A Quick Guide to Re-Designing Your Artifact

INTRODUCTION

This guide is designed to help you through the process of redesigning your artifact. First, you should determine who your target population is and craft a persona, or profile, describing your prototypical user. Next, with your user in mind you should brainstorm new ideas for changing or augmenting your chosen artifact. The result of this process will be your suggested redesigns. You should then document how you expect your redesign to be used, both in the form of a textual usage scenario and as a visual storyboard. Examples are included at the end of this document.

PERSONAS

First things first, your team needs to think about potential users. Who are you designing for? What are their goals, desires, likes, and dislikes? What cultures do they participate in? By crafting personas, you build up profiles of the people you are designing for. A Persona is a precise description of a user and what they want to accomplish. It is imaginary but precise and it is specific, but stereotyped. It describes a person in terms of his/her:
  • Goals in life (especially ones relevant to the project/artifact)
  • Capabilities, inclinations, and backgrounds

BRAINSTORMING

With a persona in place, you can now think of redesign ideas, always keeping your target users in mind. Brainstorming can be an effective way to generate lots of ideas and then determine which idea(s) best solves the problem. Brainstorming is most effective with larger groups of people and should be performed in a relaxed environment. If participants feel free to be silly, they'll stretch their minds more and therefore produce more creative ideas.

IDEO Rules of Brainstorming:
  • Defer Judgment
  • Encourage Wild Ideas
  • Build on the Ideas of Others
  • Stay Focused on Topic
  • One Conversation at a Time
  • Be Visual
  • Go for Quantity

(IDEO is a famous design firm with several offices in the Bay Area and worldwide. http://www.ideo.com)
Joy Mountford’s Techniques for Generating New Ideas

- New Uses for the Object
- Adapt the Object to be like Something Else
- Modify the Object for a New Purpose
- Magnify-Add to the Object
- Minimize-Subtract from the Object
- Substitute Something Similar
- Rearrange the Data
- Reverse of Transpose the Information
- Combine the Data into an Ensemble

STEP BY STEP BRAINSTORMING

1. Define your problem (please note that the word "problem" is not necessarily negative - your problem could be "We need a new product for the Christmas season" or "How can we redesign our artifact to be more programmable?"). Write out your problem concisely and make sure that everyone understands the problem and is in agreement with the way it is worded. There is no need to put a lot of restrictions on your problem at this time.

2. Give yourselves a time limit - we recommend around 60 minutes, but experience will show how much time is required. Larger groups may need more time to get everyone's ideas out.

3. Everyone must shout out solutions to the problem while one person writes them out. There must be ABSOLUTELY NO CRITICIZING OF IDEAS. No matter how daft, how impossible or how silly an idea is, it must be written down. Laughing is to be encouraged. Criticism is not. Why? Because you want to encourage the free flow of ideas and as soon as participants of the brainstorming session begin to fear criticism of their ideas, they'll stop generating ideas. Moreover, ideas that first seem silly may prove to be very good or may lead to ideas that are very good.

4. Once your time is up, you need to agree on one idea. Do whatever decision mechanism works for you. Here is one suggestion:

   1. Select the five ideas, which you like best. Make sure everyone involved in the brainstorming session is in agreement.
   2. Write down about five criteria for judging which ideas best solve your problem. Criteria should start with the word "should," for example, "it should be cost effective," "it should be legal," "it should be possible to finish before July 15," etc.
3. Give each idea a score of 0 to 5 points depending on how well it meets each criterion. Once all of the ideas have been scored for each criterion, add up the scores.
4. The idea with the highest score will best solve your problem. But you should keep a record of all of your best ideas and their scores in case your best idea turns out not to be workable.

SCENARIOS

After crafting your persona and brainstorming your redesign, your team needs to think about potential situations where your application is useful. Create a set of task scenarios that demonstrate the sequence of actions the personas will have to go through in order to achieve their practical goals. You can then use these scenarios both to guide your designs and to assess your designs throughout the rest of the project.

STORYBOARDING

A storyboard provides you with a pictorial “script” of important events. It sketches a scenario of a possible interaction between a user (your persona) and an artifact. It leaves out the details and concentrates on the important interaction.

