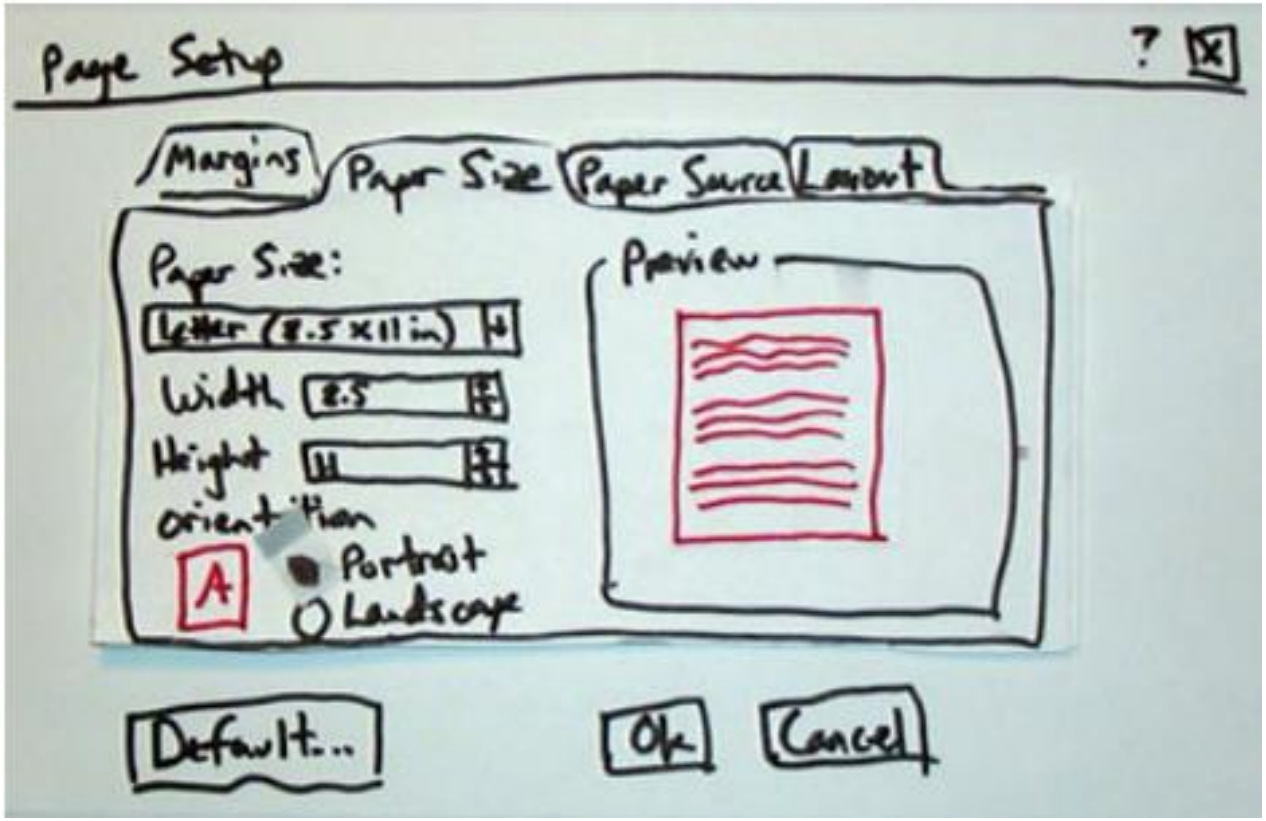
# Paper Prototyping and Card Sorting

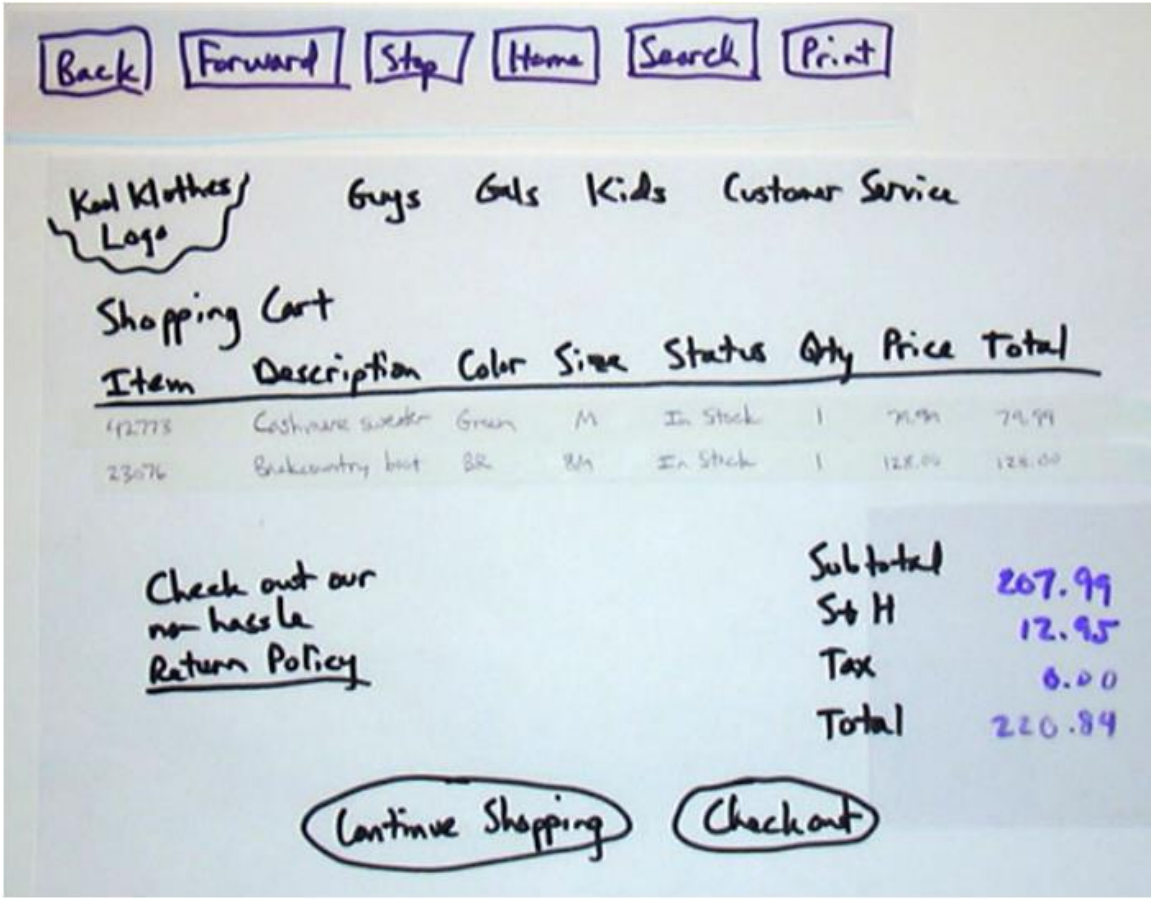
# Paper Prototyping

- Method of usability testing that is useful for Web sites, Web applications, and conventional software.

# Paper Prototype



# Paper Prototyping



# Paper Prototyping

- Decide on the tasks that you'd like the user to accomplish.
- Make screen shots and/or hand-sketched drafts of the windows, menus, dialog boxes, pages, popup messages, etc. that are needed to perform those tasks.
- Then you conduct a usability test by having one or two users play the role of "computer," manipulating the pieces of paper to simulate how the interface would behave.

# Paper Prototyping

- Users are given realistic tasks to perform by interacting directly with the prototype - they "click" by touching the prototype buttons or links and "type" by writing their data in the prototype's edit fields.
- A facilitator conducts the session while other members of the development team observe and take notes.

# Paper Prototyping

- The "computer" does not explain how the interface is supposed to work, but merely simulates what the interface would do.
- You can identify which parts of the interface are self-explanatory and which parts are confusing.
- Because the prototype is all on paper, you can modify it very easily to fix the problems you find.

# Paper Prototypes don’t need…

- **Straight lines or typed text**
  - If the user can't read something, it's OK to tell them what it says. (But if the user doesn't understand a term, don't explain it -- change it.)
- **Images or icons**
  - Use words instead. For example, for the company logo, you can just draw a box around the words "company logo."
  - If images are part of the content (a product catalog, for example), you can paste them into your prototype using restickable glue, which allows you to rearrange the page later.

# Paper Prototypes don’t need…

- **Colour**
  - As the saying goes, "You can put earrings on a pig, but it's still a pig." Colour can't save an inherently flawed design -- do your initial testing with grayscale printouts of screen shots, or sketches using any dark-coloured marker. Colour can be added later once you're sure you aren't creating a pig.

# Paper Prototypes don’t need…

- **Consistent sizing of components**
  - Unless you've got a small or densely-packed display, don't worry about adhering exactly to a grid.
  - It's OK if components are of varying sizes.
  - For example, perhaps your menu bar and icons came from a screen shot and are relatively small compared to the hand-drawn parts of the screen. You can clarify by saying things like, "This is all one window," if the user seems confused.

# Paper Prototyping is Good For…

- **Concepts and terminology**
