Final Report

KidzSafe Web: A Web Browser for Kids



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0. EXECUTIVE SUMMARY

About KidzSafe

KidzSafe specializes in products and programs that ensure safe and happy children yesterday, today, and tomorrow. After the unprecedented success of our Happy Fun Ball line of products, KidzSafe has decided to enter the software market and is considering the development of a new browser geared to provide a safe, easy, and fun Internet experience for kids and peace of mind for their parents.

About KidzSafe Web Browser

In this time of pop up porn and Viagra spam, *KidzSafe Web* is an Internet browser that will allow parents to provide a safe Internet experience and protect their child(ren) from inappropriate material. *KidzSafe Web* is also closely modeled to children's cognitive capabilities and supports children in learning how to use the Internet and web browsers on their own. *KidzSafe Web* also recognizes children's attachment and interest in animated characters and seeks to interest children in Internet learning and fun through the use of customized browser themes (e.g., Disney characters, PBS Kids characters, etc.).

The development team for *KidzSafe Web* defined the requirements and specifications for the proposed new product for children ages 5-7 years old and their parents. We followed common user interface development protocols and began our project with a detailed planning schedule and some idea of the strengths of each team member. Our second stage was to develop all of the requirements for the project, a time investment which

proved very worthwhile and that we kept going back to during the prototyping and design phases. This stage helped define our key audience and narrow our project scope. Our prototyping stage also proved to be integral in identifying the difficulties in designing the product. The prototyping and early design stages allowed us to eventually come to a design for the parental controls that utilizes some of the current information visualization strategies that Apple computers use, such as the slide-out parental controls panel at the bottom of the browser that is activated when a parent clicks on the parental controls icon.

Animals Art Games Math Science Sports Web Browser for Kids! Modules Web Browser for Kids! Amount KidzSafe

Unique Selling Points

- Automatic protection from pop-ups
- Cleanness of design/color to appeal to children
- o Tabs or panes for parental controls to maximize screen real estate
- o Ability for parents to quickly manage multiple different children's profiles
- o Usage of character themes to help kids gain attachment to browser and inspire their learning
- o Ability to completely block young kids from doing any accidental searching
- Full parental control of kid's access to web sites
- o Minimal buttons and controls allowing for easy kid browsing
- o Automated no-configuration necessary cookie and security management
- o Downloadable browser themes and favorite collections

KidzSafe Web: Child's view of browser

• Utilization of slide-out pane on bottom of browser for parental controls panel (browser window shrinks to accommodate panel similar to new Apple design)

Future Directions

While not covered as part of this proposal, there remains additional design work to be completed should this project be green-lighted. These include:

- Local language customization
- o Development of versions for additional age groups
- o Licensing of characters
- o Development of web store for distribution of theme and favorite modules
- User testing and feedback on the browser
- Establishing strong 3rd party involvement for the creation of different theme modules and favorite collections.

One uncertainty in the project is whether parents and kids are interested in this type of product. Before launching a large software development project such as *KidzSafe Web*, it would probably be wise to conduct some user focus groups and do an in-depth analysis of the current market opportunities.

Another possible uncertainty is whether the cost of licensing the characters will prove cost-prohibitive to implement.



KidzSafe Web: Parental Control view of browser

1. PROJECT PLANNING

1.1 Division of Labor

Contact List:

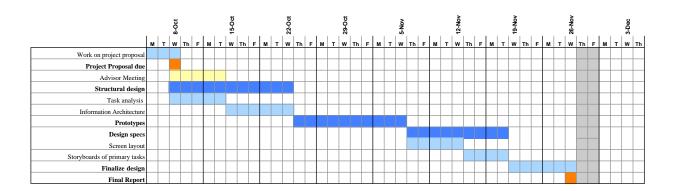
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| Final Report Preparation: | Dino |
| Task Analysis: | Dino, Marla |
| Information Architecture: | Dino, Paula |
| Product Style Guide: | Paula |
| Prototypes: | All |
| Final Screen Layout: | Marla, Paula |
| Primary Task Storyboards: | : All |

1.2 Project Schedule



2. REQUIREMENTS DEFINITION

This section of the report details the business goals, target platform, target audience and usability objectives for the *KidzSafe Web* browser.

2.1 Business Goals

- Further improve the KidzSafe brand recognition and reputation in the market place for providing safe, fun, and easy to use products.
- Increase revenue of our other family-friendly products.
- Provide a framework for browser add-ons and customizations that further enhance the product and create 3rd party revenue opportunities.

2.2 User Goals

Parents

- Provide a safe, fun, learning environment for their child(ren) on the Internet.
- Prevent the possibility of their child(ren) accidentally navigating to inappropriate web content and the opening of inappropriate and annoying popup ads.

Children

- Learn how to navigate a basic Internet browser through a system of predefined favorites.
- Have fun on Internet game and learning sites.

2.3 Target Platform

- Windows XP (Service Pack 1) and above, English version.
- MacOS X.2 and above, English version.
- DSL, cable modem, or faster connectivity required.

2.4 Requirements Specification

- Browse Web: Standard browser functionality for navigating the Web.
- **Parental lockout and set-up:** A mode where the parents can configure the browser for their kids with preconfigured controls and functionality based on the child's age group (3-5 years, 5-7 years, 7-9 years, 9-11 years).
- **Change appearance:** Ability to change the look and feel of the browser with add-on modules. For example, a theme-based browser with a Disney look & feel.
- Load web site modules: Ability to upload pre-configured bookmark categories. For example, a set of educational links geared toward pre-school aged children, or a set of web game site links that are appropriate for 9-11 year olds.
- **Bookmark management:** Configuration and organization of bookmarks.
- Change age module: An age-appropriate browsing mode can be selected by the parent and set for each child.
- Security: Standard cookie management, enabling of scripts and plug-ins.

- **Pop-up blocking:** Ability to block pop-up and spawned windows.
- Plug-in support: Support for standard browser plug-ins like Macromedia Shockwave & Flash.

It should be noted that not all of the requirements specified would be apparent in the final design of the user interface for the product. For example, it is assumed that the last three requirements mentioned (security, pop-up blocking, and plug-in support) would be supported and enabled by the product without the need for user to configure these options. These features will present more of a design challenge for the product engineering team than the interface designers.

2.5 Target Audience

Surface research on child cognitive development models indicates that there are 2 major developmental stages for childhood -3-7 year olds and 7-12 year olds. Around age 12, the child starts to enter early adulthood and for this product we'll consider age 12 and beyond as the adult mode. *KidzSafe Web* will support modes for 3-5 year olds, 5-7 year olds, 7-9 year olds and 9-11 years old. It is assumed that adults and most children over 12 will utilize a traditional browser product for their own web surfing activities.