A technique called performance-based design might be really helpful in creating your storyboards: Literally take on one of your personas and act out what might happen if this user interacts with your re-designed artifact.

Here are some suggested media for creating your storyboard. These are entirely optional, and are only meant as suggestions. This is not an exercise in how pretty your design is. Don’t spend too much time figuring out how to draw your storyboard; if you don’t know a tool, don’t attempt to learn it for this (except if you really want to:-)).

- Paper and pencil are the easiest tools to sketch your storyboard. Simply scan your results. Use a whiteboard and take a digital picture of the outcome.
- You can use applications like PowerPoint, Adobe Illustrator, Visio, or any other graphical program to draw your scenario.
- Take photographs in which you act out the use scenario to create the images in your storyboard.
James – The Travel Blogger

**Background:** 28-years-old from near Newton, MA

**Education/Job:** B.A. in politics at Tufts; was working as a QA at a dotcom company in Silicon Valley

**Story:** James got tired of his job, but didn’t know what was next. To “find himself,” James decided to backpack through Asia, spending 1.5 years in Thailand, Cambodia, India, Indonesia, Laos and Australia. He took massage classes, learned to scuba dive and worked on an organic farm; mostly, he explored with other backpackers.

**Blog:** James created a travel blog before he started traveling. He wanted his friends to be able to be able to be stay in touch with his life. He blogged 3-4 times per week, writing about events of the day, things he’d seen, other travelers, emotions, etc.

**Photo album:** James sent rolls of film to Ofoto, which created a digital photo album for him. He would link to the Ofoto site from his blog. Photos appeared every month or so.

**Travel blog community:** James sometimes surfed the LJTravel community to find other backpackers abroad. These people often made great traveling companions and were really supportive via his blog, giving him advice on where to go and how to deal with different emotions of traveling.

**Audience:** James’ family and a few close friends read his blog daily; his mom loved that she could check in on him without “being a nag.” Most of his friends read it about once a month. Only the other travelers commented; James assumed this was because they were most comfortable with the technology. His friends preferred the pictures. James figured that scanning the blog and seeing the photos allowed friends to get a quick sense of James’ state; his friends often asked for more photos of James, rather than just the sights.

**Conscientious communicator:** 20-something travelers from Europe, the States and Australia flood Asia each year. Prior to blogging, the most common way to update friends and family was via an announcement mailing list. Travelers spammed their friends and family with really long updates. James preferred to blog: “I felt less restrained in what I was writing. Writing emails can be... intrusive. I’d be sending it off to 100 people and I’d have to gauge if they would be interested in getting an email from me every 2-3 days broadcasting that I’m still sitting on the beach. If I were to broadcast emails, I would do it less frequently and make whatever I write more important. It’s showing up in someone’s inbox and presumably most people read most things in their inbox so it’s being pushed on them as opposed to being their choice to check out my blog whenever they feel like it and if they want to scan through it or skip down and see what I am doing. It’s more under their control.”
Scenario Example

Mini-Persona – Jeanette
Jeanette, a 26 year old web designer in San Francisco, is an avid user of her camera phone. Sporting an active online social life, she likes posting many of her pictures on her blog and on flickr, where she can share it with her friends and family. In addition, she also occasionally orders prints of her favorite photos using ofoto. She also archives all her photos together in the photo album on her laptop. Despite her enthusiasm for photos, managing all these different repositories and manually routing her photos was tiring drudgework… until she got mobile media asset management software.

Scenario 1 – Photo Capture and Sharing
Walking down Valencia Street, she spies a gorgeous table in a vintage furniture shop. While she can’t really justify the furniture purchase, she has to get a picture of it. Besides, her friend Rachel would absolutely love it! She pulls out her camera phone and selects the image capture application. A screen appears showing a preview image of the photo. Jeanette points the camera at the table, lines up a nice shot, and with the press of a button snaps a picture of it.

