

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/220382134>

# The narrative storyboard: telling a story about use and context over time.

Article · December 2012

DOI: 10.1145/2065327.2065340 · Source: DBLP

---

CITATIONS

7

---

READS

34

4 authors, including:



[Saul Greenberg](#)

The University of Calgary

407 PUBLICATIONS 17,364 CITATIONS

[SEE PROFILE](#)



[Sheelagh Carpendale](#)

The University of Calgary

345 PUBLICATIONS 6,440 CITATIONS

[SEE PROFILE](#)



[Nicolai Marquardt](#)

University College London

99 PUBLICATIONS 1,332 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



The Hearing Body [View project](#)



Constructive visualization [View project](#)

All content following this page was uploaded by [Saul Greenberg](#) on 07 February 2014.

The user has requested enhancement of the downloaded file.

# The Narrative Storyboard

## Telling a story about use and context over time

### Saul Greenberg

University of Calgary | saul.greenberg@ucalgary.ca

### Sheelagh Carpendale

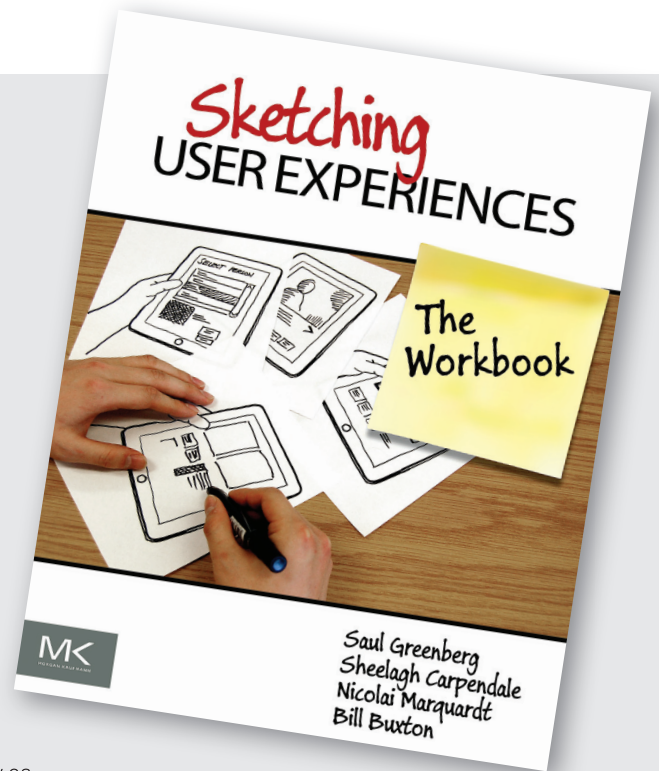
University of Calgary | sheelagh@ucalgary.ca

### Nicolai Marquardt

University of Calgary | nicolai.marquardt@ucalgary.ca

### Bill Buxton

Microsoft Research | bill.buxton@microsoft.com



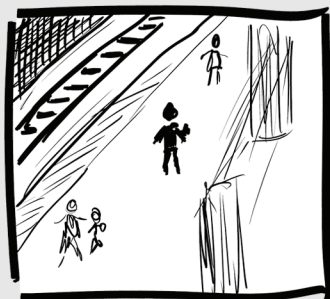
*The following article is an extract chapter from the just-published book Sketching User Experiences: The Workbook (Morgan-Kaufmann, 2012) by Saul Greenberg, Sheelagh Carpendale, Nicolai Marquardt, and Bill Buxton. It has been somewhat shortened and modified to match the style of an interactions article.*

The storyboards featured in the book so far presented snapshots of the user interface. But the interface is only part of the story that occurs as people interact: What is missing is context. The narrative storyboard provides this context. It uses a sequence of images to tell a more complete story about people's interaction over time, where each image in the storyboard represents a particular event. They communicate information about the location where the interaction takes place, present the people as personalities, and provide details about the other actions and things people are doing as they interact. As Laurie Vertelney [1] points out, narrative storyboards are actually a variation of the cinematographic storyboard found in planning movies, except applied to interaction design.

