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# Web Accessibility Analysis

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Assignment | 5

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**Note: This report was written in outline format however, the numbers do not match up to the assignment instructions as stated in Moodle.**

### Analyses Conducted Using the Following Software:

- Operating System: Windows Vista Home 64-bit
- Primary Browser: Mozilla Firefox v. 3.0.3
- Alternate Browser: Internet Explorer 7.0.6001.18000

## Site: [www.nbcolympics.com](http://www.nbcolympics.com) & Flash Video Analysis

1. The “NBC Sports” and “Powered by msnbc.com” graphics are accessible however, when we tab to the search box, there is no label to indicate what the text box is, thus rendering it useless to someone with a screen reader until the user tabs to the “Search Site” button though it is not recognized by the JAWS screen reader as being a form element. The same applies to the “Web” search button as well.
2. The horizontal navigation bar at the top of the page uses an unordered list which is acceptable however, the sub-menus cannot be accessed using the keyboard, nor would a screen reader pick up on these sub-elements. People afflicted with fine motor skills or visual disabilities would undoubtedly be unable to use this system as it is.



The Sports menu is inaccessible by keyboard however, when the CSS are deactivated, the menu is a bit more easily accessible as you can quickly tab down to the “All Sport” navigation links which are also in an unordered list format.

3. The head banner:



A person using a screen reader would have difficulty with this banner as none of the images have alternative text and provide absolutely no value to a visually impaired user. There are several hidden links that go nowhere, which only add the number of times someone using the keyboard would have to tab past.

The “Register” and “Login” links are accessible by a keyboard however, the text is such a light blue and so small, it might be difficult for someone with low vision to see. Additionally, the video links beneath the images are inaccessible by keyboard thereby rendering them useless for someone with motor disabilities.

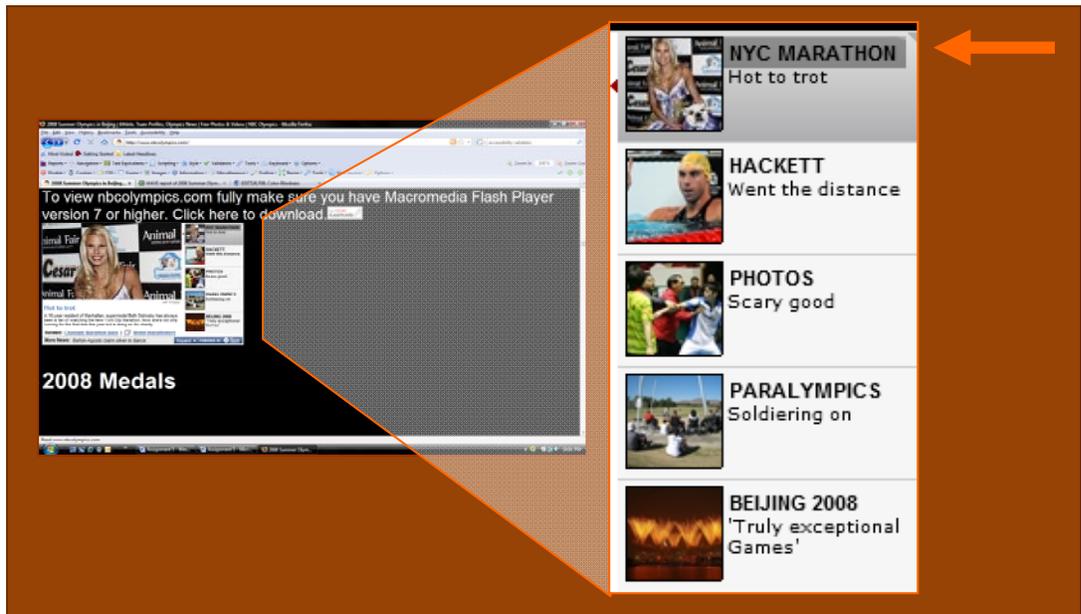
4. There is no link at the top of the page that allows the user to by-pass the top navigation bar so someone who uses a mouth stick or other adaptive device has to click 23 times

before suddenly tabbing into the Medals table *in the middle of the page*. (Note: If, the user were working with a screen reader, they can easily by-pass this banner using the “H” key to tab to each of the headers.) Furthermore, before getting to the actual data table, the user has to click past a hidden link that goes nowhere and has absolutely no purpose.

