

BAUHAUS UNIVERSITY WEIMAR

MASTER THESIS

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# Comparison of Interactive and Non-Interactive advertisement in public display

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## Abstract

Now a days, public displays are integrating more in urban environment, workplaces, supermarkets, bus/train stations, restaurants and more. These displays are vastly used as an advertising medium. Most advertisers use traditional advertising as their common driving business model, which passersby have no control over their contents, and these displays are often ignored because passersby expect uninteresting display contents, which is known as *display Blindness*. On the other hand, a lot of researche about interactive advertisements in public displays have been going on that have optimism to boost advertisement effectiveness in the form of introducing new experience to passersby with the help of new sensing technologies. But up to my knowledge, no empirical research has been done to compare the effectiveness and behaviors of passersby on interactive and non-interactive advertisement in public displays.

This thesis followed the HCI and usability-engineering methods to choose, design, and develop three advertisements for *Bauhaus-Walk*, which were non-interactive, body interactive and mobile interactive. Each of them was deployed for one week in *Weimar tourist information center*, and then the effectiveness of them were compared in between. Three measures of effectiveness were tested: The number of glances of passersby toward display, The number of *Engaged* passersby and duration of their engagement. Beside that, the user behaviors were observed and among them two main behaviors of passersby were tested, which were the number of *Honeypot effect* and *Landing effect* toward display.

Results indicate that body interactive advertisement increased the attention level, the number of engagements and also the duration of engagement of passersby significantly compared to non-interactive advertisement. And along the effectiveness, the number of *Landing* and *Honeypot* effects were also improved. No one interacted with mobile interactive advertisement, and its attention level, number of engagement and users behaviors were not considerable compared to non-interactive advertisement. Based on the field observations of the display, which was situated at sideway, a new enhanced version of body interactive advertisement was developed to attract passersby from all display angles. The findings indicate that the enhanced body interactive advertisement significantly raised attention level and engagements than the previous body interaction, but both *Landing* and *Honeypot* effects were not remarkable.

I am optimistic that the future of advertising in public is tied with interactive displays. Researchers would use these methods and processes, which were followed in this thesis, to develop innovative interactive advertisement as their leading driving business models.

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## Contents

<b>Abstract</b>	<b>ii</b>
<b>Acknowledgements</b>	<b>iii</b>
<b>1 Advertisement application</b>	<b>1</b>
1.1 Introduction . . . . .	2
1.2 Applications . . . . .	2
1.2.1 Silhouette representation . . . . .	2
1.2.2 Main advertisement application . . . . .	3
1.3 Interaction Design . . . . .	11
1.3.1 Body Interaction Design . . . . .	11
1.3.2 Mobile Interaction Design . . . . .	12
<b>Appendices</b>	<b>21</b>
<b>A Attracting attention</b>	<b>22</b>
A.1 Glance count sheet . . . . .	22
A.2 Interview Questionnaire . . . . .	23
A.3 Interview consent form . . . . .	24
A.4 Interview Color codes . . . . .	25
<b>B Focus Group</b>	<b>26</b>
B.1 First sketch . . . . .	27
B.2 Second sketch . . . . .	28
B.3 Third sketch . . . . .	29
<b>C Low Fidelity</b>	<b>30</b>
C.1 Coded Interviews . . . . .	30

<b>D Heigh Fidelity</b>	<b>31</b>
D.1 Body Interview codes . . . . .	32
D.2 Mobile Interview codes . . . . .	33
D.3 Pariticipant performance . . . . .	34
D.3.1 Body . . . . .	34
D.3.2 Mobile . . . . .	34
<b>E Field Study</b>	<b>35</b>
E.1 Interview Questionnaire . . . . .	36
E.2 Non-Interactive glance count . . . . .	37
E.3 Body Interactive glance count . . . . .	38
E.4 Body Interactive glance count . . . . .	39
E.5 Non-Interactive interview code . . . . .	40
E.6 Body Interactive interview code . . . . .	41
E.7 Mobile Interactive interview code . . . . .	42
E.8 Non-Interactive observation notes . . . . .	43
E.9 Body Interactive observation notes . . . . .	44
E.10 Mobile Interactive observation notes . . . . .	46
<b>F Enhanced body interactive Field Study</b>	<b>47</b>
F.1 Enhanced Interactive advertisement Glance count . . . . .	47
F.2 Enhanced Interactive observation notes . . . . .	48

## List of Figures

1.1	Interface flow . . . . .	4
1.2	Initial Interface . . . . .	4
1.3	Map Interface . . . . .	4
1.4	Enlarged picture . . . . .	5
1.5	Pictures on the map . . . . .	5
1.6	Advertisement video . . . . .	5
1.7	Advertisement video last frame . . . . .	6
1.8	Initial interface . . . . .	7
1.9	. . . . .	7
1.10	Map Interface . . . . .	8
1.11	Initial Interface . . . . .	9
1.12	Transition of interface . . . . .	9
1.13	Map interface . . . . .	10
1.14	Mobile controller . . . . .	10
1.15	Body interaction design. . . . .	11
1.16	Body interaction design. . . . .	13
A.1	Glance count sheet . . . . .	22
A.3	Interview consent form . . . . .	24
A.4	Good Advertisement . . . . .	25
A.5	Bad Advertisement . . . . .	25
B.1	First sketch . . . . .	27
B.2	Second sketch . . . . .	28
B.3	Third sketch . . . . .	29
C.1	Interview codes . . . . .	30

D.1	Body Interview codes . . . . .	32
D.2	Mobile Interview codes . . . . .	33
D.3	Participant's body performance . . . . .	34
D.4	Participant's mobile performance . . . . .	34
E.1	Interview questions for all conditions. . . . .	36
E.2	Non-interactive glance counts . . . . .	37
E.3	Body interactive glance counts . . . . .	38
E.4	Mobile interactive glance counts . . . . .	39
E.5	Non-Interactive interview code . . . . .	40
E.6	Body Interactive interview code . . . . .	41
E.7	Mobile Interactive interview code . . . . .	42
E.8	Non-Interactive observation notes . . . . .	43
E.9	Body Interactive observation notes (1) . . . . .	44
E.10	Body Interactive observation notes (2) . . . . .	45
E.11	Mobile Interactive observation notes . . . . .	46
F.1	Enhanced Interactive advertisement Glance count . . . . .	47
F.2	Enhanced Interactive observation notes . . . . .	48

**List of Tables**

1.1 UserMap and application color mapping . . . . .	3
A.2 Questions . . . . .	23

1

**Advertisement application**

## 1.1 Introduction

The use of technology in advertisement plays a major role in advertisement industries. It would have been much difficult to reach to customers without technologies, and technology enhances the two-way communication with the client and the customers. The companies can now easily express their thoughts and vision to their customers with the help of the latest technologies. Advertisements are everywhere, in websites, in your smartphone, in television and radio. Since the last decade, it is more common to see advertisements on the streets, in supermarkets, airports and any place of public gatherings. So, for every context or settings there are different kinds of technology that are being used to make the advertisement more appropriate. When it comes to interactive advertisement, the use of right technology plays another major role in terms of usability and understandability. Interactive advertisements on websites are usually interactive using keyboard and mouse, whereas in smartphone, advertisements use only the capability of the touch or other sensors to make the interaction easy. Interactive advertisements in public spaces have another bunch of technologies that make the interaction usable like using face recognition, body position recognition, hand gesture recognition and also touch sensors, proximity sensors and much more.

This chapter explains all the technical aspects of the advertisements system that were developed during the thesis work for attracting attention and the main advertisement application. It discusses what technologies and hardware have been used and what algorithm and methods were implemented to accomplish the goals. Besides the technical details it describes the interaction design of interactive advertisement.

## 1.2 Applications

### 1.2.1 Silhouette representation

The reason behind silhouette representation of passersby was to attract their attention toward the display. There are a lot of body sensing technologies, and the most easy way was to use Microsoft Kinect camera<sup>1</sup>, that has built-in algorithm to track people. The camera has a resolution of 640x480 pixels. I created the colored silhouette representation from the *UserMap* array sent by the camera, which was a 1xD integer array that corresponds to the pixels of the image. The array looks like below

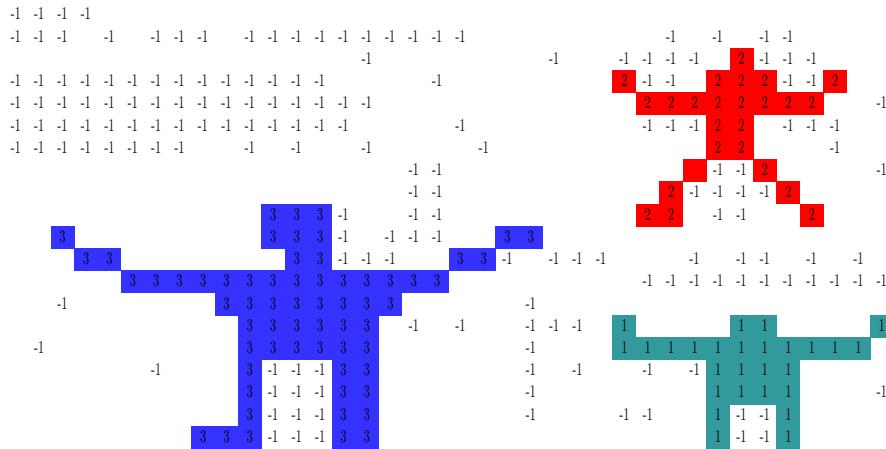
```
Int upix = context.userMap();
upix = [1,1,1,1,1,1,2,2,2,2,2,2,-1,-1,-1,-1,-1,2,2,2,2,...]
```

The above example shows the structure of the array, the index of the elements of the array correspond to the pixel number of image, and the element values correspond to the user ID tracked by the camera. The user ID is always above zero, any value that is not above zero could be related to background or non-user pixel. The example shows that there are at least two people standing in front of the camera, which have user ID (1 and 2), the -1 value is a non-user pixels. So the application iterates to this array and assigns specific color to each of the pixels of the user image, and does not give color to the non-user pixels. After assigning the color value to each user in the picture and leave out the background as null, the below picture will be created.

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<sup>1</sup>Microsoft Kinect: <https://developer.microsoft.com/de-de/windows/kinect>, last accessed 5 jun 2016

TABLE 1.1: UserMap and application color mapping



The above picture has very limited pixels. It is not an original picture but is made to clear the idea of how the coloring of silhouette works. From the above picture, the white areas or the -1 values are background and non-user and the remaining positive numbers represent the pixels related to the user. Check the Silhouette video<sup>2</sup>. For more information about the source codes, please refer to the DVD.

### 1.2.2 Main advertisement application

In this section the main advertisement applications are being discussed. According to the plane there was a need to develop three-advertisement application (non-interactive, body interactive and mobile interactive), which had the same functionality but were different in terms of interactivity and control.

The advertisement application was designed to show important places of *Bauhaus* that are included in *Bauhaus-Walk* tour, the pictures of these places are attached on the Weimar map with a name at top and a small description below of the picture frame. This technique helps participants to build a relationship of the locations and the map. Only five locations are randomly chosen by the software to be shown on the map, each animates one after another and. When all the locations are explored then the advertisement video is played and the application repeats itself again.

#### Non-Interactive application

It can be understood from the name, passersby have no control over the flow of this advertisement, but it triggers automatically. It automates through whole three hierarchical levels of interfaces, (1) Initial interface, (2) Map interface, and (3) the advertisement video interface. All the interfaces have a fixed time in which it will switch from one to another. Watch this Video<sup>3</sup> to see the flow of the interfaces.

