

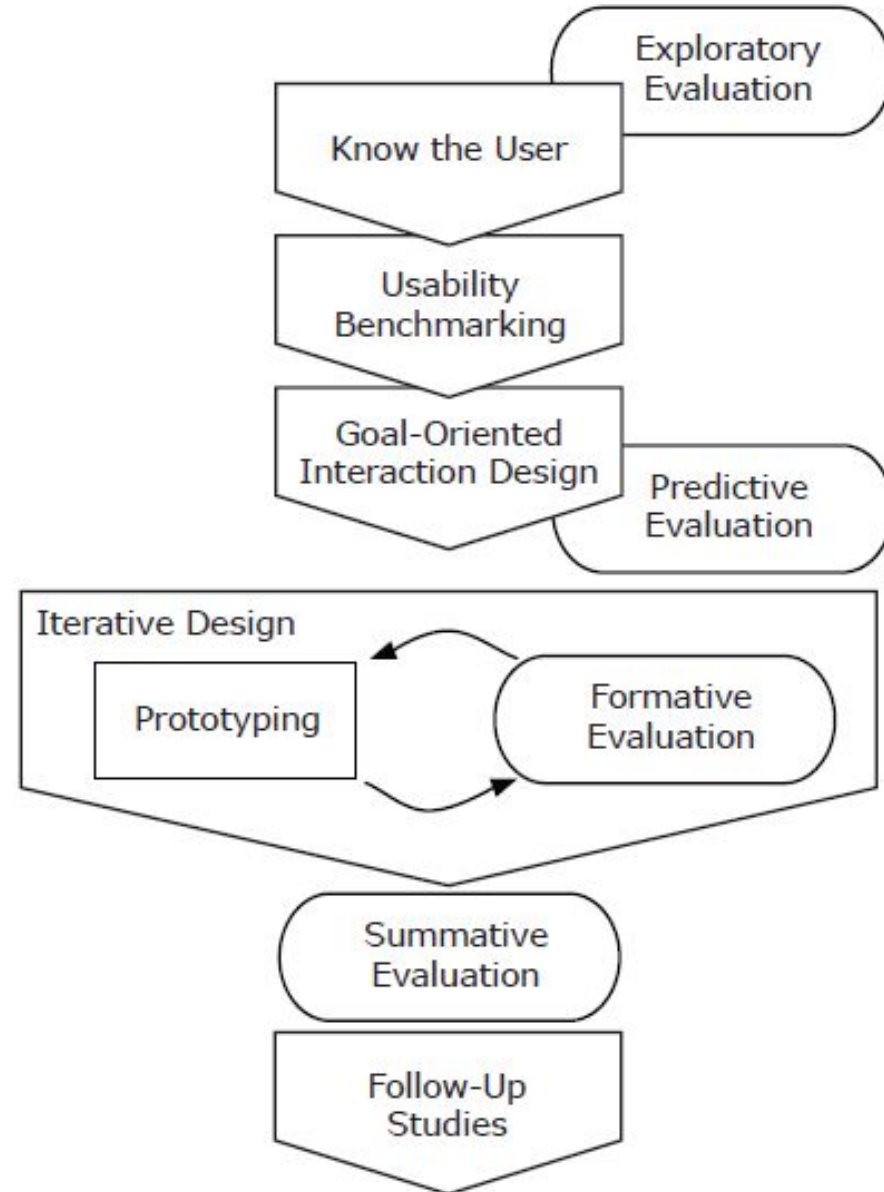


# Kelas IMK Minggu 8

Anny Yuniarti

# Review: The Usability Engineering Lifecycle

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# Review: Usability Benchmarkin g



how usable is the competition?

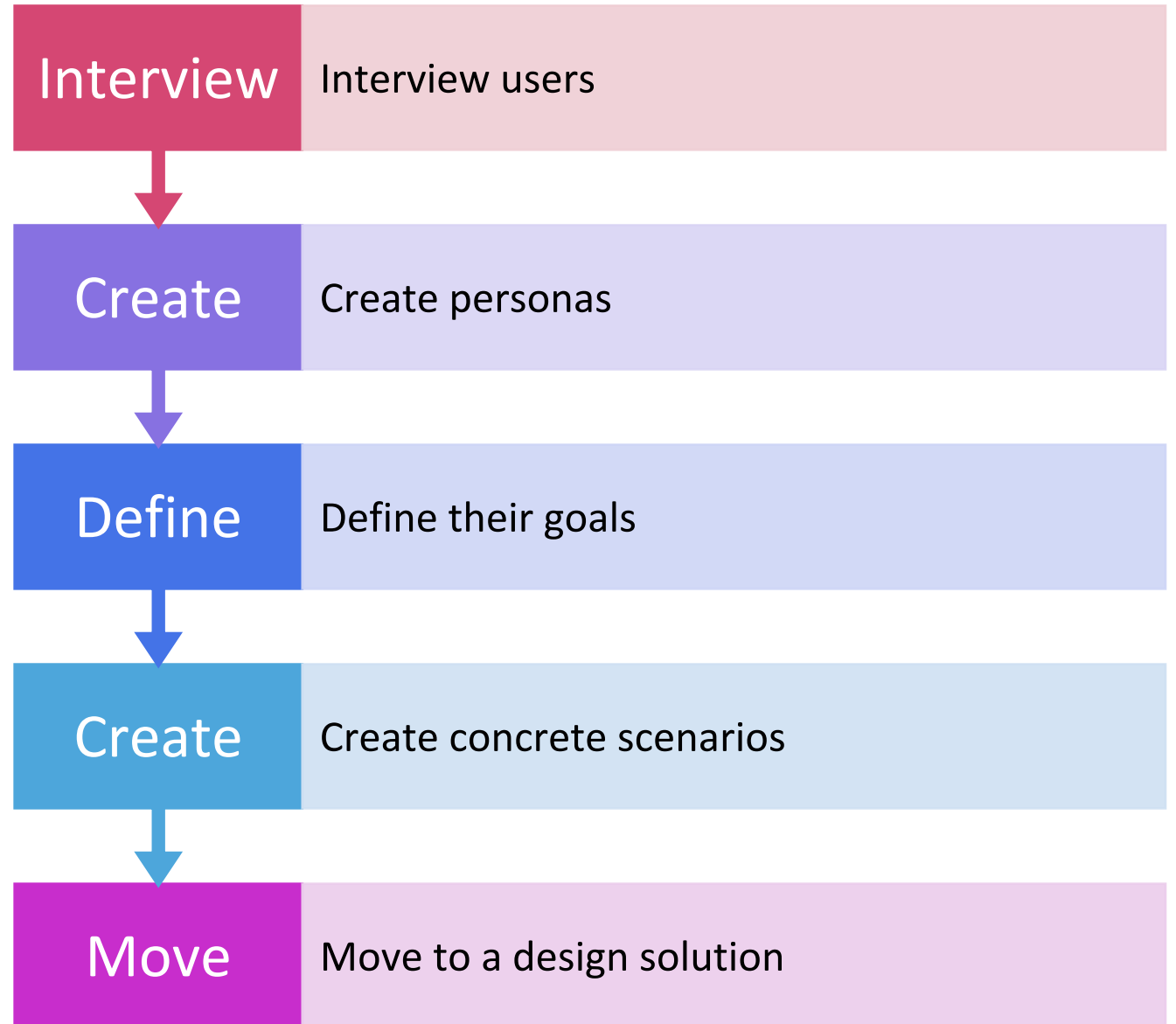


how much better should your interface be?



