

BAUHAUS UNIVERSITY WEIMAR

MASTER THESIS

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

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**Advertisement enhancement**

## 1.1 Introduction

The very first phase to get passers-by engaged with the display is the getting their attention. In previous experiment during the course of five days, only %12 of the entire of passers-by were attracted and engaged, there could be many reasons, (1) the passers-by could not see their silhouette until got very close to the display and camera and by that time the passers-by might have turned his/her face from the display without looking to their silhouette, (2) Passing by the screen happens within a short amount of second and that is not enough for passers-by to understand interactivity quickly, if the screen is large and placed in front it takes about 1.2 to understand interactivity [11], but my display was in sideways and small, so i assume that it takes longer than 1.2 seconds to understand interactivity and by that time the passers-by has passed the screen, (3) from the observations made during three weeks, most passers-by turned their faces toward the table, which was located in front of the display, and walked around the table to look for books and even did not see the display.

In existing real scenarios like in the tourist information center, where I conducted the study, the display was placed at sideways, and there was no other way to change the location of display to be more in front of passers-by to have more attention of people, therefor I took this real time scenario and proposed an extended version of attracting attention design to enhance the attention level of passers-by, who were far or at corner of display and still could be tracked by display. The chapter also discusses on the study design and evaluation of this technique and meanwhile compares this technique with the previous technique to see the effectiveness and advantages.

## 1.2 Enhanced attracting attention

The change in the new version was to extend the tracking area about 180 degree around display, this would over come the issues pointed before, because when passers-by walk from the sides the camera can track them and the application can project their silhouette, by doing this there will be enough time for passers-by to get attracted while coming toward display.

To achieve this, three Kinect cameras were integrated in the sides and in the center of the display and the tracked passers-by silhouette images were stacked together and shown on the display, a person passing from the side could see his self at the side of the screen and when moving to the middle of the screen the application could smoothly transition the person from side camera to the center camera by having the same silhouette color, physically the cameras were positioned side-by-side, therefor there was a small gap for each camera range, which was not perceivable by passers-by. Kinect cameras were tracking individually the users, so the user in the first Kinect was not the same user in the second Kinect and as a result Kinect would give different colors to the same user while passing by each camera, therefor only one color was chosen for all users so that they do not see the shift from camera to other.

See the diagram bellow that shows the physical setup including Kinect camera and their ranges, the diagram shows three different person standing at each camera range and the system has mapped their silhouette representation that all have the same color on the screen sections relative to their distance to the screen.

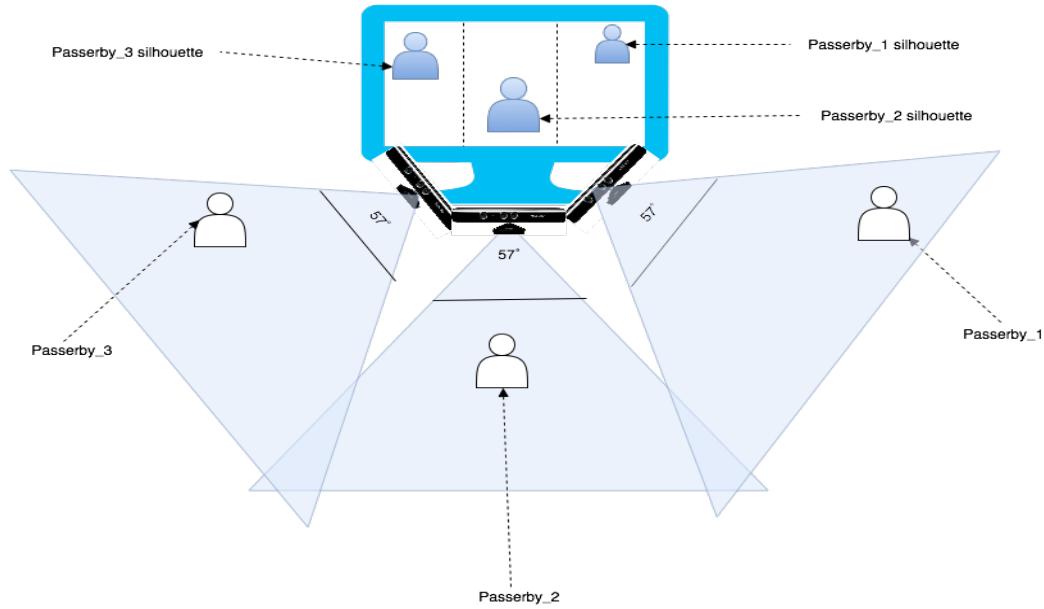


FIGURE 1.1: Attracting attention extended version.

### 1.3 Interaction design

The interaction design for the extended version is completely the same as the body interaction design that was introduced in chapter 7, it consists of seven phases, (1) Passing by phase, (2) Implicit interaction phase, (3) Subtle interaction phase, (4) Direct body interaction phase, (5) Watch ad video phase, (6) multi interaction phase, and (7) Follow up action phase. The range for implicit interaction phase is extended in both sides shown in gray color, which attracts passers-by from the sides of the display and also allows participants to do implicit interaction like playing with the body silhouette, and whenever users enter in subtle interaction zone shown in white color, then the display motivates users with call-to-action feature toward display for direction interaction and after interaction a short video is shown and then again participants can follow the interaction or be involved in other activities.