The capture application then pops up a dialog asking “Would you like to view/annotate your photo?” Jeanette selects the ‘Yes’ button, and the application takes her to a screen showing an image of the photo and various descriptive information, including the file name, date and time of capture, image resolution and size. In addition, there are some tags indicating where the photo has been sent, and descriptive tags about its content. “flickr” is already listed as a destination, as she sends most of her photos to this service and so made these options the default when she first configured the software. Below that is a space for descriptive annotation tags and free-text captions, which do not appear until she enters them.

She first wants to make sure that the photo is archived correctly, so she pushes the ‘Options’ button and selects ‘Manage Tags’ from the resulting menu. This gives her a list of annotation tags she has created before. The tags organize data as non-hierarchical labels, much like flickr or g-mail. As she has been saving photos from around the Mission District for a possible photo project, she selects the ‘Mission’ tag she created before, causing that tag name to appear bold in the menu. She then selects ‘Create New Tag…’ and enters in the text ‘Table’ to give herself an additional cue. She then pushes the ‘Back’ button and is returned to the viewing and annotation screen, where she now sees her new annotations reflected.

Jeanette wants to make sure that her friend Rachel sees this picture, so she also wants it to go to her blog, which she knows Rachel reads. To do so, she pushes the ‘Options’ button on her phone and selects ‘Send’ from the resulting menu. She then selects ‘My Blog’ from the resulting menu. She has the option to send
it immediately using WAP (the ‘$’ in the menu indicates this will cost her a little bit of money), or to just wait until the next time she synchs with her laptop and let the complementary software on her laptop manage it (for free). She wants Rachel to see it sooner, and doesn’t care about the cost so she opts to send it now. A send confirmation page appears with details about cost and delivery time. The small cost is fine with Jeanette, so she then presses the ‘Send’ button and is returned to the image view and annotation screen.

Scenario 2 – Managing Existing Photos
Sharing a photo with Rachel reminded Jeanette of a few other photos she took about 15 minutes ago but did not annotate, as she wanted to take a bunch of shots in succession without pausing to annotate each. She now hits the ‘Options’ button and selects ‘Go To Image Gallery’ where she sees the various pictures still on her phone, now indexed by time. She knows that the photos have been posted to flickr, since this has been set as a default behavior all day, so she selects the “flickr” tag via the Filter Tags screen. She quickly finds a group of 7 photos she took earlier of the murals on the Women’s building on 18th Street. She selects them as a group, pushing a selection button as she moves the cursor over each image. She then pushes the ‘Options’ button and selects ‘Annotate Photo’ to return to the image viewer and annotation screen. It is slightly different then before, for example, choosing to view the images in full screen now results in a scrollable slideshow, and the metadata shown is that common to all photos. She verifies that the photos are all going to flickr (those defaults sure are handy), also routes them to her desktop for archival at synchronization time, and as before, adds the ‘Mission’ annotation tag to the group.

She then hits the ‘Options’ button, selects ‘Exit Application’, and continues her walk down Valencia. Now everything is taken care of, as the table photo is on its way to her blog (she could verify this later should she want to) and the mural photos will eventually be routed to the right place next time she synchs up. And no doubt Rachel is going to die when she sees that table.
Storyboarding Example

Photo Project - Storyboard

"JANE WANTS TO FIND THE ASCC"

1. Sims
   This is Jane. She is a new student at Sims.

2. ASCC?
   JANE needs to find the ASCC building to buy books.

3. PHOTO APP
   Our photo app will help her.

4. ASCC
   She searches for ASCC and Sims in our photo application.

5. YOUR SEARCH
   The application offers options for the trip: 1. Scenic Route, 2. Shortest Route 3. Route with less walking

6. THE SCENE ROUTE
   Jane picks one option.

7. RESULT
   The application displays photos for the scenic route.

8. PHD
   The application has some more options for Jane.

9. ASCC
   Jane downloads the info on her PDA and happily finds her way.
10. Jane exits Sims and looks at her PDA display.

11. The application displays a photo and provides a description.

12. The photo application gives a new directive and shows a new photo.

13. And here it is: ASUC

14. With the help of the photo and description, Jane finds Sather Gate.

15. Sather Gate. Go straight...

16. Jane found the ASUC and deletes the application file from her PDA.

THE END.