After introducing some vocabulary, we present two alternative techniques for creating narrative storyboards: *sketching stories by hand* or *using photos as source material*.

## A Vocabulary of Camera Shots and Filmmaking

Filmmakers use specific terminology to describe the composition of a certain scene within a storyboard. We use some of their terms to describe the scenes in our sketched storyboards, and you can use those terms to think about how you want to compose and vary your own narrative images. A partial list of popular *camera shots* is provided below; a more complete description of these and other terms is found in Katz [2] and Block [3].



► *Extreme long shot (wide shot)*. A view showing details of the setting, location, etc.



► *Long shot*. Showing the full height of a person.



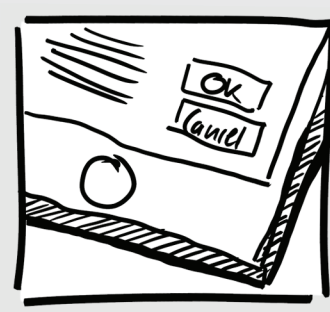
► *Medium shot*. Shows a person's head and shoulders.



► *Over-the-shoulder shot*. Looking over the shoulder of a person.



► *Point-of-view shot*. Seeing everything a person sees.



► *Close-up*, such as showing details of a user interface on a device the person is holding.

## Method 1: Sketching Storyboards

With our first *sketching storyboard* method, you create a storyboard via hand-drawn sketches. As an example, we illustrate the interaction of a person using a mobile phone to capture information displayed on a physical announcement board via a bar code located near that information.

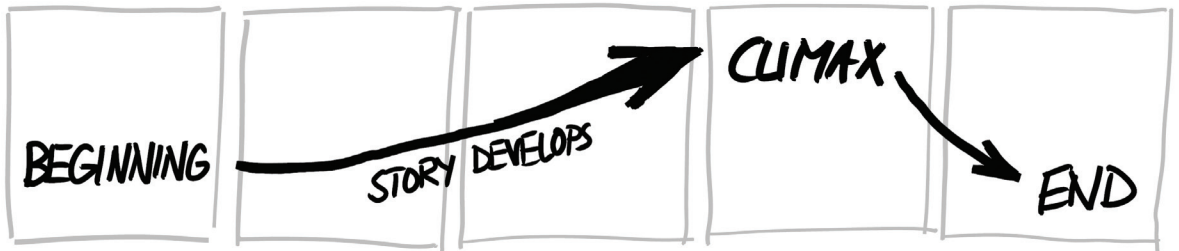
**1. Outline storyboard frames.** Take a blank piece of paper and draw a grid of 5 rectangular boxes. These frames are the basic template for our storyboard. Depending on the type of storyboard you want to create and the complexity of the interaction, you might need more than five boxes to draw all your scenes. Using only five sketches for the storyboard, however, has the benefit of limiting the interaction shown in the storyboard to one particular scenario. If necessary, you can draw additional storyboards later; either as variations of the first one, or as storyboards illustrating a different kind of interaction with the system.

**2. Develop the storyline.** Before you start sketching scenes, you need to plan a storyline for the storyboard you want to create. Some aspects to consider when describing a storyline are:

- Where does the interaction takes place?
- What is the problem?
- What is the task that people are trying to do?
- Which people are present and what are their actions?
- What kind of objects or digital devices do they use?
- What is the possible input and output for each digital system?
- How do the actions of people and/or devices solve the problem?

You will develop this storyline across your five frames.

The first beginning frame introduces your story, and is also called the “establishing shot.” The following frames develop the story, eventually leading toward a climax, i.e., the solution to the problem. The last end frame concludes the story, and often indicates a scene that emphasizes that the interaction illustrated in the storyboard is completed (e.g., a person walking away). Before you read our particular solution below, try to plan your storyboard by describing a series of five shots.