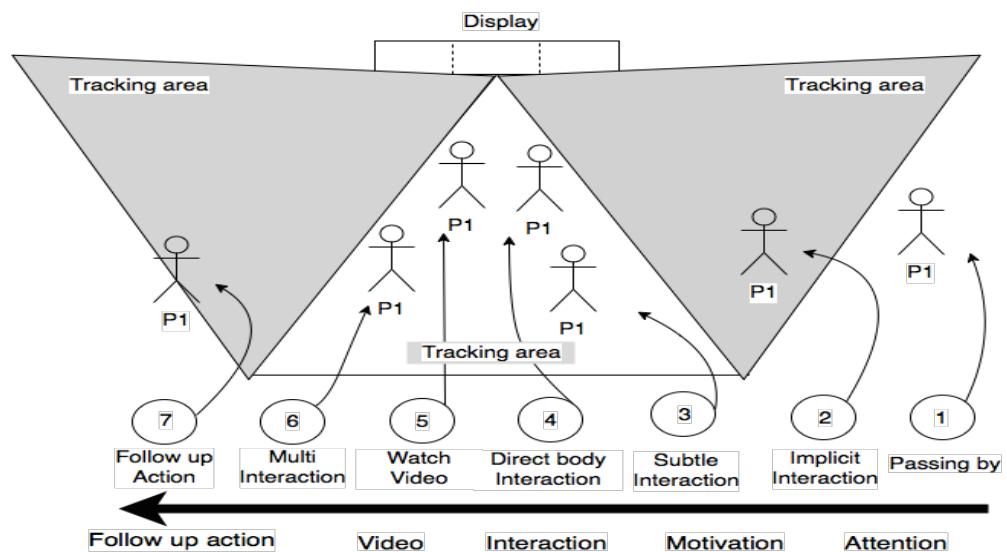


FIGURE 1.2: Extended Interaction design

## 1.4 Research question

This experiment was conducted to find out that what are the major effects when the coverage area is expanded in both right and left side of the screen, compared to the previous body interaction.

1. Would the attention level change?
2. Would the number of engaged passers-by increase?
3. Would the average engagement time rise?
4. Would there be any changes in number of Honeypot and landing effect?
5. What would be the passers-by behaviors to the display?

## 1.5 Study design

### 1.5.1 Location

This experiment was conducted in the same location that was chosen in previous location, it was positioned in the same pathway of passers-by with the same height and screen brightness. The surrounding of the display was also kept similar like the previous.

### 1.5.2 Duration

This experiment was conducted only for three continues days at end of the week, Friday, Saturday, Sunday.

### 1.5.3 Participants

The participants were from Tourist information center; they were not informed that there is an interactive screen. Most of the participants were of old age, and the rest were middle aged and young aged participants.

### 1.5.4 Data gathering

The bellow types of data were gathered during three days.

#### 1. On-Site Observation

Observation periods were selected the same as the previous study, from 10:00 – 12:00 and the second was from 14:00 – 16:00. During these two time slots the bellow observations were made.

##### (a) Attention Level measurement

Number of glances and number of ignores were counted by observing the passers-by from a fixed location, anyone who turned his/her face toward the display for less than 3 seconds were counted as glance, and those who had not turned their faces at all were selected as ignored. See the full sheet of glances in Appendix F.1.

**(b) Passerby behavior**

The behaviors of the passers-by were observed by direct observation in onsite and also from the Camera depth recorded frames. From the observation two important effects were taken in consideration (honeypot and landing effect). See other observation notes in Appendix F.2.

**2. Colored-image recording**

A 2D colored image was taken per second from each of three cameras, and meanwhile were joint together side-by-side and after the image recording was done, in lab another post processing script was applied to integrate a static background using Adobe Photoshop application. To match the data logs and the image frames, each image name consisted time as (12.43.21.png). Below three Kinect images stacked together, as can be seen that people's colored images was rendered on the images (1,2 and 3) these images are stacked together so that the transition of one person be smooth from one camera to the other.

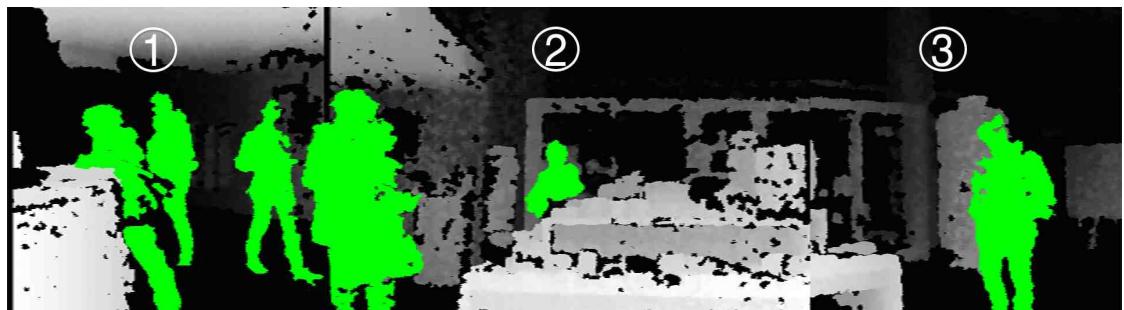


FIGURE 1.3: Three Kinect images

## 1.6 Findings and results

This section first lists all the findings for enhanced version of advertisement then it compares it with the previous interactive advertisement.

