

Computer Based Interviewing for the FRR Project

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Standalone CBI and
Virtual reality CBI : Kenny Morrison



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FRR Project – Dundee’s Role Provide computer based tools, as required, that could be used in the requirements and information gathering process

- Questions about health and mobility
- Explore the difficulties that might be experienced with various types of 'normal' toilets
- Ask opinions about new design features

Features of computer based interviewing

CBI has a 30 year history

Previously had been found to produce more complete and more honest answers when the subject matter is embarrassing

Collects information directly into a computer, for future analysis

Can be delivered using the internet

Computer Based Interviews (CBI's)

Web text-based questionnaire created

Web-based authoring and translation tool created
- enabled partners to construct interviews and produce translations in their own language

Graphics produced by Landmark Designs were incorporated into a second web CBI (and standalone CBI)

The usefulness of CBIs for the FRR project purposes, and also the acceptability of using graphics to show toilet use were tested with two focus groups

User Questionnaire

Instructions

Please try to imagine an ordinary toilet. What kind of difficulties do you experience when using an ordinary toilet? (If you have adapted the toilet in your private home please try to imagine a public toilet).

The toilet is too small?

- 1. Always
- 2. Often
- 3. Sometimes
- 4. Never
- 5. Don't know

Web-based Authoring Tool

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[Generic](#)
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Please complete with your chosen questions

Question 1:	<input type="text"/>
Question 1 Possible Answer 1:	<input type="text"/>
Question 1 Possible Answer 2:	<input type="text"/>
Question 1 Possible Answer 3:	<input type="text"/>
Question 1 Possible Answer 4:	<input type="text"/>
Question 1 Possible Answer 5:	<input type="text"/>

Translation Tool

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Please translate the chosen Master Questionnaire Template.

Questionnaire Name: CBI_1

Language:

English Intro:

1. Please try to imagine an ordinary toilet. What kind of difficulties do you experience when using an ordinary toilet? (If you have adapted the toilet in your private home please try to imagine a public toilet).

Intro:

English Question 1: The toilet is too small?

Question 1:

English Answer 1: Always

Possible Answer 1:

Adding graphics to an interview

Graphics produced by Landmark Designs were incorporated into a second CBI

User Questionnaire

Instructions

Male Users - Interview regarding body posture and cleaning habits

What position resembles most your own position while urinating?



1. standing with legs and feet apart



2. standing while finding support with one hand



3. sitting with legs and feet apart, arm(s) resting on legs

Results of focus group discussions

No reluctance to make use of a computer based interview

Graphics were a positive addition to a CBI on this subject – the use of humorous pictures was recommended as a way of making embarrassing material more comfortable to discuss

The graphics of toilet user were acceptable and appropriate

This groups preferred group discussion (especially with friends) rather than individual CBI's

Dundee Project Work

- Standalone Interviews

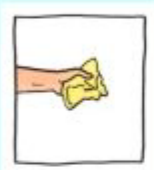
Field work with potential users identified the need for a version of the CBI that could be run in a standalone format – no necessary internet connection

A version of the standalone was developed incorporating posture illustrations provided by Landmark designs

Results are stored in a text file on the computer's hard disc.

Female Users - Interview regarding body posture and cleaning habits

5. What means of cleaning do you prefer to use after urinating?



towel or wet (toilet) paper



hand shower or bidet



dry (toilet) paper

other



water from bottle or cup



Female Users - Interview regarding body posture and cleaning habits

Thank you for completing the questionnaire.

If you wish to make comments on the questionnaire or give feedback, please comment in the text box below.

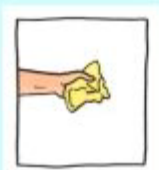
Please save your answers and comments by clicking on this button

**Save Answers and
Comments**



Γυναίκες Χρήστες που φοράνε συνήθως φούστες - Συνέντευξη σχετικά με τη στάση σώματος και τις συνήθειες υγιεινής

5. Ποιους τρόπους καθαρισμού προτιμάτε να χρησιμοποιείτε μετά από την ούρηση;



πετσέτα ή βρεγμένο χαρτί υγείας



χειροκίνητο ντους ή μιντέ



στεγνό χαρτί υγείας

άλλο



νερό από μπουκάλι ή κύπελλο



Dundee Project Work - Information Gathering and Virtual Reality

Investigation into the feasibility of using Virtual Reality (VR) technologies to support information and requirements gathering

Ideally these technologies should be web-based

The internet makes it easy to demonstrate, distribute and use the interviews

3D and VR based web- technologies becoming more widely available due to:

- increase in bandwidth size and desktop processing power
- availability of broadband networks
- reduction of internet costs

360 degree Virtual Reality Representations

Allow exploration and comment on

- Existing rest room designs
- New ideas produced by the FRR Project

Enable users to explore at will

Womens Restroom at Dundee University Virtual Tour



Your Comments

Name: (optional)
Date: 4.3.2004

In the main room->

Viewer Instructions:

- Click and drag the mouse to move left and right
- While over hotspot, click the mouse or press enter to jump to link.