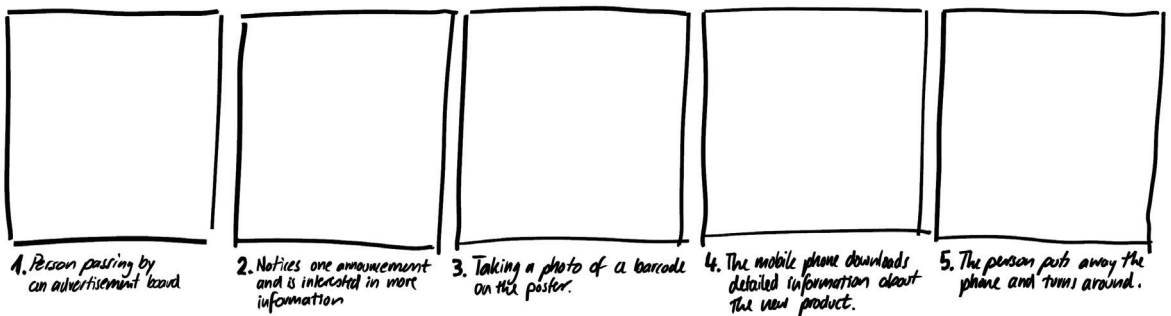


Here is one possible storyline for your example scenario:

- (a) a person is passing by an announcement board in a public setting;
- (b) the person then notices one particular announcement and is interested in more information;
- (c) the person uses a mobile phone to capture the bar code displayed next to the announcement;
- (d) detailed information appears on the mobile phone display; and
- (e) the person walks away from the board.

Write the storyline text underneath each of the five frames of our storyboard.

The next step is to draw each of these scenes from the storyline in our storyboard. Give it a try before you see our solution below (which is one of many possible solutions).



**3. Sketch establishing shot (introduction).** As mentioned above, our first sketch of our storyboard—the establishing shot—will be used to “set the scene” of our storyboard. In particular, it gives an overview of the location where the interaction takes place and shows the people involved. For this kind of sketch you can use an “extreme long shot” (as described earlier) to show details of the environment. In our solution, we sketched a hallway containing a door and an announcement board, and a person as a simple stick figure (a method detailed in Chapter 3.3 of the book). Similar to many of our sketches before, a key aspect is simplicity. Do quick sketches instead of spending too much time with unnecessary details. Keep the elements you are sketching (people or features of the environment) to the bare minimum.

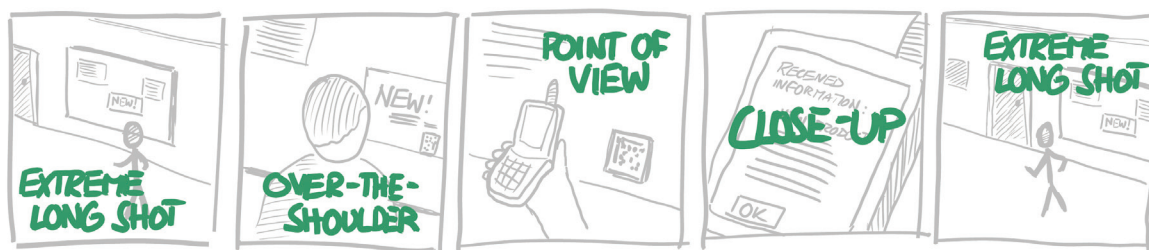


If you want to try different scenarios, do that as separate storyboards. For example, using different sheets containing five blank panels, you can create similar establishing long shots of other environments and situations: a person walking through an airport with many surrounding people and an electronic display, or a couple arriving at an enclosed bus stop with posters hung on it.

**4.** Continue the storyline sketches with appropriate camera shots. Now continue with the remaining sketches of the storyboard. Apply the simple sketching techniques we introduced in earlier chapters. Use stick figures to illustrate people's postures and orientation, or draw simple silhouettes of people and objects with the photo tracing technique (a method introduced in Chapter 3.9 of the book). Our five sketches are shown below.



