

EBU5305

Interactive Media Design and Production

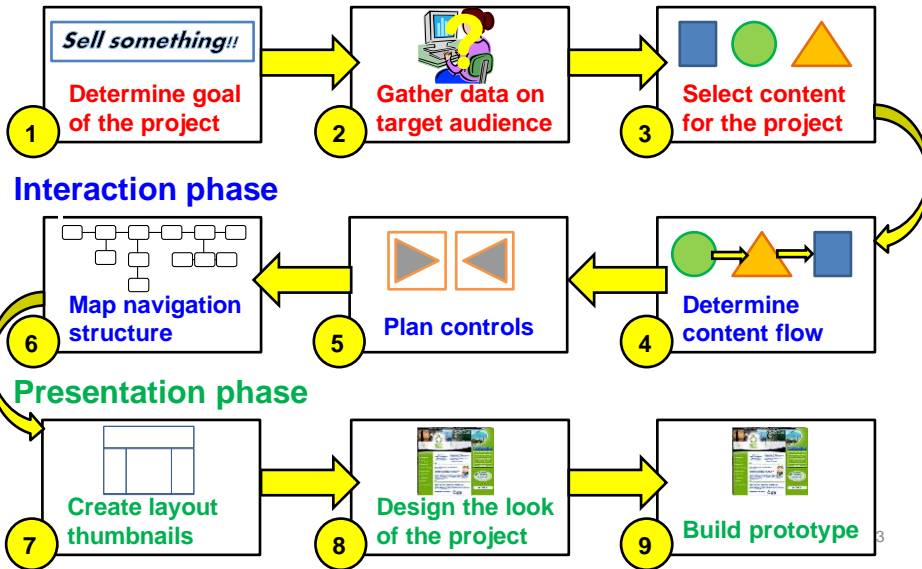
User Requirements

Agenda

- What is “User Requirements”?
- Techniques for Gathering User Requirements
- End user profiling
- Need for usability

Multimedia Project Design Process

Information phase



The information phase



1. Determining the **purpose** of the site / application
 - What is the site supposed to do?
2. Determining **who** will be using the application
 - Know your audience!
3. Determining the **content** of the application
 - What information will be given?



Let's say that:

- ▶ The goal of your interactive media application is to promote the QM/BUPT joint programme
- ▶ Users should be led to download an application form and leave their contact details.

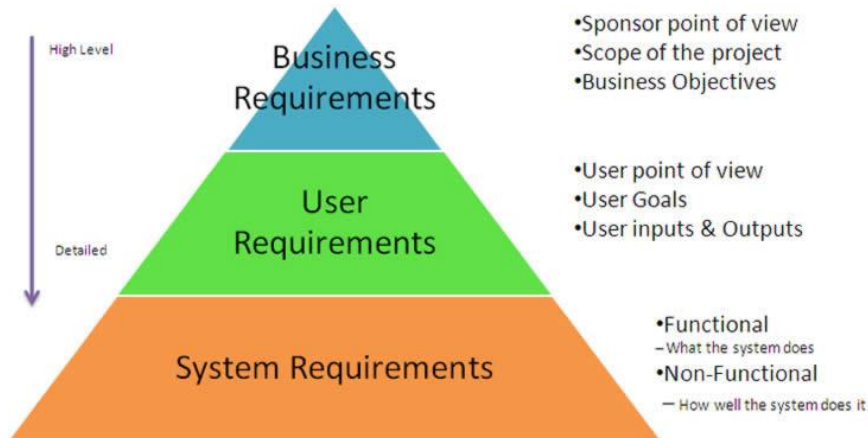
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- ▶ The second step is to determine who will be using the application or website.
- ▶ This is called **User Requirements**

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Business, User and System Requirements



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User Requirements / System Requirements

USER AND SYSTEM REQUIREMENTS

User Requirements



- Written for customers
- often in natural language, no technical details

System requirements

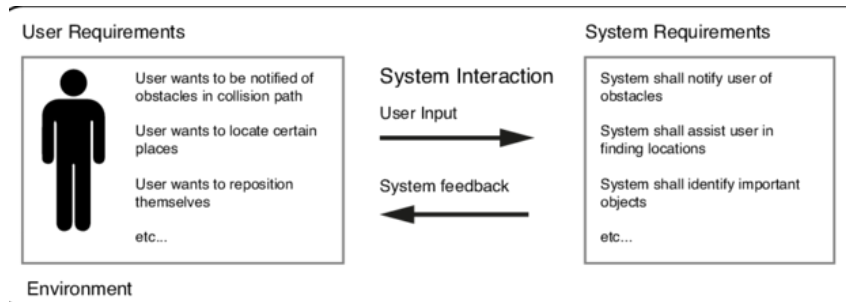


- Written for developers
- detailed functional and non-functional requirements
- clearly and more rigorously specified