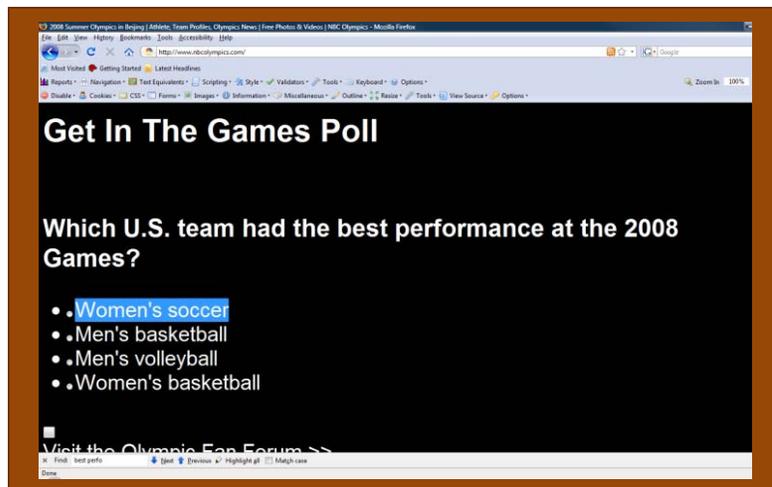
5. The “2008 Medals” table does not follow simple table guidelines and lacks table data tags and a caption (the developers used the <h2> element to describe the table) so someone using a screen reader would not be able to understand this element. Even when one tabs to and clicks on the “View full medal standings” link, the user has to tab past the entire navigation system only to find another inaccessible table. The graphic flags lack succinct alternate text that a screen reader would read as-is, further contributing to their confusion.
6. **Images of the Games:** This section also suffers from the same error of having a blank link to nowhere however; the developers did manage to include alternative text for the “Get Adobe Flash Player” graphic/link. Unfortunately, the graphics and the navigation arrows on the slideshow cannot be accessed using the keyboard so the user is forced to use the “See all photo galleries” link underneath only to access another page where they have to tab 30+ times to get to each of the individual photos and access them individually every single time.
7. The next area accessible by keyboard is the Athlete Profiles. The images both headshots and flags have alternative text however, the sports labels beneath them are in such a light grey text that they virtually blend into the background of the page making it difficult for someone with low vision to see.
8. When attempting to enlarge the text on the screen to increase legibility, the true text did enlarge however, the text embedded in images remained unaltered. Also, as the text enlarged it bled outside of its respective areas and became layered over surrounding objects, images and text so it would not be very accommodating to someone with low vision.
9. After de-saturating my monitor to imitate the view of someone with color blindness, I tried to read some of the text on this page. I found it difficult to read the text in pastel colors, especially the grey and purplish/blue copy. It almost seemed to disappear into the background however; the majority of the text was moderately legible although some users may feel the need to enlarge the text where possible (some text was embedded in graphics). Furthermore, those who suffer from color blindness would probably be better off using the high-contrast view of the site using the developer’s toolbar.
10. Using the developer’s toolbar, I examined this site in high-contrast mode and made a few interesting discoveries.
  - a. First, I discovered that there actually was a *Skip Navigation* hyperlink underneath the unordered bullet list that makes up the vertical navigation bar. This structure

defeats the purpose of having the link which appears to be hidden when displayed in normal view.

- b. The Flash elements remain inaccessible by keyboard however, in this view when the user hovers the mouse over the links to the videos in the screenshot below the menu is highlighted thus indicating that the user has successfully selected the video they wish to access.



