

## PART III

Activities and contexts of  
interactive systems design

## PART III

- Chapter 10. Envisionment (??)
- Chapter 11. Prototyping
- Chapter 12. Evaluation

## PART III

- Goal: To .

Chapter 11:

# Prototyping

# Chapter 11

11.1 Different types of prototype

11.2 Prototypes and participatory design

11.3 Different approaches to functionality in prototypes

11.4 Prototyping tools

11.5 Presenting designs

11.6 Envisionment in practice

## Chapter 11 (2)

- Explores the main remaining technique- prototyping and its variations.
- Discuss how to present designs effectively to clients
- Provides examples of how different types of prototypes have supported different types of design project.

# Chapter 11 (3)

- Helps to:
  - Select and use appropriate prototyping techniques
  - Understand the main factors in communicating designs effectively
  - Appreciate the use of different envisionment techniques in human-centred design projects.

## 11.1 Different types of prototype

- (Definition) Prototype= a concrete but partial representation or implementation of a system design.
- (Application) Prototypes are used extensively in most design and construction domains. May be:
  - ⇒ to demonstrate a concept in an early design
  - ⇒ to test details of that concept at a latest stage
  - ⇒ sometimes as a specification for the final product.

## 11.1 Different types of prototype (2)

- (Materials)
  - May be made of :
    - Something simple: paper, cardboard
    - Other suitable materials
  - May be developed using a sophisticated software package

## 11.1 Different types of prototype (3)

- In our domain of interactive system design, representations discussed in the previous chapter (screen sketches) and simply early prototypes blend into each other.
- But the main distinguishing characteristic of a prototype is interactive.
  - Something happens when the user “presses” the “button” – even if the button is drawn on the paper, and the action consists of a menu on a post-it note being added by designer.

## 11.1 Different types of prototype (4)

- The appropriateness of a prototype depends on a number of factors:
  - Whom the prototype is aimed at,
  - The stage of the process
  - Which features the designer is looking for to explore.

## 11.1 Different types of prototype (5)

- For the design team:
  - Representations like navigation maps
  - PACT statements
- may be meaningful
- But for clients and end-users:
  - Some form of prototype is crucial for capturing the outcomes of the envisioning techniques

# 11.1 Different types of prototype (6)

- Prototypes might seek to highlight :
  - Just the interface, or
  - Some crucial aspect of the functionality
- Prototypes are first and foremost a way of involving people and clients in evaluating your design idea.
- 2 mains kinds of prototyping:
  - Low fidelity (lo-fi)
  - High fidelity (hi-fi)

## 11.1 Different types of prototype – Hi-fi prototypes (7)

- Similar in look and feel, if not necessary in functionality, to the anticipated final product.
- Produced in software, whether:
  - In the development environment which be used for implementation, or
  - In packages which will allow interactive effects to be mock-up easily.

# 11.1 Different types of prototype - Hi-fi prototypes (8)

- Features:

- It is useful for detailed evaluation of the main design elements (content, visuals, interactivity, functionality and media)
  - ⇒ Hi-fi prototypes can be used in usability studies
- It often constitutes a crucial stage in client acceptance-as a kind of final design document which the client must agree to before the final implementation.
- It is generally developed fairly well into the project when ideas are beginning to firm up, unless there is some issue that needs to be resolved before any other work can proceed.

## 11.1 Different types of prototype -Hi-fi prototypes (9)

- **Problem** with developing hi-prototypes:
  1. People believe them !

⇒ Dangerous: If the designer has not checked details and thought through ideas clearly beforehand.

    - A simple error can ruin a prototype, because clients or potential users will get confused.
    - For hi-fi prototyping, accurate detail is vital.

## 11.1 Different types of prototype - Hi-fi prototypes (10)

2. Hi-fi prototyping suggest such a system can be implemented: Impossible to implement:
  - some effects that were prototyped,
  - A video made
3. Inevitably, a certain degree of effort and time is consumed in producing the prototype.
  - In the eventual development environment, developers can be understandably reluctant to discard work on features rejected in exploring the prototype.

# 11.1 Different types of prototype - Lo-fi prototypes (11)

- Lo-fi prototypes= paper prototypes
- Having the features:
  1. They are more focused on the broad underlying design ideas:
    - Content
    - Form and structure
    - "Tone" of the design
    - Key functionality requirements
    - Navigational structure

## 11.1 Different types of prototype - Lo-fi prototypes (12)

2. They are designed to be produced quickly, and thrown away as quickly
3. They capture very early design thinking and should aid, not hinder, the process of generating and evaluating many possible design solutions.