### 1.6.1 Attention Level measurements

The below chart shows the number of glances and ignore for the following three days.

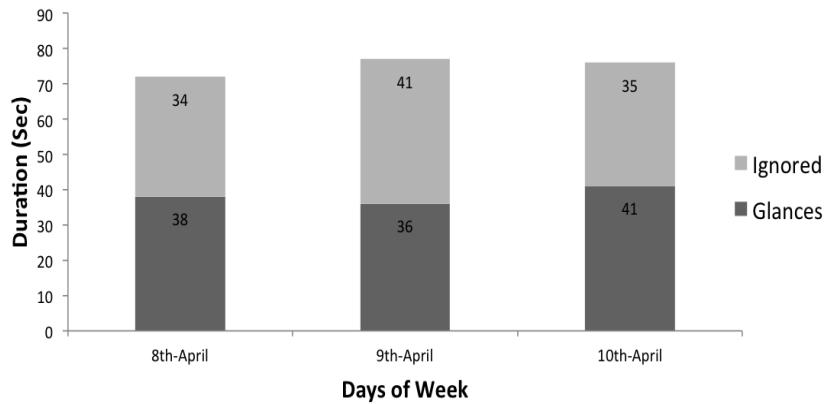


FIGURE 1.4: Attention level chart

As can be seen from the above chart every day has almost similar number of glances and ignores and in average it makes about %51 glances and %49 ignores.

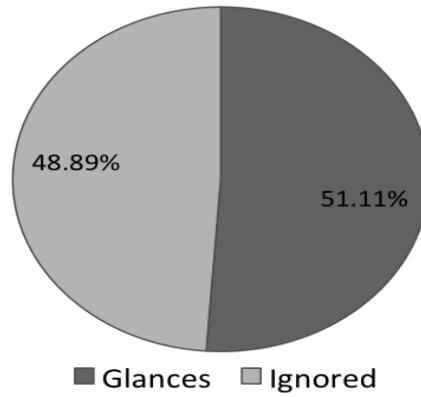


FIGURE 1.5: Attention level percentage

### 1.6.2 Engagement phases and time

The engagement time for phases were measured from system logs and depth recording manually and in which people spent 16.10 seconds in average for the Attraction/Motivation phase some people took longer and some shorter, and some of them may have left without switching to the rest phases. 16.20 seconds in average was spent for interaction phase, which was different from person to person, and only 3.63 seconds in average was spent for video advertisement.

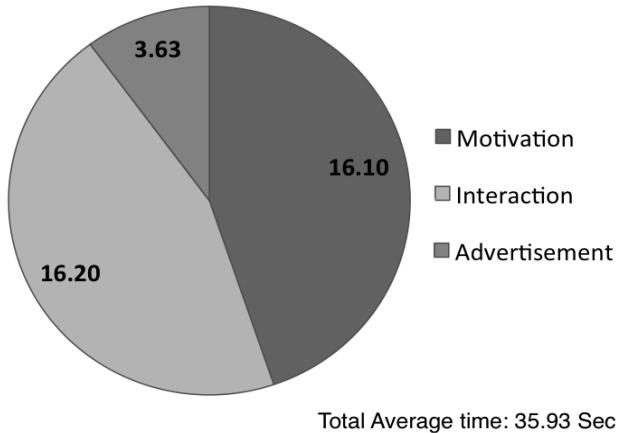


FIGURE 1.6: Average time for each phase

The entire average engagement duration for all these three phases together, was around 36 seconds.

### 1.6.3 Number of engaged passers-by

The entire three day's recordings were manually analyzed frame by frame from which the number of passers-by were counted. The bellow chart shows all the count of passers-by and out of those the people who stood in front the screen for more than 3 seconds were flagged as an engaged passer-by.

