

Viewfinder

Joyce Ma

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THIS IS **NOT** A DEFINITIVE FINAL REPORT

FORMATIVE evaluation studies like this one often:

- **are conducted quickly**, which may mean
 - small sample sizes
 - expedited analyses
 - brief reports

- **look at an earlier version** of the exhibit/program, which may mean
 - a focus on problems and solutions, rather than successes
 - a change in form or title of the final exhibit/program

Outdoor Exploratorium: Formative Evaluation Viewfinder

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PURPOSE

- To determine what visitors do at the exhibit
- To identify usability issues for the current prototype
- To gauge what visitors found interesting or not interesting about the exhibit

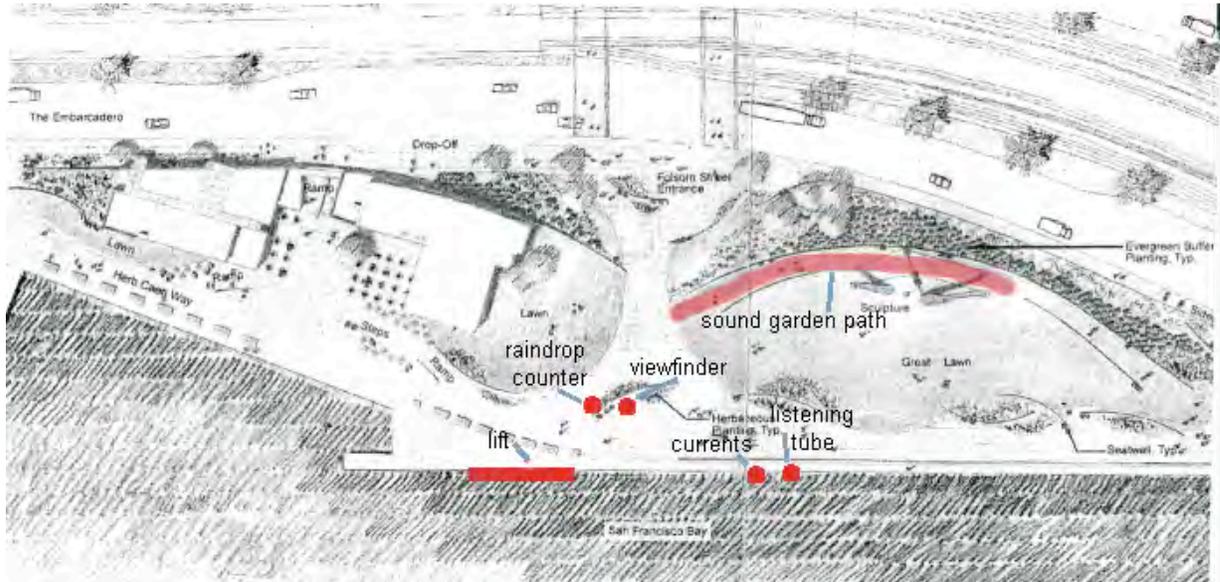
METHOD

- The prototype was set up at Rincon Park, as shown in Figure 1 and Figure 2.
- An evaluator sat and observed visitors who stopped in front of the exhibit for more than 3 seconds and approached them for interviews as they were leaving the exhibit. The observation and interview instruments can be found in Appendix A.
- We observed and interviewed people between 11am – 12:30 pm on Thursday, June 9, and between 12 pm – 5:30 pm on Sunday, June 12.

Figure 1. Prototype Setup (The 'hood' that shades the viewing monitor was not part of the setup for June 9.)



Figure 2. Prototype Location



DATA CORPUS

- N=17

Group Type	Count (out of 17)
Adult peer group	8
Multigenerational group	4
Individual adults	4
Individual child	1

RESULTS

What visitors did at the prototype

- We asked visitors what they tried to do at the exhibit. What they described is an indication of what they thought was the primary part of their experience:
 - Take pictures (7 groups)
 - Visitor1: Couldn't really see through the camera, but still fun to go crazy--taking pictures--don't know of what things.
 - Visitor2: couldn't see too well--tried to get the bridge--got warehouse--
 - Visitor3: I tried to take a picture of the ferry and write "ferry," but I couldn't write it. I only got it to type a "d" and that's as far as I got.
 - Visitor6: Just look around; took a few pictures.

Visitor9: Tried to see what I could see; took 3 pictures.

Visitor10: Take pictures of friend.

Visitor15: Tried to take picture of litter, but I couldn't find any, so I took pictures of Mom.