Given the constraints of this project, our product focuses on a more restricted childhood age range than what the final product would support. We developed the initial product design and requirements for the 5-7 year old age group and the parental controls needed for the browser.

| Target Audience Demographics | 5-7 Year Olds | Adults |
|---------------------------------|--|--|
| Disabilities | None | None |
| Language | English | English |
| Market | United States Only | United States Only |
| Computer Experience | Beginning usage; have played games and used other titles on their family computer. First used a computer at the average age of 4 years old. | Moderate experience; have installed software packages for their kids in the past. Understands the basics of web browsing and can perform basic computer tasks. |
| Computer Usage Patterns | Recreational use; just starting to use the computer for schoolwork. | Basic home task management; periodic web browsing; emailing family and friends; purchased computer primarily for kids use. |
| Average Web Usage | Recalls very few sites by name (URL), but can remember many by the type of activity or the graphics on the site. Attracted to the visual imagery and activities on sites more so than any text- based information. | Accesses a few sites to manage personal finances. Periodically visits sites like amazon.com to look for and purchase presents. Helps their kids get to their favorite web sites. |
| Primary Concerns | Having fun and finding past sites without assistance from mom or dad. | That their kids will run across inappropriate content while browsing the web. |

2.6 User Profiles

2.6.1 Children, ages 5-7

| Name: | Ian |
|----------------------------------|-----------------------|
| Gender: | Male |
| Age: | 7 |
| Race: | Caucasian |
| Education: | 3 rd Grade |
| a b b c c c c c c c c c c | |

- Computer Skills:
 - First used a Macintosh at age 3 to play educational games.
 - Family purchased a Dell and subscribed to a cable modem service in the past year.
 - Has attended a weekly hour-long computer class at school since 1st grade.
 - Can insert CD-ROMs and start the web browser to get to various sites without assistance.

Scenario:

Ian arrives home from school and follows his older brother into the computer room and watches him play a game for a half hour, all the while asking his brother questions about neopets. When his brother is called away to take care of his daily chores, Ian logs on to the computer and starts up the web browser. He accesses the neopet.com site by clicking on a favorite his older sister had previously set up for him. He chooses his favorite neopet, feeds it, and plays a game to get more money to send his neopet on a vacation. After a few minutes, his mother comes in and asks him if he's done his homework and he logs off the computer to do so.

After dinner Ian argues with his sister who is trying to email her friends. He wants to get back to the neopet site and try a game he was playing earlier. After a few more minutes of pestering, his sister relents and gets off the computer. Ian logs back on and goes to the neopets site. While playing a game, the cursor homes to the address bar of the browser and Ian somehow manages to get taken to another site. An additional screen pops up and Ian runs out of the room to ask his dad why there's a naked lady on the computer.

| Name: | Daniela |
|------------|-----------------------|
| Gender: | Female |
| Age: | 6 |
| Race: | Hispanic |
| Education: | 1 st grade |

Computer Skills:

- Can play age-appropriate web and CD-ROM games.
- Most enjoys playing games at web sites she knows such as pollypocket.com, barbie.com, disney.com, and cartoonnetwork.com.
- Can not browse the web by herself.
- Sometimes needs assistance with getting to the 'play' stage of the game.
- Has attended a weekly computer class since age 4.

Scenario:

Daniela arrives home from school and decides she wants to play on the computer while her mother cooks dinner. She asks her mom, "Can I play on pollypocket.com, Mommy?" Her mother puts her laptop on the dining room table so she and her daughter can still talk while dinner is cooking and she can be close by to help





Daniela on the computer. Her mother opens up the browser for Daniela and types in the Internet address for Polly Pocket. Daniela is familiar with this site and the different games on it so she plays happily for about 20 minutes. She occasionally needs help from her mom to go back to a game or instructions on how to play a certain game.

After a little while, Daniela decides she wants to go the Disney Channel site to play some of the Lizzie McGuire games. She asks her mom to come over and get her to the right site and the game she wants to play. Daniela gets frustrated that she can't do it herself and needs to have to ask for help to navigate to the site she wants to go to. She asks her mom's help to again to get her to the 'Dress Miranda' game on the site so she can put different outfits on the Miranda character. Her mother helps her and then goes back to the kitchen to finish cooking.

Daniela really likes playing on these kinds of websites because she is attached to the different animated characters present and goes there to "see them." She also really likes the colorful and fun look of the Polly Pocket and Disney sites.

| Name: | Dina |
|------------|--------------|
| Gender: | Female |
| Age: | 5 |
| Race: | Indian |
| Education: | Kindergarten |
| | |

Computer Skills:

- Can play age-appropriate web and CD-ROM games.
- Like to play some games on the Internet, especially Disney Playhouse games. .
- Can not browse the web by herself.
- Likes to learn about new things on the Internet, such as learn the basics about spiders, when her mother plans out the time and can assist her with the learning.
- Usually needs assistance with getting to the 'play' stage of the game.
- Uses the computer 1-2 times per week in addition to a short computer lab class in kindergarten.

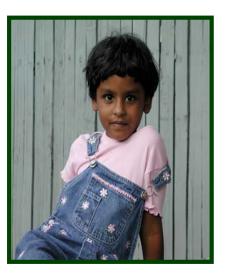


Dina is watching an Animal Planet special with her dad. She loves the giraffes and wants to know more about giraffes. Her father decides to log her onto the Internet site for Animal Planet and see if they have additional information about giraffes and/or learning games about giraffes.

Dina knows to click on her name when she sees her name come up on the user screen for Windows XP. She clicks on her name.

Her father types in the web address for animalplanet.com and shows her how to find the giraffe information (she types giraffe in the search box).

Dina is able to play a game about giraffes and learn more about them.



2.6.2 Parents

| Name: | Vanessa |
|------------------|----------------------|
| Gender: | Female |
| Age: | 31 |
| Race: | Caucasian |
| Education: | Graduate degree |
| Marital status: | Divorced; single mom |
| Children: | 6-year-old daughter |
| Career area: | IT |
| Computer Skills: | |

- Works on a computer all day long using a variety of software programs.
- Knows how to use CD-ROMs to install software, do software updates, etc.
- Comfortable using different Internet browser program.
- Primarily a PC user.
- Prefers web sites where her daughter can play and can't get to "bad" sites by accident.
- ٠ Would love to allow daughter to play alone while she is cooking dinner/cleaning/etc. but current Internet browsers too complicated for her 6-year-old daughter's solitary use.