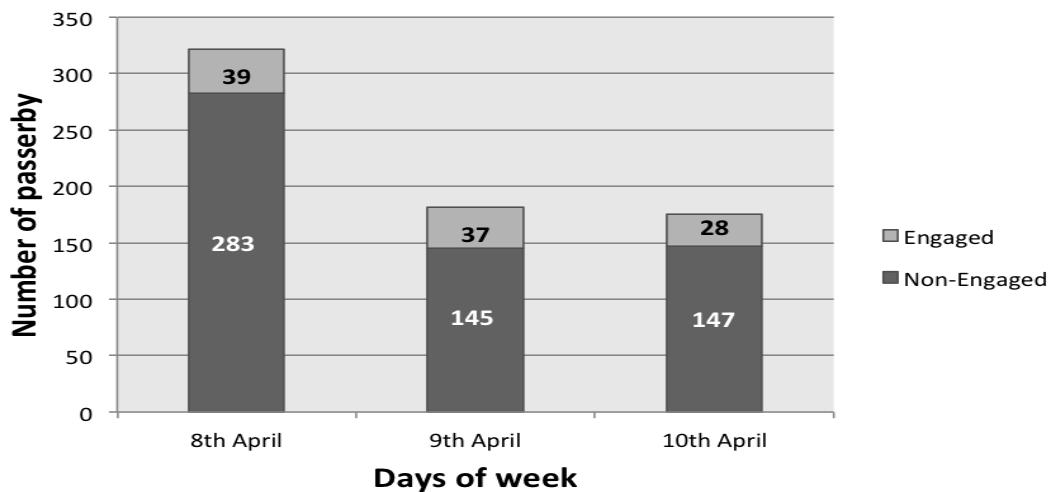


FIGURE 1.7: Number of engaged passers-by

From entire passers-by %15.32 of them were engaged with the display and the rest might have only glanced or simply ignored as shown in the chart bellow.

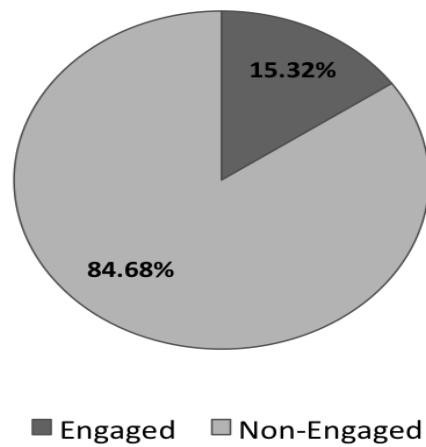


FIGURE 1.8: Percentage of engaged and non-engaged passers-by

### 1.6.4 Landing and Honeypot effects

Although the number of days were only for three days, but Landing effects [11] and Honeypot effects[15] were observed for this type of technique and they were not as strong as in previous interaction technique. See the example frames bellow.

- Honeypot Effect:

As can be seen from the picture in the right, which is composed of three kinect images that has covered right and left and the center of the display. In first frame (A) in the middle of the screen two persons are engaged and interacting for some time and a women at the left is busy with the help desk, but she is curious about the screen and has got attracted toward the screen, and she has looked many times in previous frames, in frame (B) the two guys leave the interaction and walk away from the screen and the application is left alone, and in frame (C) that women is left alone and is watching her self in the screen, and then approaches toward the screen in frame (D), she is near to the screen and I guess realizes that the screen is in fact interactive and in frame (E) she comes closer and starts actively interaction in frame (F).

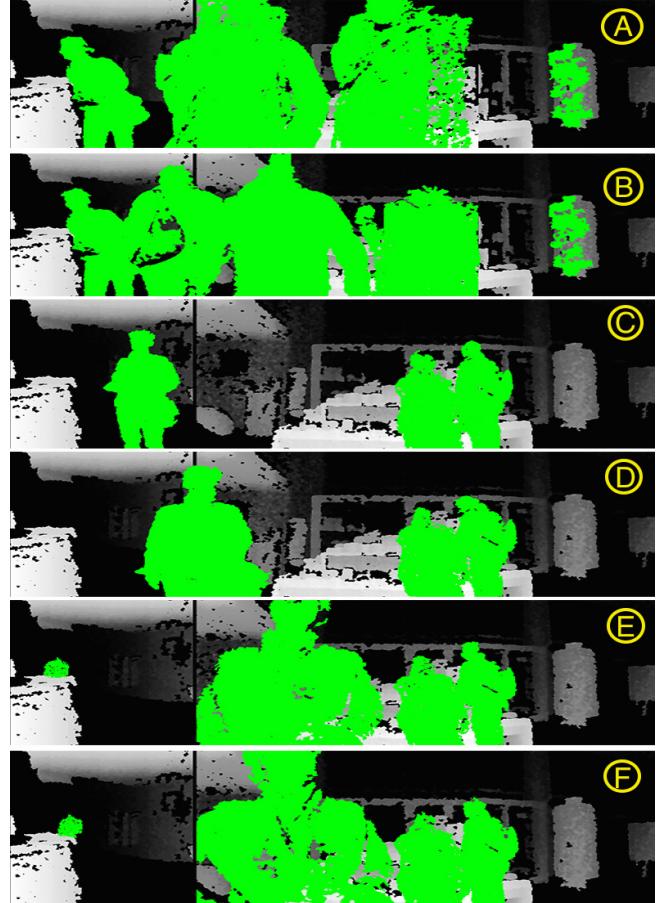


FIGURE 1.9: Honeypot effect

- Landing Effect:

Few landing effects had also happened, which were similar to the previous experiment with one camera. The landing effect has happened differently like, some noticed the interactivity in the middle and stopped by the display, and some noticed the interactivity at the very corner of the display and then moved back toward. As can be seen in the picture in the right, there is a lady (the camera could not capture the entire body of her, maybe because of the sun light), the lady is passing by the screen from frame (A – D) continuously and notices the screen interactivity in frame (E) and stops at her position and when she realizes then she moves gets closer to the screen in frame (F) and reaches the middle of the screen at frame (G) and starts to explore the interaction and game.