In each of the above sketched scenes you can apply the cinematographic techniques of varying camera shots. For the beginning and end we used the extreme wide shot to illustrate context. The over-the-shoulder view in the second frame shows details of the person and the board, as this emphasizes what the person is looking at. We then used the first person point of view shot in frame 3 to emphasize the action a person is doing (i.e., taking a photo of the bar code). Finally, the close-up in frame 4 allows us to show details of the information displayed on the screen.

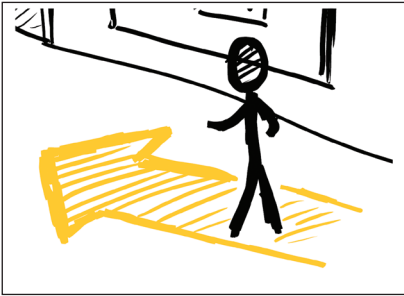


**5.** Emphasize actions and motions. If needed, you can now add visual annotations to the sketches. Annotations (drawn in yellow below) are a valuable way of indicating and emphasizing important motions or actions that are otherwise difficult to show in a static image.





**We used various arrows to indicate a person's motion.**



► In our establishing scene, we drew a large arrow on the floor indicating that the person is walking by the announcement board.



► In the second frame, the circling arrow emphasizes the head-turning motion of the person just noticing something of interest on the board.



► The last frame also uses a large arrow, this time showing the person walking away.

We also used a variety of other annotations to emphasize people's actions or thoughts:



► These lines in the third frame emphasize the photo taking action and what is being captured.



► The question mark above a person's head reveals emotion, such as an expression of surprise and interest.

**6. Demonstrate to others and iterate.** Your first narrative storyboard is now complete. Try other variations of this scenario by building alternate scenarios, such as the airport and bus stop situation described earlier. Also try developing a separate interface storyboard showing what the person does on screen; use this to explain the details the person must do in frame 3 above. Finally, use the techniques shown in Chapters 6.4 and 6.5 of the book to demonstrate this storyboard to others. Get feedback: colleagues, friends, or clients. At this point, use that feedback to see if your storyboard is effective: do they understand your story, i.e., how you envisage the context of use of the system by the actors portrayed within it?

**Method 2: Photo-Based Storyboards (Shortened Section)**

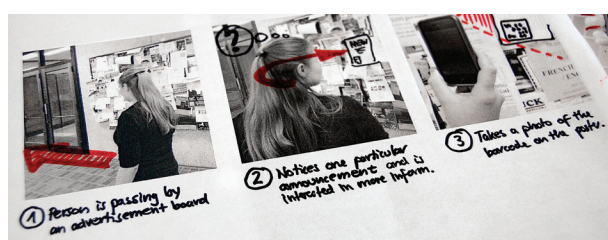
Photo-based storyboards are an alternative method for portraying narratives. Instead of sketches, you will now take and use photos as your source material. To illustrate, you will create a storyboard for the same situation: a person using a mobile phone to gather digital information from a poster via a bar code. As before, you need to have your storyline developed; for our example, we will use the same storyline developed in Step 1 above.

**1. Take photo snapshots.** Take a series of photos of a person in front of a public announcement board. Vary the camera shots: long shots for overview, over-the-shoulder and point-of-view for people's actions, close-ups for details of an interface or a particular action, etc. Select five photos as your sources for your storyboard. Again, begin with a long shot introducing the setting, followed by three photos illustrating the interaction, and a single photo for the ending of the storyboard.

**2. Manipulate and print your photos.** Using your favorite image manipulation tool, decrease the contrast and increase the brightness of the photos, and then convert them to gray scale photos. This makes it easier for you to add annotations and sketch over the photos. For printing, we recommend a minimum size of around 10cm x 10cm (4" x 4").