- c. The “Which U.S. team had the best performance at the 2008 Games?” poll uses a form to vote however, in high contrast view, it would be confusing for someone with low vision to figure out which of the 2 dots beside each choice is the radio button and for some reason, when you click on the bullets instead of the radio buttons it highlights the selection but does not select the radio button itself. Furthermore, the submit button shows up as just a little



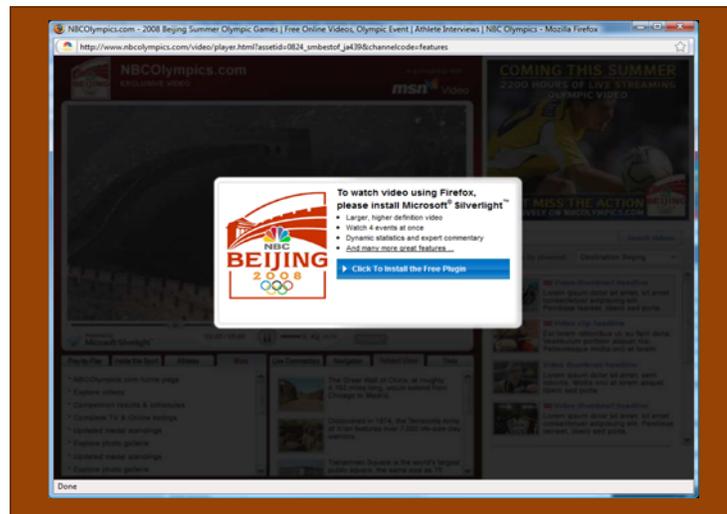
grey box below the voting selections. Overall this tool is quite useless to anyone with a visual impairment.

- Using the WAVE report tool, I looked over the header tags all of which seemed to be in logical order however, none of the pages contained an <h1> header that described what the page was about. I plugged JAWS in and refreshed the screen; JAWS did report a title for the page that was accurate though this site chose to include credit to their sponsors which was a bit annoying, but tolerable.

I switched over to outline view to see if the headings were in any sort of logical order; the rest of the outline appeared to make sense.

- Video:** I attempted to access a video, any video, using the keyboard and was unsuccessful. Using my mouse I opened the *Beijing 2008 Paralympics Daily Summary* (how ironic) page and tabbed to the *Paralympics swimming from day 1* video. This Flash-based video had several controls including Play, Stop, Pause, Rewind and volume control. The video did not start on its own, so I had to start it manually. Unfortunately, none of the controls were accessible using the keyboard and ended up trying to launch it with my mouse. But not so fast! The video would not play so I tried to open several others which would not play either.

I returned to the home page and opened *Closing Ceremonies* video when a pop-up informed me that I needed to install the Microsoft Silverlight™ plug-in. I soon discovered that the button to install the plug-in was inaccessible by keyboard. I clicked on the install when I was greeted by another pop-up window asking me to confirm this action. I hit the ENTER key and off it went. I was returned back to the Silverlight video and prompted to hit the F5 key to reload the page.



After doing so several times, I was repeatedly asked to download the Silverlight plug-in and was never able to view the video.

I switched over to Internet Explorer I re-attempted to access the *Closing Ceremony – Interviews* video, this time I was provided with the option to ignore the plug-in, which, I did. A thirty second commercial immediately began to play followed by the video I

selected. I attempted to access the PLAY button and volume controls with my keyboard unsuccessfully. The dialogue of the interview was clear and understandable even with the music in the background; with my eyes closed I could understand exactly what was going on. From a low vision/blind standpoint, this video was effective however; it lacked captioning thus precluding anyone with auditory impairment from accessing it. I was also unsuccessful in locating a transcript for it either.

In addition to the video, there was a video advertisement on the right side of the screen that I could not pause or remove. I would imagine that this would pose as a major distraction to anyone with ADD, ADHD or other cognitive disability.