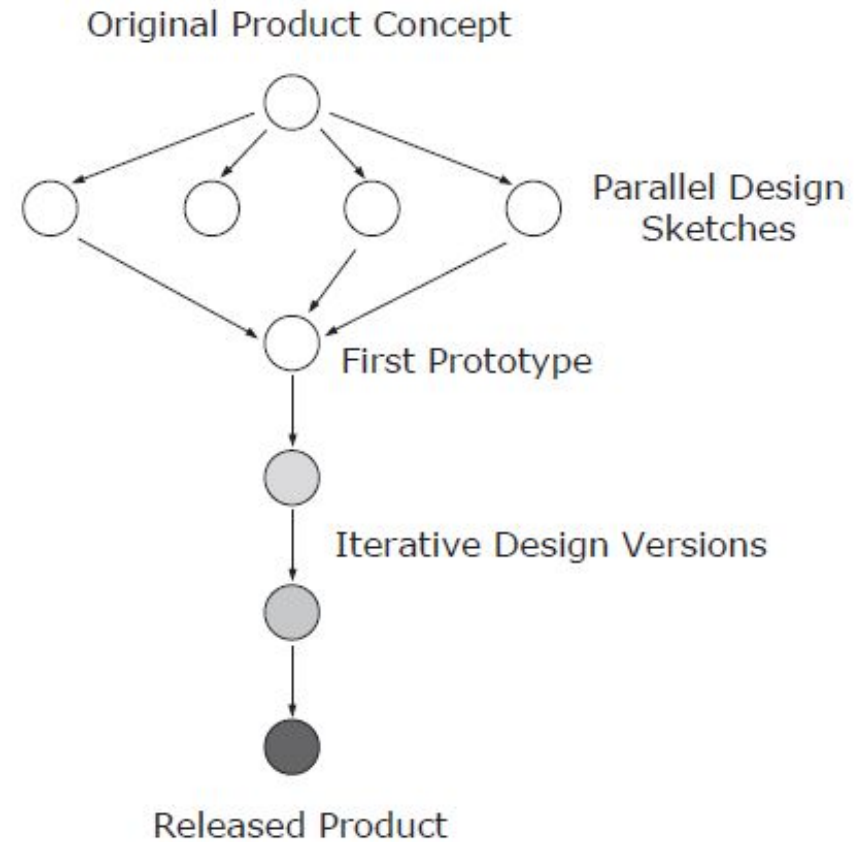
what is your likely return on investment?

# Review: The Interaction Design Process



## Moving to a Design Solution

- Parallel Design
  - If time and resources allow, explore design alternatives.
- Have several design teams work independently, then compare draft designs



**Figure 6.9:** The relationship between parallel and iterative design. The first prototype is based on ideas from parallel design sketches. From Figure 8 of [Nielsen, 1993b].

# Moving to a Design Solution

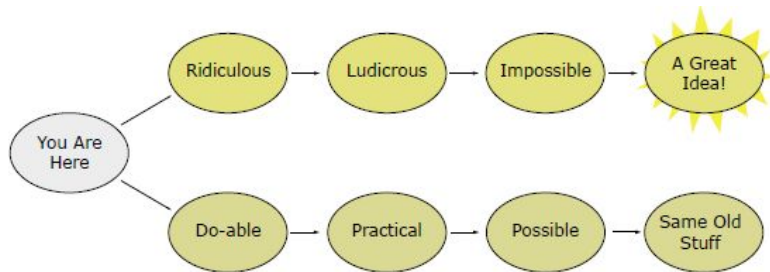


Figure 6.10: Lateral Thinking. Build on the crazy to generate new ideas [from Edward de Bono]

- Brainstorm
  - Meet away from usual workplace (different building, hut in the mountains).
  - Brainstorm with mixed team (engineers, graphic designer, writer, marketing types, usability specialist, one or two representative users).
  - Use plenty of paper. Cover the walls with it!
  - Draw. Scribble. Use lots of coloured pens.
  - Be stupid.
  - Go crazy, build on the insane, think laterally.
  - Three rules during brainstorming:
    - No one is allowed to criticise another's ideas.
    - Programmers must not say it can't be implemented.
    - Graphic designers must not laugh at programmers' drawings.
  - Only after brainstorming, organise ideas and consider their practicality and viability

# Exercise

- Lakukan **usability benchmarking** pada aplikasi tim Anda dengan menjawab pertanyaan berikut:
  - how usable is the competition?
    - Analyse competing products or interfaces
  - how much better should your interface be?
    - Set Usability Targets
  - what is your likely return on investment?
    - Use assumptions

# Exercise

- Continue with your team work on the application
  - Do you have primary and secondary personas?
  - Do you need separate interfaces?
  - Define goals and scenarios for each persona!
  - Design the interface of your app!
    - In your report, mention which approach you took to design the interface, i.e parallel design, brainstorming, etc.
    - Also, did you take surveys on users? What conventions you followed, what design pattern you used?



A large, dark, irregular ink blot with splatters on a white background. The blot is roughly circular but has many jagged, feathered edges and smaller satellite droplets scattered around it, particularly towards the top and right. The color is a deep, slightly mottled black or very dark grey.