- Look around with the viewfinder (7 groups)

Visitor4: First I looked to see what exactly I could SEE with it--which is pretty cool. That bridge was really visible. It magnifies well.

Visitor6: Just look around; took a few pictures.

Visitor7: Just looking through it. Didn't take pictures.

Visitor8: (2) Tried to see thing inside the bay, and how far the bay reached out.

Visitor9: Tried to see what I could see; took 3 pictures.

Visitor11: Look at the panorama of the view.

Visitor16: We followed points of interest--sailboats--and followed them around.

- Look at other people's photographs (1 group)

Visitor12: Tried to see the pictures already there. Took pictures, but they were all one

- Nothing (1 group)

Visitor5: couldn't figure out what to do

Did visitors take photographs?

- We then asked visitors directly if they tried to take a photograph with the exhibit

Took a photo	Count (out of 17)
Yes	13
No	4

- However, 3 out of the 13 visitors who took a photograph also reported that the picture they took was not the photograph they intended to take. For example,
 - Visitor1: trying to take a picture of grand-dad, birds--but ended up with other things
 - Visitor2: couldn't see too well--tried to get the bridge--got warehouse--
 - Visitor5: couldn't see what it was until I took the picture.
- Visitors tried to take a picture of the following subjects for these reasons:

Subject	Count (out of 13)	Visitors' rationale for choosing that subject
		Visitor15: (because he couldn't find any pictures of litter)
Bridge	4	Visitor2: Because I love the bridge--so modern, timeless structure. Every day I see it a different way. Visitor4: That bridge was really visible. It magnifies well. Visitor6: The bridge and boat because they're interesting. [Q: "What made them interesting?"] Hard to say. Visitor9: Thought they were interesting.
Boats	4	Visitor16: 'cause he [other group member] likes sailboats--but also at their right distance. Had to turn away from the sun's glare off our clothes. Visitor6: The bridge and boat because they're interesting. [Q: "What made them interesting?"] Hard to say. Visitor9: Thought they were interesting. Visitor3: Cause it was just there.
People (in their own party)	3	Visitor10: Because I only see her once a year.
Treasure Island	1	Visitor9: Thought they were interesting.
Birds	1	
Others (People did not specifically intend to take a picture of these subjects.)	1 - Bay	Visitor5: No, couldn't see what it was until I took the picture.
	1 - Other People	Visitor12: It was hard to take a picture of anything else--there are so many people.
	1 - Railing	Visitor12: It was hard to take a picture of anything else--there are so many people.
	1 - Anything	Visitor13:
	1 - Cars	Visitor17: Cause there wasn't anything else to take a picture of.

Did people look at the other visitors' photographs?

Looked at other people's photographs	Count (out of 17)
Yes	9
No	8

- Although about half of the visitors noticed the other photos, only 2 of these visitors thought they were interesting to look at.

Visitor7: It was neat how clear they came out--the ones of boats that were pretty far out... [It] Made me look for another boat.

Otherwise, they complained about the subject of other people's photos, for example:

Visitor3: There were just 2, of the airfoils (exhibit).

Visitor6: Not really. A sea Lion or other animal would be cool.

Visitor16: no, they were focused on the rail

Visitor8: Saw some of the viewfinders, seaweed and fish in the bay.

Or, they didn't look very closely or couldn't see clearly.

Visitor10: Too much sunlight to see clearly--couldn't see which one was active until I detected motion on the screen.

Visitor13: Didn't pay much attention to what they were.

Did people try to use the keypad

- Most (16 out of 17) visitors noticed the keypad.
- Visitors reported using the keypad to
 - Take a photo (7 groups¹)

Visitor4: Not really, I hit "take photo" and that's about it.

Visitor5: Took picture--Nothing to caption until after picture.

Visitor6: To push picture button.

Visitor9: Just to take pictures.

Visitor15: Yes, that's how you take a picture.

Visitor16: Used "take photo" --didn't take time to figure out --there was no explanation on what to do.

Visitor17: to take picture only. Captioning not an interesting enough idea to pursue.

- (Try to) Write a caption (4 groups)

Visitor3: I couldn't write it. I only got it to type a "d" and that's as far as I got.

Visitor8: Typed in the letters on a picture already there.

Visitor12: Tried--couldn't see if I was typing--it was very small type.

Visitor15: how to name your pictures. You have to hold the key down, not press it multiple times.

¹ Some visitors may have thought of the keypad as the alphanumeric keys and, therefore, did not associate the 'Take a Picture' button with the keypad. This may explain why 13 visitors reported taking a photograph, but only 7 reported using the keypad to do so.

