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Digital dog shelter application

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Digital Dog Shelter Application

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Contents

Abstract

Pet overpopulation has been a major issue for a long time. Hundreds of thousands of dogs are in shelters all over the country who desperately need homes. When looking up these dogs on shelter web sites it is common to find a small blurb and a low quality photograph in a poorly designed environment about a dog in need of a home. Most of the time these postings are not informative enough to help the potential owner make an educated decision in choosing the right dog for them. Dogs in these shelters would have significantly higher chances of being adopted if they had a stronger web presence than what they currently have. The purpose of this project is to find a way to make dogs up for adoption more appealing, interactive and geared toward a more accurate fit for the potential owner by means of developing a digital shelter dog adoption center. This method would be best used for dogs that have a more difficult time finding a home, such as older dogs, dogs of a specific breed and size, physically or mentally handicapped dogs, or dogs with other special needs.

www.tarynbz.com/thesis

shelter dogs, dog adoption, dog shelter, interactive, new media

Introduction

In the digital age it is important for everyone and everything to have some sort of presence on the web, including animals. Web presence is an essential networking and communication tool that is becoming more popular with time. People use social networking for connecting with old friends, communicating with new friends, finding jobs, following events of interest, spreading a message, etc. Interestingly, shelter dogs whose presence on the web could mean life or death are lacking a strong web presence. Some dogs have just a few short sentences appealing for individuals to give them a home. This isn't a sufficient amount of information about the dog to give it a leading edge when someone looking to adopt is considering them, and it also doesn't help prospective owners make an educated decision. If potential owners don't live close enough to pay a quick visit, this web space becomes significantly more important. The way that the dog is represented on the web can literally save its life.

This lack of education creates a horrible cycle where owners miss out on dogs that are perfect for them, and return the dogs that they adopted because they realize these dogs are not appropriate for them until it's too late. The importance of educating the prospective pet owner of both the animal and the selection process is essential to a smooth and compatible adoption. It's important to guide the individuals looking to adopt in a way that leads them through the process as that they discover information about dogs and themselves.

This thesis project tests the effectiveness of guiding an individual looking to adopt a dog to make the best decision for themselves and the animal. The goals of this project are to accurately depict a difficult to adopt shelter dog, list the necessary information to help the shelter have the dog adopted, help the prospective owner obtain information about the dog as completely as possible, help the owner narrow down what dogs are best for them, and increase the number of these dogs that are adopted from the shelter overall.

Review of Literature

When looking at the process of selecting a shelter dog on the web, there were two main aspects that I looked for; what information there was to help me find the right companion and how the dog was displayed. The main goal of my thesis project is to enhance both of these aspects in order to increase the overall number of successful adoptions. When looking at resources I didn't just look at if the information was there, but if it was also easily found. Specifically, I wanted to see if there was an indication that there was advice on how to pick an appropriate animal before or located around the search area.

After determining what the web had to offer in terms of finding the best shelter dog for an individual, I turned to books to help me find the basic information that is necessary for an individual to know before looking for a shelter dog. I wanted to find accurate, straightforward information that would be interesting but not overwhelming to the reader. Using this information I will instruct my users how to make an informed decision when choosing an adoptable dog from the web.

Shelter Dogs on the Web

Shelter Dog Selection Information

It's easy to find dogs that are looking for a home on a pet adoption website, but finding the information that aids in making an educated decision when looking for a shelter dog online is either hard to find, completely overwhelming, or non-specific. Some sites offer a more advanced search that filter out the preferences that the user inputs but doesn't offer any factual information on what those decisions should be based on. Other websites have little to no information at all. It is unfortunate, since it would be beneficial to give this information to the user and therefore the websites would be forthright with the information near the adoptable dogs.

The homepage for *Dogster,* http://www.dogster.com/, is overwhelming at first glance. Just by initial appearance, where would an individual look for information about how to find an appropriate shelter dog for them? Most likely, the "Adoption" tab with the well-known *Petfinder.com* logo over it. However, if the viewer had scrolled down they would have noticed a box on the right side of the site labeled "Discover your ideal breed," hidden below some advertisements and a general breed search box. But as a user, shouldn't I be able to find this box when I click on the "Adoption" tab anyway? Surprisingly, the only other way to get to the survey is to click on the "Breeds" tab. So the user needs to know what they need before they need it. This is a rather backwards approach to getting information to prospective owners.

If a user does find the "Discover your ideal breed" questionnaire, it does literally what it says it does; it only finds you a breed, and not an actual shelter dog (*Dogster*). This isn't a bad thing, it's a great tool during the research process. The user should be advised that there are only six questions that are used to determine the results, and further reading should be done to make sure that the breed truly is an accurate fit. Breeds have standards but the standards are not set in stone. Just like people, dogs can become a product of their environment and even a normally sweet dispositioned Labrador Retriever can become aggressive if put in a bad situation.

Dogster's Adoption section is powered by *Petfinder.com*, so of course *Petfinder* must have a thorough section on researching shelter dogs. The first topic in the secondary menu at the top of *Petfinder*'s site is "Before you Adopt" (*Petfinder*). When selecting the link a page is opened and it becomes very overwhelming, and key elements can be easily missed. When the page opens the first noticeable thing is how text heavy the page is. A significant number of people reading the site who are curious but not very serious about looking at this information would be scared away by a page that would take so much time to read. It's easy to miss the menu for the "Before you Adopt" section of the site, since it is hidden right under the title in the same color and size font as the

rest of the links on the page. There's another link to the next topic of the "Before you Adopt" section at the bottom of the article, but not many have the patience to get to the bottom before they are tired of reading. However, the information in this section is really great, it's the presentation of it that makes it so difficult to read through.

It seems that a large problem on both the *Dogster* and *Petfinder* pages is the cluttering of the pages and the difficulty of navigating through the content. *Dogster* could use some organization of their pages, like grouping similar features such as articles and searches separate from advertisements (*Dogster*). In *Petfinder*'s case, the right column of the screen is mostly advertising and just something so simple as keeping all the advertisements in one place and lining them in a separate colored window would help to sort out the site text from the ad text (*Petfinder*). This separates the advertisements from the main site which keeps the user from becoming confused and overwhelmed.

Lollypop Farm's website required a little exploring before I found the right links. At first I thought that the "Education" topic in the main menu would have the information that I was looking for, but I ended up finding more information under the "Adoptable Animals" section of the menu. In this section, there are links that the users looking for information before adopting can select; "About the Adoption Process" and "Before you Adopt" (*Lollypop Farm*).

In the "About the Adoption Process" page on Lollypop Farm's website, the user is encouraged to download the "Adoption Questionnaire" (Fig. 1) and fill it out in order to save time when they want to meet any animals (*Lollypop Farm*). Within the "Adoption Questionnaire" there are a number of questions to help match the individual to dogs within the shelter. The main drawback of this is that you have to take the form in, in person, in order to get results. There isn't a system for the dogs at *Lollypop Farm* (there is one for felines). So the individual won't know if the animal is right for them or not until they go to the shelter to meet it. This seems very ineffective, since it takes away from watching the website for a more compatible companion and the person is encouraged

to come in and hope that one is already there.

Figure 1. The "Adoption Questionnaire" downloaded from Lollypop Farm's website, from Lollypop Farm. http://lollypop.org/documentview.asp?sid=&docID=86 (accessed Nov. 1, 2010)

In the "Before you Adopt" section there is a downloadable pdf with information on "Selecting the Right Pet for You" (*Lollypop Farm*). It's lengthy, but it does contain a lot of great information such as assessing how large is too large, how much time the individual has for training an animal, if there are children in the household, if the adopted animal with be a companion for a current pet, etc. (*Lollypop Farm*). The main issue with this pdf, is that you have to look for it. So if someone jumps on the website, and doesn't scroll down on the "Adoptable Animals" page then they are likely to miss this important information. If Lollypop Farm wanted to make this a linear process, this pdf should be listed before the Adoption Questionnaire so that only people who are serious about adopting an animal fill it out.

The *Wisconsin Humane Society*'s website is the cleanest website of the group, it had minimal advertising, links, and article links to crowd the interface (*Wisconsin Humane Society*). Under the "Available Dogs for Adoption" in the left side menu, one of the subtopics that appears is "Finding your perfect match" (*Wisconsin Humane Society*). This is a guide to the typing of the dogs, and how they match them to different types of people. There is a link at the top of the page to the shelter's "Dog Adopter Profile" which will tell the user the type of individual they are and what dog would work best with them (*Wisconsin Humane Society*). The main drawback is that a potential adopter has to give his/her personal information before he/she can get his/her result. If there's a dog he/she was interested in it may not be available by the time they receive their result.

The only website that I came across with an interactive set of questions to help the user find a pet was in the "Pet Personals" section of *The Shelter Pet Project*'s website (*The Shelter Pet Project*) The "Pet Personals" is powered by *Petfinder.com*, and works based on choosing a cat or a dog and entering a zip code to browse local pets that are up for adoption. After entering this information, the user is prompted to answer a series of questions that help narrow down the pets that suit the wants of the person seeking a pet. This extra filter is what sets this section of the site apart from the user were just going to go to *Petfinder.com* and using the search there.

The design of the interactive questions in *The Shelter Pet Project*'s "Pet Personals" is by far the most appealing in terms of visuals (*The Shelter Pet Project*). The video of the ambient dog adds character to the interface and the buttons and sliders are easy and intuitive to use. The questions for the most part are easy to understand, and have simple visuals to reinforce the topic of the question. It's also easy to navigate between results, to the quiz, and to dogs that are found to be interesting

There are a couple possible issues with the interactive quiz (*The Shelter Pet Project*). The first is that the user can get results without answering all the questions. It assumes that the answer is "no" or a "5" on the scales if the user doesn't answer the question.

Since questions can be missed accidentally the results for the questionnaire can be inaccurate. There are also two questions that aren't as straight-forward as they should be and therefore could be problematic . One of the questions is number six: "Which candy bar size do you prefer?" (*The Shelter Pet Project*). It's apparent that this question is meant to find a preferred size of dog rather than candy, but there could have been a size comparison made that relates more to dog size rather than a food size. Question eleven, the final question, is the other strange one, "How often do you wear black?" (*The Shelter Pet Project*). I believe that this is a question concerning shedding, but I'm not positive. If there was a secondary window that would have explained the questions more thoroughly it would have helped, which leads into the other issue with this quiz. There isn't any sort of information about what to think about before looking for dogs.

Listings

The representation of shelter dogs on the web is widely varied with some sites providing significantly more information about the shelter dog than others. This lack of representation and information is what hurts the dogs. Similarly, there can be an overload of information, which in most cases doesn't even directly apply to the dog being viewed, and the overwhelming of the viewer leads to them not wanting to keep looking. It is important to find balance of information without excess text to frighten the viewer away from a lengthy read for what must be a very complex animal.

