



emex

EMERGING MEDIA EXPLORATION

Sketching iTV experiences

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Why Paper Prototyping?

- The paper prototype fills the gap between sketches and process diagrammes on the one side, and interactive digital mockups on the other.
- A paper prototype is a kind of interactive sketch, which allows to actually experience interaction processes.
- Unlike digital mockups, it can be enhanced and altered quickly.
- Nobody will confuse the paper prototype with the final visual design.
- It does not hurt much to throw it away.



It can be used both in the design process and in user research. Paper prototyping is fun.





Paper prototype use cases



















Sto..





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..board..





..ding





Paper Prototype as a Design Tool

- Paper prototypes are easier to change than simple sketches.
- You can group, move and exchange elements without drawing everything from scratch.
- You can spread the prototype on a table and collaborate easily.
- You can play through interaction flows and check for completeness.
- You can produce slide shows of interaction flows.

Paper Prototypes help you design interaction flows instead of just screens.



Paper Prototype as a testing tool

- You can do usability tests to evaluate about 80% of the final interaction design.
- Paper prototypes are excellent to reveal mismatches between the users' mental models and the design model of a service.
- You can test functional mapping, grouping and layout as a whole.
- You can change interaction concepts on the fly once you identified a usability problem.
- Paper Prototype testing gets you into an insightful conversation with the user.





What Paper Prototyping is not good for

- Paper Prototyping is not about testing Visual Design. It doesn't tell you much about the aesthetic quality of the interface.
- Also functional aspects of Visual Design such as visual hinting (font & button sizes, choice of icons) can (and should) only be fine-tuned with digital mockups later.
- Responsiveness, fluidity or anything else that is releated with the processing speed of the system.
- Any test that relies on the availability of a variety of actual content.
- Quick sketching in ideation phases.





How to prototype with paper





Material

- Paper (UI elements)
- Cardboard (Screen/Device, UI elements)
- Gluestick, adhesive tape
- A couple of felt-pens and fineliners
- Scissors

quickly

- Ideal: Non-sticking glue and removeable adhesive tape
- Anything else that seems handy to build a prototype







Video abspielt

ideo

Nath vi chten

Worknung

STAPLE



Rules

- Build the device first, it should be somewhat bigger than the digital original.
- Group small UI elements
 - find balance between customizability and handling.
- Do not use a ruler. You will work it over plenty of times.
- For smaller elements, apply sticky glue to the ground, not the element itself.
- Avoid icons, just write out what the respective element is for.
- Just-enough-prototyping.





iTV prototype



It's actually not that hard, just do it.





How to test with paper





Create some context

Test setting for a breakfast delivery service: The user gets up in the morning and uses the app right from the bed.





Design tasks

Handing over a Prototype and asking the user to play around usually is not very insightful. Instead, design tasks for the users to solve with the prototype.

Carolyn Snider defines rules for designing good tasks:

- They are based on user goals relevant for the target user group of the product.
- They cover questions that are important to the success of the product and the company in the market segment.
- They have an adequate scope not to broad, no too specific.
- They have a limited and predictable number of solutions.
- They have a clear ending, which the user can recognize.
 - They trigger actions, not only giving opinions.



Task group-1	Ad-Hoc Group Profile Creation				
Goal/Output:	utput: The present users implicitly create an ad-hoc group profile. They take note of and use subsequent group recommendations.				
Inputs:	The test user carries a personal device which is said to allow instant wireless authentication when he enters the room.				
Assumptions:	 A user is present in front of the TV and is logged in. She is currently watching a programme. This task can be performed with different dispositions of the first user: First user wants to finish watching current programme First user is open to change to a new programme 				
Steps:	 Enter room / test situation and take a seat Wait for interaction hint Choose group recommendations Browse group recommendations Agree upon one recommendation Watch recommendation 				
Time for expert:	05:00				
Instructions for user:	ructions for user : Please enter the room as if you were entering your living-room. Take a seat and wait for things to happen.				
Notes:	For a realistic experience we need information on the test user's personal preferences, hence we need to develop a profiling questionnaire.				
Additional research questions:	 How do the users recognize the change in the recommendation list? Is automatic presence detection pleasant to the user or would she prefer other methods? 				