- Do nothing in particular (3 groups)
 - Visitor1: Poked at the buttons
 - Visitor11: no
 - Visitor14: no
- Nothing - Usability issues prevented any use (1 group)
 - Visitor10: gave up when (I had) trouble focusing.
- Most (11 out of the 16) visitors had some difficulty using the keypad to write a caption. Even the visitors who did not try annotating their photo complained that doing so would take too much effort. A detailed description of these difficulties can be found under 'Usability Issues'.

Usability Issues

- Visitors had difficulty accomplishing the following
 - Figuring out what to do, how to get started (3 groups)
 - Visitor5: couldn't figure out what to do
 - Visitor13: Looked around--couldn't activ(ate) picture. Didn't seem to be changing--wanted to clear screen.
 - Visitor14: Looked at keypad, looked at screen, couldn't tell what to do.
 - Seeing what the camera sees (3 groups)
 - Visitor1: Couldn't really see through the camera, but still fun to go crazy--taking pictures--don't know of what things.
 - Visitor2: couldn't see too well--tried to get the bridge--got warehouse—
 - Visitor5: See very well... It didn't seem to have a moving view out (lens out), just showing pictures already taken.
 - Finding the live image (2 groups)
 - Visitor17: Get it to do something--couldn't find the live picture.
 - Visitor10: Too much sunlight to see clearly--couldn't see which one was active until I detected motion on the screen.
- Looking at other visitors' photos (1 group)
 - Visitor17: hard to see them and make out what they were--and covering them up.
- Otherwise, dealing with a cluttered screen (3 groups)
 - Visitor3: (Aside from being able to type) Yeah, having all the photos in the background makes it hard to see the image. I would like to be able to see them better. And my own photo, too.
 - Visitor8: Couldn't see the images
 - Visitor7: didn't think I needed to clutter up the machine with more pictures--there were already a lot on there.

- Using the keypad to annotate their photos (11 groups). These include
 - It takes too much time and energy (3 groups)
 - Visitor2: Didn't want to invest effort.
 - Visitor4: 'Cause we have two 4-year-olds, who we're watching all the time.
 - Visitor11: no, just passing by.
 - They didn't see a point to writing a caption (3 groups)
 - Visitor5: Didn't understand the captioning--the keypad seemed more about captions than viewfinding.
 - Visitor6: Not sure what the rest of the captions--how to make that work, or really why.
 - Visitor17: Captioning not an interesting enough idea to pursue.
 - Machine was not responding (2 groups)
 - Visitor1: No, but wasn't spelling anything.
 - Visitor3: I couldn't write it. I only got it to type a "d" and that's as far as I got.
 - It's hard to see what you're typing (2 groups)
 - Visitor9: No, I didn't try to caption--have sunglasses.
 - Visitor12: Tried--couldn't see if I was typing--it was very small type.
 - It's difficult to correct a mistake (1 group)
 - Visitor15: I tried to name a picture, but made a mistake.
 - The keypad interface is unfamiliar (1 group)
 - Visitor2: Didn't want to invest effort. Regular keyboard would be easier--habit.

What features visitors would like to have

- Besides solving the usability issues, visitors would like to see the following in the next iteration of the Viewfinder prototype:
 - Visitor8: Couldn't see the images--wanted it to move around and scan.
 - Visitor9: Zoom in and out.
 - Visitor10: Focusing better--I'd like to email the picture to myself, like I did at a nature preserve in New Zealand (animal preserve near Christ Church). I got a printout with my caption, and then an email.
 - Visitor12: Would like it to be at the railing, a little higher up--and to understand it better.
 - Visitor13: Just identify something--It would be better to be able to take a picture of something--for the process to be clearer.
 - Visitor16: Raise it up to adult height.

What visitors found interesting/ not interesting

Interest Rating	Count (out of 17)
Interesting	7
Somewhat Interesting	2
Neutral	2
Somewhat Not Interesting	3
Not Interesting	3

What people found interesting

- Provides a new way of seeing (4 groups)
 - Visitor2: Because of its placement and location--I walk every morning--new and different--a different way to look at the bay.
 - Visitor6: To see farther
 - Visitor9: To look around the bay, get a little overview.
 - Visitor11: The view--it seems a very good lens.
- Exhibits, in general, along the Embarcadero (2 groups)
 - Visitor6: interesting to see the thing (exhibit) there, because it's not normally there.
 - Visitor8: (2) You could see the exhibits, and what's inside the bay
- Its interactivity (1 group)
 - Visitor16: Quick response to our interaction with it--very gratifying--very visual and visceral.
- Allows people to take photos (1 group)
 - Visitor1: really really interesting. That you could take [photos]

What people found uninteresting

- The usability issues got in the way (8 groups)
 - Visitor4: Small image, and it was kind of glare-y.
 - Visitor5: Wanted to spend more time, like the concept a lot, but couldn't figure out what to do--not like looking through the viewfinder of a camera.
 - Visitor7: Didn't understand it initially. How it was taking pictures and displaying them. Nice and clear.