- Numbers of Honeypot and Landing Effects:

The chart bellow shows the frequencies of landing and honeypot effects for three days.

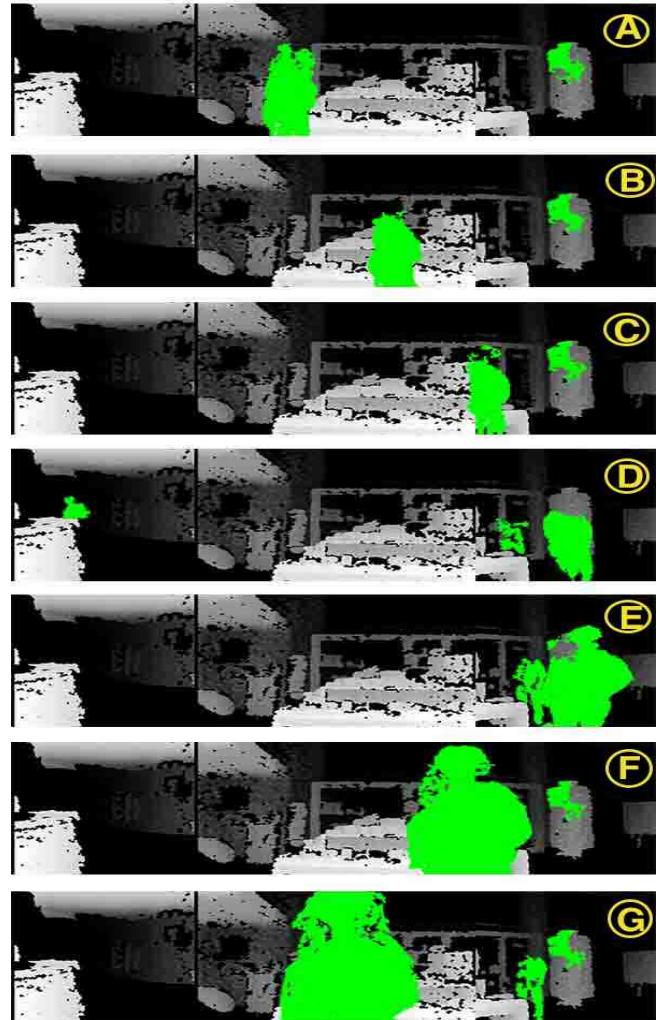


FIGURE 1.10: Landing effect

Days	Landing effect	Honeypot effect
8th April	3	3
9th April	2	5
10th April	1	2

### 1.6.5 Other observations

Beside the above behaviors there were other observations recorded too as they are listed bellow.

- Calling Others:

When a person is engaged with the display and is more excited about it, the person will most likely call his / her friend or family to see and give it a try.

Few of this calling effect have occurred in this enhanced version too, as you can see the picture in the right, in frame (A) a lady was engaged with the screen for a while and is standing in the middle of the screen, and then she calls his friend who is standing very far from the display and is busy with looking to some books, she turns her self toward her friend in frame (B) and seems to be talking to him in frame (C) and her friend leaves his work and starts to look at her in frame (C) and moves toward the screen in frame (D) while the lady is back busy with the screen, when her friend comes closer to the screen in frame (E) she gives a bit space for him to let him see by moving a bit back in frame (F), and finally her friend is also attracted and experiencing with the advertisement in frame (G).

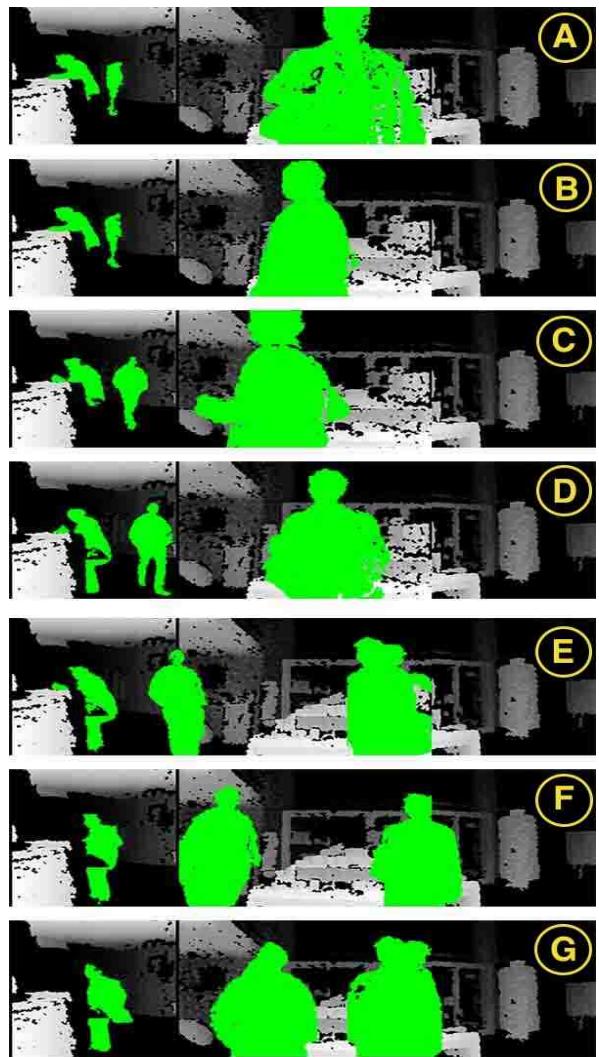


FIGURE 1.11: Calling others

- Noticing Interactivity earlier:

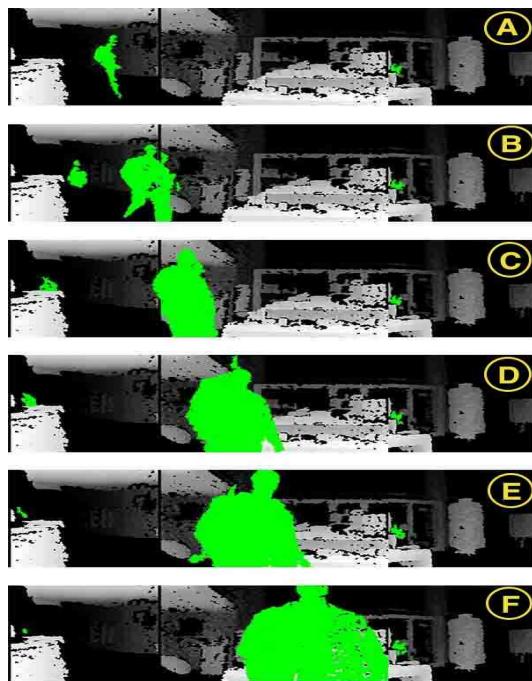


FIGURE 1.12: Noticing interactivity earlier.

Passers-by also directly came from the corners of display without showing any landing effect toward the screen and started interacting, this effect might be because of when they were passing by the screen had noticed themselves on the screen from the first camera, which was faced toward the side of the display, so it is assumed that they understood the interactivity and then came in the center of the display and started interacting. As can be seen from the image at the left side, a person is walking by from the left side in frame (A) and continues his walking toward the screen and gets closer and closer toward the middle of the screen, he is not passing by the screen by he intentionally

stops in the middle and starts interacting.

- Side interaction:

The integration of Kinect cameras at the side provided passers-by or people who were standing at the side of the display and did not or could not come close to the screen, were still able to have some sort of bound or connection with the system, this feature provided a sense of safety comfort zone for them to stay back and still be able to interact passively.

As can be seen in the picture in the right, there is a girl standing at the left side of the picture, she was standing with her parents in the information desk, and she recognizes herself in the screen and waves her hand first to see if it is actually her, and then starts to play with her silhouette on the screen and have fun.

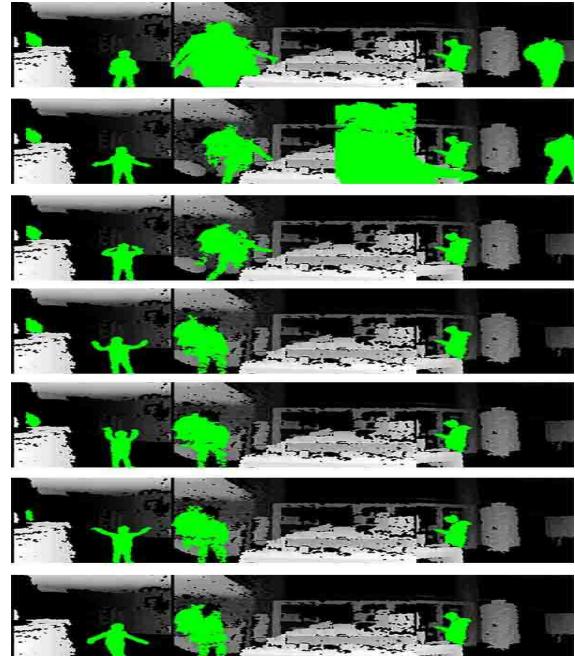


FIGURE 1.13: Side interaction

### 1.6.6 Comparison

This section compares the results and findings of the enhanced version of advertisement version with the previous advertisement, which could only track the middle screen of the display.

#### 1. Comparison of number of passers-by

To be on safe side that the number of participants were statistically the same, the below computation has been applied on three similar days, which provides the base for further evaluations.

TABLE 1.1: Number of people for three conditions

Days	Non-Interactive	Body Interactive	Enhanced body Interactive
Day 1	212	259	322
Day 2	209	216	182
Day 3	208	122	175
Total	629	597	679

ANOVA test revealed that there was no statistical significant difference between the passers-by in each of the conditions ( $(F_{2,3})=0.1449, p > .05 (p=0.868)$ )

#### 2. Attention Level comparison

The number of glances and ignores for both body interaction and enhanced body interaction were collected as below.