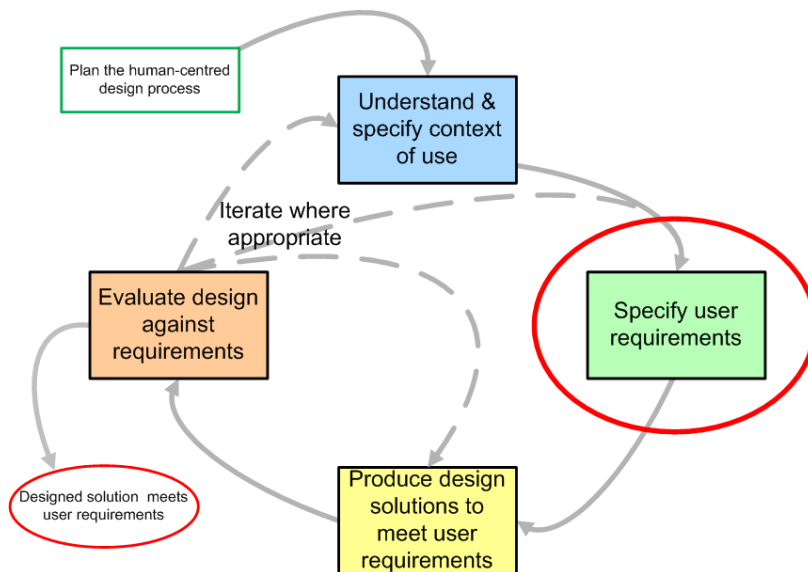
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User Requirements / System Requirements



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User Requirements: where do they fit?



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The Requirements Analyst

◆ Plays an essential communication role

- talks to users: application domain
- talks to developers: technical domain
- translates user requirements into functional requirements and quality goals

◆ Needs many capabilities

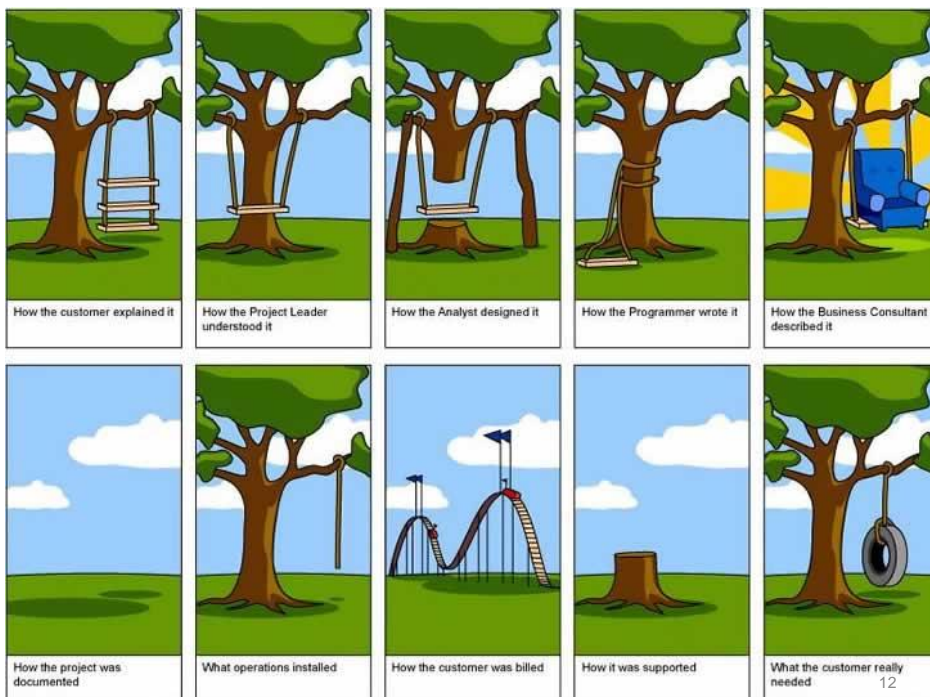
- interviewing and listening skills
- facilitation and interpersonal skills
- writing and modeling skills
- organizational ability

◆ RE is more than just modeling... This is a social activity!

