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graffiti.imagineblue.com

Forming Self-Identity through Connection to Environment and Community

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Introduction

We define ourselves in large part through our experiences with our environment. This is supported by the debate of environment versus nature that has evolved to a debate on the amount of influence environment and nature each have in shaping who we are. However our environment which has been largely formed by anglo-european influences reflects the history of a long-ago group of people whose experiences may not reflect the modern, culturally diverse north american population. It is a strongly held view by child development researchers that an environment which does not have positive or for that matter, any artifacts with which children can identify leads to poor self-identity which can include self-abasement to self-hate(California Tomorrow).

One way to create the sense of connection to our environment is to document our experiences of the places where we live and play. To how many is the monument and story of a multi-century old historical figure in a park relevant? How much more connected would we feel if the monument was related to our story and ourselves? We would have ownership of this environment where we would live amongst personally meaningful history, and this ownership in turn would increase our stewardship for it.

Our goal is to provide a re-creation of a person's physical environment in the form of a map in a virtual space. This public space is currently accessible on the internet by the address graffiti.imagineblue.com. It is functional as a prototype and thus not all of the features are live. When it is fully functional it will allow children as well as adults to build art pieces and stories and place them at relevant locations for others to see and read, thus creating a landscape that is filled with the 'monuments' and stories of the people who live there. Furthermore by making the artifacts and stories readable and viewable for everyone, we are encouraging connection to others, also a very important part of self-identity (California Tomorrow), by using the mutual place of interest as a natural entry point. We envision a virtual environment that is as rich as the diversity of people who populate the real world.

Robots, Yellow Arrows, and Graffiti

In past experiences, we felt like mere visitors with less than equal voice in our community because of the alienation we felt to the people, places, and things in our environment. However, we have also felt the pleasure and enrichment that came from feeling connected, which in turn helped us engage more deeply in our lives. Motivated by our personal experiences, we decided to create a technology to help children form self-identity by helping them build connections to their environment and community.

When thinking of technologies which might address this goal, we were guided by the amazing learning environment created in the MAS.714 class where we were immersed in the ideas of constructionism, de-centralized learning, and technology as an agent for social change. These ideas directed our thoughts and discussions to designs that would encourage reflection about the relationships one has to a place, through the act of creating personally meaningful artifacts.

Our original idea combined the ability for reflection through a journal embedded in a stuffed toy. The reflection encouraged by the use of a private journal was intended to be elicited by the stuffed toy which was to include all the advancements afforded by artificial intelligence. The stuffed toy was to be the perfect mentor, "the best of a great parent and great teacher" (Mitch Resnick, November 2, 2004 MAS.714 class). As the child travelled to personally relevant areas of his community, the toy would sense the location using GPS technology and retrieve interesting information about the location for the child to reflect upon and note using the embedded journal. However, this design was impractical and beyond the scope of the class.

We continued to think of other designs which would address our objective. At this time we learned of an art project, www.yellowarrow.org from our professor, Mitchel Resnick. The yellowarrow.org site was created by a group of New York artists whose mission is to transform the spaces in which we walk, work, and play into art. This is achieved by people placing stickers in the shape of a yellow arrow at locales that are of interest to them. After sticking the yellow arrow onto some public object, the person calls the yellowarrow.org phone number using their cellphone and sends a text message which includes the sticker's identification number and a title or short statement of the public object. For those people who notice the sticker, the sticker identification number is used to retrieve the thoughts left by their owners. The sticker's owner can also publish their art by visiting the website and posting a photo which is added to the website's gallery. The organizers drew inspiration for the sticker from graffiti seen in the urban landscape. We were very interested in some of the ideas in the Yellowarrow project. We liked people connecting in a tangible way with their environment through the sticker to 'leave their mark' and we liked that others could view thoughts about the urban landscape left by its residents.

The Yellowarrow project inspired us to think of other things that connect us to our environment: the Lincoln Memorial, a Bed and Breakfast guestbook, a highway bridge splashed with wildly colorful graffiti. The regal statue of an American hero situated steps from the nation's heart symbolizes the story of struggle and victory over slavery, the guestbook gives the personal stories inspired by visits, and the graffiti are the visual stories of its urban citizens. These are examples of artifacts which help us form relationships to locations because they merge the environment with personally meaningful stories.

