading multimedia files and playing videos, it does not provide an integrated application for opening Word or PDF documents. Another roadblock is that Google does not yet permit the installation of third-party software.

Am I sending sensitive information for hackers to sniff?

Additionally, there is a concern about data security. Through the connection between the Netbook and the Internet cloud, hackers can sniff Internet packages and intercept data between a PC and a Wi-Fi router. While the majority of organizations use encryption to resist hacking attempts via VPN software, this may not be possible with Chrome OS.

Hardware compatibility may be an issue

Finally, during the briefing, we were cautioned that equipment that does not follow to industry standards may be incompatible with Chrome OS. There will be no compatibility concerns with accessories like mouse, keyboards, or thumbdrives. On the other side, webcams, printers, and scanners may be prohibited. Google claimed that it is working on resolving the printing issue, but did not provide an answer for other devices.

We respect Google's insight and willingness to assume the risk associated with designing a next-generation operating system. However, we wonder if the lack of offline capabilities will hinder its adoption, given that the bulk of Netbook users go to regions with intermittent or expensive Internet connectivity.

There is still almost a year until the first Chrome-based Netbooks roll off the assembly line. As a result, you can submit feedback straight here.

Methodology

To get the necessary information, data collation techniques were employed to compile the data and organize it meaningfully. The authors investigated a variety of data collection techniques but ultimately settled on two: laboratory experiments and survey research. These two strategies yielded an adequate amount of qualitative and quantitative data for the authors to work with. Ethical considerations will be incorporated into the data collection process; these include the University's and BCS's (British Computing Society's) Ethical Codes, which are included in the appendices.

Experimental Design

Due to the fact that Google Chrome OS is a relatively new operating system, very few individuals would have been exposed to it. This finding alone demonstrated that the authors needed to expose people to Google Chrome OS in order to collect significant data. Laboratory Experiments are designed to maintain constant all variables save the one being measured; these constant variables are referred to as dependent variables. In this scenario, the variable that is changing (independent) is the individual who is exposed to Google Chrome OS. The subjects were picked carefully to minimize the possibility of bias throughout the experiment and to improve the variety of backgrounds gathered through random screens.

Throughout the Laboratory Experiment, the subject was instructed to do a variety of tasks using Google Chrome OS from a list of tasks. Their ability to accomplish the activities was recorded and graphed to demonstrate who could and who couldn't.

The advantages of this strategy are that the author can gather a small sample of thoughts and opinions on the OS's functionality, which can be utilized to form an opinion about Google Chrome's functionality. The experimental design is included in the appendix.

Sample Questionnaire

Apart from data collected during testing, it seemed important to collect data prior to and following testing. This intended to elicit feedback on Google Chrome OS before exposing the user to the OS and allowing them to complete the author's responsibilities. After the individual has completed/failed the activities, they will be asked additional questions about the operating system now that they have had a chance to utilize it.

The questions are designed to elicit both qualitative and quantitative data (open ended/closed ended responses); the qualitative data will be analyzed for important phrases that will be matched to codes determined by the authors that are critical to the operating system's performance. The quantitative questions will be graphed to illustrate how those exposed to the operating system view the system; this corresponds to what Catherine Dawson states in her book (2009, pg 31)

"Many researchers employ a hybrid approach, combining open and closed inquiries. Thus, it is possible to determine the number of people who utilize a service and their opinions about it using the same form."

The advantage of this strategy is that the authors can collect data on those who have not used Google Chrome OS and compare it to the data they provided after using Google Chrome. This enables the authors to compare opinions and ascertain how simple people believe Google Chrome OS is to pick up.

Rejected Methods

Although two methods were used, others methods were discussed although not used. These were: -

- Case Studies
- Focus Groups

Case studies require sufficient information about the topic being examined; unfortunately, Google Chrome has only been around for a few months, leaving insufficient material to develop a case study about it.

Focus Groups are used to swiftly acquire information from randomly selected individuals; these individuals are asked questions regarding the issue being investigated and their perspective on it. Again, due to the novelty of Google Chrome, it was determined that it was not worthwhile to conduct a focus group, as the possibility of obtaining relevant input was minimal. Catherine Dawson also argues in favor of the decision in her book (pg 30)

"Focus groups have a number of disadvantages, including the following: Other people's perspectives can pollute an individual's. It's difficult to isolate individual points of view during the analysis."

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