

## **4.3 Constraints**

### **4.3.1 System Life Cycle Sustainment Requirements**

The Waterfall Model is one of the typical SDLC models, which is first formulated by Royce in the early 70's. The basic phase of it is Concept, Analysis, Design, Construction, Testing and Operation. During the process, there are some constraints: such as time control and sufficient funding. Due to the time and funding constraints, some ideas cannot be implemented on the deadline, will need improve and enhance during the further developing. Also the security of the server is also important and need pay more attention during the process.

### **4.3.2 System Component Specific Constraints:**

#### **➤ Data and Content Constraints**

- To the extent that it is practical, all textual content of the application shall be in the form of the extensible Markup Language.
- All graphical content of the application shall be in the form of the .gif or .jpeg files.
- All persistent data shall be stored in relational databases.
- All persistent data shall be stored in Oracle databases.

#### **➤ Hardware Constraints**

- The web application is accessed by computer, mobile phone.
- Screen size: Most Web page designers currently assume a viewer screen size of at least 800x600 pixels. This is the standard size recommended for Web pages designed, unless a particular application for a proposed Web site requires and/or allows for a different screen size.
- Color Palette: There are 216 colors that are considered "browser-safe", meaning that they look the same on all browsers and across all platforms, when viewed in 8-bit color depth. Recommend that "non-dithered" (flat-colored) GIF graphics use the browser-safe palette to ensure a consistent appearance in all browsers. "Dithered" (mixed-colors) GIF graphics will look best using an "adaptive" palette.

#### **➤ Software and tools Constraints**

Asp.net,  
Cross-browser,  
Java,  
PHP,  
Ruby on Rails,  
Photoshop,  
Django

➤ **Personnel Constraints**

- Required skill level of the personnel
- Required training for the personnel
- Required support for circumventing foreseeable human errors under both normal and extreme conditions

**4.3.2 Production Environment Constraints**

- Connection speed: The visitor's computer. Even though 56.6kbps modems, and even 10Mbps cable modems are becoming more common, many people on the Internet are still using 28.8kbps modems. We aim for a maximum file size of about 30 to 40 kilobytes, which means 15 to 20 seconds of waiting, using a 28.8kbps modem.
- Operating Systems: The Website will work well with the most popular operating systems, such as XP.
- Screen Resolutions: Design for monitors with the screen resolution set at 1024x768 pixels
- Navigator type: the proper Navigator type and version to work in perfect way is Internet Explorer 6.0 or higher.