Furthermore, the existence of these artifacts is evidence that people want to share the personal meaning of a place through overt expression. Since these situated artifacts are overt, they ask others to notice them. Also these situated artifacts are non-confrontative contact-points through which connections with someone else can be made.

Through our distilled thoughts which were influenced by the learning environment of our class, and the Yellowarrow project, our goal was accomplished by using maps as symbolic representations of a person's environment, the created stories and artifacts (that we have named graffiti) placed on personally meaningful locations on the map as the contact-point and agent for connection to the environment and others. These combined components would be made accessible through the website, graffiti.imagineblue.com.

Existing Approaches

Maps

After we decided on our design project, we searched for existing designs similar to ours so that we could learn from them. We found many designs that documented areas of importance to a community such as a frog pond, a small family parkette, and a historical Native-American land (Marineography Mapping Project, Borneo Project, Aboriginal Mapping Network) onto a paper map. One activity consisted of documenting the physical monuments in the community onto a paper map (Cambridge Agazzis school project with the Smithsonian). These designs helped confirm that people were interested in using maps to communicate personally meaningful places. These objectives were similar to our project goals, however we felt they lacked broad engagement because they were constrained to particular communities.

Yellow Arrow Project

As mentioned in our introduction, we were influenced by the art project www.yellowarrow.org. This project inspired us, however its goal focused on creating a collective artwork with the artwork as the central element.

Imagemaps Project

After hearing about our idea, our professor was reminded of a website designed by Erik Blankenship, an MIT Media Lab graduate student. We spoke with Erik about his application. Erik's main goal was to provide a tool for authentic historical inquiry. The functions of his site imagemaps.media.mit.edu included the ability to upload pictures of architecture and analyze a location's architectural evolution over time. Unfortunately, he was unable to upload very old pictures from the Historical Commission because of a Commission policy, thus a main goal of his design was severely limited. Even though the objective of the Imagemaps project was different we had similar design issues. During our conversation with Erik, he shared some features that we had not thought of such as monitoring a location. We liked the monitoring feature and decided to use it to extend our design project. This will be discussed in the design section of this paper.

Design

Guiding Principles

Our design process was guided by the following principles.

- The design should encourage the learning goals.
- The design should motivate use of the website.
- The design should be structured to encourage the learning goals, but still be open-ended to allow people to create their own experience.

Features and Decisions

Representation of Physical Environment by a Map

Maps are the most commonly used representations for a physical location and its artifacts, such as streets, and parks. Thus using a map to represent the physical environment provides a low ceiling for user understanding and use. Much like how a park on a map help people visualize it in the physical space, the existence of the inserted graffiti on the map encourage people to visualize these artifacts in the physical space. It takes just one step of the imagination to envision these artifacts as part of the physical environment and to feel that they also live amongst the tangibles in our lives.

Artifact as Graffiti

The Lincoln Memorial, Bed & Breakfast guestbook stories, and graffiti all point to a desire we have for overt expression. We believe that this desire will be what creates the initial interest to engage in, and use our virtual space. We chose to name the artifacts graffiti because graffiti can be thought of as an informal art form all the way to a form of vandalism. The informal nature of graffiti as well as its various forms affords an open-ended approach to its creation. By definition, graffiti can be pleasant to shocking and can take on any form the user chooses.

Personal Story

Although the graffiti on the map is important as a contact-point to the environment and to others, it is the personal narrative that expresses the meaning that the place holds. A graffiti emblazoned on a wall is only as meaningful as the story it tells, without the narrative it is reduced to being vandalism. Thus, the story is of central importance for the learning goal because we form connection to physical space through it. Only through expression is there potential for others to find connection to us through.

Web-Based Application

The application is made widely-accessible by making it web-based. This is the most important factor in our decision to make the application web-based, and fortunately the technology exists to create all the components needed for this application such as the map control and programming language for the various features such as the textbox for the story input, login functionality, as well as the data storage functionality to be used to store the user's information.

Home Page

We wanted to use our home page to engage people to investigate our site. We decided to make the focus be the following three questions because they appeal to a person's curiosity about other people, give some indication of the website's intent, and encourage further exploration of the site: "Who has been here?, Who left their mark? What is their story?" These questions are used throughout the website to emphasize finding connection through storytelling.