Scenario:

After a long day at work, Vanessa picks up her daughter from school and they head home. She is already thinking about what she will make for dinner and what else needs to be done at home. Her daughter tells her all about her day at school during the ride home. She mentions that she has a little bit of homework.

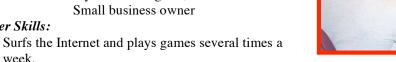
When they get home, Vanessa starts up her laptop to check her personal email (she can't check it at work). Her daughter immediately decides she wants to play on the computer.

Vanessa helps her daughter navigate to the Disney.com website and to the specific game that her daughter wants to play. She wishes that daughter were old enough to surf the Web by herself but she would rather help her daughter and make sure she doesn't get to any sites with inappropriate content for kids.

Sometimes her daughter sees different popup ads and wonders what these are. Vanessa has to go over to the computer and assist her daughter with getting around the popups. Her daughter doesn't really read the ads but they interrupt her fun on the Internet.

| Name: | Jeremy |
|------------------|--------------------------------------|
| Gender: | Male |
| Age: | 34 |
| Race: | African-American |
| Education: | high school diploma |
| Marital Status: | Married |
| Children: | 5-year-old daughter, 6-month old son |
| Career: | Small business owner |
| Computer Skills: | |

week.



Likes to buy gifts on the Internet so he doesn't have to go to the store.



- Uses Excel spreadsheets and other Microsoft Office applications to create bid proposals for construction projects and to keep track of expenses and payroll for his business.
- Has taken several one-day courses at the local community college about different software applications such as Word, Excel, etc.

Scenario:

Jeremy is just finishing up a bid proposal for a painting contract with an apartment complex when his daughter comes up to ask him when she can "play" on the computer like Daddy. Jeremy tells his daughter that she can play now because he is done with his work. He pulls his daughter up onto his lap and asks her what she feels like playing. She doesn't hesitate – she wants to go play with Rolie Polie Olie on the Disney Playhouse website.

Jeremy navigates to Internet Explorer and types in the URL for the Disney Playhouse. He notices several browser windows open along his start bar at the bottom of the screen. He opens one of them, but quickly closes it when he realizes it is spam. He proceeds to close three other pop-up windows. His daughter is starting to squirm and asks, "Daddy, I said I wanted to play Disney Playhouse."

Jeremy is able to get to the Disney Playhouse website pretty quickly and turns the mouse over to his daughter who recognizes Rolie Polie Olie's house and clicks to his website. They spend about 15 minutes like that and then Jeremy leaves to go to the kitchen to start dinner for the family.

After two minutes, his daughter is calling him because something is not working. Jeremy discovers that his daughter somehow opened a new browser window and this was hiding her game. Jeremy closes the extra Intranet browser and his daughter continues playing the game for about 20 more minutes and then she leaves to practice her cartwheels in the back yard.

2.7 Usability Objectives

2.7.1 General metrics:

- 1. Kids can get to their favorite Internet sites in fewer clicks and keystrokes than with a traditional web browser.
- 2. Kids will not be able to navigate to inappropriate sites.*
- 3. Kids will not be subjected to pop-up ads.**
- 4. Parents can configure a new child in less time than it would take to review and set traditional web browser security options.

2.7.2 Specific metrics:

Please note that the ratings system is slightly different than standard usability ratings because we will primarily be testing kids, who have different judgments on whether they like a particular product or not.

In addition, while we did not add this to our metrics table below, our goal is to have all child and parent tasks (minus the install process) take 3 clicks or less. The goal for the initial set up process is less than 10 clicks.

^{*} Location access is limited to a favorites selection that is configured and maintained by the parent.

^{**} The browser suppresses pop-up windows automatically without the need for parent to configure this option.

2.7.3 Usability Metrics Table

| Test | Completion | | Ratings (1=b | oad, 5=g | ood) |
|---|------------|-----------|----------------|----------|------------------|
| Task | Rate | Time | Easy to use | Fun | Easy to learn |
| Navigate to favorite web site from favorites (C) | 99% | <= 5 sec | 4 | 4 | 4 |
| Print current web page (C) | 90% | <=5 sec | 4 | 4 | 4 |
| Install Process (P) [Sets up initial settings for characters, age group, initial favorites, mouse character] | 90% | <= 5 min | 4 | 4 | 4 |
| Change Theme (P) [Theme setting controls screen elements such as browser window color, mouse pointer, graphics available for favorites, and general graphics displayed around the browser window] | 90% | <= 30 sec | 4 | 4 | 4 |
| Add new favorite to child's list (P) | 90% | <= 1 min | 4 | 4 | 4 |

C= Task for Child

P=Task for Parent

2.8 Competitive Analysis

2.8.1 Safari 1.x for MacOS X

Selected features available:

- Perform searches easily with built-in Google search, right next to the Web address.
- SnapBack to the point where you last typed a URL or selected a bookmark with Apple's SnapBack technology.
- No mess downloads. Safari cleans up after itself when you download disk images.
- Annoying pop-up advertisements and windows blocking.
- Import IE favorites, as well as any URLs in Address Book.
- Tracks Web sites you've visited recently.

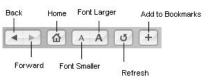


Figure 1: Browser Functionality

| http://www.apple.com/safari/download/ | 😡 🗠 🔍 Google |
|---------------------------------------|--------------------------|
| | / |
| URL entry area | Integrated Google search |

Figure 2: Additional Browser Functionality

| Switches to bookmarks view Bookmarks can be stored in pop-up menus in the bookmark bar News CNN.com Solution New York Times Cos Angeles Times BBC NEWS | ols |
|--|-----|
| New York Times Los Angeles Times | |
| 🙆 Los Angeles Times | |
| | |
| BBC NEWS | |
| | |
| 🚱 CBS MarketWatch | |
| S CNET News.com | |
| 🚱 Google News | |
| Open in Tabs | |

Figure 5: Bookmark Bar



Figure 4: Tabbed Browsing

2.8.2 Netscape 7.1 for Windows XP

Selected features available:

- Easy to set "quick list" of favorite bookmarks that show up on a toolbar.
- Incorporates email, messaging and an address book.
- Collapsable toolbars to save space.