# Prototyping



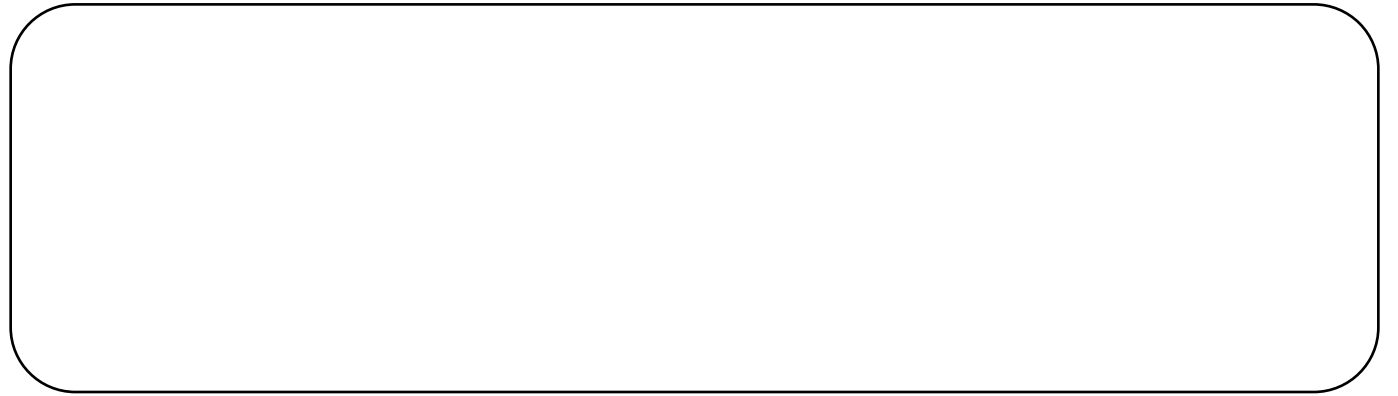
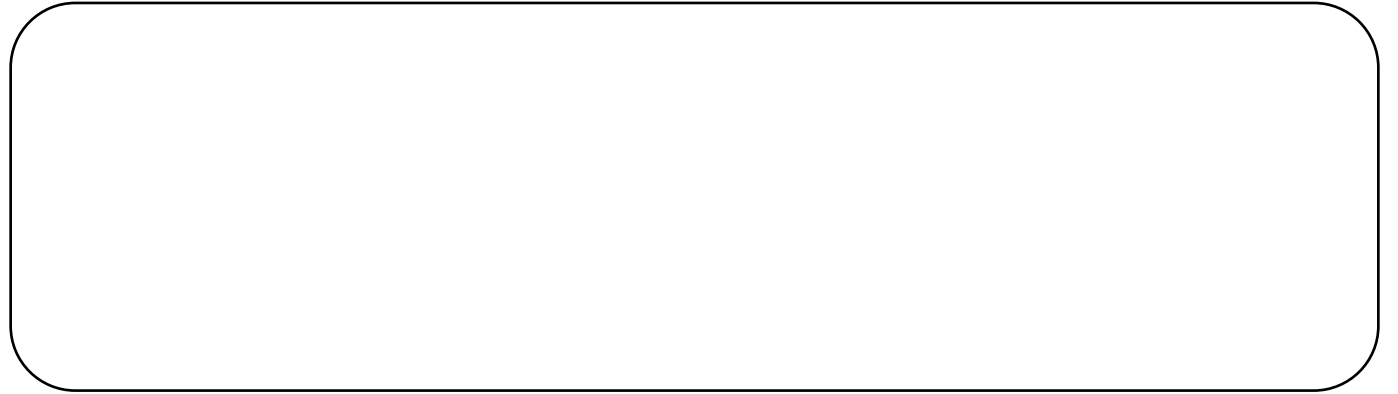
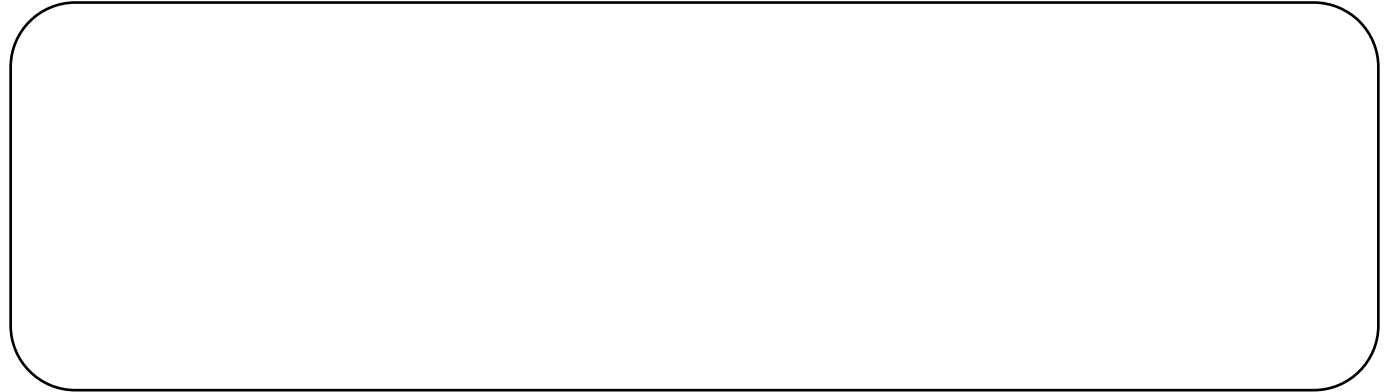
# Prototyping

- Perform usability evaluation and obtain feedback as **early** as possible in the design cycle by building and evaluating prototypes.
- Finally, throw prototypes away and implement final design.

# Types of Prototype

- **Verbal Prototypes:** textual description of choices and results.
- **Paper Prototypes:**
  - Low-Fidelity: hand-drawn sketches.
  - High-Fidelity: more elaborate printouts.
- **Interactive Sketches:** interactive composition of hand-drawn sketches.
- **Working Prototypes:** interactive, skeleton implementation.

# Low-Fidelity Paper Prototypes

A large, empty, light gray rounded rectangular box with a thin black border, intended for a diagram or sketch.A large, empty, light gray rounded rectangular box with a thin black border, intended for a diagram or sketch.A large, empty, light gray rounded rectangular box with a thin black border, intended for a diagram or sketch.

# Low-Fidelity Paper Prototypes

The image shows a hand-drawn low-fidelity paper prototype of a music application interface, laid out on a blue background. The prototype is divided into three main horizontal sections.

**Top Section (Navigation and User Interaction):**

- On the far left is a box labeled "IICM on AIR home".
- Next to it are login fields: "LOGIN" with a text input box, "PASSWORD" with a text input box, and two buttons labeled "NEW USER" and "SUBMIT".
- To the right of the login fields is the text "Status: running".
- Further right are two buttons: "search song" and "request song".
- On the far right of this section are two buttons: "PLAYLIST" and "Song history".
- At the top right corner is a button labeled "uploading Songs".

**Middle Section (Songarchive Header):**

A horizontal bar labeled "Songarchive" contains a table header with the following columns: "#", "Songname", "Duration", "Rating:", "good", "vote!", and "Request".

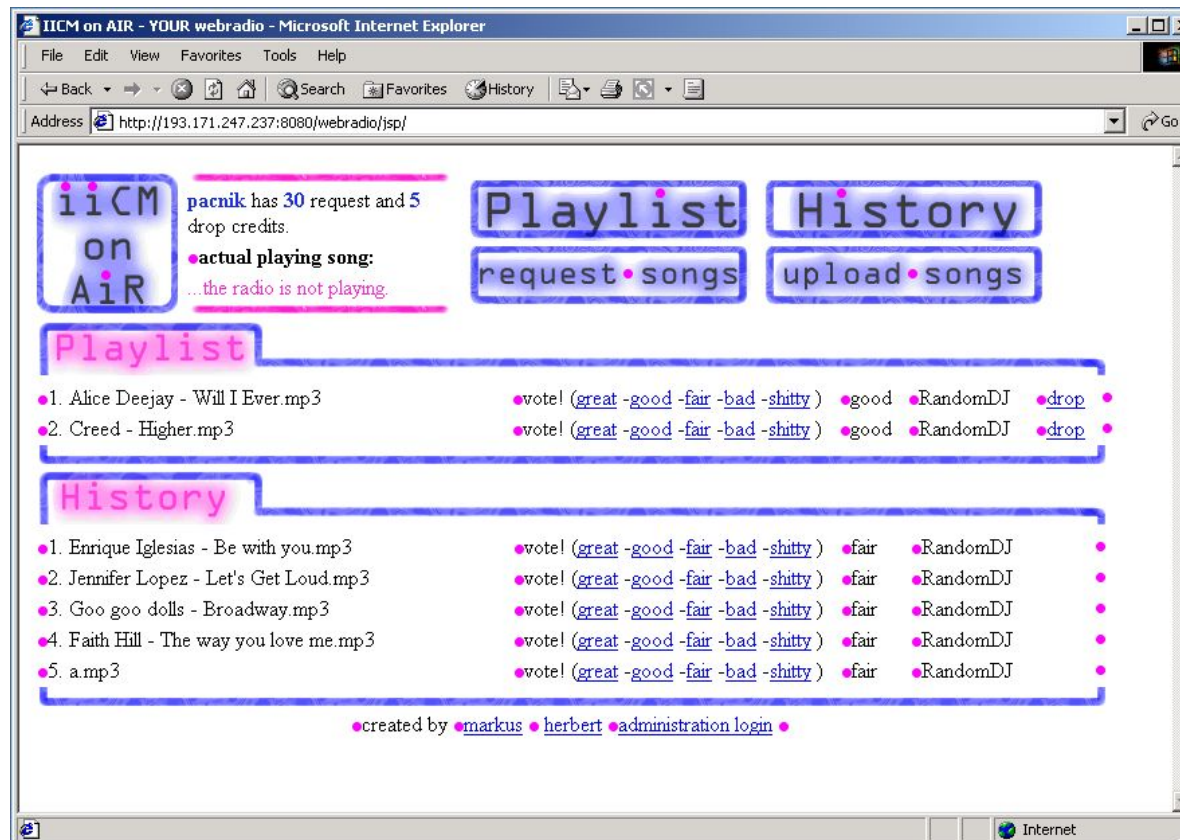
**Bottom Section (Song List Table):**

A table with 5 rows and 7 columns, corresponding to the headers in the middle section. The first column contains numbers 1 through 5, and the last column contains a small icon of a music note.