<sup>2</sup>Attraction attention method: <https://www.youtube.com/watch?v=1EtHVqS412M>, last accessed 5 jun 2016

<sup>3</sup>Non-interactive advertisement: <https://www.youtube.com/watch?v=zLszzfbZJgI>, last accessed 1 july 2016

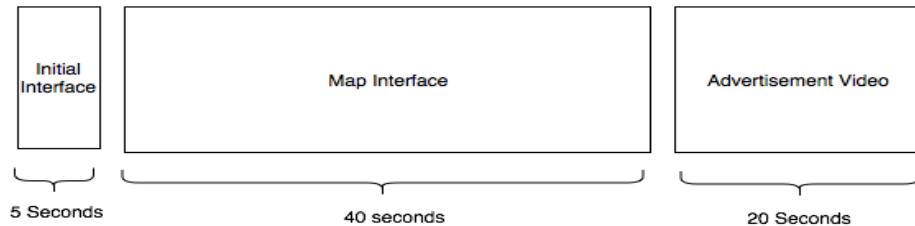


FIGURE 1.1: Interface flow

### 1. Initial Interface:

The initial interface of the advertisement shows the *Gropius walter* room, the *Bauhaus-Walk* name on the upper left side, and the Bauhaus University logo at the bottom right corner.



FIGURE 1.2: Initial Interface

### 2. Map Interface:

This is the city map of Weimar that has some interest regions shown on the top of the map. Those regions are blinking to signal the users.



FIGURE 1.3: Map Interface

The location pictures are animated randomly and they are first enlarged, and then resized back to fit on the map region.



FIGURE 1.4: Enlarged picture

The resized pictures on the map looks like below.



FIGURE 1.5: Pictures on the map

### 3. Advertisement video:

In this interface the video is being played, this picture is a screenshot of one of the frames of the video.



FIGURE 1.6: Advertisement video

This is the last frame of the video that shows information about how and where to join the Bauhaus Walk.



FIGURE 1.7: Advertisement video last frame

The advertisement video was created in PowToon<sup>4</sup> with a free version account, visit this video<sup>5</sup> that shows the advertisement video or browse the animation from the DVD.

To see the full the non-interactive advertisement flow of the interfaces and its animations visit this video<sup>6</sup> or browse the video from DVD.

## Body Interactive application

As discussed earlier, there are three interfaces or phases (initial interface, map interface and advertisement video) of the application, and in body interaction the same interfaces are used, but two of them are interactive. The first two interfaces are interactive and allow participants to interact with using their body like exploring the interest points on the map by moving physically (forward, backward, right and left) in front of the screen. The last interface shows advertisement video, which is not interactive. All the interfaces are explained in the following sections.

### 1. Initial Interface (*Call-to-Action*) :

This interface is basically the same interface as the non-interactive but with a difference. It projects passersby silhouette on the interface, this interface is also called *Call-to-Action* interface because it calls passers-by to interact with the screen. As can be seen in the below picture, there is someone standing in front of the screen and the interface calls him to come near. This interface also has alert messages on the top right corner of screen that alerts the participant if they move away from the camera range. In this example a second person had got untracked from the camera and the system has shown that message to raise his hand to be tracked again.

<sup>4</sup>PowToon: <https://www.powtoon.com/index/?gclid=CJqSqr5180CFesV0wod1u8IEQ&edgetrackerid=10083804111572>, last accessed 5 jun 2016

<sup>5</sup>Advertisement Video: <https://www.youtube.com/watch?v=-y1Dbz6E6bU&feature=youtu.be>, last accessed 5 jun 2016

<sup>6</sup>Non-interactive Ad: <https://www.youtube.com/watch?v=ZLszzfbZJgI>, last accessed: 5 Jun 2016

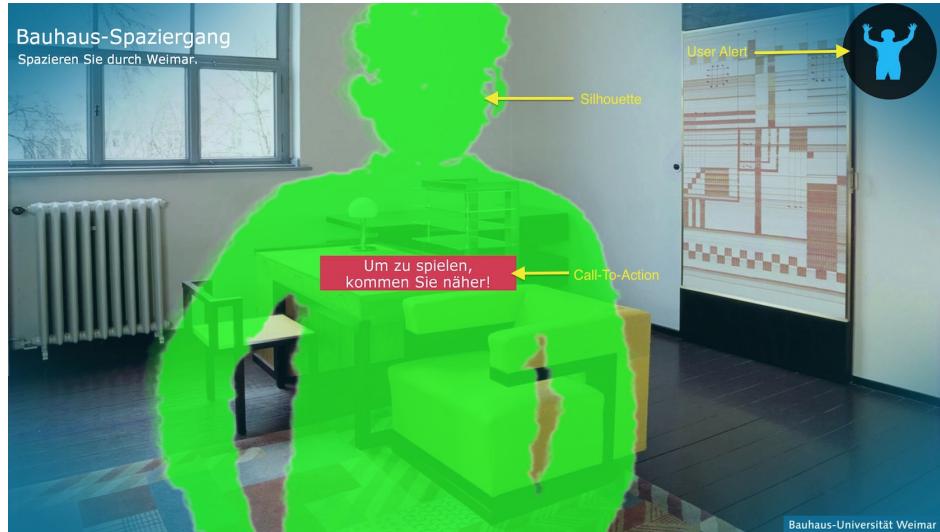


FIGURE 1.8: Initial interface

## 2. Transition to Map Interfaces:

The transition happens when the person stands close to the screen for more than 3 seconds and the processes is as follow.

### (a) Loading animation:

The loading animation is a reaction to the action of the participants, which gives the user a clue that the interaction will be started.

### (b) Scaling down the silhouette:

To walk freely on the map environment and to give the participant the feeling of real walking. The participant's silhouette is scaled down, the scaling happens smoothly frame-by-frame.

### (c) Show task instruction:

Every interaction has instructions, the instruction is fairly very easy and it is simplified in one sentence to explore locations on the map.

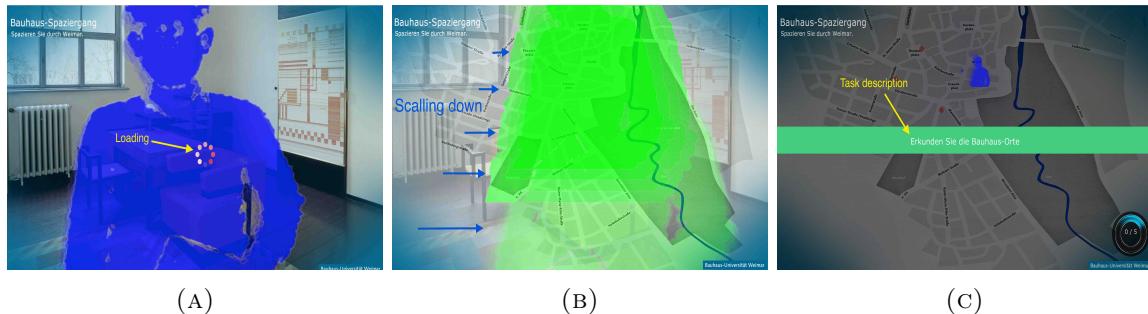


FIGURE 1.9

The picture A shows that the person is close to the screen and the loading of the animation begins. In picture B, the person's silhouette is being scaled down (in this example the silhouette color is green) and in picture C, the instructions are shown.

## 3. Map Interface (Interaction):

In this interface participants can interact with the elements on the map. In the below

picture, the silhouette has visited two locations therefor has 2/5 score, to finish the interaction he needs to visit all the location or the timer(40 seconds) on the corner right will be over.



FIGURE 1.10: Map Interface

#### 4. Advertisement video:

The same advertisement video, which was for non-interactive, is shown after the interaction is completed.

### Mobile Interactive application

In this application, the display interface is absolutely the same as the other two applications; the only different is that a user carries out the interaction with a smartphone. The mobile interaction technique and platform was adapted from the Bauhaus University *MMM Ball*[12, 13] project under Mobile Media Group<sup>7</sup> department.

#### 1. Initial Interface (*Call-to-Action*) :

This interface is designed in such a way to attract passers-by and also guide the participants on how to use their smartphone to access the advertisement application. The attraction is again the same method that was used for the body, the passers-by silhouette is projected at the back of Access information. The interface has a QR code that could be easily scanned instead of typing the whole IP address. There is an alert area that gets activated when a logged in person has not turned their phone in landscape orientation.

<sup>7</sup>Mobile Media Group: <https://www.uni-weimar.de/de/medien/professuren/mobile-media/>, last accessed 5 jun 2016



FIGURE 1.11: Initial Interface

## 2. Transition to Map Interface:

The user should login to the advertisement system, open the interaction controller, hold the mobile in landscape mode and then the following process will be triggered.

### (a) Loading animation:

The loading animation is a reaction to the action of the participants, which gives the user a clue that the interaction will be started.

### (b) Creating Colored cursor:

A colored circle will be created for the participant in the center of the screen; each participant would have different colors matching to their controller interface in their phone.

### (c) Show task instruction:

The instruction is fairly very easy and it is simplified in one sentence to explore locations on the map by using their phone.

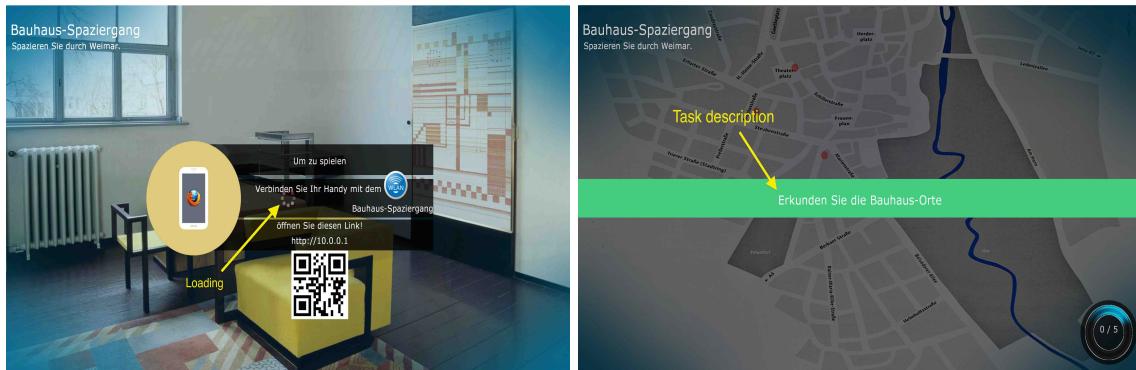


FIGURE 1.12: Transition of interface

In picture (A) a user has logged in and the screen is loading, in picture (B) the task description is shown.

### 3. Map Interface (Interaction):

This interface is where the users interact with the map; participants can navigate using the controller page on their phones. The image 1.13 displays that the user is controlling the cursor and has explored one location. The user's defined login name is also shown on the cursor to provide a hint that he/she is his circle. To reach an interest point a small circle is shown to determine the area of intersection. The interaction finishes when all the locations are explored or the interaction time (40 seconds) gets over.