| W Bookmarks | |
|---|------------------------|
| Bookmark This Page File Bookmark Bookmark This <u>G</u> roup of Tabs | Ctrl+D Ctrl+Shift+D |
| Manage Bookmarks | Ctrl+B |
| 🖆 Personal Toolbar Folder | • |
| Search and Directory | • |
| Best of the Web | • |
| 📺 Inside Netscape | • |
| How to Customize Bookmarks | |
| Kichigan Virtual University | |
| 📌 PAF's webpage | |
| Helcome to AOL Anywhere | |
| 🗶 TechTV Home | |
| 🖉 Standard Federal Bank | |
| MMBA : Michigan Mountain Biking Association | |
| Michigan Mountain Biking Association @ www.ez | 2board.com |
| 🖉 Atavia Webmail Login | |
| MBNA Net Access: Log In | |
| Imported IE Favorites | • |
| //http://www.goerlichmedia.com/MMBA/ | |
| Concast High-Speed Internet | |
| MSN Hotmail - More Useful Everyday SikyMail by Cyrusoft International, Inc. | |
| MicourseTools - Login | |
| WorkTools Login | |
| Yesterdayland - Your Childhood Is Here | |
| Consumer Information | |
| ZOrder Administration | |
| //www-personal.si.umich.edu/~huahaiy/or | der.phps |
| http://www-personal.si.umich.edu/~huahaiy/sa | ale_report.phps |
| Banner Value vs. Banner Cost | |
| ntering Community College | |

Figure 5: Bookmark Menu

| <u>G</u> o | Bookmarks | <u>T</u> ools <u>W</u> indow <u>H</u> elp | | | | |
|---|-----------|---|--------|-----------|--|--|
| B | jack. | | Alt+Le | ft Arrow | | |
| E | orward | | Alt+Ri | ght Arrow | | |
| Home Alt+Home | | | | ome | | |
| History Ctrl+H | | | | | | |
| Welcome to Comcast High-Speed Internet! | | | | | | |
| Welcome to Comcast High-Speed Internet! | | | | | | |

Figure 9: Go Menu

 Window
 Help

 ₩Levigetor
 Ctrl+1

 ™Mal & Newsgroups
 Ctrl+2

 Å Instant Messenger
 Ctrl+3

 %Composer
 Ctrl+4

 @Adness Book
 Ctrl+5

 • 1 Welcome to Concast High-Speed Internet! - Netscape

Figure 10: Window Menu

| <u>T</u> ools | Window H | telp | |
|---------------|---|------|------------------------------------|
| | rch m Manager kie Manager up Manager | | et/comcast.html |
| | sword Manage vnload Manage | | Log Out Manage Stored Passwords |
| We | o Developmen | it . | UCTS SHOPPING |

Figure 11: Tools Menu

2.8.3 OPERA 7.0 for Windows XP

Selected features available:

- Built-in Google search in toolbar.
- Tabbed pages.
- Full screen mode.
- Mouse gestures for easier quicker navigation.
- Email support.
- "Hotlist" window to view email, bookmarks, newsgroups.

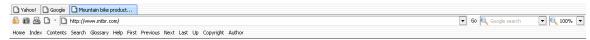


Figure 12: Tabbed Browsing

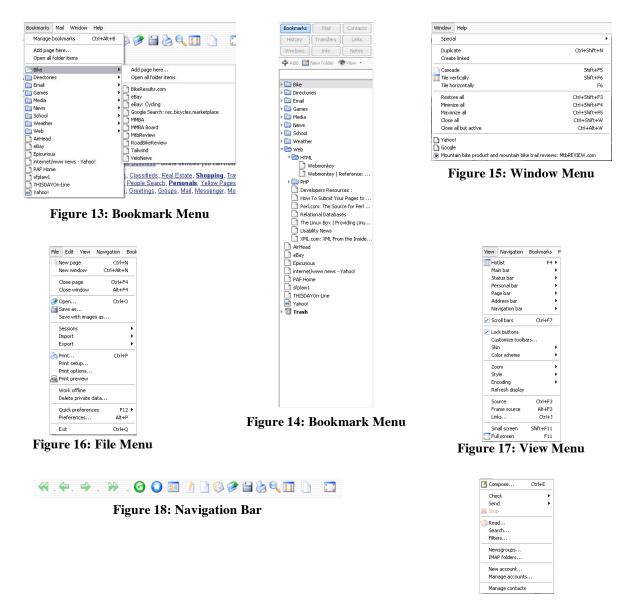


Figure 19: Compose Menu

2.8.4 Internet Explorer 6.0 for Windows XP

Selected Features Available:

- Allows customization/personalization (favorites, views, etc).
- Provides a Search Companion to assist with searches
- Allows for tracking of history and favorites. Favorites can also be organized.
- Allows for the importing/exporting of files
- Allows user to expand browser window to utilize entire screen space.
- Does not allow for custom layouts.

Figure 20: Navigation Bar

| File | Edit | View | Favorites | То |
|------|----------|---------|-----------|----|
| Ne | w | | | • |
| Op | en | | Ctrl+O | |
| Ed | it | | | |
| Sa | ive | | Ctrl+S | |
| Sa | ive As. | | | |
| Pa | ge Set | ир | | |
| Pri | int | | Ctrl+P | |
| Pri | int Prev | view | | |
| Se | end | | | • |
| Im | iport ar | nd Expo | rt | |
| Pro | opertie | s | | |
| W | ork Off | line | | |
| Clo | ose | | | |

Figure 21: File Menu

| Edit | View | Favorites | Tools | Hε |
|------|----------|-----------|--------|----|
| Cu | t | | Ctrl+X | |
| Co | ру | | Ctrl+C | |
| Pa | ste | Ctrl+V | | |
| Se | lect All | Ctrl+A | | |
| Fir | id (on T | Ctrl+F | | |

Figure 22: Edit Menu

| | | | ÷ |
|--|---|--|---|
| | = | | 1 |
| | | | |

| Contents and Index |
|-------------------------|
| Tip of the Day |
| For Netscape Users |
| Online Support |
| Send Feedback |
| About Internet Explorer |

About Internet Explorer

Figure 24: Help Menu

| View | Favorites | Tools | ł |
|-------|------------|-------|----|
| Too | lbars | | ١. |
| Stat | us Bar | | |
| Expl | orer Bar | | ۲ |
| Go 1 | Го | | ۲ |
| Stop |) | Esc | |
| Refr | resh | F5 | |
| Text | t Size | | × |
| Enco | oding | | ۲ |
| Sou | rce | | |
| Priva | acy Report | | |
| Full | Screen | F11 | |
| | | | |