The listing for Chico the dog, from *AnimalShelter.org*, is one of the worst examples of representation a dog up for adoption can have online. The description of Chico is meager and basically just gives you a name, age, breed, gender, location, and a scant description of the dog's temperament. There isn't any information on the personality and lifestyle of the dog. The former owner states that they have had "a change in living situation" and "can no longer keep him" (*AnimalShelter.org*). Due to the lack of description of the dog, it could be that this change in the living situation is

the introduction of a child and the dog doesn't get along with the child. This is an issue that should be listed so that a potential owner could assess the dog's ability to function happily and healthily in their own home. This dog is also older, and any known health problems or medications should also be indicated.

The most detrimental element of Chico's listing that is most harmful to his chances of being adopted is the lack of a photograph (*AnimalShelter.org*). A dog is a commitment, and people like to have a visual of what they are bringing into their home. This is especially true for dogs, like Chico, that are a mix of breeds. A mixed dog doesn't have a visual standard and this unpredictably can keep people from taking the risk of adopting a dog that they have never seen before.

The listing for DutchiePoo is more complete than Chico's listing but it is still not very informative (*Lollypop Farm*). DutchiePoo has an appealing picture that makes him look like he'd be a great companion. The description of DutchiePoo's character is not as thorough though. It's said that he is an adult only dog, since he hasn't ever lived with children. Does this mean that he has aggressive tendencies, possibly due to the rottweiler in him? What if children visit, do they need to keep the dog out of the room? The description states that he needs to be carefully approached so it's possible that he can become defensive. Could there be past abuse that makes him this way? It seems that the agency doesn't believe that he can change his behavior, since they aren't recommending him to be with someone willing to take classes with him (*Lollypop Farm*). There is also no mention of DutchiePoo getting along with other dogs or cats. DutchiePoo's description gives information to the viewer, but brings up many more questions, most of which are concerning, and this could negatively affect his ability to be adopted. It's important to give the dog's whole story and not just pieces that lead to the viewer to fill in the rest of the whole.

The listing for Lexus the German Shepherd from *Petfinder.com* is most effective in giving the viewer a clear sense of the dog's lifestyle and personality (*Petfinder*). The

dog is not in the best of health, but the writer did an excellent job of making her health challenges sound manageable and not as frightening. The listing of the various basic specs of the dog's background such as spaying, vaccinations, and basic training is helpful so the prospective owner knows that they don't need to worry about these things. This increases the likelihood that the dog will be adopted. All the information about Lexus is great, but the negative of all the information is that the description is lengthy. A long description can make the viewer feel overwhelmed, and upon a quick scan seeing a health problem without reading the entire description can assume that the animal is too much work for them and they stop reading the moment they think that the dog is too deamanding. Lexus's listing is a good one, but not all of the dogs at *Petfinder.com* have the same quality listing that she has (*Petfinder*). Since *Petfinder* does not have a standard it is the sole responisbility of the individual posting to give the dog the most informative and complete listing possible.

The listing on the Wisconsin Humane Society's website for Spooky is a great example of being informative without being too cluttered (*Wisconsin Humane Society*). By using links and graphics, the profile for the dog is easy to read and navigate. By clicking on the breed of the dog, a separate window opens with information about the breed of the dog. This separate window helps to inform the individual without overwhelming the screen space (*Wisconsin Humane Society*). The categorizing of the personality of the dog with a type of person is also a unique touch and could help individuals select an appropriate pet. However, there isn't a link to the evaluation from the dog's profile to figure out which kind of person you are, so if you haven't taken it you'll have to just guess based on the short descriptions that you're given. This is also assuming the individual found the "Dog Adopter Profile" ahead of time and received their result (*Wisconsin Humane Society*).

Choosing the Right Shelter Dog

Many prospective owners look mainly to the physical aspect of their desired pet such as height, weight, coat type, pedigree, etc. These factors are important but they are not necessarily predictable. For example, a Jack Russel is a small dog but has a lot of energy. If a Jack Russell Terrier is not properly exercised or does not have the proper room to run it may become destructive from the pent up energy that it is harboring. A larger dog like a Great Dane, while being very large in size, also has a docile disposition making it a great candidate to live happily within a smaller living space. For this reason, the first thing that a potential owner must consider is the breed or breeds that are present in the dog. Factors associated with breeds are coat and grooming, temperament, health issues, and size (Saunders, 41–61).

Prospective owners should find resources about the desired breeds and compare them. Be warned, sometimes these resources don't discuss the negative aspects of a breed (Bailey 14). Gwen Bailey, author of Adopt The Perfect Dog: A Practical Guide to Choosing and Training an Adult Dog, reminds owners that "every positive trait has a down side to it if it is not correctly channelled or does not suit your household" (Bailey 14). Bailey also encourages individuals to seek out owners of the breeds they are interested in, for they are one of the best resources of information about the breed in question (Bailey 14).

As Sue Sternberg states in her book *Successful Dog Adoption*, the internet and shelter websites can help have dogs adopted to successful homes. If an individual is looking for a specific breed, but doesn't want to pay breeder prices so they watch shelter sites to see if that breed is available (Sternberg, 30). Some people will drive over a day for a dog. The biggest benefit to this is that this person has thoroughly researched the dog and knows what they are getting into.

Mixed breeds, otherwise known as mutts, are slightly more complicated than purebred dogs when it comes to prior research. One of the reasons people will pay a

significant amount of money for a purebred dog is for that predictability of what the dog will be like as it grows and develops (Mckinney, Barbara and Ross, John 4). When a puppy is brought into a pound, veterinarians make a guess at what kind of mixed breed the dog is but uncertainty can lead to some surprises as the dog grows older as it is harder to predict how large they will be when fully grown and if they will develop any health problems. Some believe that the mixing of breeds can remove certain health problems, resulting in healthier, stronger, and longer-living dogs (McKinney, Barbara and Ross, John 8). It is best to research all the breeds that produced the dog and take all of their needs and concerns into consideration.

It's important that the prospective adopter assess the dog themselves. Gwen Bailey believes that owners should take some essential items with them to assess a dog; the "whole family, tidbits, toys (a ball, a tug-of-war toy, and a squeaky toy), a brush, and a small towel" (Bailey, 29). Your assessment should start when you meet the dog, if it's not keen to approach you or your family members it might not warm up to strangers quickly (Bailey, 31). You can assess the trainability of the dog by offering it treats and rewarding a repetitive behavior, like barking or raising a paw. See if the dog catches on (Bailey, 34). Try playing with the dog using multiple toys (Bailey, 38). Dogs that like playing with a ball and constantly return the ball can play like that for hours, so make sure that you can do the same (Bailey, 38). Dogs preferring tug-of-war have a strong character, and you can tell a lot about a dog's bite (Bailey, 39). Dogs that gravitate to squeaky toys can have a "killing" instinct and may prefer to hunt small animals, which should be considered if you own small animals (Bailey, 39). See how comfortable the dog is with being brushed to see how sensitive it is to touch (Bailey, 39). Make sure that the dog is comfortable and not growling. The towel is a just in case measure, some dogs can get nervous and have an accident or can drool a little. It's important that a dog is not judged too harshly though, dogs don't always behave normally in a kennel (Bailey, 29). Be patient, and give the dog a chance to relax.

Process

The overall goal of the Digital Shelter Application is to help the user find the shelter dog that is most compatible with them. This goal was met by breaking the project into three sections: Information, Compatibility and Shelter. The Information Section is to provide the user with basic resources, tools, and knowledge to guide the individual to make the best decision when selecting a shelter dog. The user takes a short personality assessment in the Compatibility section to give them a personality type that can be matched with dogs compatible with that personality. The Shelter section displays dogs currently up for adoption for the user to browse through, contact the shelter, and donate to the care of the dogs. Dogs in the shelter section are color coded to match the personality results of the compatibility section. It was also a requirement of the Shelter Section to be able to edit the dogs' information be editable through a text document. The following topics break down the development and implementation of the sections and how they worked within the main application interface.

Interface Design

Menu System

It's important that the user is guided through the process properly in order to ensure that they make the proper decisions when looking for a dog to adopt. In order to help guide the viewer along, the welcome section gives an introduction to the recommended order of the steps that the viewer should take to get the best experience with the application. The top navigational bar is in recommended order from left to right. Clicking on the different topics will bring up a sub menu on the left side of the screen to navigate within the section. This creates a hierarchy for the navigation which helps the viewer follow and find information again if they should come looking for it (Krug, 55).

The selected section highlights to let the viewer know where they are located within

the application (Fig 2). The topic that the viewer is on is located on the left navigational menu and is highlighted and contains a paw print. The text at the bottom of the screen with "Slide # of #" to indicate the length of the topic and where they are in relation to the end of the topic. This text will also indicate if a section has ended by stating that it is the "End of (selected) Section."

Figure 2. Example of how the navigational system works within the interface, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Color Scheme

The shelter application is a unit that's supposed to function within the shelter's web site. Since it's important for the application to fit within the site, the colors for the application should be neutral so that the application doesn't clash with the shelter site. Neutral colors are also easier on the eyes of the user. The text becomes prominent among the neutral colors and makes it easier for the viewer to focus on the information rather than the bright colors of the interface.

The color scheme began with a single color, RGB # F7EEDD, a tinted and slightly muted peach color. I then went to the web application "Color Scheme Designer" and entered in the number for this main color and asked it to develop a tetrad scheme based off of this hue ("Color Scheme Designer"). I manipulated the application until I was happy with the colors that it indicated. I entered the main color F7EEDD a second time and took another tetrad color scheme to supplement the first (Fig 3). The main usage of the second tetrad was for the green hue, since I would need it for my Shelter section to distinguish the four different personality types (yellow, red, green and blue).

Figure 3. Two tetrad color schemes based off of the initial color F7EEDD from "Color Scheme Designer" which were used to determine neutral hues for the interface. Developed by Petr Stanicek. http://colorschemedesigner.com/ (accessed Apr. 18, 2010).

User Orientation

The Information Section is a collection of basic information that a person should be knowledgeable of when searching for a shelter dog. This section is broken into three steps: Research, Browse and Visiting. To navigate between the steps the user can click on the buttons in the upper right of the slide that are color coded and indicate the step that they navigate to on rollover. The color of the paw button will match the side navigation background color when selected, for example step one will have a blue

navigation background, step two will have red, and step three will be ochre. When a step is selected, that paw print button will lose it's saturated colors and will no longer work as a button, indicating it's selected.

Figure 4. A collective image of each of the left navigational screens for each step of the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

The left menu system is unique in the Information Section because it changes based on the current step that the user is reading (Fig. 4). The viewer's current step (Research, Browse or Visit) is displayed at the top of the navigational bar under the Information section heading in the left menu, reinforcing that the viewer knows where they currently are in the application. The main topics in each section appear in bulleted form and are clickable to jump to a specific topic if the user is returning for a specific reason. If the user is a first-time participant, they can move through the whole section by clicking the "Next" button, and it will automatically move between steps, keeping the process linear so the user knows the appropriate order to follow.

Figure 5. Returning to question four, where the previous and answer was "A" but can be changed but selecting a different answer in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

The Compatibility Section gives the user a visual of where they are in the quiz, how close they are to the end of it, and whether they have answered every question. The user can keep track of what question they are on and how many are left by referring to the paw print icons. Greyed paw prints without a number are questions that the user hasn't accessed and answered yet, dark, numbered paw prints show an answered question, and the light, numbered paw print shows what question the user is currently on. If the user returns to a question, their previous answer will be noted by having a light colored answer button (Fig. 5). When the user has answered all the questions, the "Get Results" button will appear.

