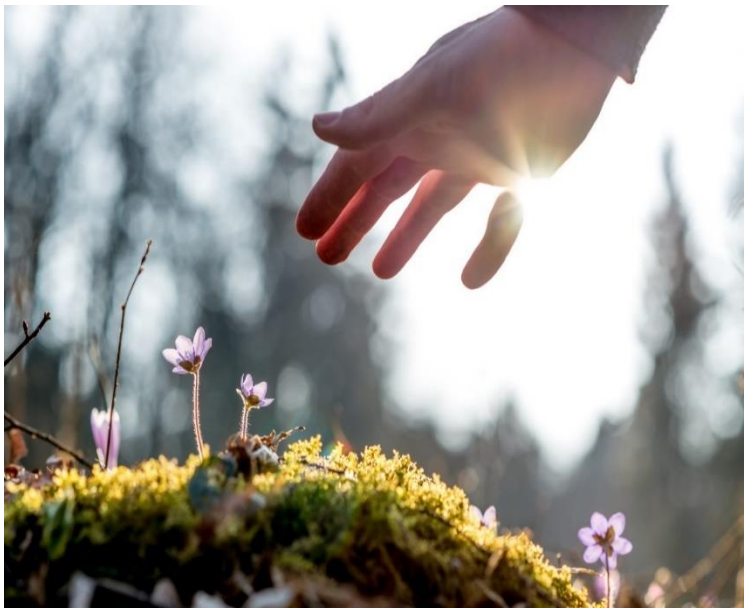

Proposal to the Office of Systems Integration (OSI)

Request for Information (RFI) #75001

For Agile Development Pre-Qualified (ADPQ) Vendor Pool

Section 508 Compliance

June 3, 2016

Strategy! Innovation! Transformation!

Revision History

Version	Date	Description of Updates	Author
DRAFT	5/24/2016	DRFT version created	xFusion
1.0	06/03/2016	Updated with review comments and new test results	xFusion

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1 Introduction

xFusion understands the significance of a system being compliant with Section 508 guidelines. The SafeKids system was tested extensively to ensure that all the necessary features have been implemented to comply with Section 508.

It is important to note that certain features of Section 508 were not tested because the system does not deal with them, such as Video and Animation, and Flashing. In addition to the tests listed below, we also conducted a Section 508 compliance scanning using online 508 compliance scanning tool as described below.

2 Testing Approach

Our Section 508 compliance testing included:

- Manual testing/reviews
- Automated testing using online 508 compliance scanning using online compliance scanning tool, www.cynthiasays.com

Section 508 compliance testing was conducted in the UI Prototype Phase and subsequently at the end of every Sprint Iteration and final product release.

The following tests were conducted based on what was applicable to the system:

- **Interactive Interface Elements**
  Interactive interface elements include features such as navigation controls (links, buttons), and editable content (selectable text, data input) that a user is expected to use. The following areas were covered in this testing:
  - ***Keyboard Access***
    The keyboard-only access included testing the system without a mouse or any such devices. It included testing the system using only the keystrokes of a keyboard.
  - ***Labels for Assistive Technologies***
    Assistive technology utilizes accessibility properties of elements and provides them to users through various modes to provide access to the application. The following were included in this test:
    - All Interactive elements
      Interactive elements such as navigation controls (menus, buttons), and editable form fields (selectable text, data input).
    - Web Forms
      Web forms that include controls (checkboxes, radio buttons), and editable content (selectable text, data input).

- **Non-Text interface elements**
  Non-text elements include images, text rendered as an image, graphs, charts, audio files, animations, and video files. The following tests were conducted to ensure compliance in this area:
  - ***Images***
    Web images such as controls (links, buttons) that are rendered as images, static images, charts, diagrams, and text rendered as an image, were tested for the Section 508 compliance.
  - ***Image Maps***
    Image maps that have designated regions or "hotspots" that contain links were tested for compliance

- **Color and Contrast**
  This testing included validating that the use of color to convey meaningful information must be provided through alternative means for users who cannot distinguish colors. Insufficient color contrast may make it difficult for some users to see and use the content. We followed the Section 508 Compliance guide (http://www.hhs.gov/web/section-508/making-files-accessible/checklist/pdf/index.html) to include colors that are accepted.
  - ***Color Dependence***
    Color dependence testing included effective use of color as the sole means to convey information. For example, a single unlabeled indicator that is green for 'on', orange for 'standby', and red for 'off' is color dependent.

- ***Color Contrast***
  The color contrast test included testing the software for peoples' ability to discern between colors/shades, including age (contrast sensitivity reduces with age), screen brightness, ambient light, color blindness and some types of low vision.

- **Page Titles**
  Page titles appear in the title bar of the browser or software window (and in the tabs where multiple tabs in a single window are used). The test ensured that there are programmatically defined page titles for the non-visual users to understand which page they are using.

- **Time Outs**
  Since the SafeKids system requires a secure login, an appropriate timeout mechanism has been implemented if there is no user response within a given time. This includes both server time outs and client side security time outs.

- **Web: Text Properties**
  Web text properties include text of the page that can be difficult for screen reader users to comprehend if certain attributes and structure are not provided. The following tests were conducted to ensure appropriate compliance:
  - ***Web: Section Headings***
    Headings were used to visually and semantically break up content to make it easier to read, easier to find and understand relevant information. Headings can be visually marked using text formatting such as bold, underline, or a combination (e.g., bold, underlined, and large font means a major heading).

- **Web: Data Tables**
  For users with vision, the process of determining what headers go with a data cell is usually straightforward, especially when formatting is used, such as bold letters and shading being applied to the headers. For users of screen reading software, however, things like 'bold' and 'shaded' have no useful meaning, so using styles and formatting to identify headers does not work. Instead, row and column headers must have programmatic markup to enable them to be identified by the screen reading software.

- **Web: Style Sheet Dependence**
  Style sheets are a means to provide visual formatting information to complement a Web page's content. The original intention behind style sheets was to separate presentation from content.
  The text, images, and links comprise the 'content', and things such as font choice, background color, and link underlining comprise the presentation 'style'.
  A Web page should, in theory, always be readable and functional without the developer's style sheet, since content is separate from presentation. However, it is possible for developers to inadvertently deliver content through style. For example, a background image can be applied with a style sheet, but if that background image also contains important information, such as an organization's name, logo and contact details, then content is no longer separate from presentation.

- **Web: Frames**
  Frames are a means of separating out sections of a Web page into different navigable regions. For mouse users, the separation of a Web page into sections means that they can scroll the information in one frame without affecting another frame. Keyboard only users who are able to see can navigate between frames.

- **Web: Repetitive Content and Links**
  Groups of navigation links are usually provided along the top and/or left of multiple pages to provide quick navigation to other areas of a website. In addition, some groups of pages may repeat blocks of content (other than navigational controls).

  For users who can see and use a mouse, skipping over navigation links and other blocks of content is simply a mouse movement followed by a click. However, for users who cannot use a mouse, repetitive links can be a serious impediment to productivity. If, for example, a site has forty repetitive links, a keyboard user must complete forty keystrokes just to get to the information they need on each and every page.

3 Section 508 Compliance Scan Report

The final compliance scan report is provided in the GitHub under *Final Deliverables/Docs* folder.

- *SafeKids – Section 508 Scan Report.pdf*