Figure 23: View Menu

2.8.5 Browser Comparison

The following table compares the icons used by the above browsers and includes two additional browsers not detailed above – SurfMonkey & DTI Kidsplorer.

| | Internet Explorer | Netscape | Opera | Safari | Surfmonkey | DTI <u>Kids</u> plorer |
|-------------------|-------------------|------------------|------------------------------|---|-------------------------|------------------------|
| back | Back | e Back | | | | 4 |
| forward | \bigcirc | Forward | 4 | | | |
| stop | × | Stop | on same button as refresh | on same button as refresh the image changes to an X | 6 | |
| refresh | | Reload | \odot | | Ø | * |
| links/favorites | K Favorites | Bookmarks | | | NA | * |
| home | | A Home | \bigcirc | | $\overline{\texttt{O}}$ | * |
| parental controls | NA | NA | NA | NA | NA | |

3. STRUCTURAL DESIGN

This section of the report details our task analysis of key parent and child tasks and our information architecture and content inventory for the *KidzSafe Web* browser.

3.1 Task Analysis

3.1.1 Assumptions

Each kid has their own OS user account that retains his or her personal browser configuration and settings. Parents will primarily be using *KidzSafe Web* to configure the browser for their children, and will use other web browsers for their primary surfing activity. This task analysis was done prior to the final design and may differ slightly from the final tasks detailed in the storyboards.

3.1.2 Key Tasks — Children: Ages 5-7

Navigate to favorite website

- 1) Point to favorites category
- 2) Select desired favorite from list
- 3) Click favorite.

3.1.2 Key Tasks – Parents

Application First Run

1) Double-click on KidzSafe Web application icon

2) Click on lock icon in bottom right of screen.

3) Enter parental password

4) Click OK (and go to Add Child task)

Print to web page

- 1) Point to printer icon at top of page
- 2) Click on print icon

Access Parental Controls

1) Click on parental lock button in lower right corner of browser.

- 2) Enter parental password
- 3) Click OK (go to Add Child task)

Add Child

1) Click on child's name in left side of pane

2) Select PROFILE tab (default is profile tab so shouldn't have to do this step)

3) Type child's name in child name box.

4) Go to FAVORITES and MODULES tabs to complete setup for child (see Configure/change child profile task

Configure/change child profile

1) Click on child name. Child profile pane appears on right side of screen.

2) Select AGE module from pull down menu in child profile pane.

3) Select THEME module

4) Select FAVORITES module from pull down menu in child profile pane.

Change password

- 1) Enter current password
- 2) Click on change password
- 3) Enter new password
- 4) Re-enter new password
- 5) Click OK

Load new themes/favorites

- 1) Select child's name
- 2) Click MODULES tab

3) Click load button to right of themes or favorites.

4) This will take parent to KidzSafe Web website where they can download additional modules.*

Forgot password

- 1) Click on 'forgot password' link
- 2) Answer security question
- 3) Enter new password
- 4) Re-enter new password
- 5) Click OK

Manage favorites

- 1) Click on FAVORITES tab
- 2) Select favorites category
- 3) Select favorite

*Note: The KidzSafe web interface is not part of the initial software development and will be developed in Phase 2 of the project.

Delete favorite

- 1) Click on FAVORITES tab
- 2) Select favorites category
- 3) Select favorite

4) Click minus (-) sign to right of favorite

Add new favorite

1) Click on FAVORITES tab

2) Select favorites category

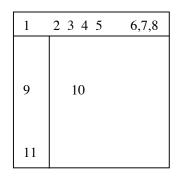
3) Select favorite

4) Click plus (+) sign to right of favorite.

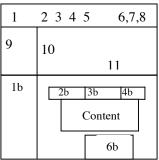
3.2 Information Architecture & Content Inventory

3.2.1 Principle Interface Components

- Initial application startup splash screen/graphic. Contains:
 - KidzSafe Web logo
 - o Text
- First time start up screen: Screen that comes up when the application is first launched that provides welcome text and prompts parents to set up a password. Contains:
 - o Text area
 - o 2 password entry fields
 - Buttons for [OK] & [CANCEL]/[QUIT]
- Browser window: Primary screen from which kids will surf the web. It will always start at a specific home screen. Contains:
 - Browser content area (10)
 - Favorites area (9)
 - \circ Basic browser control forward, back, home, print (2,3,4,5)
 - Parental control icon (11)
 - Standard window controls close, maximize, minimize (6,7.8)
 - KidzSafe Web logo (1)



- Parental control window: Primary screen for the parents to configure the web browser for their kids.
 Window initially opens up to a basic display allowing for child selection and module loading. As a child is selected the window expands to show the specific child
 - configuration options. As a Contains:
 - Child profile selection/organization/naming display (1b)
 - Modules pane (4b)
 - Theme module load button - Favorite module load button
 - Child profile pane (2b)
 - Age selection drop down
 - Theme & Favorites module drop downs
 - Add & Delete child profile buttons
 - o Favorites pane (3b)
 - Ability to add/delete items (+/-)
 - Ability to drag and drop items wherever in the list
 - Search box to search URLs
 - Add URL text box (to add a URL that doesn't exist in default favorites)
 - Name URL text box (to re-name the URL to a name your child will know)
 - Content area content displayed depends on which pane you are on (5b)
 - o [OK]/[SAVE] & [CANCEL] buttons (6b)
- Password dialog box: Used for entering password to access parental controls. Contains:
 - Password entry area
 - Change password link
 - o Change password dialog box
 - Current password text entry box
 - New password text entry box
 - Re-enter password
 - [OK] & [CANCEL] buttons
 - o Forgot password link
 - Security question
 - Security question answer box
 - [OK] button
 - New password text entry box
 - Re-enter password text entry box
 - [OK] & [CANCEL] buttons
 - o [OK] & [CANCEL] buttons (on main password dialog box)



4. PROTOTYPES

This section of the report details prototyping process for the visual interface of the *KidzSafe Web* browser.