When the user gets the results from their Personality Profiler, they will be lead to a screen with four different personality types: red, yellow, green or blue. The initial page that they are taken to is the color that they received as a result of the answers they gave. The user can use the colored paw print buttons in the upper left to look at the other personality types. The user can always find their result again, by looking for two indicators. The color that has been assigned to the user, will be indicated in a brown

frame around the button in the upper left corner (Fig. 6). This way the viewer can see their result at a glance. To reinforce that the user was assigned that color, the page with their result indicates: "YOUR RESULT IS (COLOR)" in all caps where the other pages just have the name of the color indicated (Fig. 6). The line at the bottom of the slide tells the viewer to look for dogs whose information is outlined in the color of their result.

Figure 6. Returning to question four, where the current answer is "A" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Figure 7. Returning to question four, where the current answer is "A" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

After the user receives their result from the Compatibility Section, they can look at dogs in the Shelter Section of the project that match their personality type. Users who

got results in green are encouraged to look at green dogs. The cages of the dogs are color coded to match the personalities that are assigned to the user (Fig. 7). The user then can click on the dog to launch the dog's page, which is also colored to match the different personality types (Fig. 8). The user is then instructed to click on the toys in order to read more about the dog. The buttons in the upper right give the user the option of contacting the shelter, making an appointment to meet the dog, donate to the care of the dogs, or go back to the shelter and look at the other dogs.

Figure 8. An example of the dog profile page in each personality type color; yellow, red, green and blue, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Interactivity

The user can input information into printable cards in the Information Section, encouraging them to participate in the activity the steps ask them to perform (Fig. 9).

The first step asks the user to enter dog breeds they find appealing on one list, and breeds they'd like to avoid on the next list. Since the user was going to be moving back and forth between cards, it was important that the cards maintained the information when moving through the Information Section. This way, the user could revisit the linked sources under the "Breeds" topic of Step One: Research and be sure that the information they entered would still be present when they returned to the "List" topic. The checklist in Step Three: Visit resets if the user leaves the topic. This is so that the user doesn't check something, think they have it, and then realize they've forgotten it later. It doesn't hurt to double check a checklist so it won't remember what was checked if the topic is left.

Figure 9. The "Breeds I Find Appealing" list with information typed in from the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

When the user is finished with their lists, they are encouraged to print them for their records. The list is meant as a tool to help the user when looking at dogs. They can check their list to see if the dog's breed matches a breed on either list to encourage or discourage looking into the dog further. If the user sees a breed they are unfamiliar with, they can write it on a blank line of the card and research that breed at a later time. The cards can also be printed blank, so the Appointment Card can be printed three times,

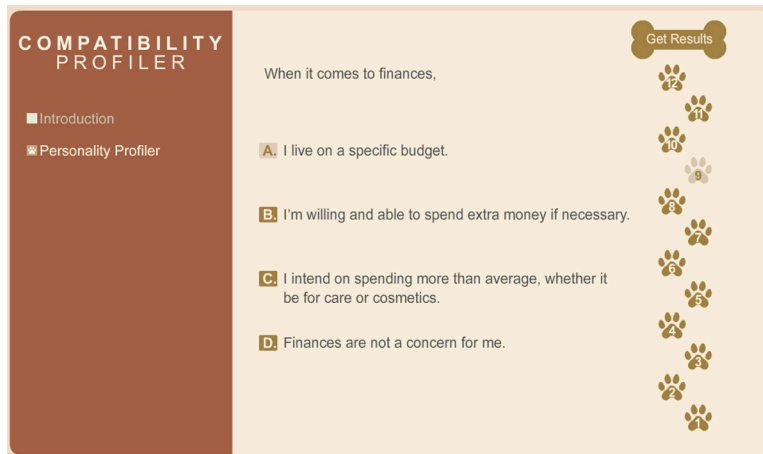and can be filled out by hand while the user is on the phone or looking at the dog online.

Figure 10. A user finishes the quiz but returns to question nine to reconsider their answer of "A", from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

The "Personality Profiler" in the Compatibility Section is set up so that the user needs to interact with it by answering the current question in order in order to move on to the next. The user also needs to answer every question before the "Get Results" button to appear. If the user is unsure of any answers they have given, they can go back and access other questions at anytime and change their answers at anytime during the quiz by clicking on the paw print button with the appropriate question number on it (Fig. 10). This gives the user more freedom to move around in the quiz, and let's them really think over their questions before they hit the submit button. By giving the user the freedom and the ability to really consider the questions, they receive the most accurate result.

Figure 11. The enlarging of the brush (grooming information) in the "Toybox" in the Shelter Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

In the Shelter Section individuals are encouraged to look through the dog's "Toybox" in order to find out more information about the dog and so the user feels like they are really getting to know the dog. The user rolls over the toys and the size of the toy increases to indicate that it's the toy that the user is on (Fig. 11). The graphic in the "Toybox" is connected to the topic of the text that the toy displays. Displaying the text this way informs the user fully of the dog without overwhelming the viewer with extensive lines of text. If the text is longer, a set of arrows will appear next to the text if the user is required to scroll through more text than can be displayed on the screen at one time. If the "Contact" or "Appointment" buttons are pushed, a separate window that will e-mail that department for the shelter will open. If "Donate" is selected, a PayPal window will open to donate to the dogs in the shelter. If the "Back to Shelter" button is pressed, the user will go back to the shelter interface with the cages.

Graphics and Animations

Figure 12. A collection of graphics and animations from the Information Section,
from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

The graphics and animations in the Information Section are to enhance the slide

visually (Duarte, 88). The animations used are all subtle, mostly looping animations so they would not be a distraction (Fig. 12). The animations also add some life to the slides and keep the user engaged and interested in what they might see next. The visuals and animations are also to serve as a memory cue so that when the user is looking at the breed and may not remember all the slides by name, they might remember the bubbling shampoo bottle reminding them that grooming is a consideration when choosing a dog.

The goal of the graphics in the Compatibility Section are to show the progress through the quiz. Using paw prints to show the questions, the track of the prints up the page show the user how close they are to the end of the quiz (Fig. 13). As questions are answered, the user can watch the progress by watching the paw prints fill in. When the end of the goal is reached, the "Get Results" bone will appear, suitable for the end of a set of dog paw prints.

Figure 13. The paw print (questions) buttons and bone (result) button visual in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

The graphics in the Shelter Section start with the dogs in their cages (Fig. 14). The

dogs are scaled in their color coded cages so that the viewer can get an idea of the size of the dog. The cages are important, the viewer needs to be reminded that the dog is in a cage somewhere and needs a home. These dogs are not simply a graphic, they are a symbol of the dog's situation.
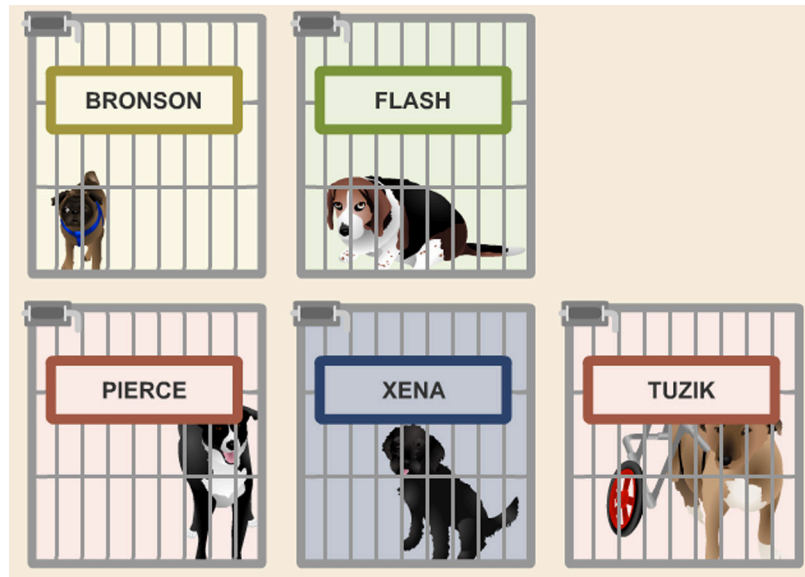

Figure 14. The dogs in their cages in the Shelter Section, from Taryn Bzdick.
Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

After the user selects the caged dog, they are redirected to the dog's page. The next graphics the user interacts with are the objects in the "Toybox," which represent the different fields of information that the user can read to find out more about the dog (Fig. 15). These objects represent the information; the brush represents "Grooming", the bone represents "Treats and Toys," the camera opens photos, etc. While looking at the dog's "Toybox," an animated version of the dog will move ambiently to keep the viewer engaged but not distracted. The dog's are animated so that they look realistic and the personality of the dog is reflected in the motions. The dogs are designed with gradients and a shadow to give them depth (Fig. 16) (Georgenes 10, 88). The dogs are animated with rapidly wagging tails, and panting tongues if they are active, high energy dogs. If they tilt their head and look at the viewer, they are very intelligent. Dogs that

shake their tails slowly and move more deliberately are shy. This is an indicator for the potential owners that if they find the animation to be a little too much for them, that dog is probably not best for them.

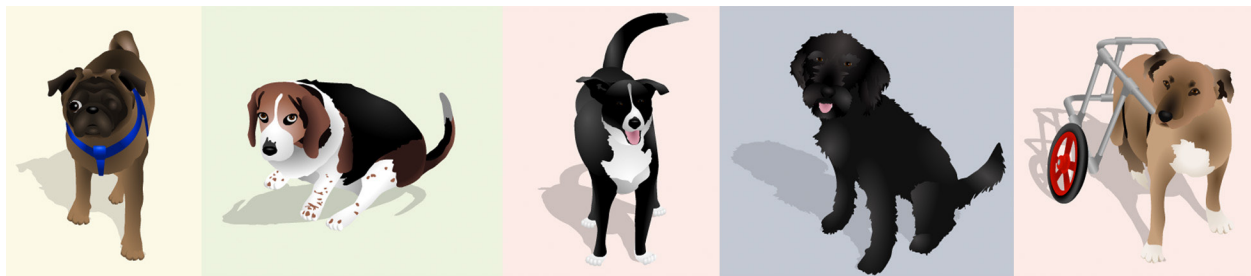Figure 15. The graphics in the "Toybox" of the dog's page in the Shelter Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Figure 16. The animated dogs that have their own page in the Shelter Section, (from left) Bronson, Flash, Pierce, Xena, and Tuzik, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Coding Challenges

Each section of this thesis project presented its own coding challenges. Aspects of the project needed to be reapproached and recoded in order to work in a way that would make them more effective and easier to use. The following breaks down the coding challenges by section and how that challenge was overcome.