  - Do the target users understand the terms you've chosen? Are there key concepts they gloss over or misconstrue? (I've seen these types of usability issues in virtually every interface I've ever tested.)
- **Navigation/workflow**
  - If there's a process or sequence of steps, does it match what users expect? Do they have to keep flipping back and forth between screens? Does the interface ask for inputs that users don't have, or don't want to enter?

# Paper Prototyping is Good For…

- **Content**
  - Does the interface provide the right information for users to make decisions? Does it have extra information that they don't need, or that annoys them?
- **Page layout**
  - Although your scribbled screens may not be pretty, you'll still get a sense of whether users can find the information they need. Do you have the fields in the order that users expect? Is the amount of information overwhelming, not enough, or about right?
- **Functionality**
  - You may discover missing functionality that users need, or functionality you'd planned but users don't care about.

# Paper Prototyping is Not Good For…

- **Technical feasibility**
  - Paper prototypes don't demonstrate technical capability. It's possible to create a paper prototype that can't actually be implemented. To avoid this, I recommend that there always be at least one person involved who understands the technical constraints.
- **Download time or other response time**
  - Because a person simulates the behaviour of the computer, the "response time" is artificial.

# Paper Prototyping is Not Good For…

- **Scrolling**
  - I've seen some interesting and subtle problems with Web page designs that discourage the user from scrolling either down the page or back up to the top. I wouldn't have found these problems with a paper prototype.
- **Colours and fonts**
  - If you really need to see how something looks on a computer screen, paper prototyping can't show you that. It's a good idea to involve the graphic designer in the paper prototype tests because he may find issues that influence the visual aspects of the final design.

# Card Sorting

- Collection of concepts (or website sections, pages, functions) are written on separate cards
- Cards sorted into piles by a user - each card in a pile must have something in common
- Each time the cards are sorted it will be based on an attribute and each pile will represent a category
- Consider using to develop navigation schemes

# Task

- Higher fidelity methods such as:
  - PowerPoint
  - HTML/CSS
  - Wireframing software

  could be used for prototyping.

  What are the

  - Advantages
  - Disadvantages

  of paper prototyping with respect to these methods?

# References

- Paper prototyping
  - Carolyn Snyder
  - November 2001
  - http://www.snyderconsulting.net/us-paper.pdf