Locations page

The locations page is populated with a featured location. The featured location contains graffiti and stories, thus allowing the visitor to experience the site easily. If the visitor is interested in exploring other locations after this initial experience, he/she can access the other location by entering in the address on this page. Also, the featured location will change with each load of the page. This was done so that the website contains new material to be explored with each visit, or even within a visit, so that interest is sustained.

My Graffiti Page

If the visitor is interested enough to visit the third page on the website, then they might be willing to participate. Thus it is on this page where we ask the user to "leave their mark". We encourage this by asking the questions: "Where have you been? What's your story?". Once the user is ready to be an active member of the site, we ask them to create a profile, and submit a story about a meaningful location with a graffiti. The contribution of the story

and graffiti is mandatory because we want to encourage active participation and discourage passive use.

Ability to Interact with Members who are Logged-in

We considered including as a feature the ability to see other users who are logged into the site and to interact with them through something like instant messenger. This feature would facilitate connection between people but we were concerned about the quality of that interaction. We decided against this because we felt this feature might discourage deep reflection about the stories given the immediacy of a program such as instant messenger. We also felt that this departed from the value of the graffiti and story as a non-confrontative contact-point.

Contribute Responses to Stories

As an alternative to a feature like instant messenger, we added the ability to respond to a story. The response to a story is appended to the end of the story and is shown with the story. This feature supports the learning goal of connecting to others.

Monitoring Location

From Erik Blankenship's Imagemaps application, we discovered a neat feature of monitoring a location and decided to use it in our website. The monitoring functionality is a privilege open only to members. This feature can only be turned on for those locations in which the member has contributed a story. We wanted to include this feature because we wanted members to be alerted when there is a mutual interest in their place.

Search for Text and Time

The search feature allows visitors and members to search the stories in the location for specified text and time. For example, if a visitor wanted to find other people who contributed stories about 9/11, they could easily do so using the search feature. We are limiting this function to search only those stories in the location of interest in order to support the learning goal of facilitating a person's sense of connection to others through the mutual place of interest.

Member Profiles

We discussed to what degree we should make user information public. We realized that the personal information could be used by others as another way to connect to each other, however there was also the fear that people would abuse this information. We decided that we did not want users to share their email address because we wanted to encourage communication to others through the website. If the user wishes to share their email address with another user, they can do so by responding to a story and include their email address there. For all other personal information, we decided to give the control on how much to share to the user. This is supported in the optional information section in the user profile.

Magnification of Graffiti

We realized the graffiti would be difficult to see due to clutter or map resolution. We considered opening a new window with the enlarged graffiti image once the user clicked on it, however we didn't like this idea because it would take attention away from the website as well as add to clutter on the screen. We decided instead to give an anchored

magnification of the graffiti, in the style of the Mac IV icons (this is not currently implemented on the website).