4.1 Thumbnails

4.1.1 CHILD WINDOW

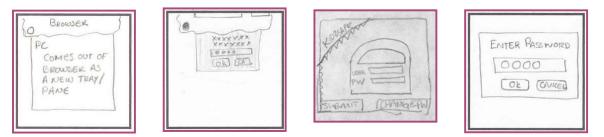




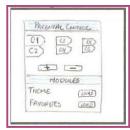


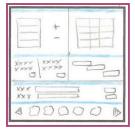


4.1.2 Dialog Boxes & Screen Parts



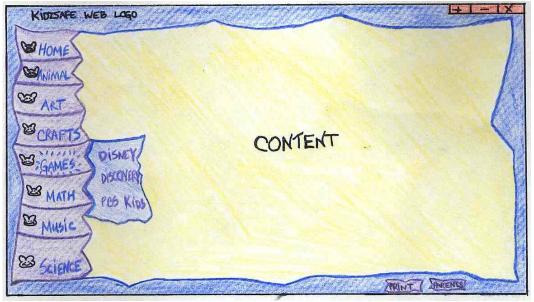
4.1.3 Parental Controls







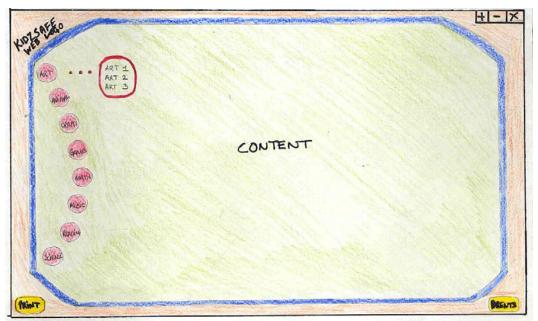
4.2 Screen Roughs



Version 1: Child View

| WHOME | | PARENTAL | | | | |
|---|-----------|--|-------------------|--|------------------|--|
| ANIMA- DART BCRATS GAMES MATH | | 04RT OART OANIMALS OGAMES OMATH OMUSIC OSIENCE | And and and and a | NEW SCREET FOWERRAFEGRUS SCORY DOO PONGEBOIG SEARCH ADD URL | DELETE DELETE | |
| OVERLAYS IN CONTEN AREA; DIS | л (Charg | IN: NORD Passand: ard for Alling Martin Isancel | | DNE | CANLEL | |

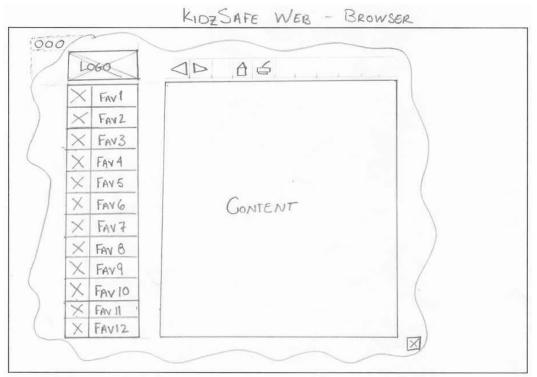
Version 1: Parental Control View



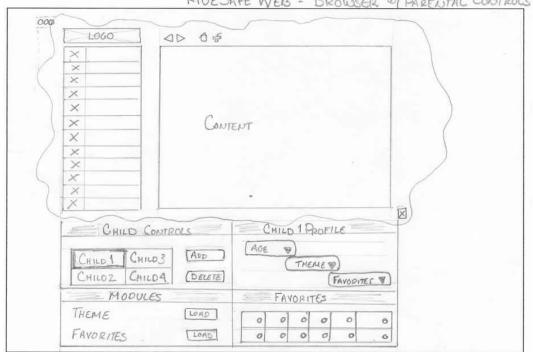
Version 2: Child View

| Plarse IC Pressence Subanov Chunge Torr Chunge Torr | Conver | Î X |
|---|----------------|--------------|
| Ket | CONTROLS | PARENOS |
| SELECT CHILD OCL OC2 OC3 OCH | ADD CHILD NAME | and the spin |
| SELECT AGE 03-5 05-7 | FAVORITES | |
| SELECT THEME SELECT ONE | | |
| 1 | | AVE |
| | ADD URL | ANCEL |

Version 2: Parental Control View



Version 3: Child View



KIOZSAFE WEB - BROWSER W/ PARENTAL CONTROLS

Version 3: Parental Control View

Kidzsate OOOB X A games PASSWURD POP-NP WINDOW * Science) FOR PARENTAL CONTROLS month PARENTAL CONTROLS BUTTON ▶ ant

Version 4: Child View

FAWRITES (ADD) DEL LASCANFY WIRESIE 1000 10 0 ADDS comment parge

Version 5: Parental Control View

| | [1040] | 000 | | X |
|--|---|-----|--------------------|---|
| SHAWE JELECTED | > MRENTAL LTRU | | | A |
| PREFERENCES) | CHILD I ET | | | |
| - DUL OTHER OFTIMAS GREATED DINT INVITIC AT LEAST I CHILLASS SELECTEDS | CHILU Y CHILU | | | |
| | | | | T |
| 6 | | | | |
| N P | MRENTAL CONTROLS | | O Q KONO | |
| E F | AUGALIES Child I | | MODULES CHILD I | |
| | A E | | | |
| | SEARCH [| | | |
| | bo/ELL | | | |

Version 6: Parental Control View

4.3 Mockups



Version 1: Parental Control in Browser Window

| KidzSafe | 0000 | X |
|---|------|---|
| ► games ⊠ ► math ⊠ | | Î |
| ▼ science × link 1 × link 2 × link 3 × link 4 | | U |
| ► art 🗵 ► reading 🗵 | | |
| (► sports ⊠ | | ų |

Version 2: Child Browser Window

| k;dz | late | | | | + - (|
|--------------------------------------|---|--|----------------------------|------|-------|
| Sports |) | | | | |
| Animals | | | | | |
| Animals |) | | | | |
| Animals | | | | | |
| Animals | | | | | |
| ▼ Animals | | | | | |
| • | \sim | | | | |
| Child Accounts child 1 child 2 | Profile Fa | vorites Modules Sea | Address | | |
| child 3 | bookmark ► Science ► math ► snorts ► LC Sports ► lds Sports ► art ► agames | link http://www.xox.com/xox http://www.xox.com/xox | k Disney nath irt | link | |
| • • | animals | | | | |

Version 3: Parental Control in slide down tray

5. DESIGN SPECIFICATIONS

5.1 Final Screen Layout

The following pictures represent the final browser screens for both child and parent with parental controls.

| Kidz, | afe < < | × |
|--|-----------------------|---|
| ► Animals | | 4 |
| ArtGames | 🔒 Demo | |
| ▶ Math | 🔒 Download | Ξ |
| ScienceSports | Kidz 6 Modules | |
| 2 | Web Browser for kids! | |
| | About KidzSafe | |
| click to open parental controls | | |

KidzSafe Web: Child's View

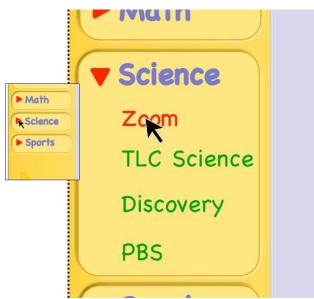


KidzSafe Web: Parental Controls activated

5.2 Storyboards of Primary Tasks

5.2.1 Child: Navigating to a Favorite





Step 1: The browser starts at the default KidzSafe page with the available link collections showing along the left hand side of the screen.