Visitor12: Couldn't see what was going on; Picture small, not clear; Keypad made no sense.

Visitor13: It was hard to figure out what to do. Description sounded good, but the actuality didn't match up.

Visitor14: Didn't understand what to do--hard to see screen with the glare.

Visitor15: Because the view is a little blurry--the screens are a little small--full screen trying to take a picture would be better.

Visitor17: Too small (short) and hard to use.

- It doesn't offer the right perspective (focal length) (1 group)

Visitor10: As far as the idea--it's focusing way too far away--I know the idea is to see the bay, but it'd be nice to see people too.

- It doesn't do much (1 group)

Visitor3: It doesn't really do anything except take a picture. It doesn't give any info; the writing thing doesn't work.

- There was no point (1 group)

Visitor17: It's annoying to use--it's controlling--contrived--asking for random input--but doesn't have a natural reason for existence.

SUMMARY

- The usability problems dominated the visitors' experiences at this early iteration of the Viewfinder prototype. Comments about difficulties using the exhibit can be found throughout every visitor group's interview.
- Despite usability problems, we did find that 13 out of the 17 groups did take a picture. Some (10) of these visitors looked for specific subjects for their composition, while others took pictures of whatever was there. People were *not* just interested in taking pictures of each other but instead took pictures of the bridge, the boats, birds, and Treasure Island.
- About half (9 out of 17) looked at photos that other visitors left. However, only a small minority (2 visitor groups) thought they were worthwhile.
- Few visitors (4 out of 17) tried to write a caption for their own photographs. Visitor comments suggest that *people may not want to spend the time and energy to annotate their photos. This may be mitigated with a more user-friendly interface.*
- The key usability issues are:
 - *Visitors had difficulty figuring out what they should or can do at the exhibit.* This may be in part due to problems visitors had with other aspects of using the exhibit.

- *People had a hard time seeing the ‘live’ image* because the glare on the monitor made the images hard to see. This was the case even after the ‘hood’ was attached to the prototype to shade the monitor.² Furthermore, a few visitors thought that the size of the image was too small. To compound the problem, the screen can become ‘cluttered’ with photographs taken earlier. Because there’s nothing that readily distinguishes the live image from the other images, people had problems even finding the live image in the mix.
- Although only a small minority of the visitors seemed interested at looking at other visitors’ photographs, the few who wanted to found it *hard to look at earlier photographs because images overlapped and could not be brought to the foreground*.
- Finally, 11 out of 17 visitors *found the keypad too difficult to use to write captions* or they thought that annotating their pictures was not worth the effort.
- On average, visitors found the exhibit *somewhat interesting*. It is, however, difficult to assess how interesting visitors found the *concept* because the usability problems so dominated the visitors’ experiences for the current prototype.

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² For future iterations, we may also need to think about how sunglasses can affect screen visibility since people will likely be wearing sunglasses on sunny day.

APPENDIX A

Observations

Note anything of interest. In particular, make note of the following:

1. Did they reorient the device/camera?
2. Did they touch the keypad?
3. Other observations...

Questions

1. How interesting did you find that experience? Would you say that was ...

Uninteresting	Somewhat Uninteresting	Neutral	Somewhat Interesting	Interesting
1	2	3	4	5

2. What made it _____ for you?
3. Can you tell me what you tried to do at the exhibit?
4. [If they mentioned taking a picture] What did you take a picture of?
 - a. Can you say a little bit about why you decided to take a picture of _____?
5. Did you look at the other photos already on display?

[If YES]

 - a. Was there any one that you found particularly interesting? What made that one interesting?
 - b. Did these other photos affect what you did at the exhibit?
6. Did you notice the keypad?

[If YES]

 - a. Did you get a chance to use the keypad? [If YES] What did you do with the keypad?
 - b. Did you have any difficulties using the keypad? What?

[If NO]

 - c. Is there a particular reason why you did not use the keypad?
7. Was there anything you wanted to do at the exhibit that you didn't or couldn't do?