Align your Ul elements neat & handy...





...to keep the overview during testing.





Define your team roles









Thinking Aloud Method

Maybe the mother of all user-test methods. While observation tells you, what the user is doing, thinking aloud helps you to find out why the user is doing something:

- Ask the user to comment aloud on actions as well as thoughts and reasoning when interacting with the paper prototype.
- Do remind the user to comment aloud once in a while, as it might feel a bit strange to the user in the beginning.
- Take a written notes and/or record the test on video. Written notes need some training to catch the relevant details, but speed up evaluation if you do not have much time (often the case in commercial projects).





User Tests - Evaluation

The evaluation of qualitative user tests is similar to, albeit in everyday use simpler than qualitative research in social sciences.

- 1. Identify issues from the records and list along with quotes and contextual description in a table.
- 2. Merge identical or very similar issues.
- 3. Codify issues into categories / issue groups.
- 4. Suggest solutions per category.





Issue table - Example

No	Description / Quote	Problem	Effect	Solution	Type of Issue	Task	Tester	Keyword
1	Nutzer bekommt den Task vorgelesen: "Da würde ich schon wieder passen. Ehrlich gesagt"	Das Konzept Geräteverbindun g wirkt für den Tester zu kompliziert.	Nutzer ist entmutigt und versucht gar nicht erst, eine Verbindung zu erstellen.	Konzept weniger technisch beschreiben.	Wording	Geräteverbi ndung	1	Concepts
2	"Von dort (TV) nach hier (tablet)?"	Die Richtung des Verbindungsaufb aus ist dem Nutzer nicht auf Anhieb klar.	Nutzer sucht evtl. auf dem falschen Gerät nach der Möglichkeit, die Verbindung zu initiieren.	Ggf. Hinweise ergänzen, z.B. erklärendes Piktogramm. Die Verwirrung ist aber auch teilweise dem Paper Prototyping geschuldet.	Contextual	Geräteverbi ndung	1	Concepts





Settings f	or		on			
Main menu	profile-info	information for	users			
Subtitles						
sign language	interpreter					
audio descript	ion					
language						
open on seco	nd device					
screenreader						
Chose function	by number	or colour key on	remote control:			
Launcher 1 application	Turn on con- 2 text help	3Size/contrast	4 device connection	5 log in / log out	Hide application	





Settings for [placeholder for profile name] on [placeholder for device name]

Main menu	profile-info	information for users					
UT Subtitles							
👌 sign langua	ge interpreter						
audio descr	audio description						
🗢 language	language						
open on se	cond device						
Screenread	er						
Chose function by	number or colou	key on remote control:					
Launcher 0 application 1	Turn on con- text help 2 Size/con	trast 3 device connection 4 log in / log out Hide application					

Challenge New perspectives on TV viewing history

TV service providers love to collect and process usage data, yet an underestimated aspect is that this particular data can be of value to the viewer too. The human memory is not a reliable tool to recall this information and a lot of programmes and themes we once did like slip through our mind over time. The individual usage data, visualized within the right information architecture, can be insightful and even entertaining to browse.

In this challenge we are looking for concepts that provide an explorative interface to personal TV usage data in order to find out more about oneselfs TV viewing preferences, possibly extended with well-positioned recommendations.





References

- Bill Buxton: <u>Sketching User Experiences</u>.
- Carolyn Snyder: <u>Paper Prototyping</u>.
- Marc Hassenzahl: <u>www.attrakdiff.de</u>
- Donald Norman: <u>The design of everyday things</u>.
- HBB-NEXT Project UX <u>evaluation reports D2.3.1 and D2.3.2</u> (by rbb and KU Leuven)





Thank you!

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