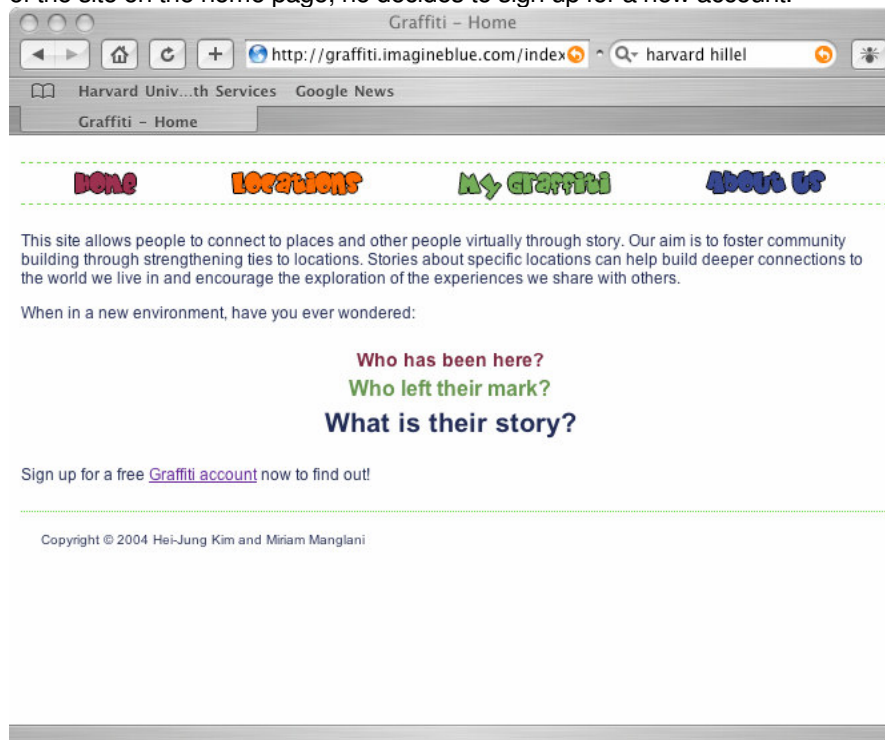
Facilitating Exploration

To facilitate exploration of locations, we decided to include the navigational controls and the zoom in and zoom out controls seen in most map programs such as MapQuest (this is not currently implemented on the website).

User Scenarios

Bob - New User

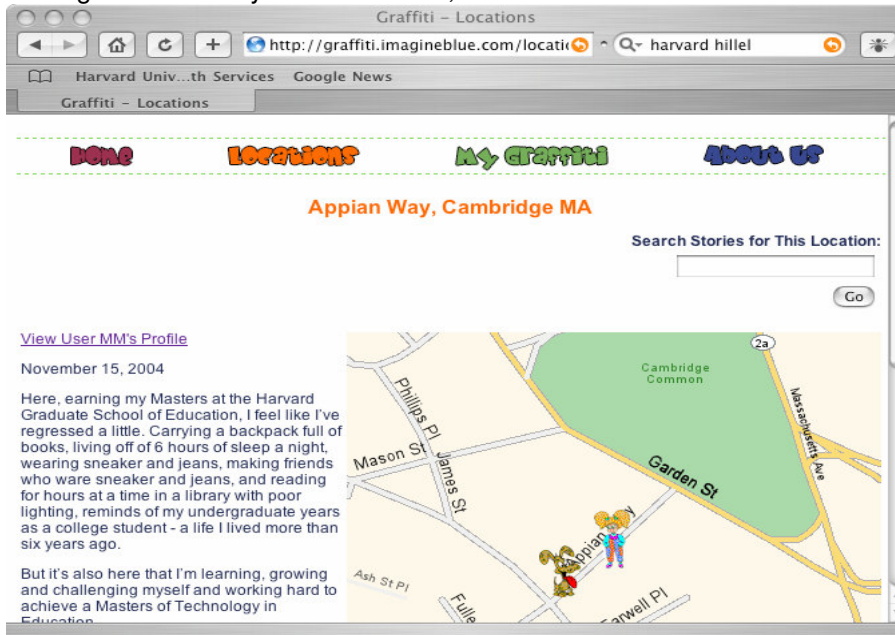
Bob, a retired schoolteacher, stumbles upon graffiti.imagineblue.com. After reading a short description of the site on the home page, he decides to sign up for a new account.



He fills in all the required information: username, password, his story about Walden Elementary (the elementary school he taught at for 10 years), address of Walden elementary, and uploads graffiti to represent his experience. He chooses not to supply the optional information.