**Additional Details:**

- Below the "Rating:" header, there is a small dropdown menu with the following options: "great", "good", "fair", "bad", and "shitty".

# Working prototype



# Paper Prototype of Customer Information Terminal

A paper prototype of a customer information terminal for Northumberland Bank. The prototype is a rectangular sheet of paper with a light blue background and a darker blue border. It features several text boxes, input fields, and buttons. At the top, it says "Northumberland Bank". Below that, a instruction box says "Use the keyboard to enter your details pressing ENTER to move to the next line." The first input field is labeled "Amount" and has a placeholder "£" followed by a box for the amount, with a note "(in multiples of £100, up to £10,000)". The second input field is labeled "Desired Period of Repayment" and has a note "(in multiples of 6 months, up to 5 years)". Below these, there is a section for "Loan Protection Cover" with a "Loan Protection Cover" label and two buttons, "YES" and "NO". The next section is "Total repayments will be" followed by "Your monthly repayment is" and "Do you find this acceptable?" with "YES" and "NO" buttons. The final section is "Are the repayments too high?" with "YES" and "NO" buttons. At the bottom right, there are "Back" and "Next" buttons. At the bottom left, there is a "For Help Press Here" button with a question mark icon.

Northumberland Bank

Use the keyboard to enter your details pressing ENTER to move to the next line.

Amount  (in multiples of £100, up to £10,000)

Desired Period of Repayment (in multiples of 6 months, up to 5 years)

Loan Protection Cover

Total repayments will be

Your monthly repayment is

Do you find this acceptable?

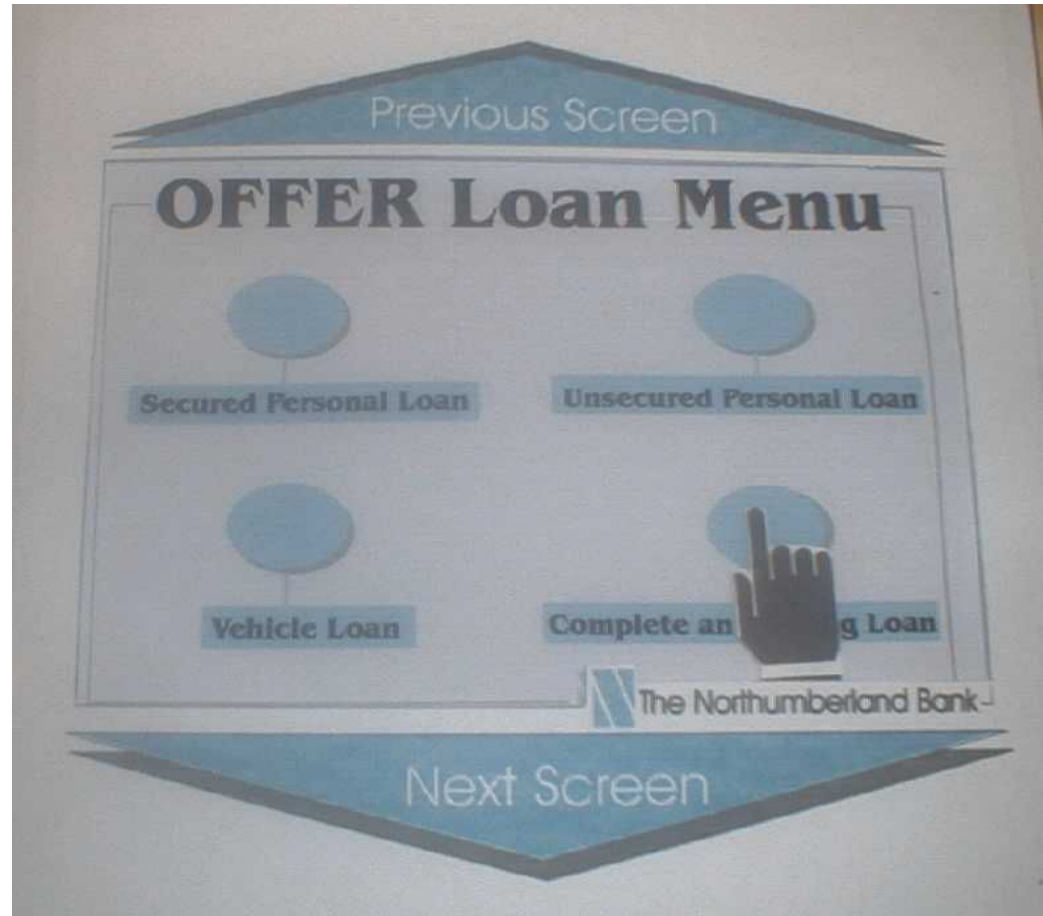
Are the repayments too high?

For Help Press Here

Paper prototype 1 for a customer information terminal



# Paper Prototype of Customer Information Terminal



Paper prototype 2 for a customer information terminal.



# Paper Prototype of Customer Information Terminal

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## CALCULATING LOAN REPAYMENTS

☐ AMOUNT REQUIRED  
(UP TO £10,000 IN UNITS OF £100)

THOUSANDS      HUNDREDS

◀ 10 ▶      ◀ 100 ▶

☐ PERIOD OF REPAYMENTS  
(6 MONTHS OF 5 YEARS IN UNITS OF 6 MONTHS)

YEARS      MONTHS

◀ 1 ▶      ◀ 0 ▶

☐ LOAN PROTECTION INSURANCE?

YES      NO

! CALCULATE

Cost of Total Loan (+ Interest): £

Cost of repayments per month is: £

PROCEED TO APPLICATION

BACK/PREVIOUS

EXIT/LEAVE

Paper prototype 3 for a customer information terminal.

# High-Fidelity Paper Prototypes



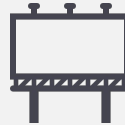
Elaborate screen designs created with drawing editors such as Adobe Illustrator or Corel Draw.



Printed out in colour.