The coding challenge of the lists and card was the main coding obstacle of the Information Section. The key was finding a way to help the application retain the information that the user put in the cards so that they can move through the Information Section and come back to their information. In order to record the information, I decided to make variables for what was entered into the dynamic text boxes, and to store it in

an array (Fig. 17). When data is typed into the text space, it becomes the string variable assigned to that text space, and is spliced into the array (Fig. 18). If the user doesn't fill in any of the text spaces, then they will remain blank.

```
///////////////// Variables and Array for Like Breeds List ///////////
var inputlike01: String
var inputlike02: String
var inputlike03: String
var inputlike04: String
var inputlike05: String
var inputlike06: String
var inputlike07: String
var inputlike08: String
var inputlike09: String
var inputlike10: String
var inputlike11: String
var inputlike12: String
var inputlike13: String
var inputlike14: String
var inputlike15: String
var inputlike16: String
var inputlike17: String
var inputlike18: String
var inputlike19: String
var inputlike20: String

var likeBreeds: Array = [inputlike01, inputlike02, inputlike03, inputlike04, inputlike05,
inputlike06, inputlike07, inputlike08, inputlike09, inputlike10, inputlike11, inputlike12,
inputlike13, inputlike14, inputlike15, inputlike16, inputlike17, inputlike18, inputlike19, inputlike20];
```

Figure 17. The code for the declaration of variables and the array for the "Breeds I Find Appealing" list in the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

The coding for the "Personality Profiler" was the biggest coding challenge of the project. Making the quiz more openly navigational would let the users have more flexibility with their answers and encourage them to critically examine the accuracy of their responses. I found that the most effective way to have the quiz work correctly was to have three different information sources, and a system that checked and reacted to that information.

```
function addlikeBreeds(e:Event = null):void{
    //line 1
    inputlike01 = listAppealing_mc.likebreed01_txt.text
    likeBreeds.splice(0, 1, inputlike01);
    //line 2
    inputlike02 = listAppealing_mc.likebreed02_txt.text
    likeBreeds.splice(1, 1, inputlike02);
    //line 3
    inputlike03 = listAppealing_mc.likebreed03_txt.text
    likeBreeds.splice(2, 1, inputlike03);
    //line 4
    inputlike04 = listAppealing_mc.likebreed04_txt.text
    likeBreeds.splice(3, 1, inputlike04);
    //line 5
    inputlike05 = listAppealing_mc.likebreed05_txt.text
    likeBreeds.splice(4, 1, inputlike05);
    //line 6
    inputlike06 = listAppealing_mc.likebreed06_txt.text
    likeBreeds.splice(5, 1, inputlike06);
    //line 7
    inputlike07 = listAppealing_mc.likebreed07_txt.text
    likeBreeds.splice(6, 1, inputlike07);
    //line 8
    inputlike08 = listAppealing_mc.likebreed08_txt.text
    likeBreeds.splice(7, 1, inputlike08);
    //line 9
    inputlike09 = listAppealing_mc.likebreed09_txt.text
    likeBreeds.splice(8, 1, inputlike09);
    //line 10
    inputlike10 = listAppealing_mc.likebreed10_txt.text
    likeBreeds.splice(9, 1, inputlike10);
    //line 11
    inputlike11 = listAppealing_mc.likebreed11_txt.text
    likeBreeds.splice(10, 1, inputlike11);
    //line 12
    inputlike12 = listAppealing_mc.likebreed12_txt.text
    likeBreeds.splice(11, 1, inputlike12);
    //line 13
    inputlike13 = listAppealing_mc.likebreed13_txt.text
    likeBreeds.splice(12, 1, inputlike13);
    //line 14
    inputlike14 = listAppealing_mc.likebreed14_txt.text
    likeBreeds.splice(13, 1, inputlike14);
    //line 15
    inputlike15 = listAppealing_mc.likebreed15_txt.text
    likeBreeds.splice(14, 1, inputlike15);
    //line 16
    inputlike16 = listAppealing_mc.likebreed16_txt.text
    likeBreeds.splice(15, 1, inputlike16);
    //line 17
    inputlike17 = listAppealing_mc.likebreed17_txt.text
    likeBreeds.splice(16, 1, inputlike17);
    //line 18
    inputlike18 = listAppealing_mc.likebreed18_txt.text
    likeBreeds.splice(17, 1, inputlike18);
    //line 19
    inputlike19 = listAppealing_mc.likebreed19_txt.text
    likeBreeds.splice(18, 1, inputlike19);
    //line 20
    inputlike20 = listAppealing_mc.likebreed20_txt.text
    likeBreeds.splice(19, 1, inputlike20);
}

if (inputlike01 == null || inputlike02 == null || inputlike03 =
    || inputlike04 == null || inputlike05 == null || inputlike0
    || inputlike07 == null || inputlike08 == null || inputlike0
    || inputlike10 == null || inputlike11 == null || inputlike1
    || inputlike13 == null || inputlike14 == null || inputlike1
    || inputlike16 == null || inputlike17 == null || inputlike1
    || inputlike19 == null || inputlike20){
```

Figure 18. The code for putting text into variable and into the array for the "Breeds I Find Appealing" list in the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

```
5  //CREATE THE ARRAYS
6  var colorPoints:Array = [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0];
7  var answers:Array = ["f", "f", "f", "f", "f", "f", "f", "f", "f", "f", "f", "f"];
8  var accessed:Array = ["no", "no", "no", "no", "no", "no", "no", "no", "no", "no", "no", "no",];
```

Figure 19. The three arrays that control the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

I began the code for the quiz by creating three arrays; one that held the points that determined what color personality would be the result of the quiz, another for the answers to the questions, and the last that determined if the question was accessed (Fig. 19). The array that held points were stored until the end of the quiz, where they were totaled and then the placed into a numeric range that would determine the outcome for the user. The answers array recorded the answers of the questions so that if the user went back to a question their previous answer would be highlighted. The

last array records if a question was accessed, if it was its paw print button will become visible so the user can return to that question.

```
if(answers[0] == "f" || answers[1] == "f" || answers[2] == "f"
    || answers[3] == "f" || answers[4] == "f" || answers[5] == "f"
    || answers[6] == "f" || answers[7] == "f" || answers[8] == "f"
    || answers[9] == "f" || answers[10] == "f" || answers[11] == "f"){
    finish8_btn.visible = false;
}

else{
    finish8_btn.visible = true;
}
```

Figure 20. The three arrays that control the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

    The first part of the code of a question looks at the answers for the question. In order to make it so that the user can only get their result when all the questions have been answered, the "Get Results" button isn't visible until all questions have an answer. Initially, the array has twelve "f"'s in it (Fig. 20). Most questions have answers of "a", "b", "c", or "d" and a couple have "e" as an option. When an answer is selected, either "a", "b", "c", "d" or "e" is spliced into the array, replacing the "f"'s (Lott, Peters and Schall 114). Therefore, if every question has an answer, the array should not contain any "f"'s and the "Get Results" button will be visible.

```
1   stop();
2
3   accessed.splice(7, 1, "yes");
```

Figure 21. The following two lines of code appear at the beginning of each question's code within the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

```
///////// visibility for paw butto
if (accessed[0] == "no"){
    q108paw_mc.visible = false
}
else{
    q108paw_mc.visible = true
}
if (accessed[1] == "no"){
    q208paw_mc.visible = false
}
else{
    q208paw_mc.visible = true
}
if (accessed[2] == "no"){
    q308paw_mc.visible = false
}
else{
    q308paw_mc.visible = true
}
if (accessed[3] == "no"){
    q408paw_mc.visible = false
}
else{
    q408paw_mc.visible = true
}
if (accessed[4] == "no"){
    q508paw_mc.visible = false
}
else{
    q508paw_mc.visible = true
}
if (accessed[5] == "no"){
    q608paw_mc.visible = false
}
else{
    q608paw_mc.visible = true
}
if (accessed[6] == "no"){
    q708paw_mc.visible = false
}
else{
    q708paw_mc.visible = true
}
//if (accessed[7] == "no"){
//   q808paw_mc.visible = false
//}
//else{
//   q808paw_mc.visible = true
//}
if (accessed[8] == "no"){
    q908paw_mc.visible = false
}
else{
    q908paw_mc.visible = true
}
if (accessed[9] == "no"){
    q1008paw_mc.visible = false
}
else{
    q1008paw_mc.visible = true
}
if (accessed[10] == "no"){
    q1108paw_mc.visible = false
}
else{
    q1108paw_mc.visible = true
}
if (accessed[11] == "no"){
    q1208paw_mc.visible = false
}
else{
    q1208paw_mc.visible = true
}
```

Figure 21. The three arrays that control the "Personality Profiler" in the Compatibility Section,
from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

```
/////////////////////Q1 Button/////////////////
q108paw_mc.buttonMode = true;

/////ON QUESTION
//q108paw_mc.gotoAndPlay("selected");

//////OFF QUIESTION

q108paw_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverq108);

function hoverq108 (event:MouseEvent): void {
    q108paw_mc.gotoAndStop("over");
}

q108paw_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutq108);

function rolloutq108 (event:MouseEvent): void {
    q108paw_mc.gotoAndStop("out");
}

q108paw_mc.addEventListener(MouseEvent.MOUSE_DOWN, goq108);

function goq108 (event:MouseEvent): void {
    q108paw_mc.removeEventListener(MouseEvent.MOUSE_OUT, rolloutq108);
    q108paw_mc.removeEventListener(MouseEvent.MOUSE_OVER, hoverq108);
    q108paw_mc.removeEventListener(MouseEvent.MOUSE_DOWN, goq108);
    gotoAndPlay("Question01");
}
```

Figure 22. The code that indicates that the user is not on question one of the "Personality Profiler" in the
Compatibility Section and indicates the rollovers and mouse events for the question button,
from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

```
//////////////////////Q8 Button//////////////////////
//q808paw_mc.buttonMode = true;

//// ON QUESTION
q808paw_mc.gotoAndPlay("selected");
```

Figure 24. The code that indicates that the user is on question eight of the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

There are a couple different layers of code involved when it comes to the question buttons, the numbered paw prints that appear when a question is reached. The very beginning of the of the code does two things; it stops the timeline, and it tells the accessed array that the question has been seen by the user (Fig. 21). If the question is viewed, "yes" splices into the array and replaces the "no" for that question. The next part of code looks at the question buttons and checks to see if they were accessed. Each part of the array that reads "yes" means that question becomes visible (Fig. 22). The next step for the buttons is indicating their reactions to mouse events and if they are a button (Fig. 23). For all the questions that the viewer has accessed but is not currently on, the question paw print is visible, can be used as a button, changes on mouse rollover and can be clicked to move to that question. If the user is currently on the paw print button's question, then it is not a button, and it doesn't react to any mouse interaction (Fig. 24).