Step 3: The child is browsing their desired site.

Step 2: The child selects the link collection by clicking on it. The collection/category list expands to show individual links. The child selects their link.

5.2.2 Child: Print a Web Page



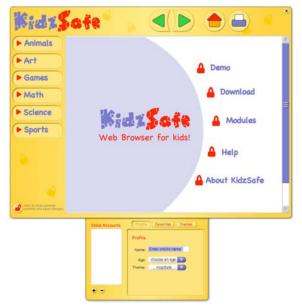
Step 1: The child browses to the page they want to print.



Step 2: The child clicks on the large printer button at the top of the screen. The page is sent to the printer without the need for additional action or potentially confusing printer dialog boxes.

5.2.3 Parent: Application First Run





Step 1: When the application is first run, the parent is prompted to set up a password for future access, and a security question and answer in case they forget the password.



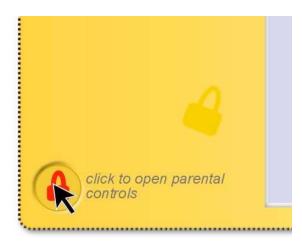
Step 3: The child profile is saved automatically eliminating the need for a specific 'save' button. When setup of the child profile is complete, the parent clicks on the lock icon in the lower left corner of the main window to save the changes and lock the browser.

Step 2: After setting up the parental control password the parental control pane opens, prompting for the creation of a child profile. The parent enters the child's name then selects their child's age range and theme from the pop-ups.



Step 4: Ready for use by the kids.

5.2.4 Parent: Password logon



Step 1: The parent clicks on the lock in the lower left corner of the browser window to access the Parental Controls.



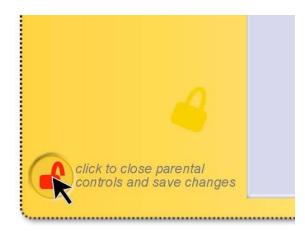
Step 3: The parent clicks on the GO button in the password dialog box.



Step 2: The parent enters their password in the password dialog box that appears.



Step 4: Assuming the correct password was entered, the Parental Control tray slides out allowing the parent to make configuration changes.



Step 5: The parent clicks on the lock again to save the changes and make the browser ready for their kid's use.



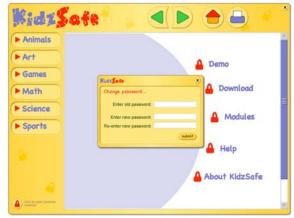
Step 6: The browser is ready for the kids.

5.2.5 Parent: Password Change





Step 1: The parent clicks on the lock in the lower left corner of the browser window to access the Parental Controls.



Step 3: The parent enters their new password twice and clicks on the SUBMIT button.

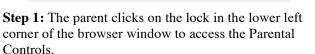
Step 2: The parent enters their password and clicks on the CHANGE button in the password dialog box.

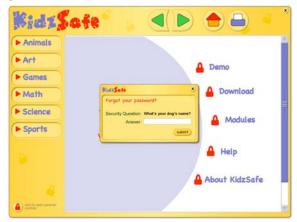


Step 4: The browser reverts to the ready for kids state with the Parental Control password now changed.

5.2.6 Parent: Password Forgot







Step 3: The parent answers their security question and clicks on the SUBMIT button.



Step 2: The parent enters their password and clicks on the FORGOT button in the password dialog box.



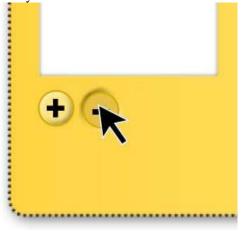
Step 4: The browser reverts to the ready for kids state with the Parental Control password now changed.

5.2.7 Parent: Parental Controls — Adding/Deleting a Child





Step 1-3: The parent follows the steps as outlined in *5.2.3 Parent: Password Logon* to access the Parental Control tray.



Step 5: The parent clicks on the minus button in the lower left corner of the tray to delete the child.

Step 4: With the Parental Control tray open, the parent selects the name of the child to be deleted.



Step 6: The child's profile is deleted. Note: To add a child, the parent clicks on the plus button and picks up at Step 2 of the *5.2.2 Parent: Initial Setup*.

5.2.8 Parent: Parental Controls — Favorites



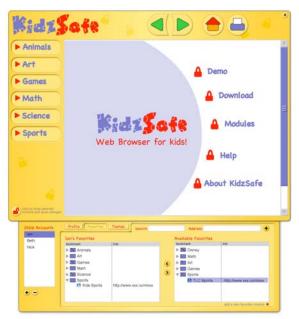


Step 1-3: The parent follows the steps as outlined in *5.2.3 Parent: Password Logon* to access the Parental Control tray.



Step 5: The parent then selects the FAVORITES tab at the top of the Parental Control pane.

Step 4: With the Parental Control tray open, the parent selects the child they wish to modify.



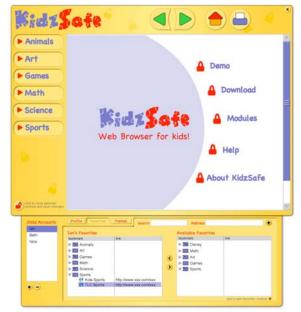
Step 6: The parent selects the favorite from the available list to be added to the child's favorite list.



