

Tutorial 2: Paper prototyping and the human computer

Human Computer Interaction

Kami Vaniea

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1 Preparation

For this week's tutorial you need bring:

- If you want to test your coursework app you need to bring a **paper** version of your fridge app screens. It must be on paper, any other medium will not be allowed.
- Something to take notes with.

For those who do not want to test their app yet, we will be providing an example prototype app for you to use instead. The tutor has full authority to decide if you will be testing on your own app or the example one.

2 Today's Protocol

Today we will be testing paper prototypes using the “human computer” methodology.

1. Form groups of 3.
2. Decide who will be the computer, facilitator, and tester (section 3). When testing your own app, you should play the role of the computer, as the computer role requires the most knowledge of how the app works. Facilitators don't actually need to know much about the app to fulfil their role.
3. 10 minutes: Run the Human Computer protocol following the full script in section 4.
4. Rotate roles within your group, or by switching out members, if necessary.
5. 10 minutes: Run the script again, but this time you can skip section 4.1 to save time since everyone should have already heard it.
6. Rotate roles within your group, or by switching out members, if necessary.
7. 10 minutes: Run the script again, but this time you can skip section 4.1 to save time since everyone should have already heard it.
8. 15 minutes: Group discussion

3 Roles

Computer The human that will be pretending to be a computer. This person is in charge of showing the tester the paper mock-ups. They are also responsible for reacting to the tester's actions. For example, if the tester clicks a link the *computer* will take away the current screen and replace it with the screen that shows where the link goes. If the tester clicks on something and no screen exists, then the *computer* either draws the missing screen on a sticky note, or verbally says what would have happened. The *computer* almost never speaks unless it is to clarify what is happening on the interface.

Facilitator The person in charge of running the test. They are in charge of speaking with the tester, explaining what is going on, and taking notes.

Tester Also called a “participant” this person is testing the design. They have the easy job of just being themselves. They will be interacting with the *computer* by tapping on the paper prototypes shown to them just like they would interact with a real computer.

4 Scripts

4.1 Introduction: Facilitator says this part verbatim

Hello. My name is [your name] and I am a software designer. This is my colleague [“computer’s” name] who will be helping me with this test.

Today we are testing a new design for our new smart refrigerator to see if it works the way we intended. I want to make it very clear that we are testing the design, not you. Our goal today is to find what parts of our design work well and what parts cause problems for people. So don’t worry if you get stuck or something does not work as you expect it to; those are exactly the types of problems we are hoping to find.

As you can see we haven’t built the software for the app yet; the design is still on paper. We want to find potential problems now, before we invest time to make a well designed app. Today my colleague [“computer’s” name] will play the part of the computer. [He/She] will do all the things that the computer would normally do such as showing you screens when you click on something, or reacting to your input. [He/She] will not say very much today.

While you interact with our design, please feel free to tell me whatever is on your mind and ask questions. Our goal is to see how the interface will work when we are not around, so I may not always be able to answer your questions right away. But please keep asking them because they help us understand what is confusing about the interface.

Do you have any questions about what we will be doing today?

4.2 Demo the human computer: Facilitators can modify this text

[Show the participant one of the prototype screens, typically the first one.]

This is one of the screens from our app. You can interact with it just like you would a normal mobile device. To click something just point to it with your finger, to drag something just touch it and slide your finger just like you would normally on a mobile device. If you want to type something click on it and our human computer will provide a sticky note and pencil for you to write on. If you want to delete something just erase it.

If something you do changes the screen our human computer will take care of this by replacing the screen or adding elements to it. Again feel free to talk out loud. Our human computer will only react though to clicking and typing.

[Hand them the first task]