The next section of code in the "Personality Profiler" is for each of the answer buttons (Fig. 25). The first bit of each button's code indicates its appearance on rollover and rollout. The next block of code is what happens if an answer is selected. The bulk of the code tells the button chosen to change to a lighter color to show that it was chosen and the rest of the buttons to remain the same darker color. The next line of code is the splicing of the points that give the result, and the chosen letter so that the user can return and see their previous answer. The last line of this part of the code moves the user right to the next question.

```
//***A BUTTON EVENTS
a08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverA08);

function hoverA08 (event:MouseEvent): void {
    a08_mc.gotoAndStop("over");
}

a08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutA08);

function rolloutA08 (event:MouseEvent): void {
    a08_mc.gotoAndStop("choice");
}


a08_mc.addEventListener(MouseEvent.MOUSE_DOWN, selectA08);

function selectA08 (event:MouseEvent): void {
    //a
    a08_mc.gotoAndStop("chosen");
    a08_mc.removeEventListener(MouseEvent.MOUSE_OUT, rolloutA08);
    a08_mc.removeEventListener(MouseEvent.MOUSE_OVER, hoverA08);
    //b
    b08_mc.gotoAndStop("choice");
    b08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverB08);
    b08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutB08);
    //c
    c08_mc.gotoAndStop("choice");
    c08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverC08);
    c08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutC08);
    //d
    d08_mc.gotoAndStop("choice");
    d08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverD08);
    d08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutD08);
    //add array info
    colorPoints.splice(7, 1, 4);
    answers.splice(7, 1, "a");
    //next09_btn.visible= true
    trace(colorPoints);
    trace(answers);
    ques09();
}
```

Figure 25. The code for the "A" answer button in the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

The last bit of code looks at the answers array to see if any of the answers should be highlighted as a previous answer to the question (Fig. 26). If all the answers array has an "f" in that question's section of the array, then all the potential answers show up as dark colored button. If there is a letter chosen, then that letter will be lighter indicating it as a previous choice.

```
//DETERMINES WHICH BUTTONS ARE HIGHLIGHTED
if (answers[7] == "f") {
    a08_mc.gotoAndStop("choice");
    b08_mc.gotoAndStop("choice");
    c08_mc.gotoAndStop("choice");
    d08_mc.gotoAndStop("choice");
}

if (answers[7] == "a") {
    //a
    a08_mc.gotoAndStop("chosen");
    a08_mc.removeEventListener(MouseEvent.MOUSE_OUT, rolloutA08);
    a08_mc.removeEventListener(MouseEvent.MOUSE_OVER, hoverA08);
    //b
    b08_mc.gotoAndStop("choice");
    b08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverB08);
    b08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutB08);
    //c
    c08_mc.gotoAndStop("choice");
    c08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverC08);
    c08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutC08);
    //d
    d08_mc.gotoAndStop("choice");
    d08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverD08);
    d08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutD08);
}
```

Figure 26. The code that checks the answers array to see if a question has a previous answer and then indicating that answer to the user in the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

The main coding challenge in the Shelter Section is making the dog's information load into the page from external text documents. This code was referenced from an ActionScript blog (*Biochemistu's Corner: Flash Blog*, http://www.tutorials-expert.com/tutorial/17575/How-to-load,-display-and-scroll-external-text-with-ActionScript-30.html) but there were some modifications that had to be made (Fig. 27). Originally, the EventListeners were attached to the stage. In order to have all the text boxes work without errors, the EventListeners had to be applied to the separate movieclips that specified the information. If they were not, they resulted in null errors. The other adjustment was that it needed to tell how many lines the text would have to exceed so that the scrolling arrows would appear. Without this information the text would get cut off. The last adjustment was within the .txt documents themselves. All the apostrophe's had to be removed since they did not convert properly when being loaded into the dog's page. "I'm" had to become "I am," "Don't" had to be "Do Not," "Won't" was changed to "would not," etc.

```
// SCROLLING TEXT CODE// SCROLLING TEXT CODE //

//--------------loading external text and display it---------
var textRequest:URLRequest = new URLRequest("dog04_diary.txt");
var textLoader:URLLoader = new URLLoader();
textLoader.load(textRequest);
textLoader.addEventListener(Event.COMPLETE,fileLoaded);

function fileLoaded(e:Event):void {
    diaryscrolling_mc.diary_txt.text = e.target.data;
    diaryscrolling_mc.diary_txt.wordWrap = true;

    if(diaryscrolling_mc.diary_txt.numLines > 10){
        diaryscrolling_mc.scrollUp.visible = true;
        diaryscrolling_mc.scrollDown.visible = true;
    }else{
        diaryscrolling_mc.scrollUp.visible = false;
        diaryscrolling_mc.scrollDown.visible = false;
    }
}

//-----------------make buttons to scroll the loaded text-------
var scrolling:Boolean = false;
var scrollDirection:String;

diaryscrolling_mc.scrollDown.addEventListener(MouseEvent.MOUSE_DOWN,scrollTextDown);
diaryscrolling_mc.scrollUp.addEventListener(MouseEvent.MOUSE_DOWN,scrollTextUp);
diaryscrolling_mc.addEventListener(MouseEvent.MOUSE_UP,stopScroll);

function scrollTextDown(e:MouseEvent):void {
    scrolling = true;
    scrollDirection = "down";
    diaryscrolling_mc.diary_txt.scrollV +=1;
    diaryscrolling_mc.addEventListener(Event.ENTER_FRAME,checkButtons);
}

function scrollTextUp(e:MouseEvent):void {
    scrolling = true;
    scrollDirection = "up";
    diaryscrolling_mc.diary_txt.scrollV -=1;
    diaryscrolling_mc.addEventListener(Event.ENTER_FRAME,checkButtons);
}

function stopScroll(e:MouseEvent):void {
    diaryscrolling_mc.removeEventListener(Event.ENTER_FRAME,checkButtons);

    scrolling = false;
}

//---------checking to see if buttons are pressed----------
function checkButtons(e:Event):void {
    if (scrolling) {
        if (scrollDirection =="down") {
            diaryscrolling_mc.diary_txt.scrollV +=1;
        } else if (scrollDirection == "up") {
            diaryscrolling_mc.diary_txt.scrollV -=1;
        }
    }
}|
```

Figure 27. This code for the Doggie Diary text box in Shelter Section,
from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Audience Feedback

The first bit of feedback that I received was about the buttons on the interface.
They started smaller, and the slide text was on the right side of the slide (Fig. 28). The
buttons were difficult to click since they were smaller, and the slide text was visibly
disconnected from the navigational buttons. By making the buttons larger, it gives them
more presence and there is more click area for the user. The linear path from the "Back"
button, to the slide text, and ending at the "Next" button also provides a more fluid
navigational system that incorporates all of the items into the viewer's line of sight.
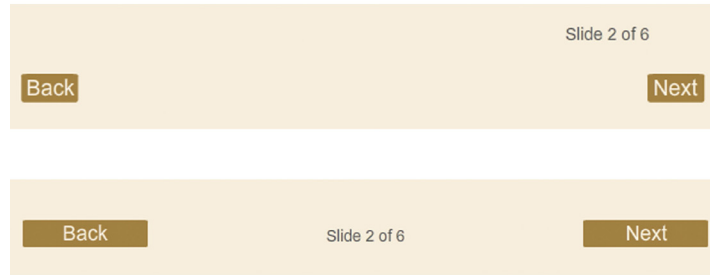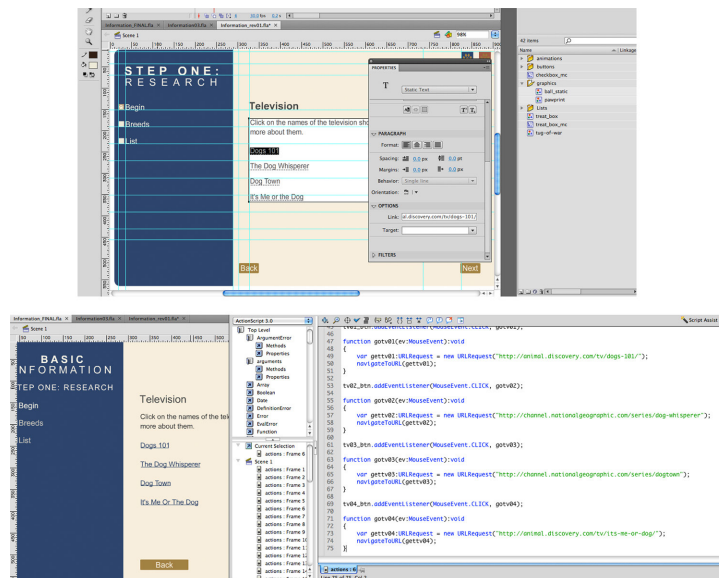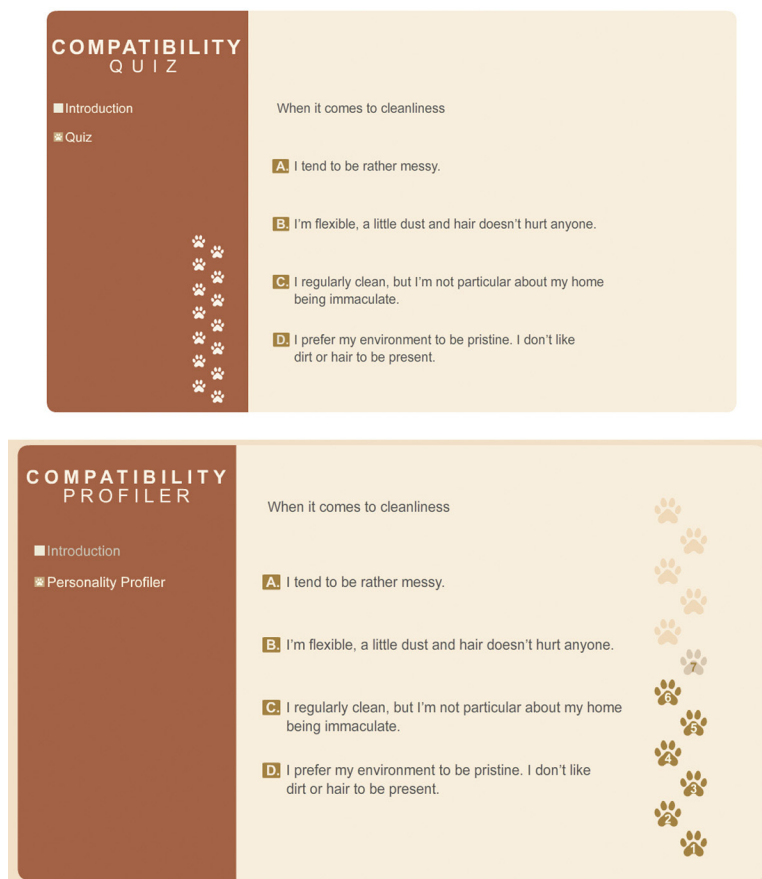
Figure 28. The before page of links (top) and the after page of links (bottom) in the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

In the initial building of the Information Section, the interactive lists and cards were not going to be interactive but just printable tools for the user to use if they decided to do so. However, when testing the cards and lists with a user they said that they were tempted to just click on the lines and fill in the information directly. Taking this advice, the cards and lists can be filled in through the application and printed.

Figure 29. The before page of links (top) and the after page of links (bottom) in the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

The other issue that testers had with the information section was the links under the "Breeds" topic under Step One: Research. Initially they were the same color as the slide text and the users didn't identify the links as actual links. So I changed the text to

a muted blue and underlined it to help the user identify the links. The other problem with the links is that they opened in the same window as the application, meaning that the user would have to reopen the application and then find where they were before clicking the link. This was a simple fix, I simply changed the links from linked text in Flash to buttons and used a URL Request in the code to open a new window (Fig. 29).