Step 7: The parent clicks on the left arrow to move the selected favorite to the child's favorite list.

| Animals | | | | | |
|-------------------------------|--|---------------|-------|--|----------------------|
| Art | | | | A De | mo |
| Games | | | | - | |
| Math | | | | 4 | Download |
| Science | 10 | id IS | - 2 | | Modules |
| Sports | | Browser f | | | Modules |
| | | | | Δ. | Hala |
| | | | | 1.5 | Help out KidzSafe |
|) and day and good the | pa j | | | 1.5 | |
| Child Accounts | Charles and the | Nerres Search | | 1.5 | |
| Child Accounts Tan Beth | Profile (Fourther) 1 | Nantas Search | | Abress Address | out KidzSafe € |
| Child Accounts | Profile Favoritation | Nanak Search | 00 A | Address Address Bibliother Facerities Address Bibliother Sacerities | |
| Child Accounts Tan Beth | Prefile Foundation | Neres Search | 8 4 4 | Address Address Bibble Favorites Assas Disney Math | out KidzSafe € |
| Child Accounts Tan Beth | Prefix Frontiss Somes > Annais > Annais > Annais > Gares > Gares | Neres Search | | Address Address Bidoble Fasorites Aman Droney Math Clares Gares | out KidzSafe € |
| Child Accounts Tan Beth | Prefix Fournas Jan's Fascrites Joukean Doubea | hand) famth | | Address Add | out KidzSafe € |

Step 9: The parent clicks on the right arrow and the selected favorite moves back to the list of available favorites. Note: Individual favorites that aren't part of an existing collection can be added by entering the URL in the Address bar above the Available Favorites area and clicking on the plus button next to it (the web site shows up within the main browser window so that the parent can preview the web site before adding it and/or search for a specific URL using Google or another search tool).



Step 8: The parent selects the favorite from the child's favorite list to be removed.

5.2.9 Parent: Parental Controls — Adding/Deleting Modules



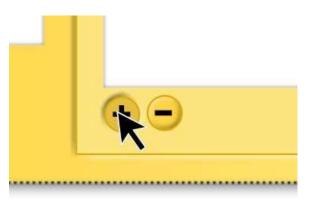


Step 1-3: The parent follows the steps as outlined in *5.2.3 Parent: Password Logon* to access the Parental Control tray.



Step 5: The parent then selects the MODULES tab at the top of the Parental Control pane.

Step 4: With the Parental Control tray open, the parent selects the child they wish to modify.



Step 6: The parent clicks on the plus button beneath the Themes portion of the module pane to add a new theme to the browser.



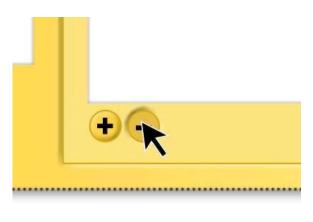
Step 7: The parent is then taken to the KidzSafe web site store where they can browse and select the various Themes that are available for purchase and download.



Step 9: To remove a theme module, the parent selects the theme module to be removed.



Step 8: When the purchase transaction is completed, the new Theme appears in the list of available Theme modules.



Step 10: The parent clicks on the minus button beneath the Themes portion of the module pane to add or remove the theme from the browser.



Step 11: The theme module is deleted. Note: The same steps apply in the adding and removing of Favorite modules though the activity takes place on the Favorites module side of the pane.

5.3 Icons



Figure 25: Move favorites left or right from Child's Favorites to Available Favorites list

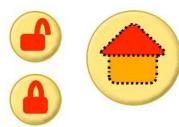


Figure 29: Parental controls icon (locked and open)

Figure 30: Home icon



Figure 26: Plus/minus icons (for adding/deleting children, URLs, etc.

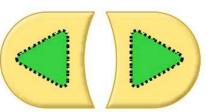




Figure 31: Back and Forward browser buttons

Figure 32: Print icon

5.4 Product Style Guide

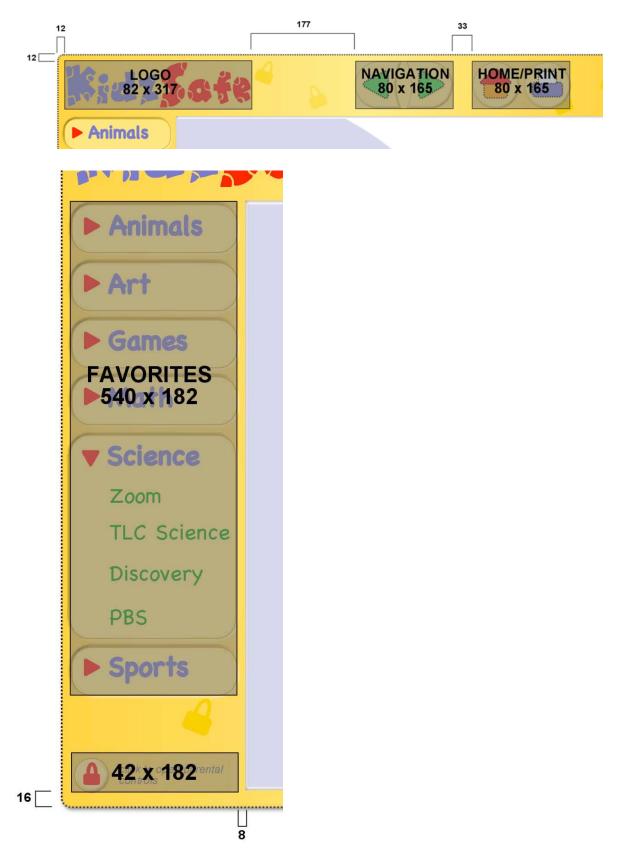
5.4.1 General Style Notes

To aid 3rd party developers in developing Theme modules for the **KidzSafe Web** browser the following guidelines should be followed:

- The overall style, shape, and color of the browser, widgets, and fonts will be theme dependent except where noted in the diagrams below.
- The KidzSafe logo must remain intact and placed as shown.
- Overall functionality of the browser and widgets should not be modified.
- Sound effects are welcome.
- The default theme and favorite modules should not be modified or deleted.

Note: all measurements are in pixels.

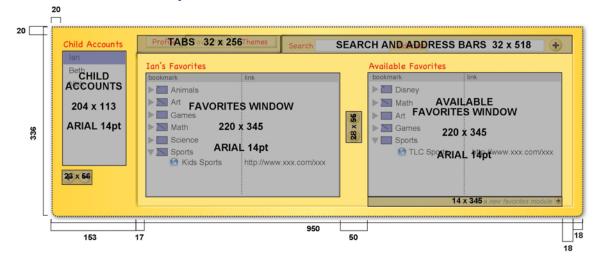
5.4.1 Browser Window: Top & Side Bars



5.4.2 Parental Control Tray: Profile Pane

| Child Accounts Ian | Profile Favorites Modules | |
|-----------------------|---|----|
| Beth Nick | Profile Nam CHHO PROFILE 96 x 214 Age: 5-7 ARIAL 14pt Theme: KidzSafe | 58 |
| + - | 446 | 88 |
| | 14 | -0 |

5.4.3 Parental Control Tray: Favorites Pane





5.4.4 Parental Control Tray: Module Pane