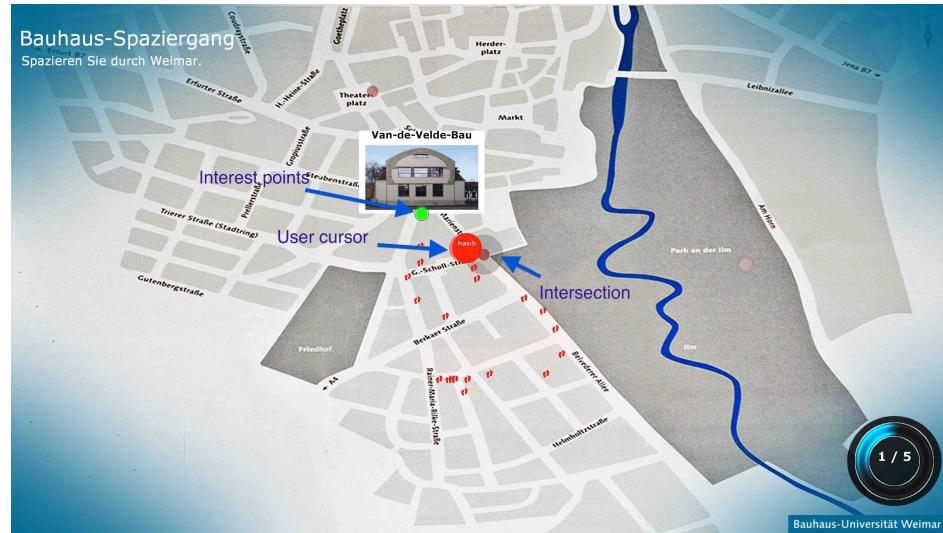


FIGURE 1.13: Map interface

### 4. Advertisement video:

The same advertisement video used for non-interactive is shown after the interaction is completed.

### 5. Mobile interface:

The interaction controller in the smartphone is shown below. The interface is very simply designed and has two elements, the cursor and the select button. With the cursor, the user can navigate inside the map to interest points and on reaching on an interest point the participant presses the select button to explore that location.



FIGURE 1.14: Mobile controller

## 1.3 Interaction Design

The body interaction model is designed based on *Audience funnel*, as it suites well for public setups like the Tourist information center and advertising. With the design of this interaction model different levels of interactions and phases can be observed. Based on this model the three phases of the applications were designed (*Call-to-Action*, Interaction interface and ad video). This model attracts passersby and gradually motivates them toward the display to engage them in interaction and at the same time it is also convenient for the passers-by to avoid the display.

### 1.3.1 Body Interaction Design

The diagram below shows the display at the top, the body-tracking area illustrated by a triangle. This triangle is divided into two sections that are separated by dashed lines, (1) gray region defines the least interest regions, because in this area it is assumed that people maybe busy with other things around the display, and people in this region can easily avoid the display and the display will not motivate them for interaction, and (2) the highest interest region, it is assumed that people are aware of the display and the display would motivate them for interactions only if they are facing towards display.

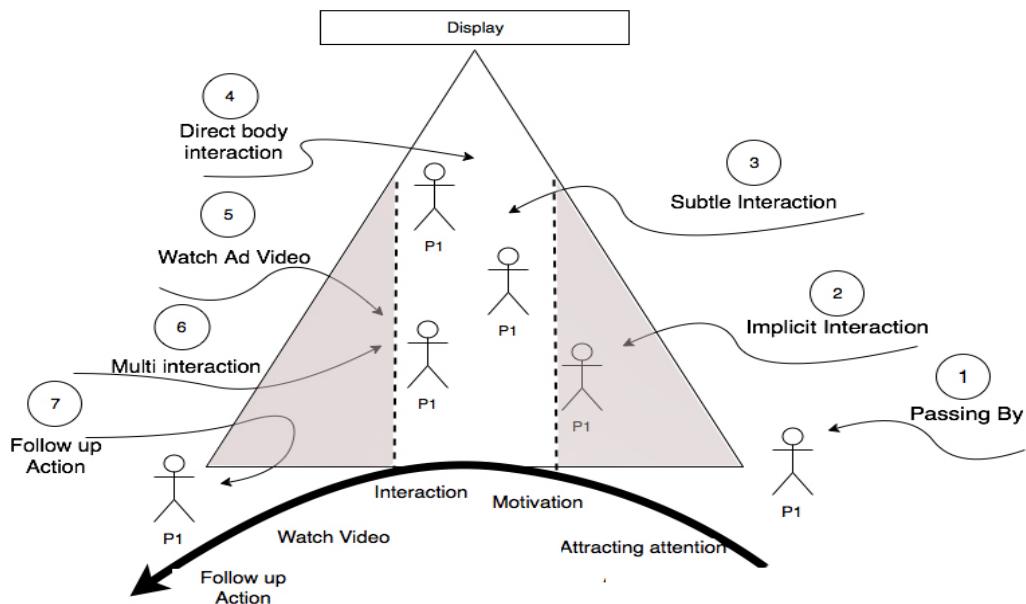


FIGURE 1.15: Body interaction design.

The model consists of seven phases, each of them are explained in the following list.

#### 1. *Passing by phase:*

This phase demonstrates passersby, who are not in the display tracking range.

#### 2. *Implicit Interaction phase:*

This phase starts, when passersby are in tracking range but are standing far or at side of the display.

#### 3. *Subtle interaction phase:*

In this phase, the user is in near or center area of tracking range and facing toward

display. The system motivates the user for direction interaction with the *Call-to-Action* feature (“*To play, Come near*”).

4. *Direct body interaction phase:*

This phase happens, when the user has actively started the game interaction and is playing. At this phase the whole tracking range (gray and white color) could be used for direct interaction until the end of interaction phase.

5. *Watch ad video phase:*

When the interaction is over, a short advertisement video is shown.

6. *Multi interaction phase:*

This phase demonstrates that the user can perform interaction multiple times.

7. *Follow up action phase:*

Follow up action phase is, when the user leaves the display’s tracking range and performs other actions.

The Black curve below the diagram shows the transition of the user between each phase and shows the flow of the attention, motivation, interaction and other phases. The attention is captured mainly in *Implicit interaction phase*, the motivation occurs when the user is in *Subtle interaction phase* and the interaction is when the user is directly playing with the his/her silhouette in the entire tracking coverage area. After the interaction and watching ad video, the curve changes direction moving down, which illustrates that the user would likely leave the interaction area and follow other actions unrelated to the screen.

- Attention:

A *Bottom-Up* approach was used to achieve the passers-by attention because the approach can help get attention by showing a sudden object, or by contrasting various colors. To do so, the silhouette representation of passers-by were projected on the screen, this representation can bring higher level of attraction as it is responsive to the user movements, and has different contrast colors in relation to background. In chapter 3, this method was compared with other forms of representation and attracting attention and the silhouette was the top candidate.

- Motivation:

The motivation is done by bring joy, fun, curiosity and challenge[51] to the users who are attracted toward the display. In body interaction design the use of passers-by’s silhouette presentation would be a good motivational force to bring passers-by near the display. This technique can become a source of fun and entertainment and can give a sense of connectedness with the display. And at the same time it also motivates passersby by showing a *Call-to-Action* message like “to play! Come near”, which is responsive to user movement and gives them confidence to play.

- Interaction and follow up actions:

When the user starts the interaction, the interaction being carried out should be meaningful, understandable and easy, else the user will leave immediately after some tries. Therefore many focus groups and evaluations of many prototypes were conducted to assure the usability of the body interaction. The interaction is explained in detail in the previous sections. After the end of the interaction, the advertisement video is shown and then the user can start again interaction or leave the screen.

### 1.3.2 Mobile Interaction Design

Below diagram shows the mobile interaction design. The diagram shows the display at the top, and the triangle represents body-tracking range for passersby. The design has the same 8 phases as proposed for the body interaction. (1) Passing by phase, which demonstrates passers-by who are not in display tracking range, (2) Implicit Interaction phase, the mobile version also has the implicit body interaction for attracting attention only and it is not limited to a certain region, but the whole the tracking area could be used for this purpose, and no further direct interaction is possible, (3) Read Access info, after the user is attracted toward the screen, the user reads how to use his/her mobile phone to connect to the display, (4) connect to system, in this phase the user connects to Wi-Fi and opens the controller, (5) direct interaction phase, is when the user actively interacts using smartphone with the display, (6) Watch ad video, this phase is triggered when the interaction is over, (7) multi interaction phase, demonstrates that the user can perform interaction multiple times, (8) Follow up action phase, is when the user leaves the display's tracking range and performs other actions.

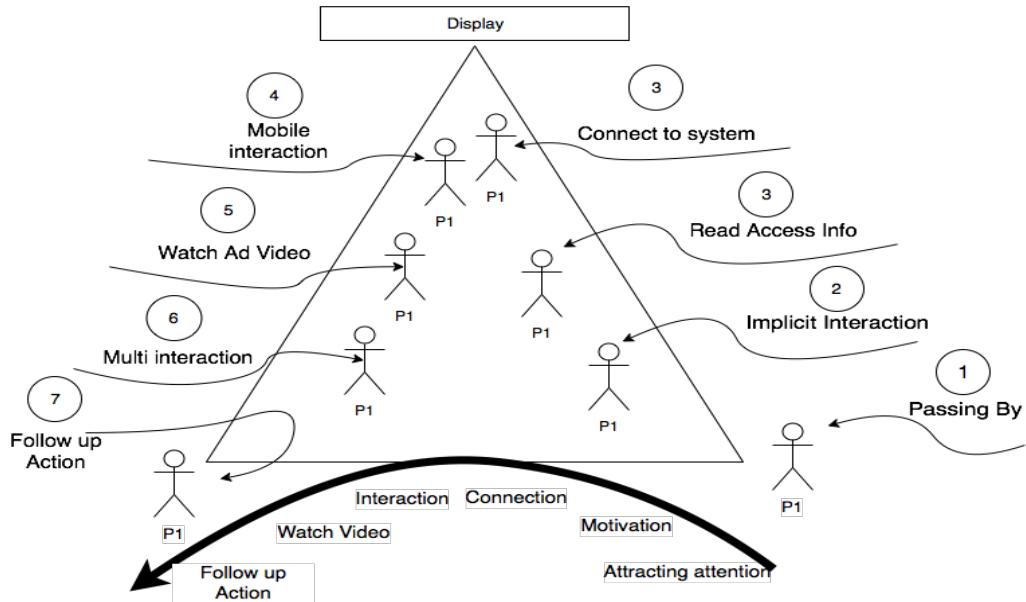


FIGURE 1.16: Body interaction design.

#### 1. Attention:

Technologies like Bluetooth, infrared and NFC<sup>8</sup> of mobile devices in fact could be used for attracting attention of passersby, but these technologies have their limitations and limited usage and not all mobile phones support all of the technologies. At the same time it is possible that the passers-by have not switched on these technologies because of battery consumption or other purpose. Therefore to attract all the passers-by without any limitation, the silhouette representation was used as it was used for body interaction design.

#### 2. Motivation:

The motivation is also similar to the body interaction. Due to the display of the silhouette, it brings curiosity and joy to the users. Besides that, an Information text is shown on the screen to give sufficient information on how to access the advertisement system and play the game.

<sup>8</sup>NFC: Near Field Communication

3. Interaction and follow up actions:

The interaction with the game element is only possible with the use of a smart phone. The interaction usability is important in order to keep the passersby engaged with the display. Therefore two prototype versions of the mobile interactions were evaluated to remove any possible usability issue. After the interaction is over the advertisement video and other following up action is taken on user.

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## Appendices

## Attracting attention

### A.1 Glance count sheet

#### Glance Count sheet

Date: .....  
Location: .....  
Observer: .....

Hour: minute			
:00			
:05			
:10			
:15			
:20			
:25			
:30			
:35			
:40			
:45			
:50			
:55			
:00			
:05			
:10			
:15			
:20			
:25			
:30			
:35			
:40			
:45			
:50			
:55			

#### Findings:

	Male	Female
Glances		
Ignored		
Total		

#### Symbols:

(F) === Female  
(M) === Male

(FFMMMM)  
(E)

== Group  
== Glanced Female

(M)  
(EFMMMM)

== Glanced Male  
== Glanced Group

FIGURE A.1: Glance count sheet

## A.2 Interview Questionnaire

TABLE A.2: Questions

---

No.	Research Questions
1	Do you like advertisement on displays?
2	Which kind of advertisement do you like?
3	What is that makes advertisement annoying or interested for you?
4	What attracted you toward the screen?
5	What do you think about this type of technique?
6	Do yo have any other recommendations?
7	What do you know about Interactive Advertisement?
8	What is your expectation about interactive advertisement?

