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Randall Reid
Bowling Green State University

Simha Magal
Bowling Green State University

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Internet Browser Configuration for Presentations

Randall C. Reid
Simha Magal
AMIS Department
Bowling Green State University

Abstract

The increased use of the Internet and the World Wide Web in presentations requires that techniques must be developed to ensure service standards of performance, consistency, flexibility, availability, and reliability of the presentation. Since operation of the network and the visited web site is often outside of the control of the presenter, other approaches must be developed. This paper looks at the configuration and use of a web browser to address these issues.

Introduction

The use of either the Internet or the World Wide Web in the classroom or presentation environment requires, in most cases, an online system. An effective online system requires performance, consistency, flexibility, availability, reliability, recovery and security (Stamper 1994). The purpose of this article is to demonstrate how many of these online requirements can be met through proper configuration of a web browser. This is necessary because the network portion of the system is almost always outside the control of the presenter. Proper configuration can also meet many of the display requirements of a presentation. This paper will use Netscape’s Communicator version 4 to demonstrate the various configuration options.

Consistency, Availability, Reliability, and Performance

The requirements of reliability and performance can be met by the use of the cache that is maintained by the browser. The cache is a storage area on the client machine’s hard drive that stores recently visited pages for future use. The cache can be configured in three ways. When configured to check Once per session (the factory default) each time a browser session is launched, the browser will access a page from the source the first time it is requested. Any subsequent access will load the page from the cache area, if available, rather than reaccessing the Internet. If the Every time option has been selected the page will be reloaded from the source each time the page is requested. This option totally bypasses the cache. Selection of the Never option results in the cache area being accessed prior to the web even the first time a browser session is launched. If the page exists in the cache, it is loaded from there without ever checking what the pages’ status is on the web. For many types of presentations, caching all of the needed pages in advance and configuring the browser to “Never”, (i.e. always use the document in cache) can significantly improve performance, and if implemented properly, can improve reliability and consistency.

To configure the cache, first access the properties area. This is located under the Edit/Preferences commands then under the Advanced folder. The first step is to clear both the memory and disk cache areas. The size of the cache is indicated in kilobytes and should be set above the maximum expected size. The cache works on a first in/first out format so setting it too small will result in the loss of desired pages. The directory where the cache is located can be set as an option. This allows for the reuse and storage of multiple different presentations. Secondly, select the box NEVER for comparison of the cached pages with those on the Internet. Once the configuration is established, each page that the user wishes to display must be visited. This is how the pages are placed into the cache.

Reading pages from the cache rather than from the network has several advantages. Performance is significantly improved because the pages are being read from the hard drive instead of contending with network and server performance. The consistency comes about since you are dealing with a known quantity. Due to the dynamic nature of the World Wide Web there is no way to know exactly what content will come up anytime a site is accessed. This can present some interesting moments during a presentation. Reliability and availability are enhanced because the presentation is no longer dependent on the functioning of the network or the remote server.

If for some reason the network ceases to function the presentation can be run as a stand-alone operation. To run Netscape Communicator in a Windows 3.1x or 95 environment without an active TCP/IP connection, a dummy winsock must be created. This dummy can be obtained from Netscape’s website located at “ftp://ftp.netscape.com/unsupported/windows’ (Netscape Staff, 1996). Download the file mozock.dll and place it in the Windows\system subdirectory. When the network fails, rename the current winsock.dll (i.e. to winsock or something similar) and then rename mozock.dll to winsock.dll. This technique can also be used to give a presentation when no network connection is available or the quality of the connection is suspect.
Presentation Configuration

In order for any presentation to be successful, its projected components must be both visible and legible. Visibility and legibility can be improved by (1) increasing the amount of space available to the main display area; (2) by modifying the colors and fonts used on the display. The default configuration of the browser does not lend itself to effective projection. It comes configured for viewing on a high-resolution monitor in a controlled environment that is approximately 18 inches away from the viewer. In a presentation environment, the viewers will be between 10 and 35+ feet away from the screen; the lighting quality will vary as will the viewing angle. An equivalent configuration between the desktop browser and one used for projection would have the user standing 10 feet away from their monitor (Holcombe and Stein 1990).

Display Area

Netscape’s Communicators main screen is composed of several areas that can be tailored to the user’s requirements. Figure 1 is the screen with all areas active. Reference letters have been placed to the right of each component for identification. Table 1 contains the size of these components in pixels (they all are constant regardless of screen resolution) and their relative percentages of the available screen at different monitor resolutions.

Figure 1. Netscape Communicator Screen

The primary goal of configuration is to increase the amount of space given to the display area (reference E-F) and to reduce the amount of administrative area. This is necessary in order to allow for the increasing of the font size in the display area without losing too much of the page outside of the display window. A font size of 16 appears to be the minimum that will be visible from the back of the room. 30 point is recommended for all around ease of viewing (Szul and Woodland, 1998). Several configuration options are available for the non-display areas.

The Navigation toolbar (reference points B-C) can be configured to eliminate it, display it using text and icons (default, Figure 2), display it using icons only (Figure 3), and to display it using text only (Figure 4). At the minimum, set it to text or picture only. Eliminating the toolbar will provide additional space for the main display area. Suppressing the toolbar from view does not preclude its use, as the right mouse button provides access to the more frequently used functions, back, forward, stop and reload. Configuration is found under the View, Preferences, Appearance.

Table 1. Netscape Communicator Screen Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Reference</th>
<th>Size in Pixels</th>
<th>% at 1024x768</th>
<th>% at 800x600</th>
<th>% at 600x480</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Admin. Area</td>
<td>A-B</td>
<td>40</td>
<td>5.4%</td>
<td>7.0%</td>
<td>8.8%</td>
</tr>
<tr>
<td>Navigation Toolbar</td>
<td>B-C</td>
<td>23</td>
<td>3.1%</td>
<td>4.0%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Text &amp; Icons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Icons only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text only</td>
<td>C-D</td>
<td>14</td>
<td>1.9%</td>
<td>2.4%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Location Toolbar</td>
<td></td>
<td>20</td>
<td>2.7%</td>
<td>3.5%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Personal Toolbar</td>
<td>D-E</td>
<td>23</td>
<td>3.1%</td>
<td>4.0%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Display Area</td>
<td>E-F</td>
<td>90.0-77.9%</td>
<td>87.1-71.4%</td>
<td>83.7-63.8%</td>
<td></td>
</tr>
<tr>
<td>Horizontal Slide</td>
<td>F-G</td>
<td>14</td>
<td>1.9%</td>
<td>2.4%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Bottom Admin. Area</td>
<td>G-H</td>
<td>20</td>
<td>2.7%</td>
<td>3.5%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Minimized Toolbar</td>
<td></td>
<td>12</td>
<td>1.6%</td>
<td>2.1%</td>
<td>2.6%</td>
</tr>
</tbody>
</table>
Colors

The contrast of the letters and images against the display background has a significant effect on the legibility of the presentation. Under the View, Preferences there is an option to set the colors. A selection of dark letters on a very light background will produce the maximum contrast.

Background colors and patterns used in web pages often add complexity and can reduce contrast and legibility (Lynch and Horton, 1997). There is also an option that will allow you to over-ride the colors of the page that is being displayed with your colors. This is very useful if the page(s) to be presented are low contrast.

Conclusions

The use of a web browser as a tool for presentations is increasing. As with any tool, we need to develop an understanding of its advantages and limitations, and how to configure the tool for the intended purpose. This paper has identified and discussed a few aspects of the browser as it relates to presentations. However, the discussion is not based on empirical evidence, but on experience, and observation. Further study is needed to more formally clarify the issue.

References