13. **Registration Link:** I clicked on this link and reviewed the form. The screen reader did pick up on labels for each of the fields, all of which made sense. This form is definitely accessible by anyone, even those with visual impairment.
14. This page violates all sorts of accessibility requirements which is probably why it was selected for this assignment. Below are some general observations addressing each of the various disability categories.

Disability	Rationale
Blindness/Color Blindness/Low Vision	<ul style="list-style-type: none"> <li>• The contrast of the text against the background in some areas makes this page more difficult to read unless viewed using assistive technology.</li> <li>• Some of the video would make sense to someone with visual impairments however, they would probably never even know there was any video because you cannot tab to it and in most cases, there is no alternative text to indicate there is. This stands true for some of the images as well.</li> </ul>
Auditory/Deaf	<ul style="list-style-type: none"> <li>• The only auditory roadblock I ran into was the fact that none of the videos I viewed were captioned. This would not be necessary for such things as the opening/closing ceremonies but it is a must-have for the interviews or any other video where people are speaking. The quality of the video is fairly good and one may be able to read the lips of the speaker, but it is a far cry from accessible.</li> </ul>
Motor	<ul style="list-style-type: none"> <li>• Because so many elements are inaccessible by keyboard, this site is a nightmare for anyone with motor disabilities.</li> </ul>

Disability	Rationale
Cognitive	<ul style="list-style-type: none"> <li>This site is full of information and anyone with an attention deficit, dyslexia or other cognitive disorder would probably feel overwhelmed and incapable of finding what they were looking for to begin with simply because there is so much information. To NBC's credit, they don't have a lot of moving graphics which is good, but someone with this type of medical issue would probably be better served using assistive technology (i.e. outline view).</li> </ul>
Seizure	<ul style="list-style-type: none"> <li>No issues identified. Based on my experience, I did not come across any blinking graphics or video, or anything resembling an optical illusion that might cause a user to seize.</li> </ul>

### 15. Validation Results

Validation	Results
HTML	114 errors, 6 warnings / Failed
Wave	41 accessibility errors found / Failed
Cynthia Says	Multitudinous errors / Failed

### Site: [www.nbcolympics.com/gymnastics/index.html](http://www.nbcolympics.com/gymnastics/index.html) Analysis

This page of the NBC Olympics site appears to suffer from many of the same imperfections that the home page suffers from which is only to be expected given it is formatted with the same CSS. Many of the elements in this page repeat those on the home page though they are filtered to address gymnastics.

There is a sub-navigation bar in the form of an unordered list above the "All Sports" navigation bar which would make it more easily accessible by a screen reader (if it had a heading) or a keyboard, if the user could actually tab to it.

#### Validation Results

Validation	Results
HTML	106 errors, 7 warnings / Failed
Wave	30 accessibility errors found / Failed
Cynthia Says	Failed automated verification / Failed

### Site: <http://www.nbcolympics.com/resultsandschedules/index.html> Analysis

On the surface, this table looks fairly simple and harmless however, to a blind user it is fraught with all sorts of confusing information.

The table column headers don't have alternative text so the JAWS reader just reads the first two letters of each day, followed by the date, followed by another number that is not identified. "Su 17 9" has absolutely no meaning. I allowed the reader to start from the top of the page and let it continue to go through the table, but for some reason (which I could not figure out); it paused once it reached the sports. I pressed the tab key and it continued to read only from the populated <td> cells that contained graphics without alternative text other than to say "medal" which was accurate however, the legend is located at the bottom of the table. Had the developers programmed the source code correctly, the reader would have been able to make more sense of the table when reading the data. A blind user would have trouble understanding the significance of the medal until after having read the entire table. Furthermore, the reader does not recognize how many semi-/final events were held on any given day. I'm not sure if JAWS mentioned the word "link" when speaking of the medals however I am not entirely sure if it was because JAWS was reading so fast or if there was a programming error.