---

### A.3 Interview consent form

Date: / /

Bauhaus-Universität Weimar

## Human Computer Interaction Questionnaire Consent Form

This is a study of attention attraction toward screen, conducted by **Hasibullah Sahibzada** because of his thesis research on Interactive Advertisement Vs. Traditional Advertisement. The purpose of this study is to help improve advertisement using existing technology. You are being requested to **answer** the questions in the interview and at the same time being **audio recorded** to assist us in the study.

The identities of all people who participate will remain anonymous and will be kept confidential. Identifiable data will be stored securely in a password protected computer account. Your participation is entirely voluntary and you may quite at any time from the study.

#### Contact Information About the Project

If you have any concerns about your rights as a research subject, you may contact directly Hasibullah Sahibzada at [Hasibullah.sahibzada@uni-weimar.de](mailto:Hasibullah.sahibzada@uni-weimar.de) or at phone # 015216967648.

Signature: -----

FIGURE A.3: Interview consent form

## A.4 Interview Color codes



FIGURE A.4: Good Advertisement

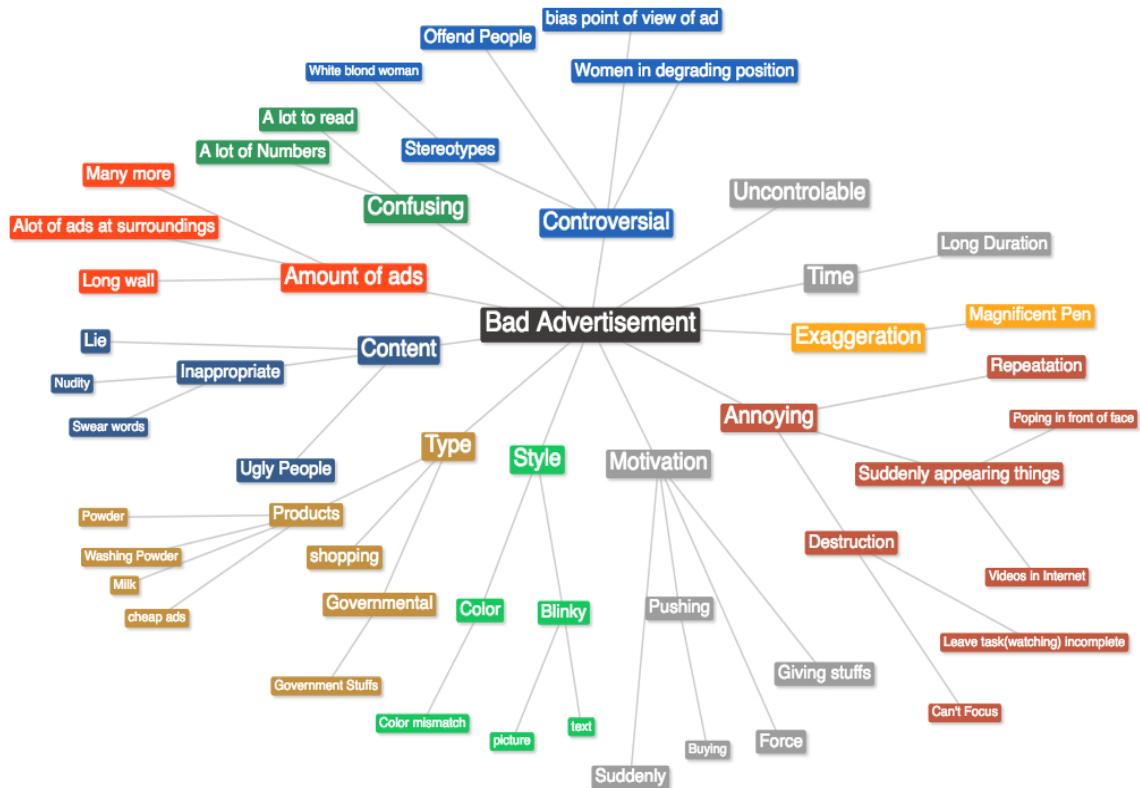


FIGURE A.5: Bad Advertisement

$\mathcal{B}$

## Focus Group

### B.1 First sketch

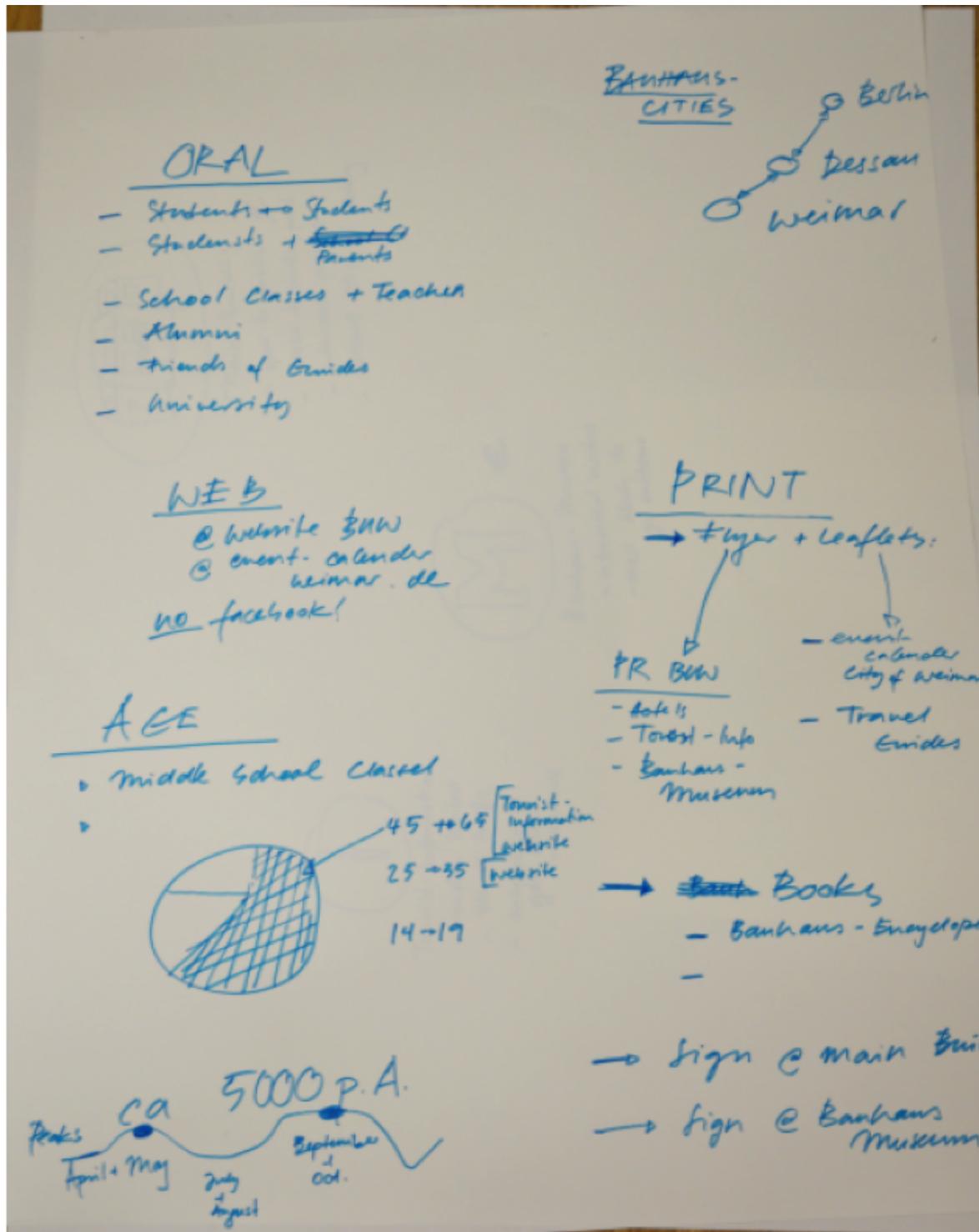


FIGURE B.1: First sketch

## B.2 Second sketch

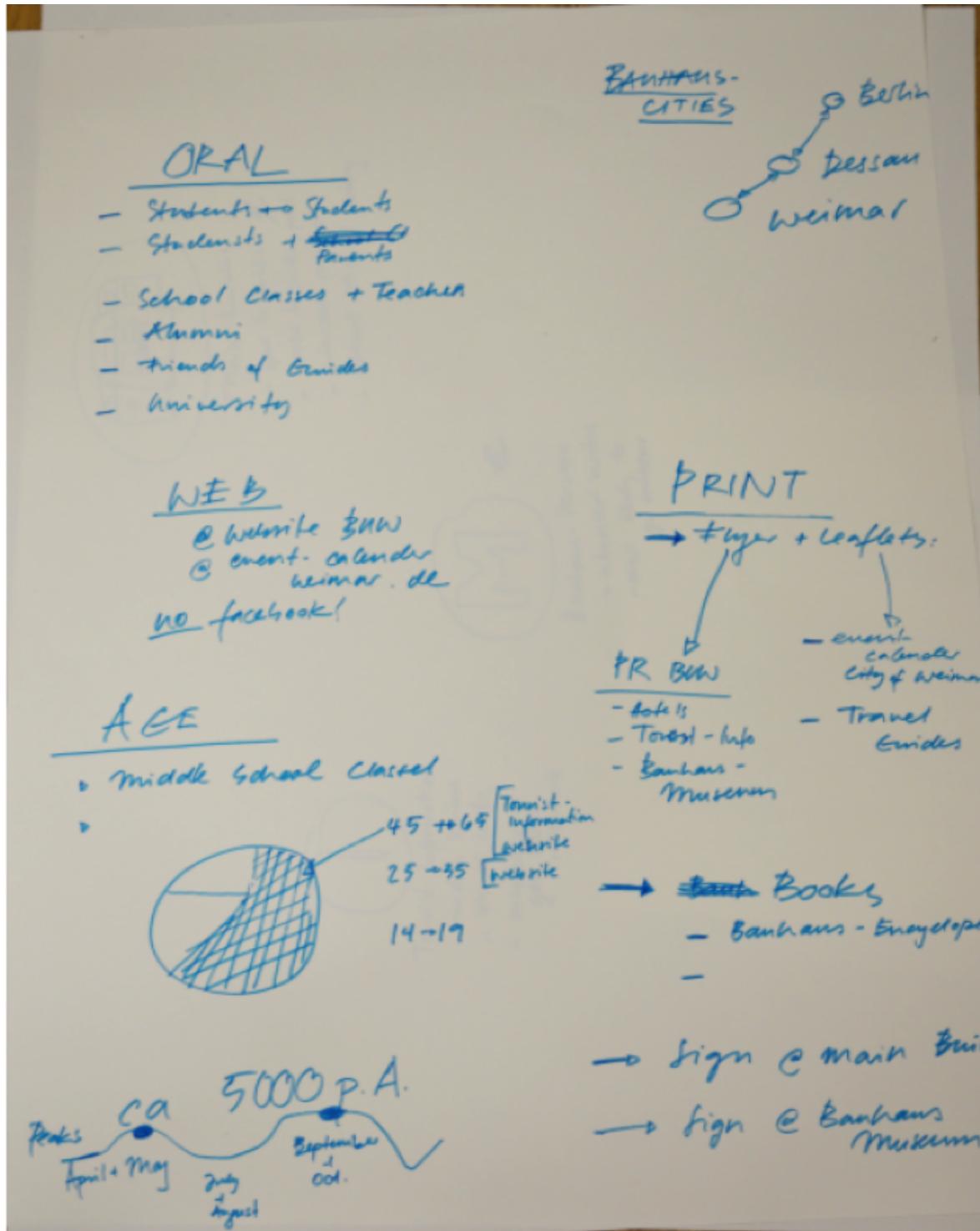


FIGURE B.2: Second sketch

### B.3 Third sketch

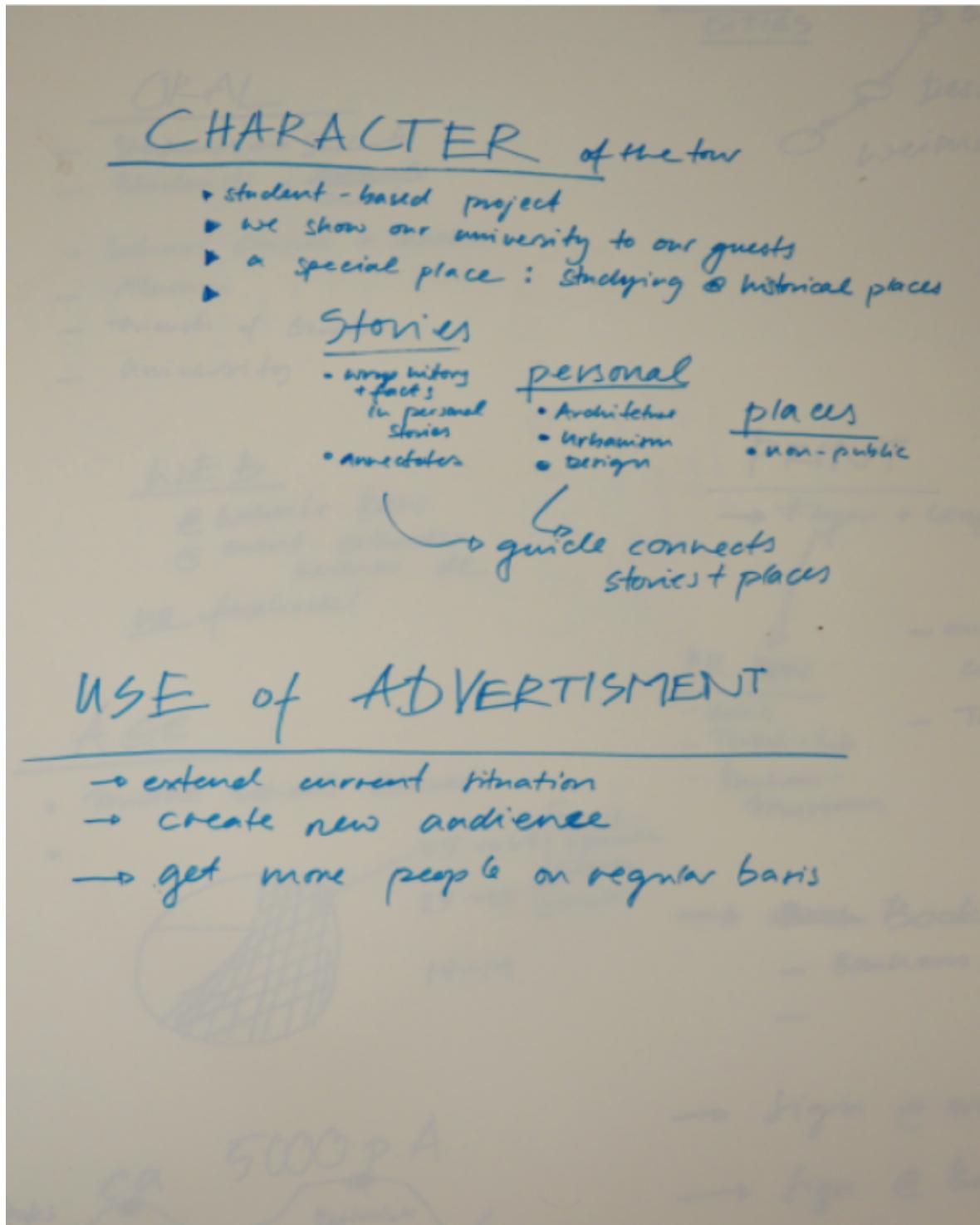


FIGURE B.3: Third sketch



## C.1 Coded Interviews

	<b>Like</b>	<b>Dislike</b>	<b>Confusing</b>	<b>Recommendations</b>
<b>Body</b>	<ul style="list-style-type: none"> <li>• Physical walking / Moving</li> <li>• Funny.</li> <li>• It is a good technique.</li> <li>• Interesting.</li> <li>• I liked obviously the body interactive prototype.</li> <li>• Easy fun and interesting.</li> <li>• Coming near to screen is a very nice.</li> <li>• Fast and easy.</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding the role or task.</li> <li>• Face was not understandable.</li> <li>• The face was so confusing.