Figure 30. The before page of links (top) and the after page of links (bottom) in the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

The feedback on the Compatibility Section was mainly to make the quiz more openly navigated. It was difficult for users to tell were they were within the quiz, if they were closer to the end or the beginning (Fig. 30). The paw prints were moved to the right of the questions to make them look more connected to them. Then the paw prints were

ghosted and fill in as the user progresses, giving a clear indication of how far along the user is within the quiz. The user also has the ability to go back and see what they selected and to change the answers they previously entered. Initially, the quiz was linear and it could not be navigated as openly.

The audience feedback on the Shelter Section dealt with the design of the dogs (Fig. 31). Initially, the dogs weren't as realistic as they ended up. Viewers thought that there wasn't much of a connection to these cartoon-like dogs and felt that they would have more of a reaction to dogs with more realistic features and actions. The dogs were redesigned, and viewers said that there was significantly more connection to them being a real dog.
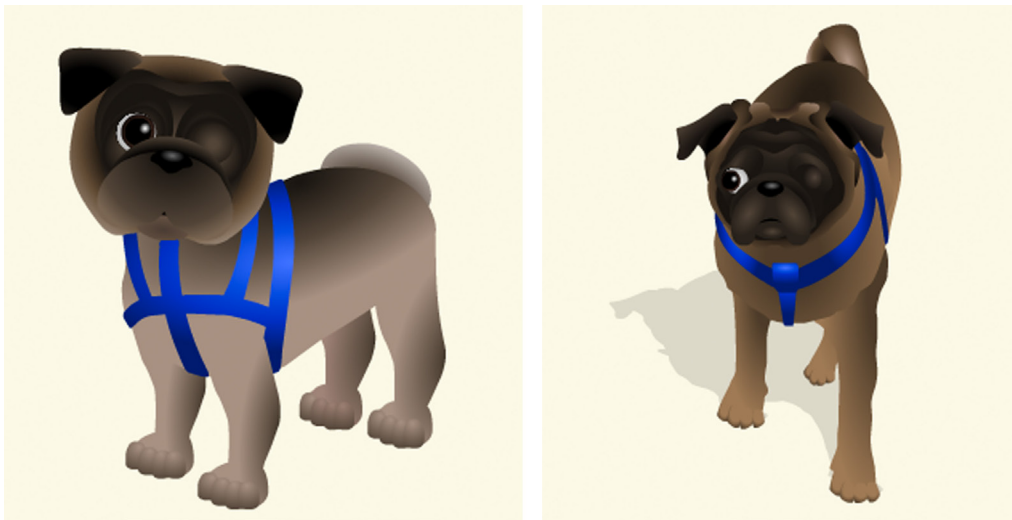
Figure 31. The redesign of Bronson the pug in the Shelter Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

In terms of the concept and content of the project, there was nothing but praise and compliments. Testers felt that the information was informative without being overwhelming or too lengthy. Almost every user reported learning something new from the project. The interactive quiz was easy to understand and work. Users in the focus group found that they received an accurate result comparable to their personality. The

Shelter Section was the most impressive to the users. Most of them said that they had never seen such complete listings for any animal up for adoption. One tester said that it wasn't just a good source of information, but it was also fun to look through the profiles of the dogs.

Conclusion

The goals of this project were to accurately depict a difficult to adopt shelter dog, list the necessary information to help the shelter have the dog adopted, help the prospective owner obtain information about the dog as completely as possible, help the owner narrow down what dogs are best for them, and increase the number of these dogs that are adopted from the shelter overall. Based on the feedback, the users verified most of the goals of the project. The quiz helped users to figure out what kind of dog owner they are. With the extensive information displayed, users felt that they had a solid sense of the dog. The goal of increasing adoptions couldn't be tested literally, but the detail of the dogs lends to users from further than the surrounding area being able to get information about the dogs which increases adoptability.

The personal gain from this thesis project has been immense. I've grown especially in the fields of coding in ActionScript, and using typography. Having to figure out how to really interpret code to work out bugs and null objects. The typographic hierarchy was integral to this project so that the user could keep track of the importance of information. I even had the ability to push my animation skills making realistic, animated dogs in Flash.

Overall, I am very pleased with the turnout of my thesis project. I think that it has the potential to give the dogs a greater web presence. With this web presence their chances of being adopted will increase. Not only that, but using the application will mean that people will adopt dogs that are more suitable for them and lessen the amount of dogs that people adopted inappropriately to get returned to the shelter. I think that a shelter and its dogs would benefit greatly from an application like this.

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McKinney, Barbara and John Ross. Adopting a Dog: The Indespensible Guide for Your Newest Family Member. New York/London: W.W. Norton & Company, 2003.

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Wisconsin Humane Society. Wisconsin Humane Society. http://wihumane.org/ (accessed Oct. 28, 2009).

Appendix

Figure 1. The "Adoption Questionnaire" downloaded from Lollypop Farm's website, from Lollypop Farm. http://lollypop.org/documentview.asp?sid=&docID=86 (accessed Nov. 1, 2010)

Figure 2. Example of how the navigational system works within the interface, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Figure 3. Two tetrad color schemes based off of the initial color F7EEDD from "Color Scheme Designer" which were used to determine neutral hues for the interface. Developed by Petr Stanicek. http://colorschemedesigner.com/ (accessed Apr. 18, 2010).

BASIC
INFORMATION

STEP ONE: RESEARCH

■ Begin

■ Breeds

▣ List

BASIC
INFORMATION

STEP TWO: BROWSE

▣ Begin

■ Be Thorough

■ Appointment Card

BASIC
INFORMATION

STEP THREE: VISIT

■ Begin

■ Visiting

■ Household

■ Treats

▣ Toys

■ Brush

■ Towel

■ Checklist

Figure 4. A collective image of each of the left navigational screens for each step of the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

WAGGING TAILS SHELTER APPLICATION

INFORMATION   COMPATIBILITY   SHELTER

COMPATIBILITY
PROFILER

■ Introduction

▣ Personality Profiler

About how much time is there someone present in your home on an average day?

A. A few hours a day myself or a household member will be present.

B. For at least 5 hours myself or a member of my household will be in the home.

C. Myself or a household member are home at least half of the day.

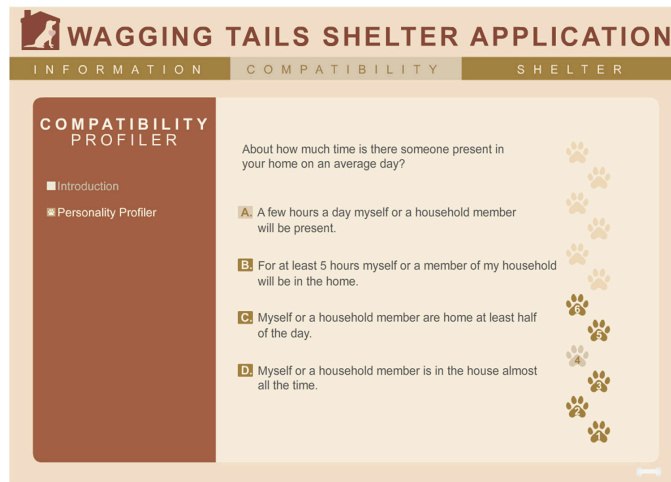D. Myself or a household member is in the house almost all the time.

Figure 5. Returning to question four, where the previous and answer was "A" but can be changed but selecting a different answer in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Figure 6. Returning to question four, where the current answer is "A" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Figure 7. Returning to question four, where the current answer is "A" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

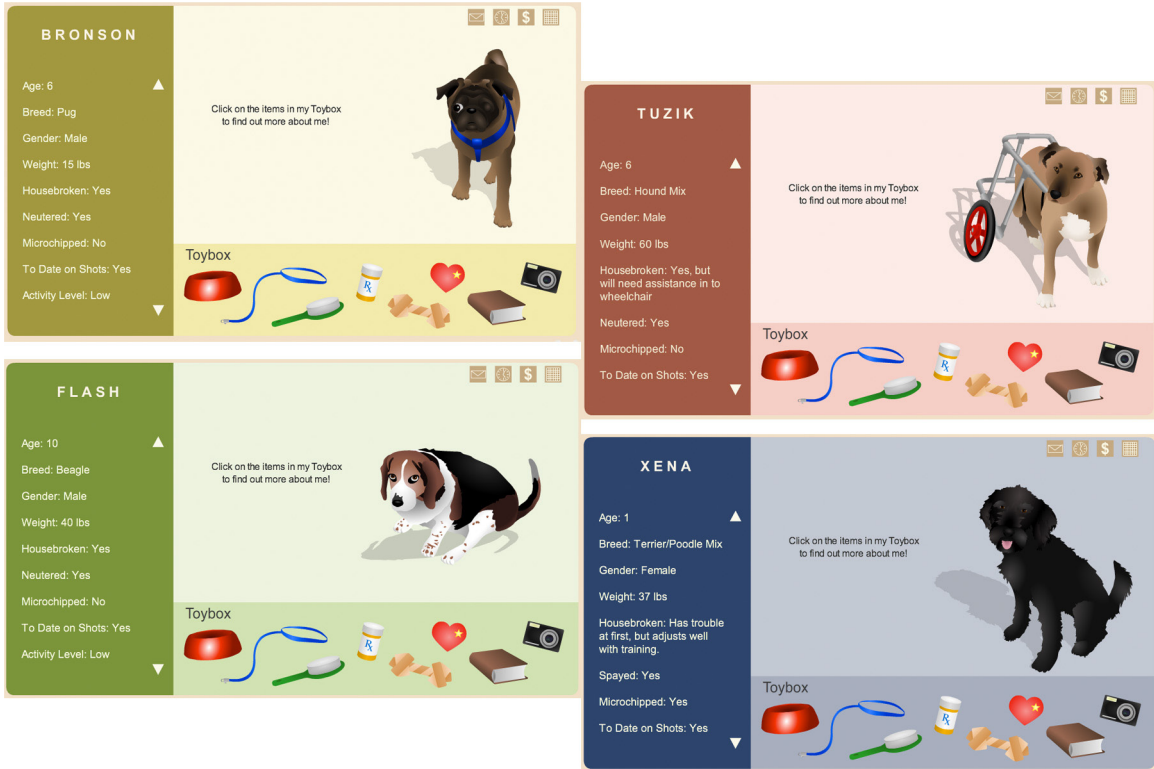Figure 8. An example of the dog profile page in each personality type color; yellow, red, green and blue, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Figure 9. The "Breeds I Find Appealing" list with information typed in from the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).
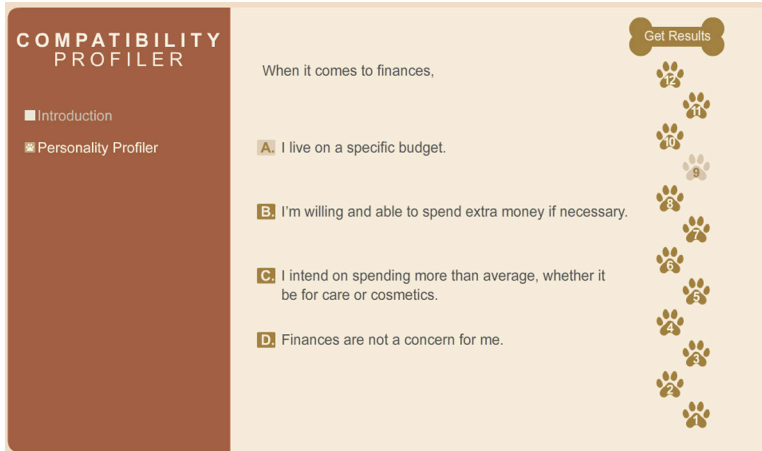
Figure 10. A user finishes the quiz but returns to question nine to reconsider their answer of "A", from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Figure 11. The enlarging of the brush (grooming information) in the "Toybox" in the Shelter Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Figure 12. A collection of graphics and animations from the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).
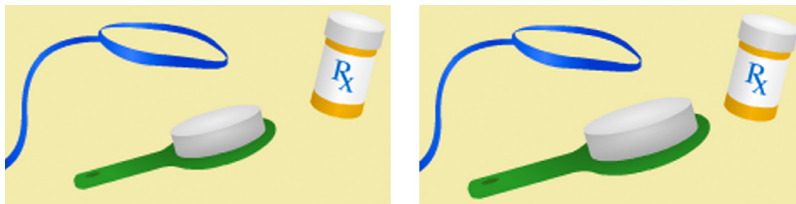
Figure 13. The paw print (questions) buttons and bone (result) button visual in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).
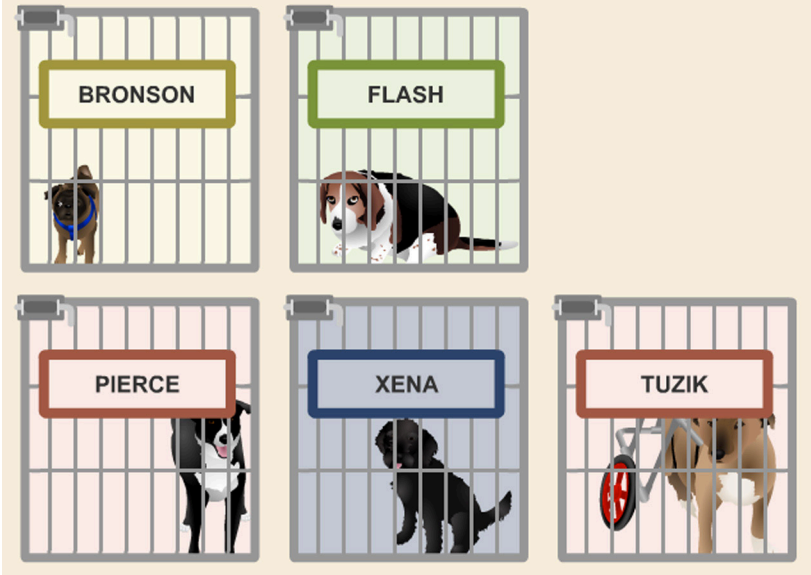