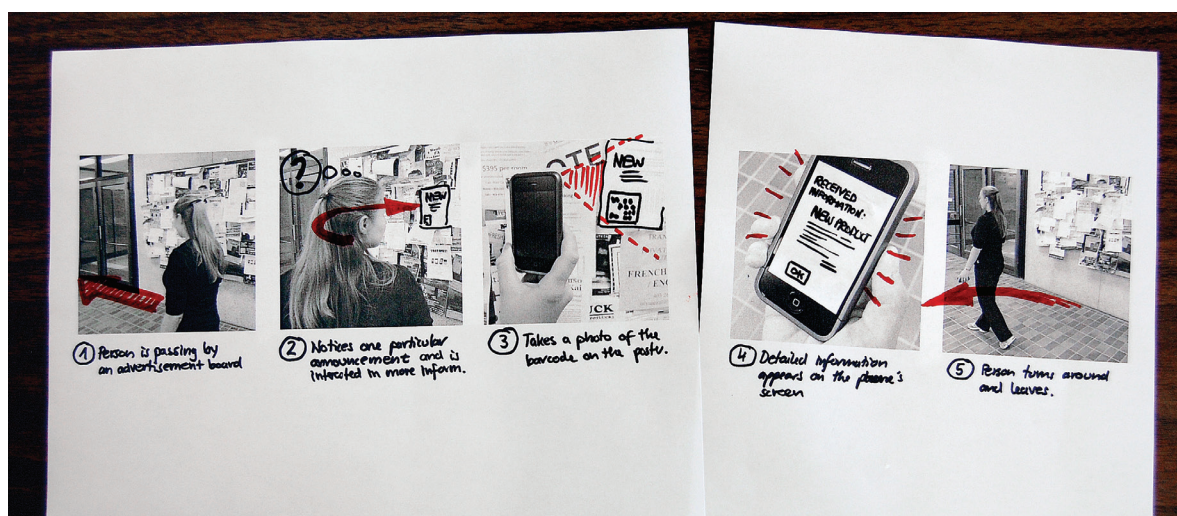


**3. Add annotations.** Similar to our earlier sketched storyboard, we also add annotations to our photo storyboard. Again we use these to indicate a person's movement (arrows for walking direction, or head turning). Use a thick marker and different colors to make these annotations stand out from the photo underneath. Alternately, use office supplies (as described in Chapter 3.7 of the book) to add editable and movable annotations atop your storyboard. For example, if you place a transparency over the photo, you can draw your arrow atop of that. You can move that transparency to move the arrow, or replace it with a new transparency if you change your mind.



**4. Add storyline text and comments.** Write the storyline text below the printout of the photos. This makes it easier for others to follow the story you are telling when they read your storyboard.

Your photo-based narrative storyboard is now complete.



**You Now Know**

Narrative storyboards illustrate the context of an interaction sequence: the physical environment, the actions of people, and events that unfold over time. They show what is happening in the world, and thus complement the interface storyboard that emphasizes what is happening on the screen. You can create narratives via sketches and via photos. You can also use techniques developed within film storyboarding to show the unfolding story: starting and ending with an overview scene, varying camera shots to capture necessary detail of particular activities, using arrows to indicate motion, adding annotation to emphasize what is going on, and including short explanatory phrases under each frame. Collectively, these support the storytelling character of these narrative sketches.

**ENDNOTES:**

1. Vertelney, L. Using video to prototype user interfaces. *SIGCHI Bulletin* 21, 2 (1989), 57-61.
2. Katz, S. *Film Directing Shot by Shot: Visualizing from Concept to Screen* (1st edition). Michael Wiese Publishing, Studio City, CA, 1991.
3. Block, B. *The Visual Story: Creating the Visual Structure of Film, TV and Digital Media* (2nd edition). Focal Press, Burlington, MA, 2007.

DOI: 10.1145/2065327.2065340 Copyright is held by the author/owner.