</li> <li>• I did not know him</li> </ul>	<ul style="list-style-type: none"> <li>• Face character.</li> <li>• Not really sure what you are making.</li> <li>• But it makes people confused in the sense that if it is you then why not your face.</li> <li>• I did not get that the blue picture.</li> <li>• I did not understand that I am on the screen.</li> <li>• I did not know when I saw myself on the screen.</li> </ul>	<ul style="list-style-type: none"> <li>• Show the route that we can follow</li> <li>• There I should be able to choose then it should show me like house of Goethe.</li> <li>• Change some colors. I do not have any other idea.</li> <li>• There could be instructions for that</li> <li>• If there are more colors and good design for the application would be more attractive,</li> </ul>
<b>Mobile</b>	<ul style="list-style-type: none"> <li>• It is good that you visit this place</li> <li>• Interesting.</li> <li>• Mobile was also fine.</li> <li>• I liked the QR code.</li> </ul>	<ul style="list-style-type: none"> <li>• Not enough instructions.</li> <li>• A bit difficult.</li> <li>• Face was not understandable.</li> <li>• Mobile wanted a lot of login to write.</li> <li>• I do not like that the login part.</li> <li>• I do not like the login.</li> <li>• I guess typing the IP address was difficult for me</li> </ul>	<ul style="list-style-type: none"> <li>• I did not understand what to do.</li> <li>• I could not understand what to do with it.</li> <li>• It said visit my houses or locations, but I had no houses.</li> <li>• I did not know how to change the face position.</li> </ul>	<ul style="list-style-type: none"> <li>• It would be also good to show information about the locations I visited.</li> <li>• Some changes you can bring like more information about the houses.</li> <li>• I should not be forced to write my name or other information. The system should automatically get my phone IP address or something else.</li> <li>• I recommend about good fonts and design.</li> <li>• There must be like Do you want to try again after the game is over.</li> <li>• There should be instructions on how to use the face in the mobile.</li> </ul>