TABLE 1.2: Cross tabulation for each condition attention level

Method	Glanced (%)	Ignored	Total
Non-interactive	111(%28.83)	274	385
Body Interactive	106 (%41.40)	150	256
Enhanced body Interactive	115 (%51.11)	110	225
Total	332	534	866

As can be seen the enhanced body interactive advertisement has a higher percentage about %51 of the glances compared to the old body interactive advertisement, this means that there is a rise of %10 increase. To test if these are statistically significant different, the Chi-square test was applied on them and revealed  $\chi^2(1, N=481)=4.5413, p < .05 (p=.033086)$  that they are statistically different and the enhanced body attraction technique does have higher effect on the attention level.

The non-interactive advertisement was about %28 percentage in attracting attention, but the enhanced version had about %23 higher attention level than non-interactive, Chi-square reveals  $\chi^2(1, N=610)=30.2247, p < .001 (p=.0)$ , which strongly suggests that the enhanced version has dramatically increased the attention level than the non-interactive one.

### 3. Engaged and Non-engaged passers-by

The numbers of engaged and non-engaged were recorded for all three conditions as bellow.

TABLE 1.3: Number of engaged passers-by in three weeks

Days	Non-Interactive	Body Interactive	Enhanced body Interactive
Day 1	15	26	39
Day 2	15	20	37
Day 3	15	23	28
Total	45	69	104

ANOVA reveals that there was statistical difference between these conditions, ( $(F_{2,3})=20.3154, p < .05 (p=0.0021)$ ), and to confirm that which of the pairs were different significantly, I run Post-Hoc Tukey's HSD test as bellow.

TABLE 1.4: Post-Hoc Tukey's HSD

Methods	Tukey HSD Q statistic	Tukey HSD p-value	Tukey HSD inference
A vs B	3.6459	0.0920761	insignificant
A vs C	8.9627	0.0017440	** p<0.01
B vs C	5.3169	0.0218582	* p<0.05

Group A, B and C refers to (Non-interactive, body interactive and enhanced body interactive) advertisement accordingly. Post-hoc Tukey computed the critical value(Studentized Range Q statistic) for A and C as,  $Q_{critical}^{\alpha=0.01,k=6} = 6.3250$  and another critical value for B and C as,  $Q_{critical}^{\alpha=0.05,k=6} = 4.3341$  and the significance can be determined if each pair's critical value(Tukey HSD Q statistic) is bigger than Studentized Range Q statistic.  $Q_j^i > Q_{critical}$ , and the strength of difference is determined by the P value as shown above.

From the diagram above it is very clear that non-interactive with body interactive is insignificant because their critical value is smaller than 4.3341 and  $p > 0.05$ , the result was significant in the previous chapter because of five days together but became

insignificant with little number of days. On the other hand, the non-interactive with enhanced body interactive is strongly significant because their critical value is bigger than 6.3250 with  $p < 0.01$ , the result of enhanced body compared to body interactive is also significant with  $p < 0.05$ . As a result the enhance body interactive has strongly increased the number of engaged passers-by compared to non-interactive advertisement, and the effect size between them are measured as bellow.

To find out how big is the difference between number of engaged passers-by in non-interactive and enhanced body interactive conditions, the eta squared ( $\eta^2$ ), which is an effect size index for ANOVA, in which the  $SS_{effect}$  (sum of squared) between conditions is divided by  $SS_{total}$  (sum of squared) total as bellow calculated by online tool *Easycalculator*<sup>1</sup>.

$$\eta^2 = \frac{SS_{effect}}{SS_{total}} = \frac{580.1687}{648.8354} = 0.8942 \approx 0.89$$

The 0.89 means that %89 of total variance is accounted for by the conditions (enhanced body interactive, non-interactive) effect.

#### 4. Landing effect comparison

The landing effects were recorded for non-interactive, body interactive and enhanced body interactive in bellow table.

TABLE 1.5: Cross tabulation for each condition Landing effect

Method	Non-Interactive	Body Interactive	Enhanced body Interactive
Day 1	2	2	1
Day 2	0	2	2
Day 3	1	3	3

After conducting ANOVA test, it states that there is no significant different between three days for all of the conditions, ( $(F2,3)=1.857$ ,  $p > .05$  ( $p=0.236$ )).

#### 5. Honeypot effect comparison

Honeypot effects were also gathered from those days as bellow in table.

TABLE 1.6: Cross tabulation for each condition Honeypot effect

Days	Non-Interactive	Body Interactive	Enhanced body Interactive
Day 1	2	2	3
Day 2	2	5	5
Day 3	1	3	2

ANOVA reveals that there is also no statistical difference between these conditions. ( $(F2,3)=1.667$ ,  $p > .05$  ( $p=0.266$ ))

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<sup>1</sup>easycalculator: <https://www.easycalculation.com/statistics/eta-square-calculator.php>, last accessed 15 jun 2016

## 1.7 Discussions

The increase in attention level, which was higher than old body advertisement version could have many reasons, (1) *Wide angle tracking*, the wide angle of display tracking, in which participants could see themselves from different angles (left, center and right) if they had missed the left, there was still chance to see the center or vice versa, and (2) *Exposure time*, the time passers-by were exposed to their silhouette in three cameras facing (left, center, right), was longer than exposure time with only one camera, normally it takes around 1.2 seconds to understand interactivity with silhouette with large screen that is in front of passers-by [11].