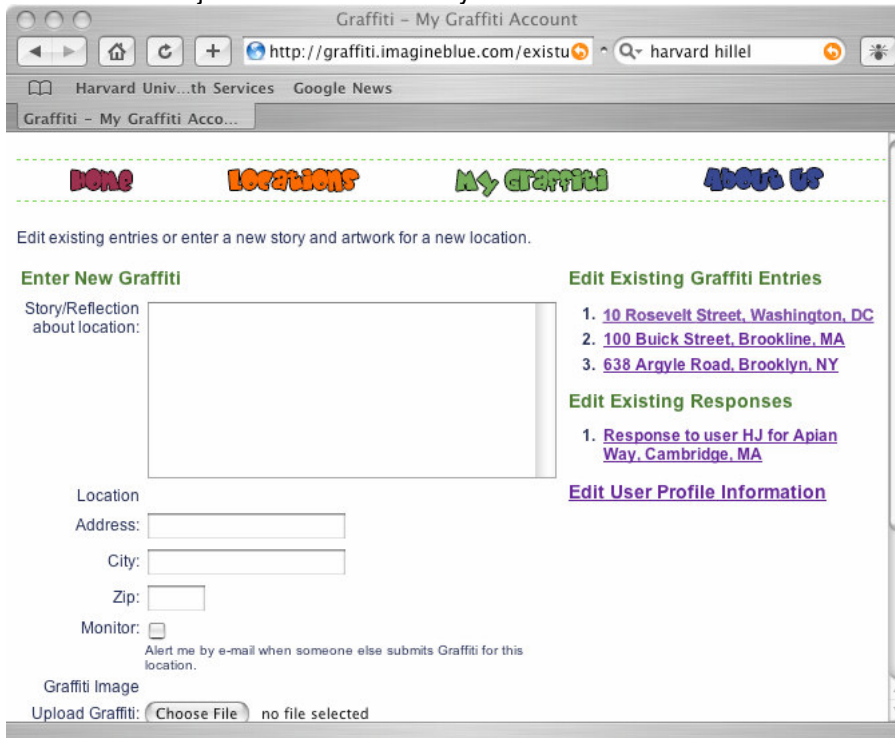


He hits the signup button and is taken to the "Locations" page where he sees the image he supplied on a map of the elementary school area and his story next to the map. He also sees another image next to his. When he rolls over the dog image with his mouse, he sees a username and the dog image is magnified. Out of curiosity, he clicks on the dog image and the page reloads with Antoine's story about attending Walden Elementary. Unlike him, Antoine filled out all of the optional information including supplying a photo. Although Antoine was never a student of Bob's, his face is familiar. Bob enjoys reading Antoine's story about Mr. Smith, a friend of Antoine's and a teacher Bob remembers even now.



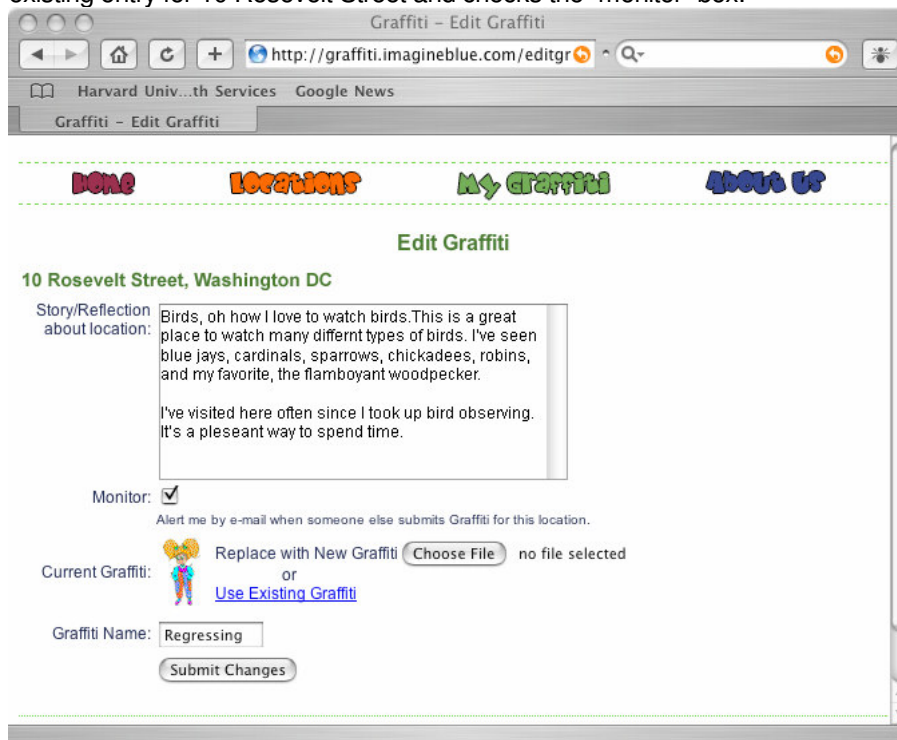
Eleanor - Registered User

Eleanor is an avid traveler. She registered for a username about a year ago and is a frequent Graffiti.com user. As a perfectionist, she likes to expand and edit her existing stories and graffiti images. To do this, she clicks on the My Graffiti link, types in her username and password, and is directed to a page where she can see all of her entries. She then selects one of her existing entries under the “Edit Graffiti” list and supplies a new graffiti image for the selected location because she has become bored with the same old image. She also edits her story associated with the location. Once she is finished, she clicks on “Submit Changes” and is directed to a page where she can see her new image on a map of the location adjacent to the edited story.