FIGURE C.1: Interview codes

$\mathcal{D}$

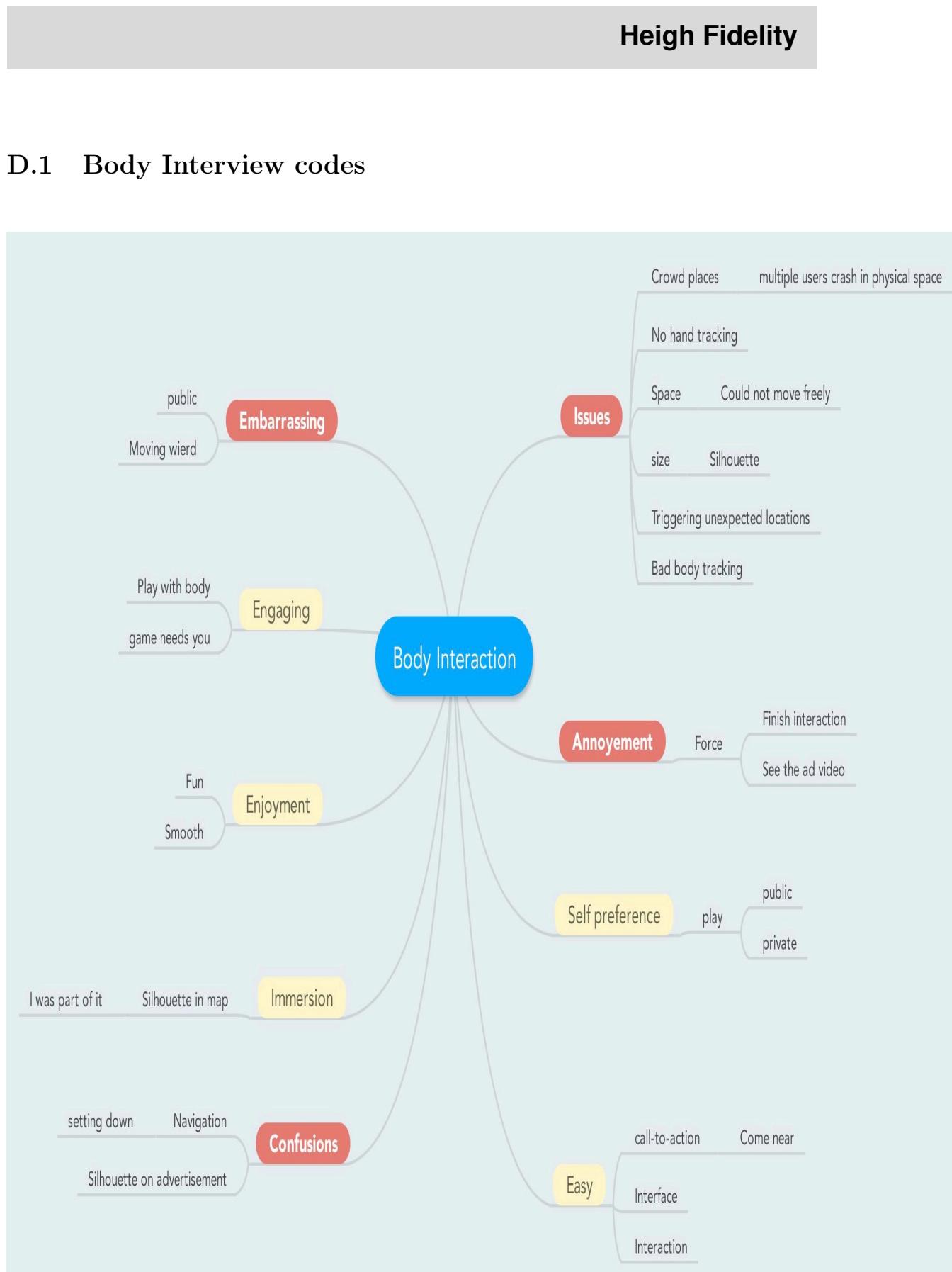


FIGURE D.1: Body Interview codes

## D.2 Mobile Interview codes



FIGURE D.2: Mobile Interview codes

### D.3 Participant performance

#### D.3.1 Body

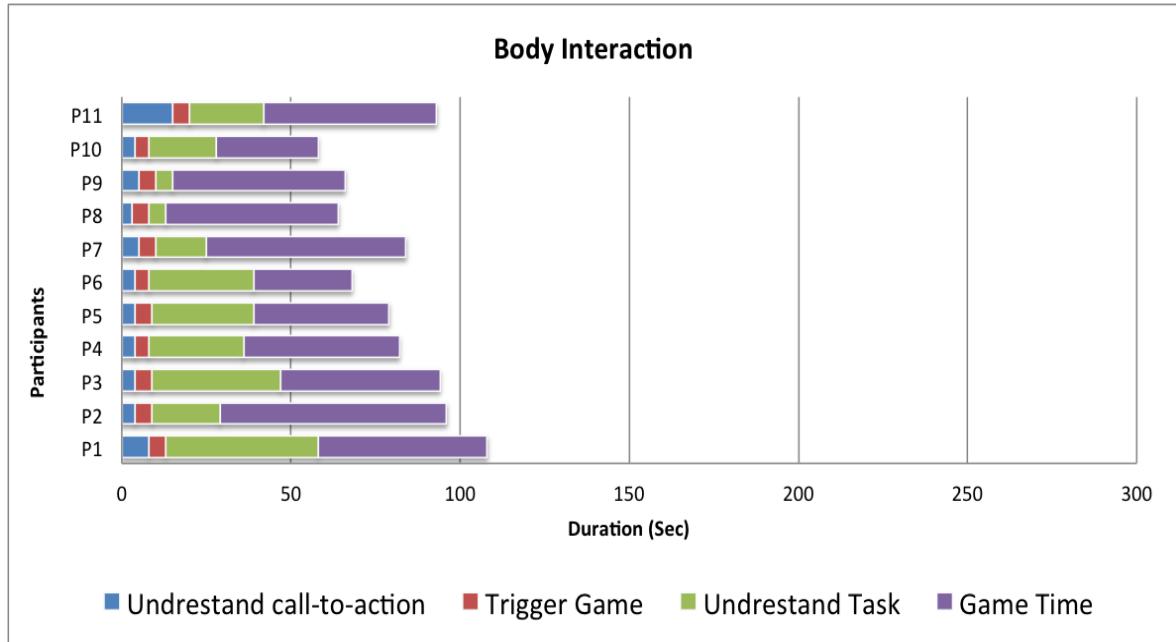


FIGURE D.3: Pariticipant's body performance

#### D.3.2 Mobile

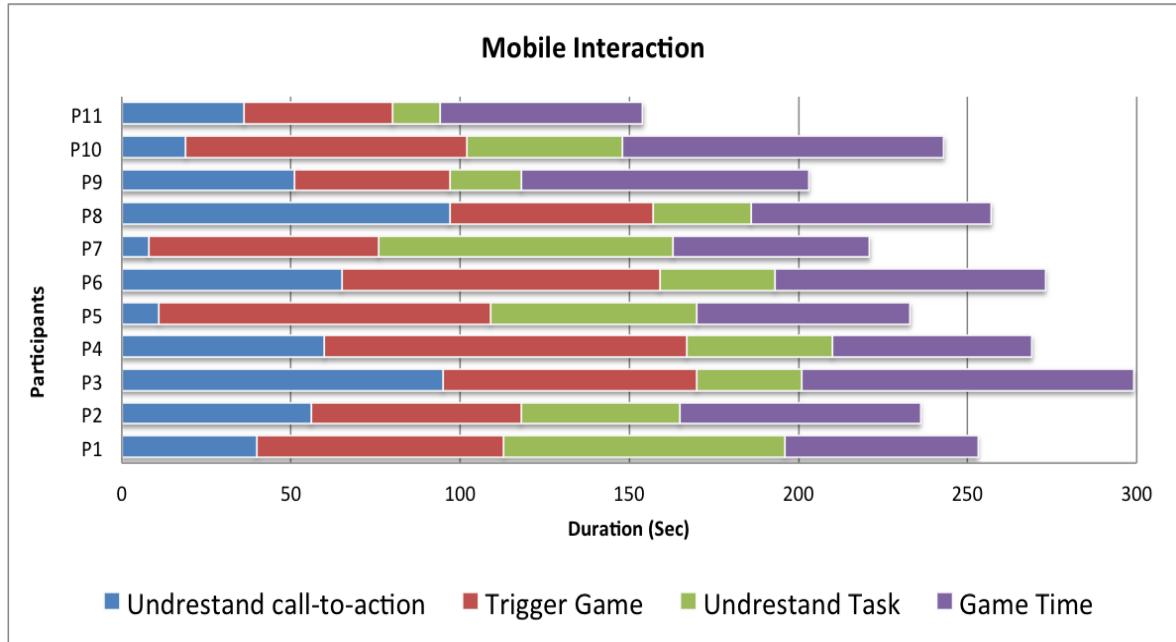


FIGURE D.4: Pariticipant's mobile performance

$\mathcal{E}$

## Field Study

### E.1 Interview Questionnaire

#### **Non-Interactive questionnaire**

(German version)

1. Um was handelte es sich bei der Werbung?
2. Würden Sie am Bauhaus-Spaziergang teilnehmen?
3. Hat Ihnen diese Art der Werbung gefallen? Bitte begründen Sie Ihre Antwort.
4. Haben Sie weitere Anmerkungen oder Verbesserungsvorschläge?

(English version)

1. What was the advertisement about?
2. Would like to take a tour with Bauhaus-Walk program?
3. Did you like this technique of advertisement? Why? Or Why not?
4. Do you have any other feedback and comments?

#### **Body interactive questionnaire**

(German version)

1. Haben Sie gesehen sich auf dem Display?
2. Wie haben Sie sich zum ersten Mal gesehen?
3. Um was handelte es sich bei der Werbung?
4. Würden Sie am Bauhaus-Spaziergang teilnehmen?
5. Hat Ihnen diese Art der Werbung gefallen? Bitte begründen Sie Ihre Antwort.
6. Haben Sie weitere Anmerkungen oder Verbesserungsvorschläge?

(English version)

1. Did you see yourself in the screen?
2. How did you see yourself at first time?
3. What was the advertisement about?
4. Do you want to take part in Bauhaus-Walk?
5. Do you like this kind of advertisement?
6. Do you have any other feedback and comments?

#### **Mobile interactive questionnaire**

(German version)

1. Um was handelte es sich bei der Werbung?
2. Möchten Sie Ihr Mobiltelefon für die Interaktion zu nutzen, warum / warum nicht?
3. Würden Sie am Bauhaus-Spaziergang teilnehmen?
4. Hat Ihnen diese Art der Werbung gefallen? Bitte begründen Sie Ihre Antwort.
5. Haben Sie weitere Anmerkungen oder Verbesserungsvorschläge?

(English version)

1. What was the advertisement about?
2. Do you like to use your mobile phone for interaction why/why not?
3. Would like to take a tour with Bauhaus-Walk program?
4. Did you like this technique of advertisement? Why? Or Why not?
5. Do you have any other feedback and comments?

FIGURE E.1: Interview questions for all conditions.

## E.2 Non-Interactive glance count

Date	Timings	Glance counts				Total			
			M	F	Total		M	F	Total
2-Feb	10:00— 11:00	Glanced	10	7	17				
		Ignored	13	14	27				
	14:00— 15:00	Total	23	21	44				
		Glanced	2	3	5				
3-Feb	10:00— 11:00	Ignored	5	9	14				
		Total	7	12	19				
	15:00— 16:00	Glanced	2	3	5				
		Ignored	5	10	15				
4-Feb	11:00— 12:00	Total	7	13	20				
		Glanced	3	1	4				
	14:00- 15:00	Ignored	10	14	24				
		Total	13	15	28				
5-Feb	11:00— 12:00	Glanced	7	6	13				
		Ignored	14	16	30				
	15:00 – 16:00	Total	21	22	43				
		Glanced	4	8	12				
6-Feb	10:00— 12:00	Ignored	20	23	43				
		Total	24	31	55				
	11:00— 12:00	Glanced	15	15	30				
		Ignored	32	38	70				
7-Feb	11:00— 12:00	Total	47	53	100				
		Glanced	11	9	20				
	11:00— 12:00	Ignored	19	28	47				
		Total	30	37	67				

FIGURE E.2: Non-interactive glance counts

### E.3 Body Interactive glance count

Date	Timings	Glance counts				Total			
			M	F	Total		M	F	Total
10-Feb	11:00— 12:00	Glanced	8	7	15	Glanced	10	8	18
		Ignored	8	8	16	Ignored	12	14	26
	15:00— 16:00	Total	16	15	31	Total	22	22	44
		Glanced	2	1	3	Glanced	13	11	24
11-Feb	10:00— 11:00	Ignored	4	6	10	Ignored	18	27	45
		Total	6	7	13	Total	31	38	69
	15:00— 16:00	Glanced	7	3	10	Glanced	6	8	14
		Ignored	10	13	23	Ignored	8	14	22
12-Feb	11:00— 12:00	Total	17	16	33	Total	14	22	36
		Glanced	4	6	10	Glanced	2	10	12
	14:00— 15:00	Ignored	2	10	12	Ignored	5	12	17
		Total	6	16	22	Total	7	17	24
16-Feb	10:00— 11:00	Glanced	4	9	13	Glanced	4	9	13
		Ignored	6	7	13	Ignored	6	7	13
	14:00— 15:00	Total	10	16	26	Total	10	16	26
		Glanced	4	3	7	Glanced	4	3	7
13-Feb	10:00— 11:00	Ignored	3	8	11	Ignored	3	8	11
		Total	7	11	18	Total	7	11	18
	10:00— 11:00	Glanced	12	11	23	Glanced	12	11	23
		Ignored	11	15	26	Ignored	11	15	26
14-Feb	10:00— 11:00	Total	23	26	49	Total	23	26	49
		Glanced	7	15	22	Glanced	7	15	22
	10:00— 11:00	Ignored	12	14	26	Ignored	12	14	26
		Total	19	29	48	Total	19	29	48

FIGURE E.3: Body interactive glance counts

## E.4 Body Interactive glance count

Date	Timings	Glance counts	Total																																
17-Feb	11:00—12:00	<table border="1"> <thead> <tr> <th></th><th>M</th><th>F</th><th>Total</th></tr> </thead> <tbody> <tr> <td>Glanced</td><td>2</td><td>3</td><td>5</td></tr> <tr> <td>Ignored</td><td>1</td><td>6</td><td>7</td></tr> <tr> <td>Total</td><td>3</td><td>9</td><td>12</td></tr> </tbody> </table>		M	F	Total	Glanced	2	3	5	Ignored	1	6	7	Total	3	9	12	<table border="1"> <thead> <tr> <th></th><th>M</th><th>F</th><th>Total</th></tr> </thead> <tbody> <tr> <td>Glanced</td><td>5</td><td>9</td><td>14</td></tr> <tr> <td>Ignored</td><td>10</td><td>22</td><td>32</td></tr> <tr> <td>Total</td><td>15</td><td>31</td><td>46</td></tr> </tbody> </table>		M	F	Total	Glanced	5	9	14	Ignored	10	22	32	Total	15	31	46
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FIGURE E.4: Mobile interactive glance counts