Figure 14. The dogs in their cages in the Shelter Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Figure 15. The graphics in the "Toybox" of the dog's page in the Shelter Section,
from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).
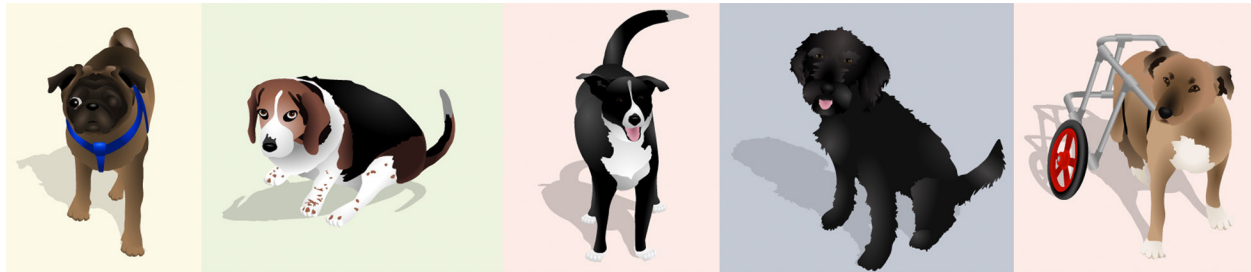

Figure 16. The animated dogs that have their own page in the Shelter Section, (from left) Bronson, Flash,
Pierce, Xena, and Tuzik, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/
(accessed Oct. 21, 2010).

```
//////////////// Variables and Array for Like Breeds List ///////////
var inputlike01: String
var inputlike02: String
var inputlike03: String
var inputlike04: String
var inputlike05: String
var inputlike06: String
var inputlike07: String
var inputlike08: String
var inputlike09: String
var inputlike10: String
var inputlike11: String
var inputlike12: String
var inputlike13: String
var inputlike14: String
var inputlike15: String
var inputlike16: String
var inputlike17: String
var inputlike18: String
var inputlike19: String
var inputlike20: String

var likeBreeds: Array = [inputlike01, inputlike02, inputlike03, inputlike04, inputlike05,
inputlike06, inputlike07, inputlike08, inputlike09, inputlike10, inputlike11, inputlike12,
inputlike13, inputlike14, inputlike15, inputlike16, inputlike17, inputlike18, inputlike19, inputlike20];
```

Figure 17. The code for the declaration of variables and the array for the "Breeds I Find Appealing" list
in the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/
(accessed Oct. 21, 2010).

```
function addlikeBreeds(e:Event = null):void{
    //line 1
    inputlike01 = listAppealing_mc.likebreed01_txt.text
    likeBreeds.splice(0, 1, inputlike01);
    //line 2
    inputlike02 = listAppealing_mc.likebreed02_txt.text
    likeBreeds.splice(1, 1, inputlike02);
    //line 3
    inputlike03 = listAppealing_mc.likebreed03_txt.text
    likeBreeds.splice(2, 1, inputlike03);
    //line 4
    inputlike04 = listAppealing_mc.likebreed04_txt.text
    likeBreeds.splice(3, 1, inputlike04);
    //line 5
    inputlike05 = listAppealing_mc.likebreed05_txt.text
    likeBreeds.splice(4, 1, inputlike05);
    //line 6
    inputlike06 = listAppealing_mc.likebreed06_txt.text
    likeBreeds.splice(5, 1, inputlike06);
    //line 7
    inputlike07 = listAppealing_mc.likebreed07_txt.text
    likeBreeds.splice(6, 1, inputlike07);
    //line 8
    inputlike08 = listAppealing_mc.likebreed08_txt.text
    likeBreeds.splice(7, 1, inputlike08);
    //line 9
    inputlike09 = listAppealing_mc.likebreed09_txt.text
    likeBreeds.splice(8, 1, inputlike09);
    //line 10
    inputlike10 = listAppealing_mc.likebreed10_txt.text
    likeBreeds.splice(9, 1, inputlike10);
    //line 11
    inputlike11 = listAppealing_mc.likebreed11_txt.text
    likeBreeds.splice(10, 1, inputlike11);
    //line 12
    inputlike12 = listAppealing_mc.likebreed12_txt.text
    likeBreeds.splice(11, 1, inputlike12);
    //line 13
    inputlike13 = listAppealing_mc.likebreed13_txt.text
    likeBreeds.splice(12, 1, inputlike13);
    //line 14
    inputlike14 = listAppealing_mc.likebreed14_txt.text
    likeBreeds.splice(13, 1, inputlike14);
    //line 15
    inputlike15 = listAppealing_mc.likebreed15_txt.text
    likeBreeds.splice(14, 1, inputlike15);
    //line 16
    inputlike16 = listAppealing_mc.likebreed16_txt.text
    likeBreeds.splice(15, 1, inputlike16);
    //line 17
    inputlike17 = listAppealing_mc.likebreed17_txt.text
    likeBreeds.splice(16, 1, inputlike17);
    //line 18
    inputlike18 = listAppealing_mc.likebreed18_txt.text
    likeBreeds.splice(17, 1, inputlike18);
    //line 19
    inputlike19 = listAppealing_mc.likebreed19_txt.text
    likeBreeds.splice(18, 1, inputlike19);
    //line 20
    inputlike20 = listAppealing_mc.likebreed20_txt.text
    likeBreeds.splice(19, 1, inputlike20);
    }

if (inputlike01 == null || inputlike02 == null || inputlike03 =
    || inputlike04 == null || inputlike05 == null || inputlike0
    || inputlike07 == null || inputlike08 == null || inputlike0
    || inputlike10 == null || inputlike11 == null || inputlike1
    || inputlike13 == null || inputlike14 == null || inputlike1
    || inputlike16 == null || inputlike17 == null || inputlike1
    || inputlike19 == null || inputlike20){
```

Figure 18. The code for putting text into variable and into the array for the "Breeds I Find Appealing" list in the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

```
5   //CREATE THE ARRAYS
6   var colorPoints:Array = [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0];
7   var answers:Array = ["f", "f", "f", "f", "f", "f", "f", "f", "f", "f", "f", "f"];
8   var accessed:Array = ["no", "no", "no", "no", "no", "no", "no", "no", "no", "no", "no", "no",];
```

Figure 19. The three arrays that control the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

```
if(answers[0] == "f" || answers[1] == "f" || answers[2] == "f"
    || answers[3] == "f" || answers[4] == "f" || answers[5] == "f"
    || answers[6] == "f" || answers[7] == "f" || answers[8] == "f"
    || answers[9] == "f" || answers[10] == "f" || answers[11] == "f"){
    finish8_btn.visible = false;
}

else{
    finish8_btn.visible = true;
}
```

Figure 20. The three arrays that control the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

```
1  stop();
2
3  accessed.splice(7, 1, "yes");
```

Figure 21. The following two lines of code appear at the beginning of each question's code within the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).


```
///////// visibility for paw butto
if (accessed[0] == "no"){
    q108paw_mc.visible = false
}
else{
    q108paw_mc.visible = true
}
if (accessed[1] == "no"){
    q208paw_mc.visible = false
}
else{
    q208paw_mc.visible = true
}
if (accessed[2] == "no"){
    q308paw_mc.visible = false
}
else{
    q308paw_mc.visible = true
}
if (accessed[3] == "no"){
    q408paw_mc.visible = false
}
else{
    q408paw_mc.visible = true
}
if (accessed[4] == "no"){
    q508paw_mc.visible = false
}
else{
    q508paw_mc.visible = true
}
if (accessed[5] == "no"){
    q608paw_mc.visible = false
}
else{
    q608paw_mc.visible = true
}
if (accessed[6] == "no"){
    q708paw_mc.visible = false
}
else{
    q708paw_mc.visible = true
}
//if (accessed[7] == "no"){
//    q808paw_mc.visible = false
//}
//else{
//    q808paw_mc.visible = true
//}
if (accessed[8] == "no"){
    q908paw_mc.visible = false
}
else{
    q908paw_mc.visible = true
}
if (accessed[9] == "no"){
    q1008paw_mc.visible = false
}
else{
    q1008paw_mc.visible = true
}
if (accessed[10] == "no"){
    q1108paw_mc.visible = false
}
else{
    q1108paw_mc.visible = true
}
if (accessed[11] == "no"){
    q1208paw_mc.visible = false
}
else{
    q1208paw_mc.visible = true
}
```