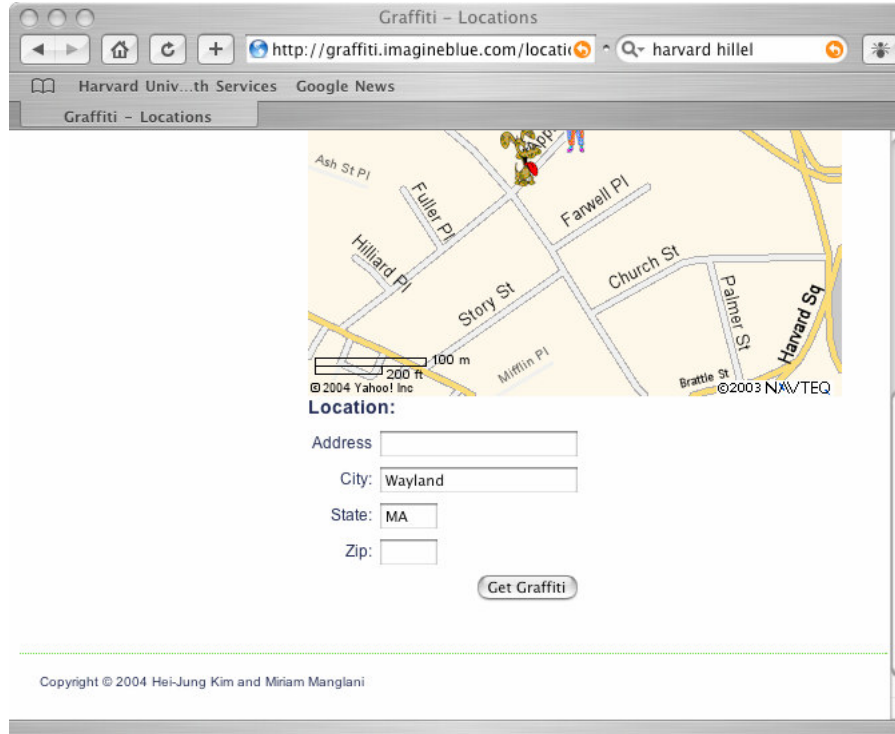
Eleanor also likes to update her personal profile. She often takes photos of herself and likes to change her personal photo frequently. To do this, she clicks on the “Edit User Profile” link on the “My Graffiti” page and is taken to a page where she can edit her profile information. Recently, she’s taken up knitting as a hobby so she adds knitting to her list of interests and edits “Bird Watching” to “Bird Observing”, a far more sophisticated term that more accurately reflects her skill in the field. Last week she celebrated her 58th birthday and because she’s an honest person, she updates her age. She also uploads a new photo of herself (she thinks she looks especially attractive in it) dressed in a pink puffy dress (her favorite color) with a purple flower in her hair. Once finished with the edits to her profile, she selects the “Submit Changes” link and is taken to a page where she can view her changes.

Eleanor also takes advantage of the monitoring feature. She has decided to monitor her favorite bird observing location, 10 Rosevelt Street in Washington. On the “My Graffiti” page, she clicks on her existing entry for 10 Rosevelt Street and checks the “monitor” box.



Later in the day, she receives an email from graffiti.imagineblue.com alerting her that a user has posted a story about 10 Rosevelt Street. Eager to learn about this new posting, she clicks on the link in her e-mail and is directed to the locations page where she can see a map of the Rosevelt Street area and a new Bird graffiti. She clicks on the bird graffiti and reads the story of a fellow bird observer that has just sited some marvelous Blue Jays. Eleanor is ecstatic and cannot wait to see the precious Blue Jays herself.

Anna - Visitor and Voyeur



Anna is 12 years old and stumbles upon graffiti.imagineblue.com while using Google. She clicks on the locations page and enters only the city and state of her old house, Wayland Massachusetts, and selects "Get Graffiti". She is taken to a page where she sees a map of the Wayland. She uses her mouse to move around the map and zoom into the area of her old house. Where her old house should be on the map, she sees an image of a little boy and clicks on it. The page reloads with a story written by Tom who has just moved into 10 Mission Hill, her old house. Tom's story about the yellow house with green shutters, rickety fence that smells like rainwater, and the big pine tree in the backyard that is frequently covered with blue fuzzy caterpillars, triggers fond memories. After her initial experience with the website, she returns to the site frequently to read stories people in her old neighborhood have posted. She heard from a friend of hers that she could monitor the location of her old house if she registered for the site, but chooses not to because she does not want to submit a story of her own, a requirement for registration. Maybe one day when she is brave enough she thinks to herself.