## E.5 Non-Interactive interview code



FIGURE E.5: Non-Interactive interview code

## E.6 Body Interactive interview code



FIGURE E.6: Body Interactive interview code

## E.7 Mobile Interactive interview code



FIGURE E.7: Mobile Interactive interview code

## E.8 Non-Interactive observation notes

Date	Notes
1 <sup>st</sup> Feb	<p><b>Observations:</b></p> <ul style="list-style-type: none"> <li>• There are many people but no one watch the screen.</li> <li>• <b>14:20:</b> A man is reading the screen.</li> <li>• The woman waiting long time in desk watched the advertisement once for 10 sec.</li> <li>• <b>15:36:</b> People do not look at advertisement at all.</li> </ul> <p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>• People lose interest after some pictures popping up.</li> </ul>
2 <sup>nd</sup> Feb Cloudy	<p><b>Observations:</b></p> <ul style="list-style-type: none"> <li>• <b>10:28:</b> an employee noticed and came back to see the content of advertisement for 4 sec.</li> <li>• A man noticed for 15 sec.</li> <li>• <b>10:43:</b> A man busy with his phone in front of the screen is waiting for his friend. He started reading the advertisement and came near, he is curious about Kinect Camera. 14 sec</li> <li>• A man is watching screen from information desk location.</li> <li>• <b>11:21:</b> Two couples saw ad completed two times, the woman asked the man to see the ad.</li> <li>• <b>14:51:</b> Two people watched the ad two times; they stopped looking when it repeated for the third time.</li> <li>• <b>12:36:</b> A group read the advertisement.</li> </ul> <p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>• People look at the interesting objects in front of the screen.</li> </ul>
3 <sup>rd</sup> Feb Cloudy / cold	<p><b>Observations</b></p> <ul style="list-style-type: none"> <li>• <b>14:41:</b> The weather is sunny and a bit warm.</li> <li>• Asked the employee, how many people come per day? She replied that around 100-120 people from which some come to get information and some only see around.</li> <li>• <b>14:46:</b> an interviewee asked me about the advertisement to give him some more detail, so I showed him the screen.</li> <li>• <b>15:30:</b> A woman stood with her phone and glanced. She is talking while standing near screen.</li> </ul>
4 <sup>th</sup> Feb weather cloudy cold	<p><b>Observations</b></p> <ul style="list-style-type: none"> <li>• <b>11:14:</b> An employee is standing to see ad for one time complete. She came again to see advertisement she is reading the content. She came to ask me about the price and I approached to take her interview, but she refused to sign in the consent form and she left.</li> <li>• <b>11:58:</b> A man reads the entire ad and for second time. He approached after talking receptionist again and asked his friend and laughed.</li> <li>• Another man saw the previous man and saw the screen.</li> </ul>
5 <sup>th</sup> Feb Cloudy and warm	<p><b>Observations</b></p> <ul style="list-style-type: none"> <li>• <b>10:52:</b> A woman looked the advertisement for a while (half).</li> <li>• <b>11:20:</b> A woman saw the ad and pulled her husband to see the ad and kept looking for brochure around.</li> <li>• <b>11:40:</b> A man came after a while again and fully saw the advertisement.</li> <li>• <b>11:53:</b> The man saw the ad and came closer to ad and looked for complete and then the friend came also and joint to read for two times. They also asked about ticket from help desk.</li> <li>• <b>11:51:</b> A man saw ad while his wife was playing the music with handle.</li> <li>• <b>15:15:</b> An employee first time noticed the advertisement while passing the screen. And then walked back to see the content.</li> <li>• <b>15:35:</b> A couple see ad and standing to see more about the city from the screen. And later they asked about the Bauhaus Atelier from help desk.</li> </ul> <p><b>Comments</b></p> <ul style="list-style-type: none"> <li>• Normally people come in couple, ones ask questions from information Desk while the other looks around, and finishes when questions or work is done by the first person.</li> <li>• Today there are many people coming inside.</li> <li>• In front of monitor on the table there is an interactive music player that with handle movement music plays.</li> <li>• People are looking things random and want to find something interesting.</li> </ul>
6 <sup>th</sup> Feb Partially cloudy Warm	<p><b>Observations</b></p> <ul style="list-style-type: none"> <li>• Two men want to see map with advertisement.</li> <li>• <b>10:40:</b> A woman looking at the screen.</li> <li>• <b>10:58:</b> A man looked the entire ad.</li> </ul> <p><b>Comments</b></p> <ul style="list-style-type: none"> <li>• Today a lot of people coming inside.</li> <li>• <b>11:30:</b> The people are less; no one looks to the screen to read.</li> </ul>
7 <sup>th</sup> Feb Warm / cloudy	<p><b>Observations</b></p> <ul style="list-style-type: none"> <li>• A man is standing and read the entire ad.</li> <li>• <b>14:40:</b> People are very less now.</li> </ul> <p><b>Comments</b></p> <ul style="list-style-type: none"> <li>• People are coming and the center is very crowded.</li> <li>• A lot of people are playing piano with the handle.</li> <li>• People look for brochures.</li> </ul>

FIGURE E.8: Non-Interactive observation notes

## E.9 Body Interactive observation notes

Date	Notes
10 <sup>th</sup> Feb Sunny / cold	<p><b>Observations:</b></p> <ul style="list-style-type: none"> <li>A boy noticed himself and then showed others that there is a Kinect camera.</li> <li><b>11:44:</b> A man saw himself and starred for a while and moved out.</li> <li><b>14:23:</b> Two office employees passed by screen and saw themselves on the screen and the first woman told and pointed on the screen and showed his partner.</li> <li><b>14:05:</b> I was working in the screen.</li> <li><b>14:27:</b> A man saw the screen but did not perceive even his silhouette was projected on the screen.</li> <li><b>14:47:</b> A man saw himself on the screen, but turned back.</li> <li>Two couples noticed the screen.</li> <li><b>15:49:</b> The man noticed and ignored</li> </ul> <p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>People are very less.</li> <li>System got overloaded because of the recording silhouette.</li> <li>The reason people do not notice is because it is at corner of desk and people tend to change their head orientation toward the table, which has items.</li> </ul>
11 <sup>th</sup> Feb Sunny / cold	<p><b>Observations:</b></p> <ul style="list-style-type: none"> <li><b>10:15:</b> an employee is arranging books in front of the screen.</li> <li><b>10:22:</b> A woman saw and then ignored to interact.</li> <li><b>10:47:</b> A man noticed and attempted to start the game, but left quickly less than 2 sec and the game could be started.</li> <li><b>10:59:</b> Three young boys saw the Kinect and stood for a while beside the screen, and did not understand how it works because they were out of camera range and Kinect could not project their silhouette.</li> <li><b>11:08:</b> A girl saw herself and then did not approach.</li> <li><b>11:17:</b> A couple noticed themselves from back side of the table in the screen, to confirm if actually they were, they started waving to see the feedback, then both of them came near to screen, the boy started the game by coming more closer and completed one task, but left because he was called by her friend to leave for city tour.</li> <li><b>11:46:</b> A man noticed and then stood in front of the screen but did not proceed to trigger the game, instead he called his child to play. The girl triggered the game but she was standing very close to the screen and camera could not track her, she saw the alert message to raise her hand and so she did, but nothing happened because she was close. Then she tried to touch the screen on the locations that were blinking in the game. But nothing happened she got frustrated and left.</li> <li><b>12:52:</b> Three of the employees tried the system individually, Each had the touch event on the screen.</li> <li><b>14:42:</b> Two people noticed and approached to the screen, but could not open because they were very close to the screen.</li> <li><b>15:10:</b> An employee started the game but did not know how to work because she could not see her silhouette. She started to touch the screen thinking that it is touch.</li> </ul>
12 <sup>th</sup> Feb Sunny / cold	<p><b>Observations:</b></p> <ul style="list-style-type: none"> <li><b>10:10:</b> A man saw himself but he ignored</li> <li><b>11:26:</b> A child saw her in the screen and moved toward the screen and smiled.</li> <li><b>11:40:</b> Eva Hornecker came; we slightly changed the camera angle toward the entrance.</li> <li><b>14:15:</b> A man standing beside the screen, accidentally triggered the game, because camera was facing to the right side.</li> <li>A boy is looking the screen from far away</li> <li><b>14:18:</b> The man noticed the screen after he triggered the game accidentally, but then he did not continue and surprisingly came near to the screen and completed a task without noticing.</li> <li><b>14:22:</b> I showed the advertisement for two people that asked me how it works.</li> <li><b>14:36:</b> A man saw the screen and stood for a while and seemed he read the Call-to-Action text but he did not approach and then left the screen. (I wanted to know the reason by taking interview but he did not participate because of the city tour he had at that time.)</li> <li><b>15:16:</b> A girl accidentally triggered the game.</li> <li><b>15:22:</b> An old lady noticed herself in screen and moved a bit to confirm but turned away.</li> <li><b>15:27:</b> A girl noticed herself but did not understand what to do the instruction was not shown because she was beside the screen.</li> </ul> <p><b>Comments</b></p> <ul style="list-style-type: none"> <li>Some people see a lot of detail in the posters and brochures and wall in tourist information center.</li> </ul>
13 <sup>th</sup> Feb Sunny / warm	<p><b>Observations:</b></p> <ul style="list-style-type: none"> <li><b>10:00:</b> The monitor face slightly changed to the entrance.</li> <li><b>10:12:</b> A man approached but was not able to play with the game because he was close enough to the screen.</li> <li><b>10:25:</b> A woman noticed and moved a bit to confirm and left.</li> <li><b>10:27:</b> The above woman saw her again but did not do anything. She was waiting for information desk.</li> <li><b>10:42:</b> Two couples tried to interact, the girl started interacting and the boy kept looking the girl's interaction, the boy left because of a work the girl continued to do a task. And then left.</li> <li><b>10:48:</b> Two boys came to try the application but application crashed.</li> <li><b>11:32:</b> A woman accidentally stood beside table and triggered the game 3 times and left without noticing it. Because the camera and screen are not in right orientation.</li> <li><b>12:00:</b> The screen rotated opposite to the entrance.</li> <li>Two people noticed and looked at screen but did not approach to play.</li> <li><b>13:15:</b> The system crashed for the second time while I was introducing the system to an employee.</li> </ul> <p><b>Comments</b></p> <ul style="list-style-type: none"> <li>People wait at information desk and their first priority is to get their job done, and interaction with the game comes in their least priority.</li> <li>Path way is a problem for people in order to use the body interaction, because people do not want to block others way by interacting.</li> <li>Application should not be at side of information desk. People avoid these sides, because they might feel to be noticed or asked questions (may I help you?).</li> <li>People take much more time looking things on the tables, which is in front of the monitor.</li> <li>People always try to interact with their hand, like raising their hand that could be also the effect of the alert function.</li> </ul>

FIGURE E.9: Body Interactive observation notes (1)