Figure 22. The three arrays that control the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

```
//////////////////////Q1 Button//////////////////
q108paw_mc.buttonMode = true;

/////ON QUESTION
//q108paw_mc.gotoAndPlay("selected");

//////OFF QUIESTION

q108paw_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverq108);

function hoverq108 (event:MouseEvent): void {
    q108paw_mc.gotoAndStop("over");
}

q108paw_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutq108);

function rolloutq108 (event:MouseEvent): void {
    q108paw_mc.gotoAndStop("out");
}

q108paw_mc.addEventListener(MouseEvent.MOUSE_DOWN, goq108);

function goq108 (event:MouseEvent): void {
    q108paw_mc.removeEventListener(MouseEvent.MOUSE_OUT, rolloutq108);
    q108paw_mc.removeEventListener(MouseEvent.MOUSE_OVER, hoverq108);
    q108paw_mc.removeEventListener(MouseEvent.MOUSE_DOWN, goq108);
    gotoAndPlay("Question01");
}
```

Figure 23. The code that indicates that the user is not on question one of the "Personality Profiler" in the Compatibility Section and indicates the rollovers and mouse events for the question button, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

```
//////////////////////Q8 Button//////////////////////
//q808paw_mc.buttonMode = true;

//// ON QUESTION
q808paw_mc.gotoAndPlay("selected");
```

Figure 24. The code that indicates that the user is on question eight of the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

```
//***A BUTTON EVENTS
a08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverA08);

function hoverA08 (event:MouseEvent): void {
    a08_mc.gotoAndStop("over");
}

a08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutA08);

function rolloutA08 (event:MouseEvent): void {
    a08_mc.gotoAndStop("choice");
}


a08_mc.addEventListener(MouseEvent.MOUSE_DOWN, selectA08);

function selectA08 (event:MouseEvent): void {
    //a
    a08_mc.gotoAndStop("chosen");
    a08_mc.removeEventListener(MouseEvent.MOUSE_OUT, rolloutA08);
    a08_mc.removeEventListener(MouseEvent.MOUSE_OVER, hoverA08);
    //b
    b08_mc.gotoAndStop("choice");
    b08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverB08);
    b08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutB08);
    //c
    c08_mc.gotoAndStop("choice");
    c08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverC08);
    c08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutC08);
    //d
    d08_mc.gotoAndStop("choice");
    d08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverD08);
    d08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutD08);
    //add array info
    colorPoints.splice(7, 1, 4);
    answers.splice(7, 1, "a");
    //next09_btn.visible= true
    trace(colorPoints);
    trace(answers);
    ques09();
}
```

Figure 25. The code for the "A" answer button in the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

```
//DETERMINES WHICH BUTTONS ARE HIGHLIGHTED
if (answers[7] == "f") {
    a08_mc.gotoAndStop("choice");
    b08_mc.gotoAndStop("choice");
    c08_mc.gotoAndStop("choice");
    d08_mc.gotoAndStop("choice");
}

if (answers[7] == "a") {
    //a
    a08_mc.gotoAndStop("chosen");
    a08_mc.removeEventListener(MouseEvent.MOUSE_OUT, rolloutA08);
    a08_mc.removeEventListener(MouseEvent.MOUSE_OVER, hoverA08);
    //b
    b08_mc.gotoAndStop("choice");
    b08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverB08);
    b08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutB08);
    //c
    c08_mc.gotoAndStop("choice");
    c08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverC08);
    c08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutC08);
    //d
    d08_mc.gotoAndStop("choice");
    d08_mc.addEventListener(MouseEvent.MOUSE_OVER, hoverD08);
    d08_mc.addEventListener(MouseEvent.MOUSE_OUT, rolloutD08);
}
```

Figure 26. The code that checks the answers array to see if a question has a previous answer and then indicating that answer to the user in the "Personality Profiler" in the Compatibility Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

```
// SCROLLING TEXT CODE// SCROLLING TEXT CODE //

//--------------loading external text and display it---------
var textRequest:URLRequest = new URLRequest("dog04_diary.txt");
var textLoader:URLLoader = new URLLoader();
textLoader.load(textRequest);
textLoader.addEventListener(Event.COMPLETE,fileLoaded);

function fileLoaded(e:Event):void {
    diaryscrolling_mc.diary_txt.text = e.target.data;
    diaryscrolling_mc.diary_txt.wordWrap = true;

    if(diaryscrolling_mc.diary_txt.numLines > 10){
        diaryscrolling_mc.scrollUp.visible = true;
        diaryscrolling_mc.scrollDown.visible = true;
    }else{
        diaryscrolling_mc.scrollUp.visible = false;
        diaryscrolling_mc.scrollDown.visible = false;
    }
}

//-----------------make buttons to scroll the loaded text-------
var scrolling:Boolean = false;
var scrollDirection:String;

diaryscrolling_mc.scrollDown.addEventListener(MouseEvent.MOUSE_DOWN,scrollTextDown);
diaryscrolling_mc.scrollUp.addEventListener(MouseEvent.MOUSE_DOWN,scrollTextUp);
diaryscrolling_mc.addEventListener(MouseEvent.MOUSE_UP,stopScroll);

function scrollTextDown(e:MouseEvent):void {
    scrolling = true;
    scrollDirection = "down";
    diaryscrolling_mc.diary_txt.scrollV +=1;
    diaryscrolling_mc.addEventListener(Event.ENTER_FRAME,checkButtons);
}

function scrollTextUp(e:MouseEvent):void {
    scrolling = true;
    scrollDirection = "up";
    diaryscrolling_mc.diary_txt.scrollV -=1;
    diaryscrolling_mc.addEventListener(Event.ENTER_FRAME,checkButtons);
}

function stopScroll(e:MouseEvent):void {
    diaryscrolling_mc.removeEventListener(Event.ENTER_FRAME,checkButtons);

    scrolling = false;
}

//---------checking to see if buttons are pressed----------
function checkButtons(e:Event):void {
    if (scrolling) {
        if (scrollDirection =="down") {
            diaryscrolling_mc.diary_txt.scrollV +=1;
        } else if (scrollDirection == "up") {
            diaryscrolling_mc.diary_txt.scrollV -=1;
        }
    }
}
```

Figure 27. This code for the Doggie Diary text box in Shelter Section,
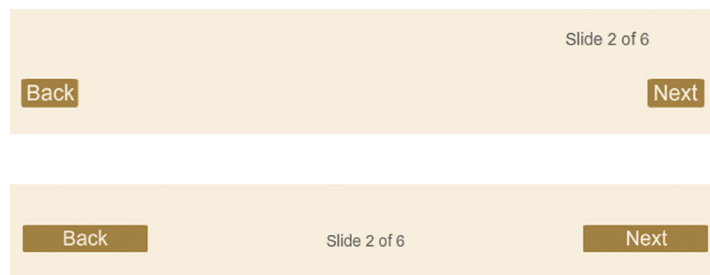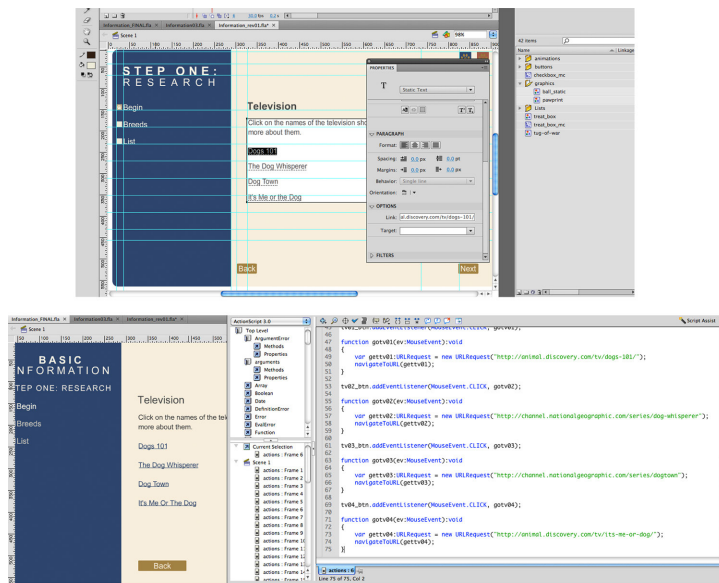from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Figure 28. The before page of links (top) and the after page of links (bottom) in the Information Section,
from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Figure 29. The before page of links (top) and the after page of links (bottom) in the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).
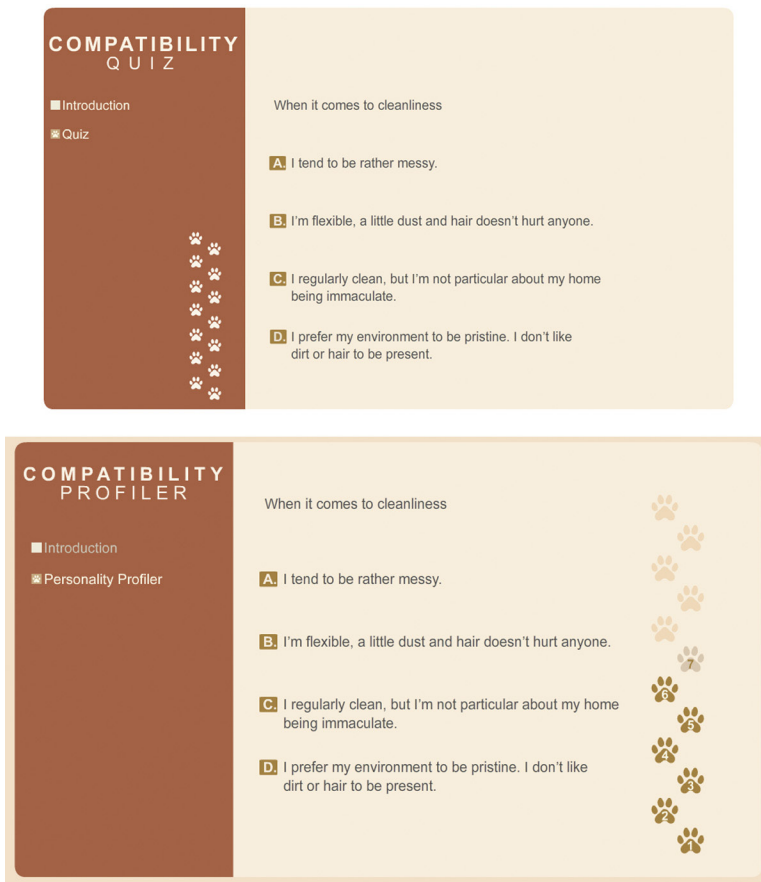

Figure 30. The before page of links (top) and the after page of links (bottom) in the Information Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).

Figure 31. The redesign of Bronson the pug in the Shelter Section, from Taryn Bzdick. Digital Dog Shelter Application. http://tarynbz.com/thesis/ (accessed Oct. 21, 2010).