Evaluation

We spoke with four people who shared their thoughts about our website. We will give their reactions as well as their suggestions on how the user experience can be improved.

Amon Millner (graduate student in the Lifelong Kindergarten Group at MIT's Media Lab)

Amon liked the website. He thought that facilitating connection to environment through the map and graffiti was intriguing. However he wondered if kids would be able to relate to a map. He thought that

children didn't view their world in a structured manner, instead they understood their world as a collection of places: their home, their school, the park in which they played, the hangout area in the park.

Mitchel Resnick (professor of our class, director of the Lifelong Kindergarten Group at MIT's Media Lab)

Professor Resnick liked the website. He especially liked that the focus of the website was the story instead of the graffiti. He made the suggestion that we may want to give a key place from which the user could start their exploration. We decided to incorporate this into our design by presenting the user with a featured location when the user visits the locations page. He thought it would be good to implement zoom in, zoom out, and navigation functionality into the map for ease of exploration. He raised the concern of clutter that would occur if many people posted to a location that held wide-appeal such as Fenway Park after the 2004 World Series.

Daniel Klebanov (friend and computer science professional)

Dan liked the website because he thought it would be fun to use. He thought he would use the website, but initially only as a passive user. He said he would enjoy reading the stories, but he was less sure that he would post a story to a location. He said he would be more likely to contribute a story if others had already contributed to the location. He attributed this hesitancy in part to the big effort of writing a story.

Jasmine Lopez (classmate and computer science professional)

Jasmine liked the website because she had not seen a site like this before. She thought people might use it to share a journey such as a road trip. She thought that users might want to provide a link to the graffiti in their contributions to blogs. Jasmine also raised the issue of clutter that would occur once there were many postings on a location. She suggested taking an approach used in another web-based application, "Whyville". This application groups postings based on some shared attribute. For example all postings that have the color green are grouped together and represented by a green icon. The green icon reveals all the postings once the green icon is pressed.

Conclusion

It is our hope that people will use our website to form meaningful connections to locations and other people by contributing to the evolving database of stories and reading the stories of others. We realize that not all users will want to contribute stories or reflections. Some might be introverted, scared of expressing themselves, (like Anna in our user scenarios), and others might not have an interest in contributing and only wish to peer into the lives of others by passively reading stories. Others might abuse the site by writing abusive language instead of a genuine story. If we had more time, we would make the following enhancements to help us achieve our goal.

- Turn our prototype into a fully functional website for use by the public. We have been speaking about getting a working version of the site live sometime in the near future.
- Since users might have an experience they want to share of a particular location but no image or artwork to accompany it, we could provide them with a library of

“community graffiti” for them to choose from. We could also give users the ability to add their own images to this free collection of art.

- Group graffiti images together on the locations page. We anticipate our map on the locations page getting cluttered with people’s graffiti images. We learned that “Whyville”, a children’s learning website, does a nice job of handling this design problem. They cluster images together so when a user clicks on a cluster, the cluster expands to reveal the images inside of it.
- Allow users to perform searches across all stories. While searching stories posted just for a particular location is consistent with our goal of encouraging users to connect to specific locations, it might be too limiting. A global search would allow users to find stories that relate to their particular experience and this might in turn foster a stronger connection to others and the locations the stories were written about.
- Highlight new graffiti images by outlining them in red or giving them a slight glow. When creating a user scenario for Eleanor, a frequent user who monitors locations, we realized that she might want to quickly identify the graffiti images on the locations page that she hasn’t yet seen. Highlighting those images would help her distinguish between stories she hasn’t yet read and stories she has read for a particular location.
- Ability to reject stories that are slanderous or contain vile language. This might be a difficult feature to implement with 100% success since it’s difficult to detect all combinations of words that might be hateful in context but deemed harmless when considered alone. However, we could check for specific words or phrases by running a basic search on the text people input into the story field and flagging it for specific swear words and inappropriate language.
- Allow users to e-mail their stories or links to their stories on the site to their friends who might or might not be registered users.
- Evaluation is needed from children and additional adults on how to encourage use and the learning experience.