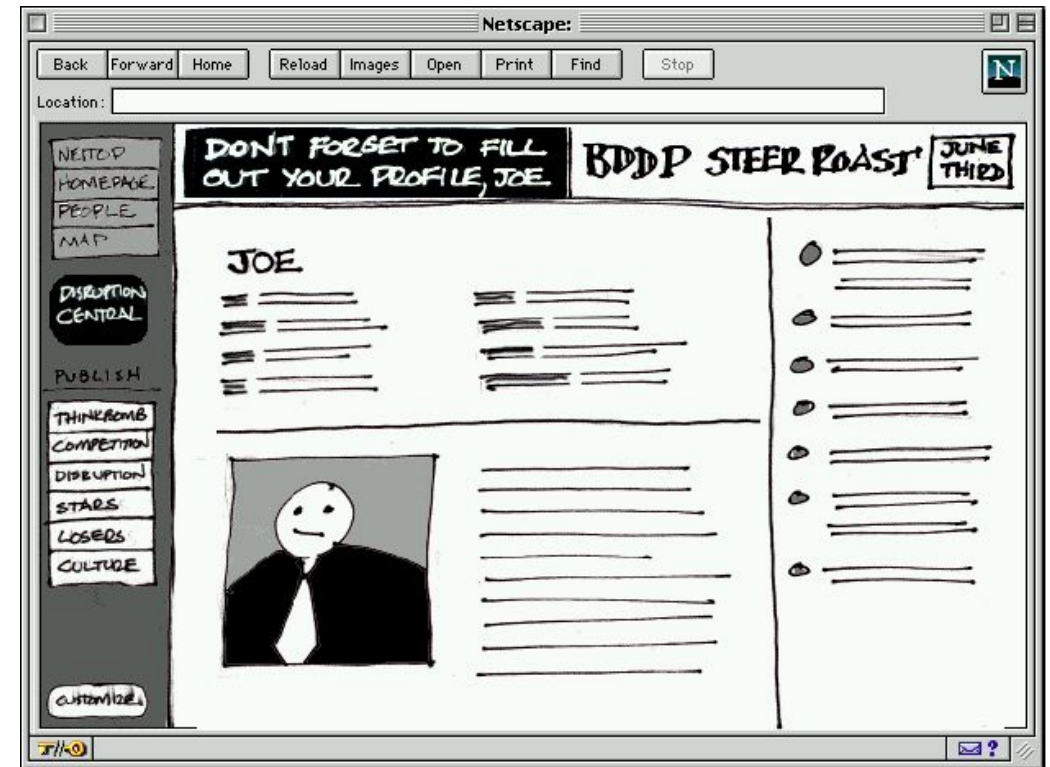
They often look too much like a finished design, and not enough like a prototype.



Users tend to comment on the choice of fonts and colours, rather than the flow through the application.

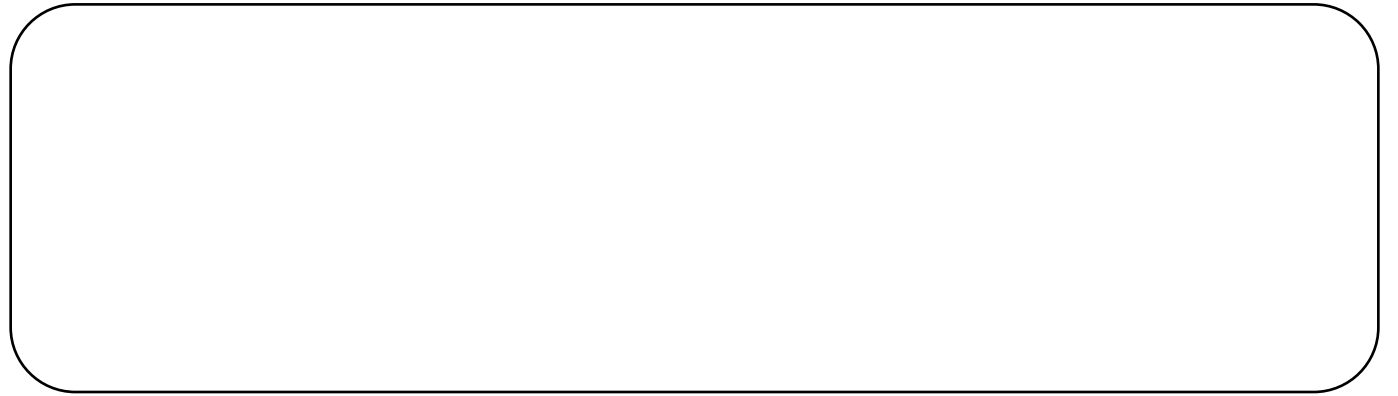
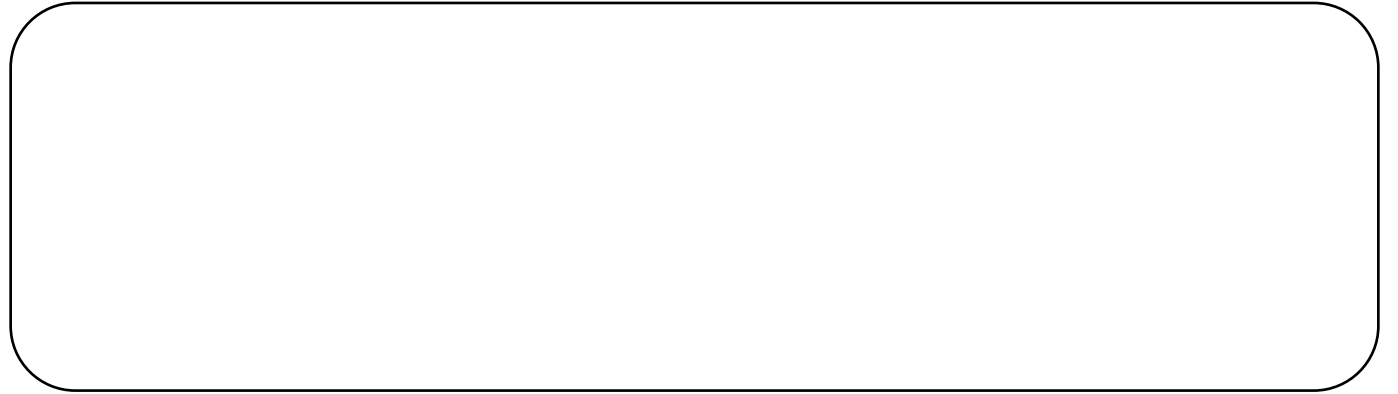
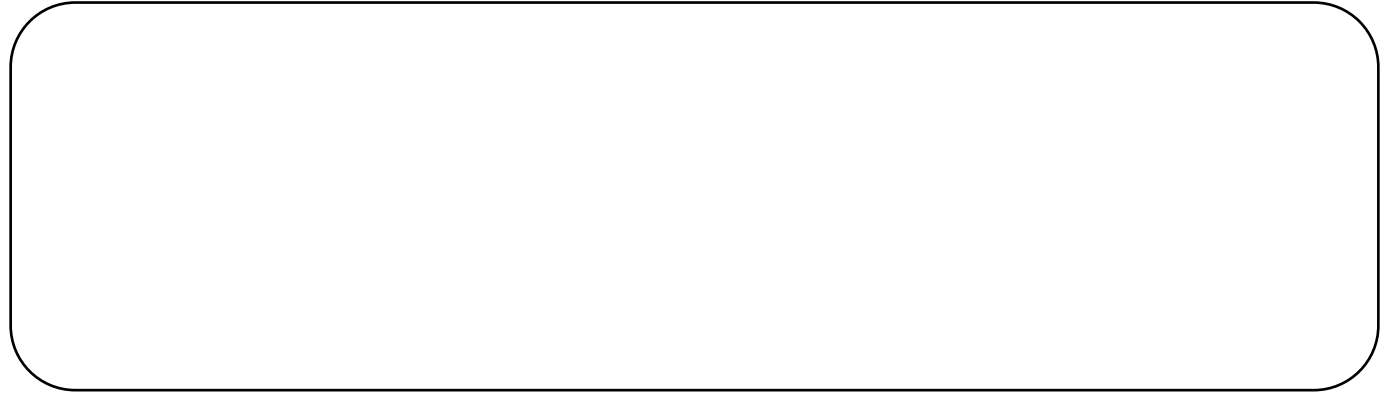
# Interactive Sketches

- Scan in hand-drawn interface sketches.
- Assemble interactive prototype with clickable elements (say with Macromedia Director).
- Retains throwaway, casual look to encourage criticism and discussion



An interactive sketch made in Shockwave. Screen designs sketches are scanned and assembled into an interactive prototype with Macromedia Director.