<http://134.36.35.2/360demo/TowerB2.html>



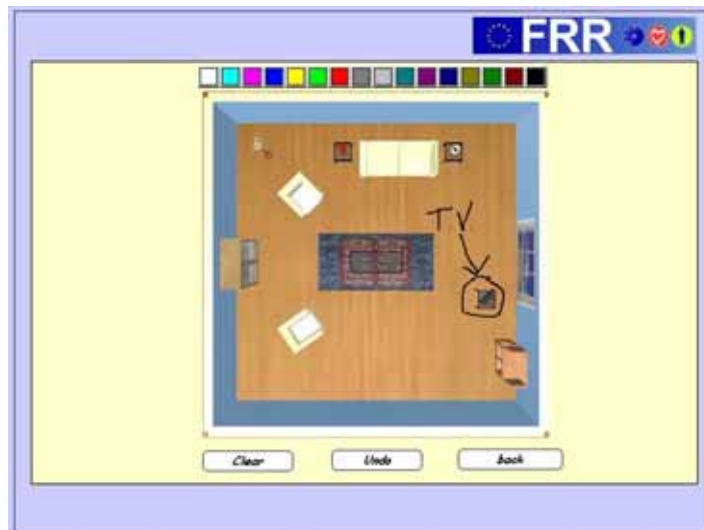
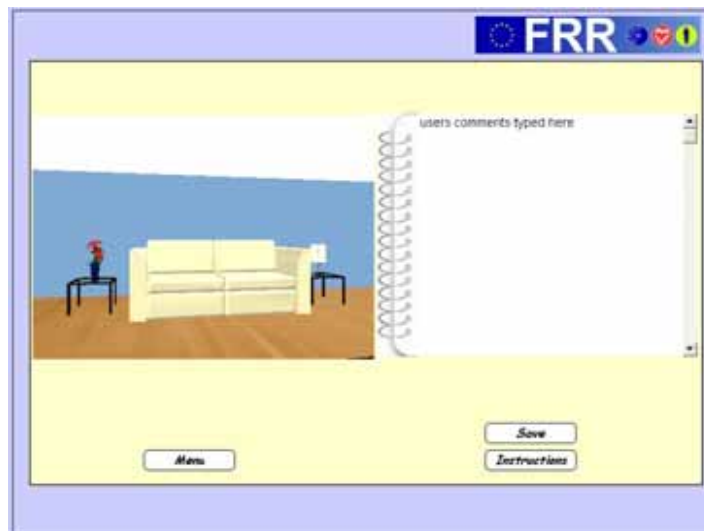
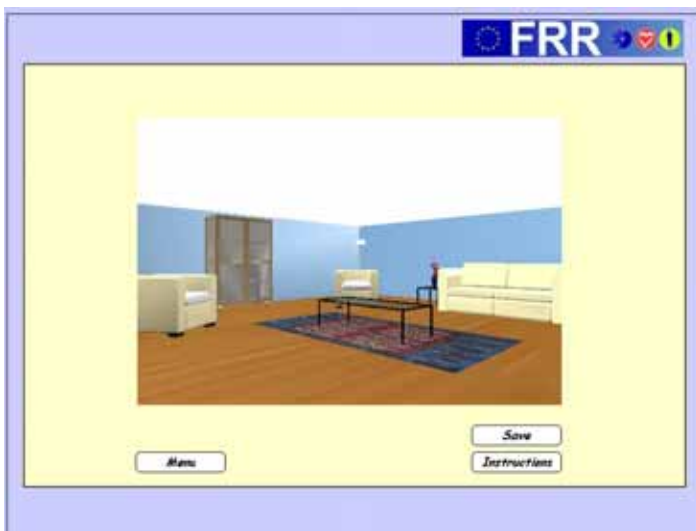
360's created by 'stitching' together a sequence of digital photographs taken by a camera on a tripod in the centre of the scene

3D Virtual Reality Scenes

VR technologies were investigated further as a means of information gathering

Include 3D environments where the user feels more immersed within the environment

Introduced a novel way of obtaining user-feedback
- the user first clicks with the mouse on the desired wall
- comments are then entered by keyboard typing or freehand writing using the mouse



Pilot Study Traditional paper-based interview was compared with the interactive environment

12 users were asked to select one item from the scene that they liked and one item that they didn't like from within the 'living-room' scene.

Users were instructed to record their selections and make some comments about why they liked/didn't like their selected items.

Conclusions Onscreen notepad was deemed to be the most usable and most helpful information gathering tool.

The enjoyment aspect of drawing on the walls of the scene was highlighted

It is not clear whether the ability to draw within the scene would actually benefit information gathering.

Summary Elderly people were generally unworried about talking about toilets and toilet-habits

CBI proved beneficial for gathering and storing data electronically

The feasibility of using web-based virtual reality tools to support information and requirements gathering was also explored throughout the project

- 360 degree panoramic views
- Virtual environments incorporating 3D models

Thank you....