Karl Wiegert – *In Search of Excellent Requirements*



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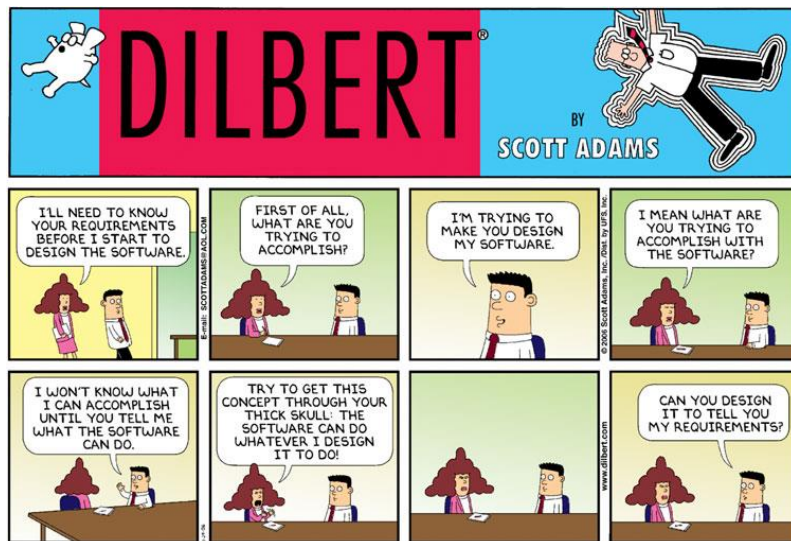


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Getting Requirements from Users



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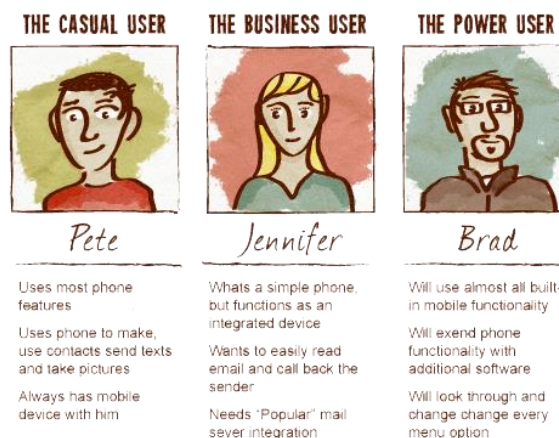
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Techniques for Gathering User Requirements

- One-to-one interviews
- Group interviews
- Questionnaires
- Following people around (Observation)
- Persona and Use cases
- Brainstorming
- Analysing existing systems

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Persona



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End User Profiling



- What is End User Profiling?

Building a profile of the final users of the system in terms of age, gender, socio economic background, (dis)abilities, knowledge, skill set, frequency, interest and any other relevant information.

- Why Use it?

If your interface/website/object has multiple audiences profiling will reveal potential clashes of interest

e.g. Educational website when viewed by parents, teachers and children will have to cater for each groups' different perspectives. You have a place from which to start making decisions/trade-offs

End User Profiling

- Compile a list of qualities your users have. Are they:
 - Expert / intermediate / novice users?
 - old / young
 - frequent or intermittent users?
 - abled / disabled
 - skilled / unskilled
 - attentive / easily distracted
 - educated / uneducated
 - foreign / native
 - homogeneous / heterogeneous
 - and any other relevant information

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Exercise

- ▶ You are commissioned to design an interactive guide to promote the QM/BUPT Joint Programme (JP)
- ▶ In small groups of two or three, address the following issues:
 - Who are the anticipated end users of the interactive guide?
 - Who are the students on the JP? Are they the same people?
 - What sort of situations are they likely to encounter on the JP?
 - What are their expectations?
 - Are there any cultural issues?
 - Is there a dominant group that the guide should target and if so why?
- Build a user profile

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- ▶ You should also give some thought about how the targeted audience will access the information (on line, DVD, etc.)
- ▶ You should think about the environment where the intended audience will use the application (large screen, individual PC, tablet, phone, etc.)