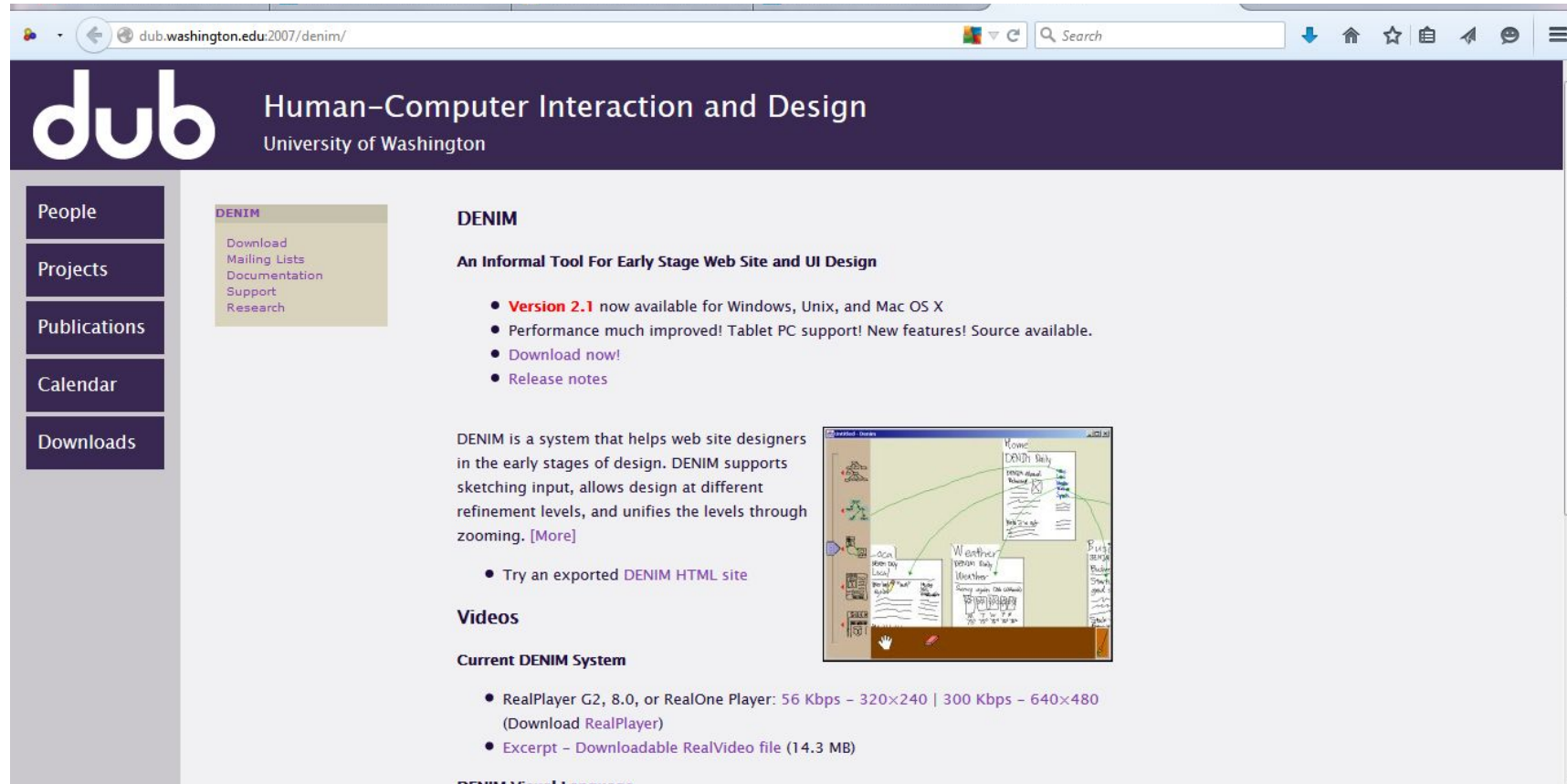
# Working Prototypes

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# Prototyping Tools

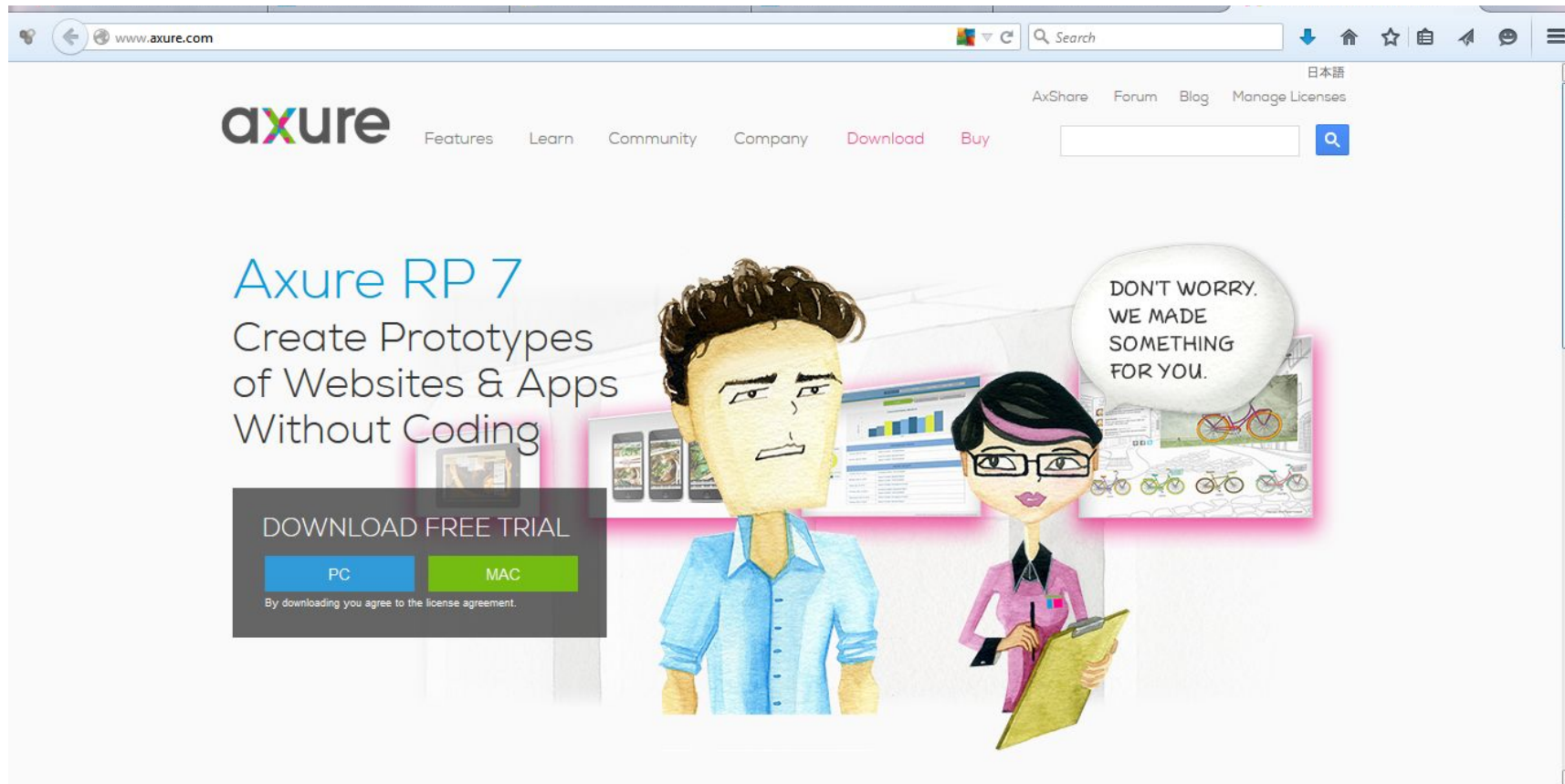
- DENIM
- Axure
- Balsamiq Mockups
- Microsoft Expression
- HotGloo

