

PAPER PROTOTYPING

Outcome

Paper prototypes are a tool for gaining valuable feedback about the bones of an idea from users without the expense or time required to build a model in software.

Function

While paper prototyping began as hand-drawn interfaces to model a design, the term is nowadays used to cover digital prototyping. New tools – such as Balsamiq – are now so fast that they are as easy, and cheap to create as paper sketches. They are also easier for distributed teams to collaborate on a shared early design.

Key benefits of paper prototyping

- The team have an opportunity to test assumptions about design and user interaction with real users, allowing them to interact with the prototype in order to explore various design choices. It is extremely useful to test information architecture and navigation, usability and comparison between 2 or more designs.
- Even when not tested with real users, the paper prototype allows all team members to be involved with the design and to have a shared vision of the user interface. This can bring up problems much earlier in the process, when they are easier to fix.
- Cheaper than creating software, paper prototyping stops the team rushing into premature decisions regarding language, architecture or design which may be difficult to change later.
- Relatively quick, paper prototyping permits several different versions to be drawn up for testing. Because of the obviously 'unfinished' nature of design, it is clear to everyone that this can be criticised or changed. More polished models in software risk appearing finished or built. It can either inhibit appropriate feedback or risk non-software specialists demanding the team settle for a partial solution.

Benefit

Who

Implementation

Prerequisite

Input from a range of people – including those with little understanding of software – is welcomed.

Someone on the team has the skills to: set up the test; facilitate users' interaction with the prototype, and interpret the results.

The team can use a variety of techniques to draw up a paper prototype, including compositions, storyboards or wireframes.



Scaling Factors

Difficulty

Implementing a paper prototype

Agree which specific elements the team wish to explore or whether there are choices to be made – between two different ways of presenting information, for example. These questions will be essential when setting up an objective test.



Different types of prototype

- **Compositions:** At its most basic level, ideas for design can begin with printing out a screenshot of a website someone admires and scribbling on it to show where menus or headings might go. These can be formalised and prettified to make a moodboard that gives people an idea of the look and feel the design team is aiming for. Later mock-ups can show colours and fonts with picture space, menus and action buttons.
- **Wireframes:** This is a page schematic to show layout. Here you should focus on the connections between screens – the flow from one screen to the next via the information architecture. You should draw out a series of screens, showing buttons and drop down menus with post-it notes etc. layered on top. These allow people to actually explore how they would find their way through the website, look for information or perform actions.
- **Storyboards:** These enable us to look at what we expect customer journeys to be through the site. We may even have data regarding actual user journeys to inform this. The visual representation is helpful to explore any complexity, for example, if there are too many steps or screens. This can provide an important way to help consider simplifying or condensing journeys.

Testing:

Find a group of people who represent your typical users. It is often a good idea to video the sessions so as to be able to go back and consider body language and time how long certain interactions took.

Create a set group of tasks you wish users to complete which will provide you with useful information, or perhaps a direct comparison between two designs. If you do this, then you will need to divide the group – showing one design A first, and the second design B first in order to control for familiarity.

Have someone who will act as the 'computer'. When a user touches on the 'file' button, for example, the computer should pick up a new piece of paper that represents the 'file' menu page. The computer can't explain anything. Discovering if users get stuck is part of the purpose of the testing.

As well as data on how long / whether users can complete the tasks, you can also ask for subjective opinions such as which design they preferred, or how easy / hard they would rate the navigation.

The whole design team should observe the testing and take notes. The team might make changes to the paper prototype between testing sessions to see if they can resolve problems immediately.

Potential pitfalls

- Although one of the advantages of paper prototyping is that developers are less attached to sketches than to software, teams can still become overly enthused by their own ideas and struggle to tear up the prototype and start again. This is especially likely if instead of paper the team choose to use more sophisticated digital tools.
- Prototypes should be annotated and kept in order to provide a record of development thinking. On occasions this is insufficient detail for key decisions and learning – especially if members of the team change.
- Running testing can require specific skills, a facilitator or moderator who understands how to set up research can be invaluable in this case.
- If prototyping is used with stakeholders rather than testing with users, it can be important to explain that the final finished product and system will look very different.

If you want to learn more, consider reading:

Paper Prototyping by Shawn Medero - an article on alistapart.com

Paper Prototyping: The Fast and Easy Way to Design and Refine User Interfaces by Carolyn Snyder