While I was toying with my keyboard, I discovered a short-cut for browsing through all the headers (the "H" key). If someone with a motor-skills disability were to use a program like JAWS, then the site would be easier to navigate however, this does not negate the fact that there are still many other issues that this little discovery does not address.

I used my mouse to hover over the table's data cells and while doing so, noticed that the CSS highlighted the day in the column header. This might be useful for someone who is easily distracted or confused.

### Validation Results

Validation	Results
HTML	84 errors, 1 warnings / Failed
Wave	18 accessibility errors found / Failed
Cynthia Says	Multitudinous errors / Failed

**Site:** <http://www.nbcolympics.com/athletes/athlete=1653/bio/index.html>  
**Analysis**

*Administrative note: I was finally able to download JAWS onto my home PC (not my laptop because most screen readers are NOT compatible with Windows Vista 64-bit).*

This page was a bit more simplistic and a little bit easier to interpret without using my eyes.

1. The first thing I noticed is that the page had a header. JAWS read the title of the page so I knew exactly where I was however; it also included a load of extraneous information that really added no value.
2. When I tabbed to the search text box, the reader only indicated that it was an editable field. I tabbed further to the “Search Site” and “Web” buttons, and the reader only indicated the text, not that it was a button. Presumably, a blind user might not interpret these elements combined to function as a form.
3. When I tabbed to the main part of the banner, the advertisement was announced but there was no alternative text with a description of what the advertisement was about, whether it was an image or for what product or service it was promoting. I guess the marketing department did not consider that they would be missing out on twenty percent of potential consumers. Again, this element has absolutely no value for a blind user.
4. The alternative text was truncated for the “Results and Schedules” link thereby making it confusing, as the screen reader pronounced an incomplete word “sched” instead of “schedule”.
5. The Italian flag logo is tagged “ITA” rather than stating that it’s a graphic of a flag and spelling out the name of the country. It indicates that there is a link, but it doesn’t say where the link will take you. Even for someone with relatively perfect vision, I really didn’t know what to expect if I clicked on the image.
6. Using the TAB key, I tabbed a couple of times and ended up skipping over the athlete’s biography entirely. I backed up and allowed JAWS to continue reading through the table, which did appear to make sense followed by the bio. I clicked the TAB key again and was immediately directed to the “Print this” link which was tagged and titled correctly.
7. Exclusive Video – The developers used a list for the video links. Unfortunately, there is some extraneous information between each of the links in the list containing blank information. This does not hinder the user from understanding what they are hearing but it would become cumbersome if this were a long list. This list is accessible by keyboard after tabbing through over half of the page. For someone with limited motor skills, this page poses the same issues as the home page. Many elements are buried way down in the sequence or simply inaccessible altogether.
8. The “Highlights” button is tagged as “Live” which would have no meaning to a blind user especially since there is no heading after the end of the previous list. The two following buttons are tagged correctly, but again are out of context.
9. The advertisement below is not tagged and JAWS identified a text box where the user can enter a zip code to *Plan Your Olympic TV & Online Viewing Experience*.

Unfortunately, there is no alt text to tell the blind user about this feature and is therefore wasted.

10. I tabbed down to the “Athletes Search” tool. At first, I thought the form was not captioned or labeled; the reader just told me that I had tabbed to a combination box with an option of selecting from 207 choices. I backed out and let JAWS just read down the page. JAWS did pick up on the “Athletes Search” text and successfully read through the various form elements, all of which were labeled.

I could go on and analyze the rest of this page however, at the risk of repeating many of the errors on this page that mirror those on the home page; I will spare you, the reader.

### ***Validation Results***

<b>Validation</b>	<b>Results</b>
<b>HTML</b>	53 errors, 2 warnings / Failed
<b>Wave</b>	22 accessibility errors found / Failed
<b>Cynthia Says</b>	Multitudinous errors / Failed