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Need for Usability



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Usability

- Much of what we have discussed about design is concerned with making systems more usable.
- Usability can be defined as follows:
 - Usability is the study of the **ease** with which people can employ a particular tool or other human-made object in order to **achieve a particular goal**.
 - for example, in human-computer interaction and computer science, usability studies the clarity with which the interaction with a computer program or a web site (web usability) is designed.
- The primary notion of usability is that an object designed with a generalized users' psychology and physiology in mind is, for example:
 - **More efficient to use** — it takes less time to accomplish a particular task
 - **Easier to learn** — operation can be learned by observing the object
 - **More satisfying to use**

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10 Usability heuristics

- **Meet expectations**
 - (H2) Match the real world
 - (H4) Consistency & standards
 - (H10) Help & documentation
- **User is boss**
 - (H1) Visibility of system status
 - (H3) User control & freedom
 - (H7) Flexibility & efficiency
- **Errors**
 - (H5) Error prevention
 - (H6) Recognition, not recall
 - (H9) Error reporting, diagnosis, and recovery
- **Keep it simple**
 - (H8) Aesthetic & minimalist design

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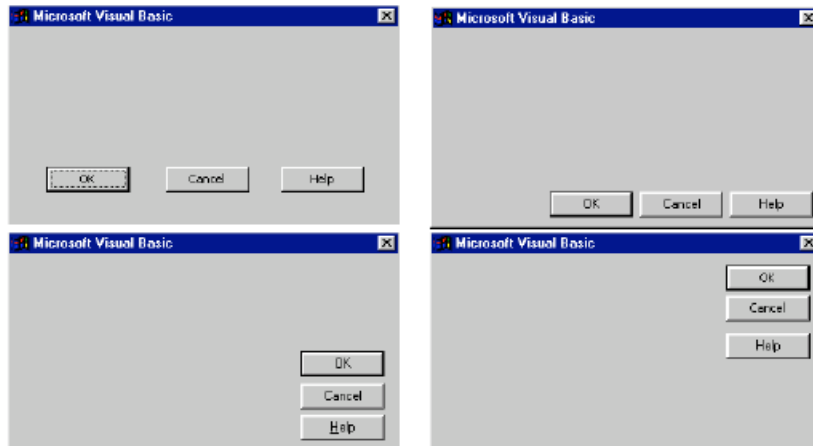
Match the real world

- speak the users' language
- follow real world conventions

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Consistency and standards

- consistency within **and between applications**

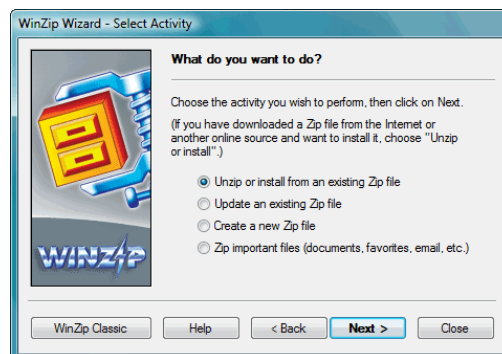


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User control and freedom

- ▶ “exits” for mistaken choices, undo, redo
- ▶ don’t force down fixed paths

- ▶ *Exception: e.g. Wizards*
 - must respond to question before going to the next (forced down fixed path)
 - OK for infrequent tasks
 - e.g. modem configuration
 - not so good for common tasks
 - Good for beginners



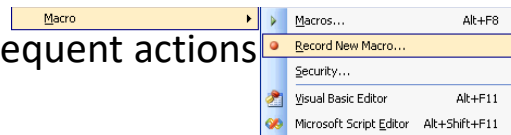
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Flexibility for efficient use

- accelerators for experts
– *e.g. keyboard shortcuts*



- allow users to tailor frequent actions
– *e.g. macro commands*



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Error prevention

- *e.g. if PIN is 4 digits, only allow 4 numeric characters to be entered*

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Aesthetic and minimalist design

- e.g. no irrelevant information in dialogues

Form Title -- (appears above URL in most browsers and is used by WWW search)		Background Color:
Q&D Software Development Order Desk		FFFFB0
Form Heading -- (appears at top of Web page in bold type)		Text Color:
Q&D Software Development Order Desk		000080
<input checked="" type="checkbox"/> Center		Background Graphic
E-Mail responses to (will not appear on)	Alternate (for mailto forms only)	
dversch@q-d.com		
Text to appear in Submit button	Text to appear in Reset button	
Send Order	Clear Form	
<input type="radio"/> Mailto <input checked="" type="radio"/> CGI		
Scrolling Status Bar Message (max length = 200 characters)		
WebMania 1.5b with Image Map Wizard is here!		
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Summary

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- Techniques for Gathering User Requirements
- End user profiling
- Need for usability