# Prototyping Tools



<http://dub.washington.edu:2007/denim/>

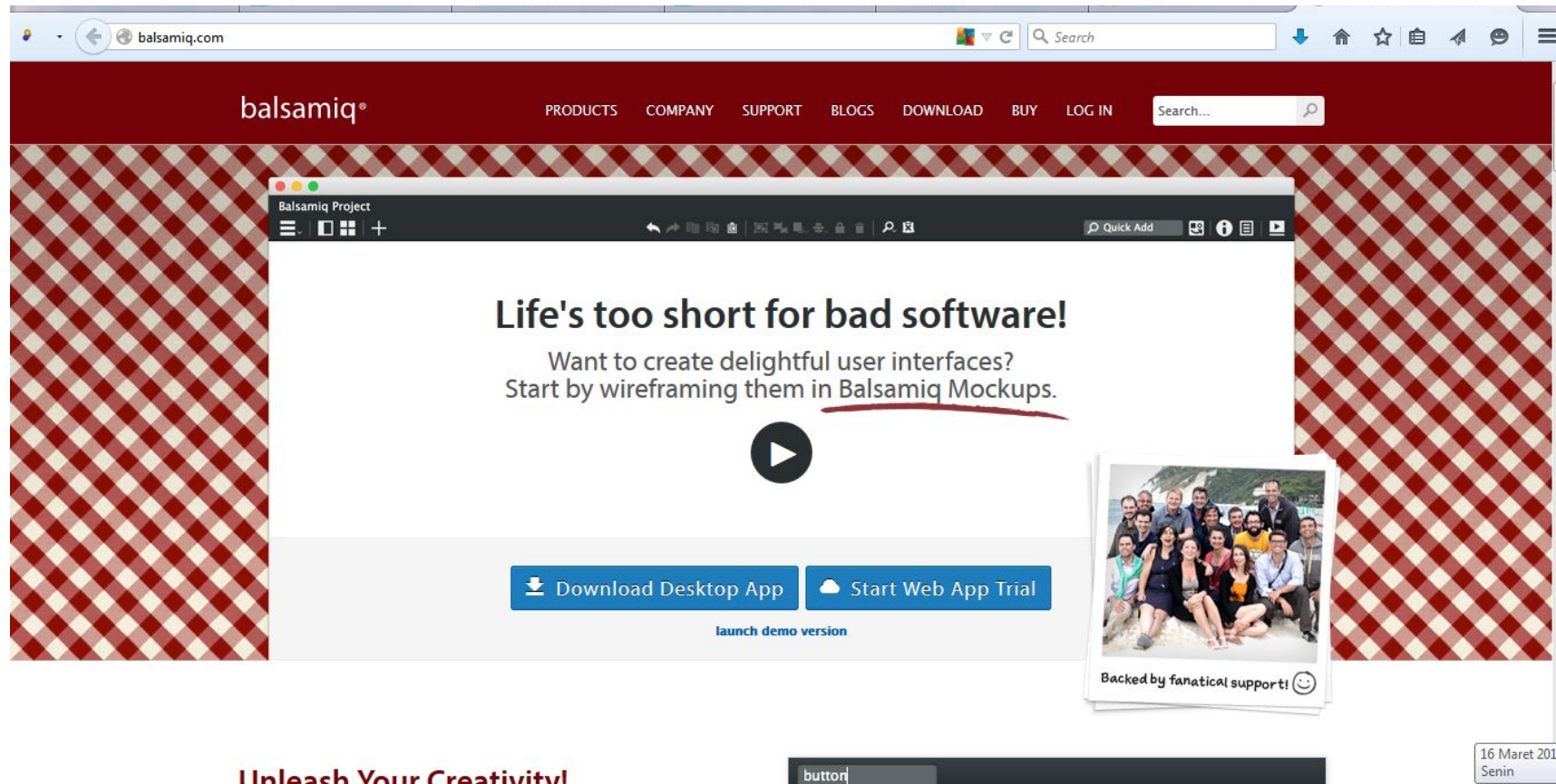
# Prototyping Tools



<http://www.axure.com/>



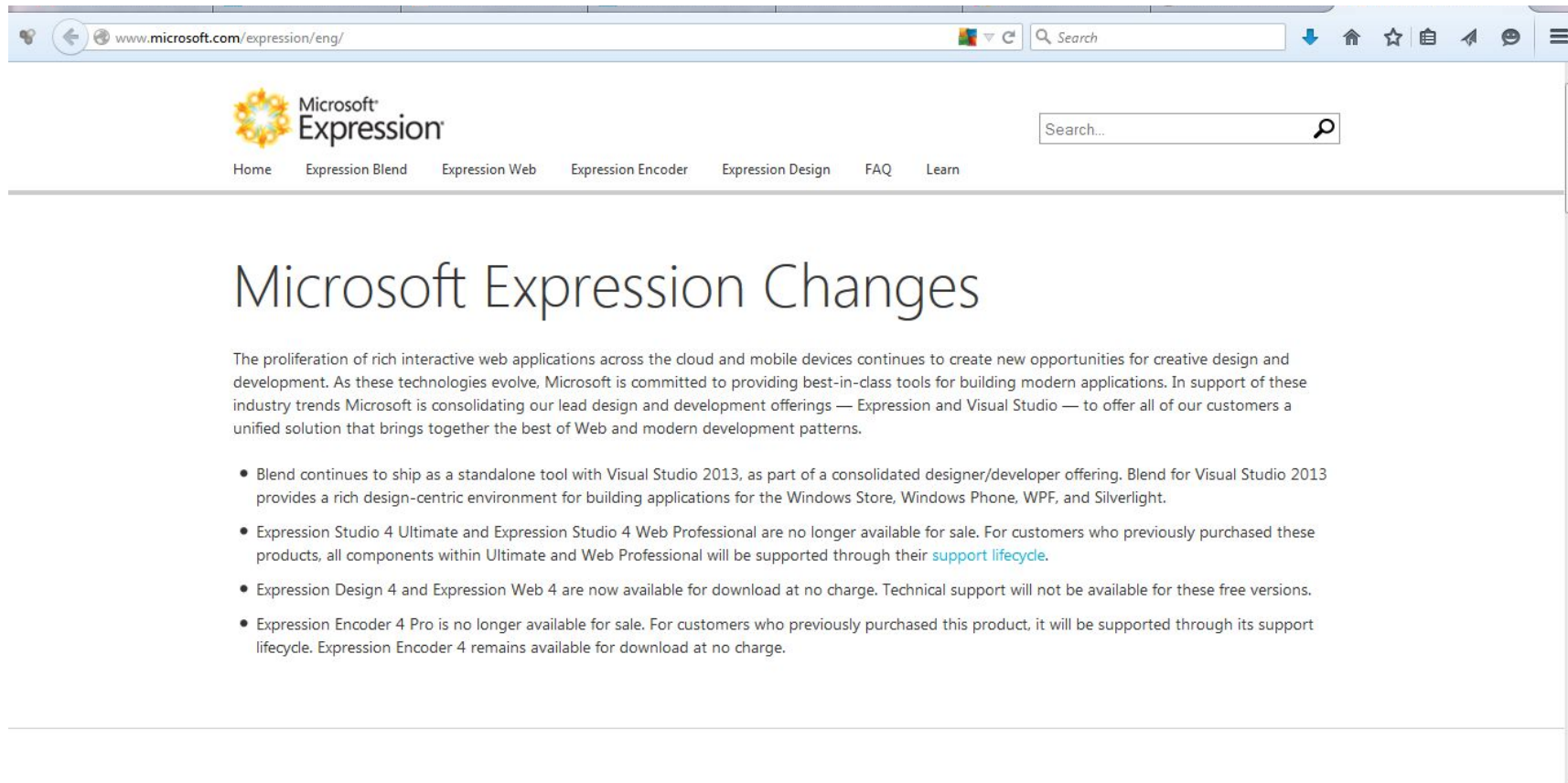
# Prototyping Tools



<http://balsamiq.com/>

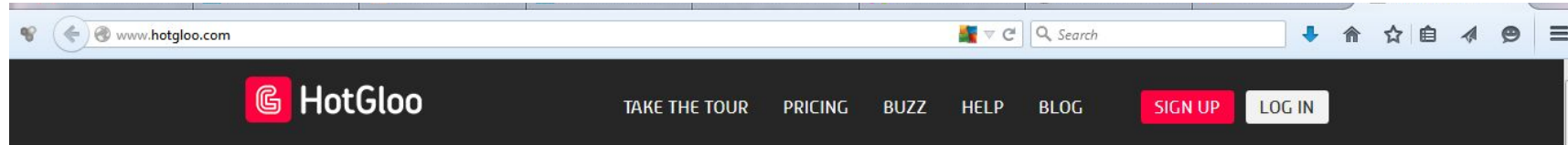


# Prototyping Tools

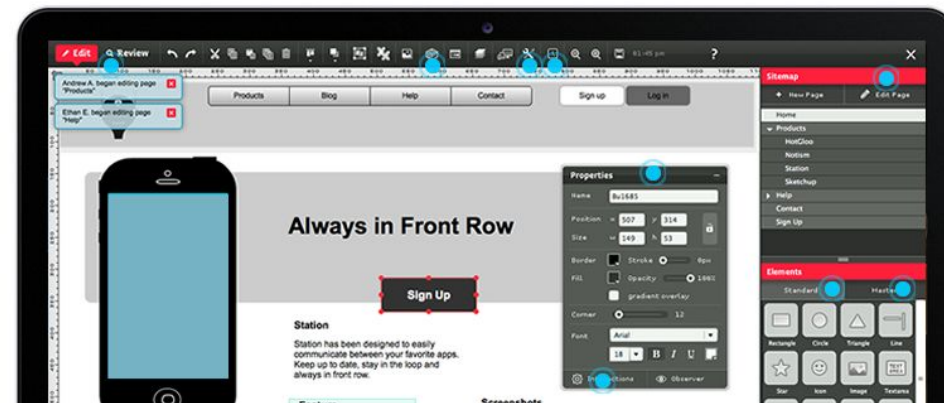


<http://www.microsoft.com/expression/eng/>

# Prototyping Tools



HotGloo combines interactive wireframing  
and collaborative prototyping -  
all in one tool.

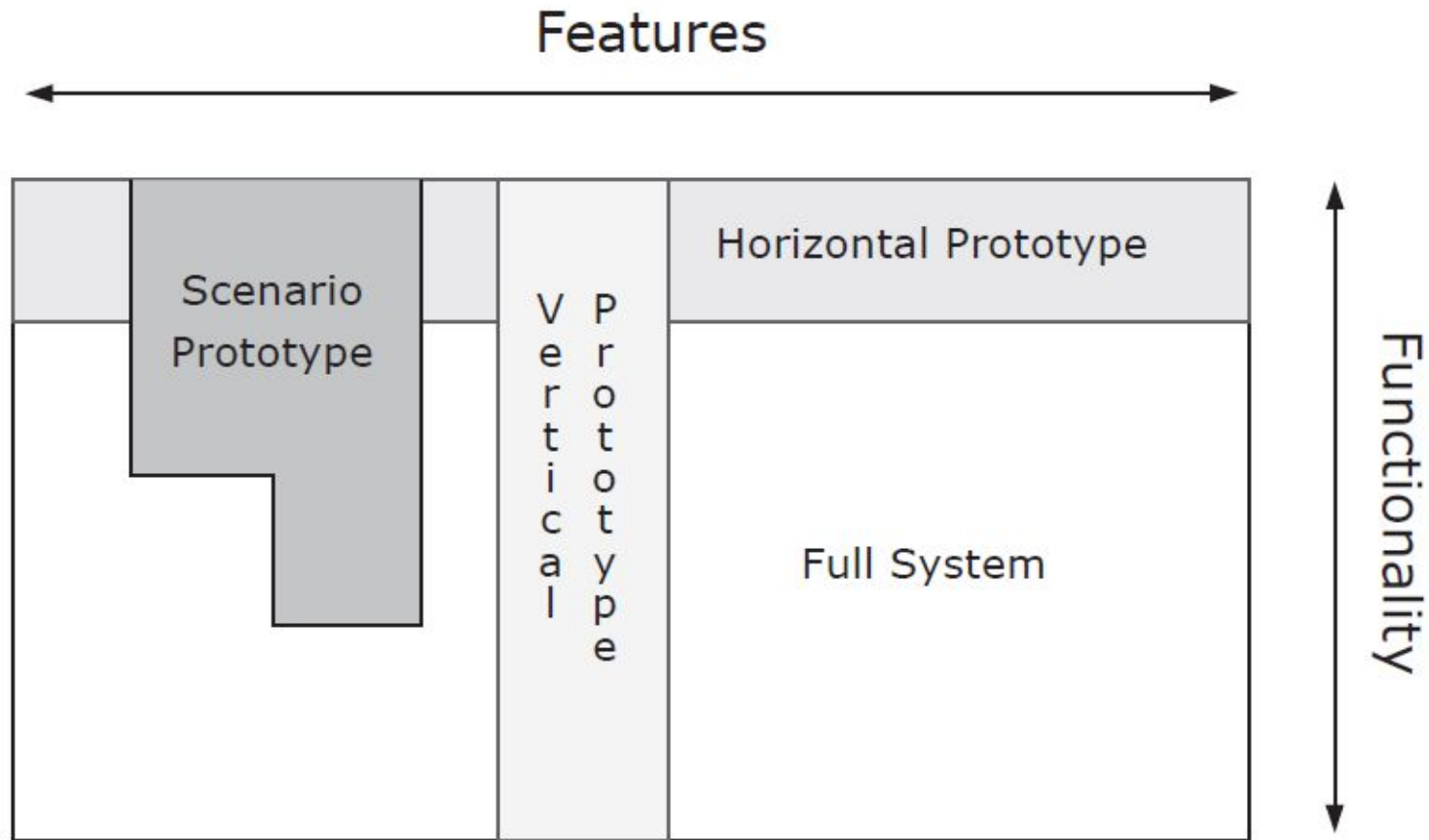


<http://www.hotgloo.com/>

# Dimensions of Working Prototypes

- Working prototypes cut down on either the number of features, or the depth of functionality of features:
  - Vertical Prototype: in-depth functionality for a few selected features.
  - Horizontal Prototype: full interface features, but no underlying functionality.
  - Scenario Prototype: only features and functionality along the specific scenarios or paths through the interface which are to be evaluated.

# Dimensions of Working Prototypes



# Implementation

- Implement final design.
- Competitive analysis of software components:
  - Use existing interface framework as far as possible (Motif, MS-Windows, Java Swing) – saves a lot of work.
  - Use existing components and applications rather than re-inventing the wheel.

# Exercise

- Build an interactive working prototype of your app
  - Choose one prototyping tool to develop the prototype
  - Choose whether it is a vertical, horizontal, or scenario prototype

## Interface Design and Usability Engineering