	<ul style="list-style-type: none"> <li>The employee liked it to be with a keyboard like buttons or different buttons not with body, because body seemed difficult.</li> <li>Use basic elements that could be easy to understand like handle or moving hand, touch or something other.</li> </ul>
<b>14<sup>th</sup> Feb</b> <b>Cloudy /</b> <b>Rainy and cold</b>	<p><b>Observations</b></p> <ul style="list-style-type: none"> <li><b>10:03:</b> Very less people coming currently.</li> <li>A person looking at the sides and wall, now interacting with the headphone.</li> <li><b>10:17:</b> A woman noticed someone else in the screen from information desk.</li> <li><b>10:19:</b> A girl noticed herself others also saw it, and pointed to the screen meanwhile another boy noticed from her pointing and went near to the screen and triggered the game and left because he was called by his friend.</li> <li><b>10:22:</b> Two couples played the game, the girl played most of the tasks.</li> <li><b>10:24:</b> Another girl did interact when the interaction finished, after a second she left because she lost interest to see the advertisement.</li> <li><b>10:25:</b> A man stood to see what is going on but did not interact.</li> <li><b>10:30:</b> Weather became cloudy.</li> <li><b>10:42:</b> A girl interacted with the screen, but could not play because she was touching the screen. She kept reading and watching the screen.</li> <li><b>10:50:</b> A woman triggered the game but did not succeed to play, she understood that she could play with body, but could not because of the space, which was occupied by other person.</li> <li><b>11:00:</b> The sun is shining on the Kinect camera, makes it difficult for people detection.</li> <li><b>11:33:</b> A girl saw and told to other girl to play with and did two tasks. And the time passed they left.</li> <li>Meanwhile another girl noticed them interacting with the screen.</li> <li><b>11:50:</b> A boy noticed himself and wanted to interact, his sister held him up to be visible for the screen, he asked his father to show him how the system works, His sister triggered the game and did two tasks and when got over they left did not completely saw advertisement.</li> <li><b>12:00:</b> A man tried to play, his silhouette was projected on the screen, but he did not understand and kept touching screen and when the game time elapsed he left.</li> <li><b>12:02:</b> A woman triggered the game. She had tried it before with her daughter too she saw the advertisement too.</li> <li><b>12:07:</b> The employee was curious and tried to trigger but did not do it and saw me.</li> <li><b>12:10:</b> A woman noticed the screen, but did not approach the screen, and she turned back.</li> <li><b>13:55:</b> A man came near and triggered the game and did one task but did not continue then left with his two kids.</li> </ul> <p><b>Comments</b></p> <ul style="list-style-type: none"> <li>The instruction while playing the game should be visible and clear; the time for game instruction is not enough.</li> <li>Attraction and engagement rate is higher but people take less time to see the entire ad.</li> </ul>
<b>15<sup>th</sup> Feb</b> <b>Partially cloudy</b> <b>Warm</b>	<p><b>Observations</b></p> <ul style="list-style-type: none"> <li><b>11:43:</b> A man saw himself stood and then left.</li> <li><b>14:18:</b> A woman approached to screen but did not understand what to do she was touching the screen.</li> <li><b>14:35:</b> A man noticed the screen, triggered the game and explored some locations by moving his body, but was not interested and left with his two kids.</li> <li><b>15:17:</b> An old woman noticed herself and pointed for her husband and read the Call-to-Action but she did not approached and laughed.</li> </ul>
<b>16<sup>th</sup> Feb</b> <b>Cloudy / cold</b>	<p><b>Observations</b></p> <ul style="list-style-type: none"> <li><b>10:05:</b> A group of students noticed and then explored locations, a participant tried to lean down to reach to the objects then she learnt by moving her body.</li> <li>Another group saw the first group and came to check out what is going on. This group just played with the body silhouette.</li> <li><b>10:22:</b> A woman saw her in the screen.</li> <li><b>10:42:</b> A man tried 4 times to get to know the functionality of the system and now he is trying again.</li> <li><b>10:57:</b> A girl saw herself but did not come in center to Call-to-Action be triggered.</li> <li><b>11:40:</b> A boy noticed himself and looked strange on the screen.</li> <li><b>11:42:</b> Another group noticed and triggered the game.</li> <li>A boy triggered the game and did two tasks but his mother was angry on him and did not allow him to play.</li> <li><b>15:53:</b> Two boys noticed, triggered and explored the game and saw the advertisement.</li> <li>The above boy's father also noticed and was looking to the boys interaction.</li> </ul> <p><b>Comments</b></p> <ul style="list-style-type: none"> <li>With small sized screen, it is good not to show a whole group because they do not seem to fit in the screen and physical area.</li> <li>May be show a circle like alert around small silhouette while playing to drag user attention two or three times.</li> <li>Alert participants to move back if they are very near to the screen.</li> </ul>

FIGURE E.10: Body Interactive observation notes (2)

## E.10 Mobile Interactive observation notes

Date	Notes
17 <sup>th</sup> Feb	<p><b>Observations:</b></p> <ul style="list-style-type: none"> <li>• 10:47: A man saw by waving his hand but did not continue to approach.</li> <li>• 10:51: Another man also saw the screen and his silhouette too.</li> <li>• 11:29: A woman noticed her but did not do anything, probably because of the phone.</li> <li>• 11:30: Another woman notice again but did not approach.</li> <li>• 14:03: A kid saw her and then her mother noticed that they are playing with their image.</li> <li>• 14:50: The employees are arranging the books on the table.</li> <li>• 15:00: No one has played with the advertisement until now.</li> </ul> <p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>• Because of the books and other items on the table people look down most of the time, which drives their attention away from other things, placed up (screen).</li> <li>• I approached to a person for an interview but he denied and said I do not have any idea how it works.</li> <li>• Most old people do not have a phone, or if they have one, they do not know the functionality to use.</li> <li>• The mobile is a big restriction for old aged and youngsters for interaction.</li> </ul>
18 <sup>th</sup> Feb	<p><b>Observations:</b></p> <ul style="list-style-type: none"> <li>• 10:00: Screen orientation changed toward entrance.</li> <li>• 11:56: A man glanced two times (1<sup>st</sup> non-intentionally, 2<sup>nd</sup> time intentionally).</li> <li>• 14:00: Screen orientation changed opposite to entrance.</li> <li>• 14:05: Man saw himself when turned him self from front table. But did not interact..</li> </ul> <p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>• For mobile maybe people do not prefer to stand and interact, It is better to give people enough time somewhere to sit and make decision to interact with their phones.</li> <li>• It does not make sense interacting with their phones while the monitor is at their hand reach.</li> <li>• Mobile phones should be used for far hand reach and big screens or projection wall.</li> <li>• Because of amount of less people, very less glances were observed and no one has interacted with advertisement.</li> </ul>
19 <sup>th</sup> Feb	<p><b>Observations:</b></p> <ul style="list-style-type: none"> <li>• 10:00: Monitor positioned back to its original position.</li> <li>• A woman noticed the screen, and read the information text on the screen, but could not interact because she had an old Nokia phone, which was not compatible to operate. She was one of the guide tour who had seen the body interaction too.</li> <li>• 14:00: I interacted with the advertisement many times to drag people attention and the usage and give them some sort of encouragement.</li> <li>• 14:35: I played once again while 4 people were standing behind me.</li> </ul> <p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>• Mobile phone takes longer time to operate.</li> <li>• Less glances made to the screen, maybe because of the access information text rendered on top, which blocks full silhouette representation.</li> <li>• In tourist information people tend to get information as quick as possible; to restrict the advertisement with mobile phone, which consumes time, would not be a good choice.</li> <li>• Mobile interaction is very private to one person and does not drive others attention toward the people interacting.</li> </ul>
20 <sup>th</sup> Feb	<p><b>Observations:</b></p> <ul style="list-style-type: none"> <li>• 10:05: A boy noticed and took his phone out and scanned the QR-Code but his mother called him and left.</li> <li>• 10:25: A girl and a boy are seeing their body and having fun many times, just playing with their silhouette. Which drove their mothers attention too.</li> <li>• 10:45: I played in crowd and some of the people around noticed, but no interaction happened.</li> <li>• 11:00: Many children are playing with the screen using body and jumping up and down.</li> <li>• 11:35: A man waved on to the screen and came near to the screen, after reading the information text he left.</li> <li>• 13:15: Two people discuss on the application, they are curious about it.</li> </ul> <p><b>Comments</b></p> <ul style="list-style-type: none"> <li>• Do a survey for mobile usage in public displays in places like tourist information center.</li> </ul>
21 <sup>th</sup> Feb	<p><b>Observations</b></p> <ul style="list-style-type: none"> <li>• 10:00: The screen height got reduced and the screen and Kinect is facing diagonal.</li> <li>• 10:46: A man saw the screen for 3 seconds but did not play.</li> <li>• 10:48: Another man also noticed but did not approached to play.</li> </ul> <p><b>Comments</b></p> <ul style="list-style-type: none"> <li>• The diagonal setup of the monitor suites where people see things facing down on the table.</li> </ul>

FIGURE E.11: Mobile Interactive observation notes



## Enhanced body interactive Field Study

### F.1 Enhanced Interactive advertisement Glance count

Date	Timings	Glance counts			Total				
			M	F	Total		M		
8-Apr	10:00—11:00	Glanced	7	9	16		20	18	38
		Ignored	4	10	14		13	21	34
		Total	11	19	30		33	39	72
	15:00—16:00	Glanced	13	9	22				
		Ignored	9	11	20				
		Total	22	20	42				
9-Apr	10:00—11:00	Glanced	8	10	18		16	20	36
		Ignored	10	13	23		19	22	41
		Total	18	23	41		35	42	77
	14:00—15:00	Glanced	8	10	18				
		Ignored	9	9	18				
		Total	17	19	36				
10-Apr	10:00—11:00	Glanced	7	6	13		16	25	41
		Ignored	3	8	11		16	19	35
		Total	10	14	24		32	44	76
	11:00—12:00	Glanced	9	19	28				
		Ignored	13	11	24				
		Total	22	30	52				

FIGURE F.1: Enhanced Interactive advertisement Glance count

## F.2 Enhanced Interactive observation notes

Date	Notes
8 <sup>th</sup> April Sunny /cloudy	<p><b>Observations:</b></p> <ul style="list-style-type: none"> <li>• <b>9:56:</b> A man tried to trigger the game, he really liked the system and he played two times, and he later explained to other of his friends.</li> <li>• <b>10:00:</b> A woman is playing, and her husband is standing behind to see her playing.</li> <li>• <b>10:31:</b> A man triggered the game, and played the game.</li> <li>• <b>11:08:</b> The man triggered the game and when advertisement came, he left.</li> <li>• <b>11:11:</b> A man accidentally triggered the game.</li> <li>• <b>11:13:</b> Two girls noticed the screen and are playing together, they were having fun and stop seeing ad.</li> <li>• <b>11:33:</b> Two couples noticed themselves from the corner and then started the game and played.</li> <li>• <b>11:48:</b> Man triggered the game and is now playing, after that his wife came to interact too.</li> <li>• <b>14:19:</b> A man saw and triggered the game.</li> <li>• <b>14:26:</b> Old people ignored the screen the woman saw herself and then ignored the screen.</li> <li>• <b>14:45:</b> Two groups started the game, but could not play because they were very near and they started touching the screen.</li> <li>• <b>14:48:</b> Two people played, the woman cloud not but the man did play two or three tasks, he came again when ad finished to play it was interesting for him and then he came for the third time.</li> <li>• <b>14:55:</b> The woman saw from the information desk.</li> <li>• <b>15:08:</b> A man played and after sometimes, he realized that all his friends have left. He was so immersed.</li> </ul> <p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>• If people are more targeted to a direction or work, then there is very little glance, but if they are looking around in the center then there is possibility of glancing toward the screen.</li> <li>• Most young audience interacts with the screen.</li> <li>• The interaction is memorable, a girl who had already interacted with the system came again and saw the screen and did another interaction.</li> <li>• Participants come very near and cannot see their silhouette.</li> <li>• People tend to bend to navigate back and they learn after they move a bit.</li> </ul>
9 <sup>th</sup> April Sunny	<p><b>Observations:</b></p> <ul style="list-style-type: none"> <li>• <b>10:17:</b> A woman triggered the game while a man standing beside the screen.</li> <li>• <b>10:21:</b> A man played with the game, but left it after a while.</li> <li>• <b>10:28:</b> A boy noticed and brought his parents to play.</li> <li>• <b>10:30:</b> The boy is playing and while standing a man noticed himself.</li> <li>• <b>11:32:</b> The man called his wife to see the screen.</li> <li>• <b>10:34:</b> A couple was waiting and saw themselves.</li> <li>• <b>10:36:</b> A woman saw herself from far and then ignored the screen.</li> <li>• <b>10:51:</b> A man triggered the game and he was standing very near, and he starting to touch the screen and he felt bad.</li> <li>• <b>11:03:</b> A man triggered the game and called his friends too, they left when they saw the advertisement.</li> </ul>
19 <sup>th</sup> April Sunny	<p><b>Observations</b></p> <ul style="list-style-type: none"> <li>• The man is looking a lot now he started the game and he is not moving to play the game.</li> </ul> <p><b>Comments</b></p> <ul style="list-style-type: none"> <li>• Some participants only stare the screen and not doing any physical activity like moving even the silhouette is projected on the screen. They think a lot and when nothing happens suddenly the move away and do not see the screen afterward.</li> <li>• I guess the people that stand still and think could actually reading the map contents.</li> </ul>

FIGURE F.2: Enhanced Interactive observation notes