Honeypot effect in the previous body interaction experiment and in this experiment did not seem to be more strong, there could be many reasons for this, (1) *Environment*, the display is situated in a touristic place, where people do not stay longer than staying in restaurant or some other gatherings, people move in and out often times, (2) *unfamiliarity*, people are not familiar with each other to wait or come near to the shoulder of other person to look what is going on, therefor they tend to ignore, (3) *Personal interaction*, the interaction seemed more personal and single user, and was not vast to be observed by others quickly, (4) *display size*, screen size was also small and passers-by might have not noticed the interactions of people.

As mentioned before, landing effect happens, when the user notices interactivity after he passes by the screen, but in this enhanced version few honeypot effects happened, one of the reasons could be that, when the passer-by is walking from a far side of the display, he is noticing the interactivity before hand because he can see himself in the screen, and when he reaches near to the screen, he is aware of the interactivity for sure and would not perform landing, but by that time he would have two options (a) start interacting, or (b) ignore the interaction and pass by the screen.

## 1.8 Conclusion

In conclusion, this enhanced body interactive version performed significantly better than body interactive technique, it has increased the attention level of passers-by and dramatically raised the number of engaged people in front of display, but the number of landing and honeypot effects were not significant compared to body interactive.

In enhance version, the number of glances was %51 against the number of ignores, it was very effective in attention level than other two conditions (non-interactive and body interactive), because the number of glances was almost double than non-interactive and %10 increase than body interactive. The findings show that for a display positioned in a sideway, this technique can increase the attention level significantly than non-interactive display.

The enhanced version also increased the number of engaged people up to %15 of whole passers-by during three days, which the body interactive could not achieve in five days (%12) and the findings state that the enhanced version significantly engaged people than body interactive, but the significance was not as strong as compared to non-interactive (%7), which was above the double of percentage of engaged.

The above percentages might would have increased if the silhouette color was not the same for all passers-by, various silhouette color has an effect on the attention level and the motivation on passers-by, it would be very effective if this problem gets fixed in future.

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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

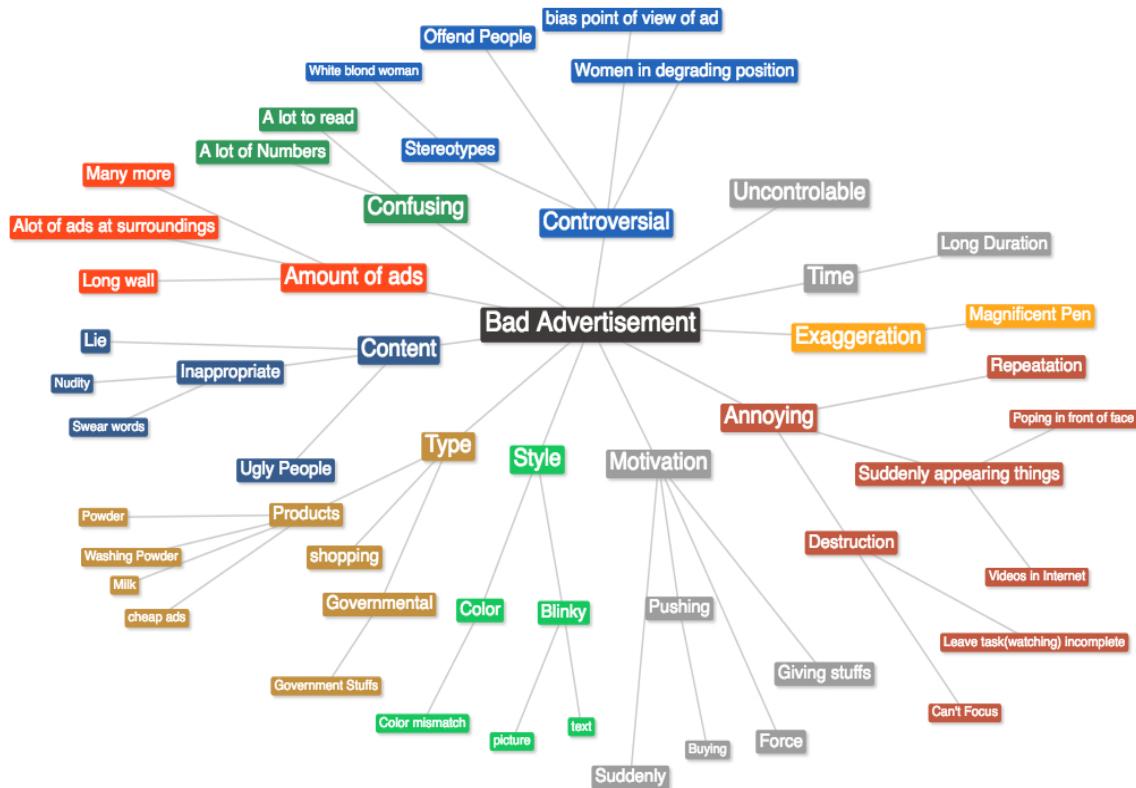


FIGURE A.5: Bad Advertisement

$\mathcal{B}$

## Focus Group

### B.1 First sketch

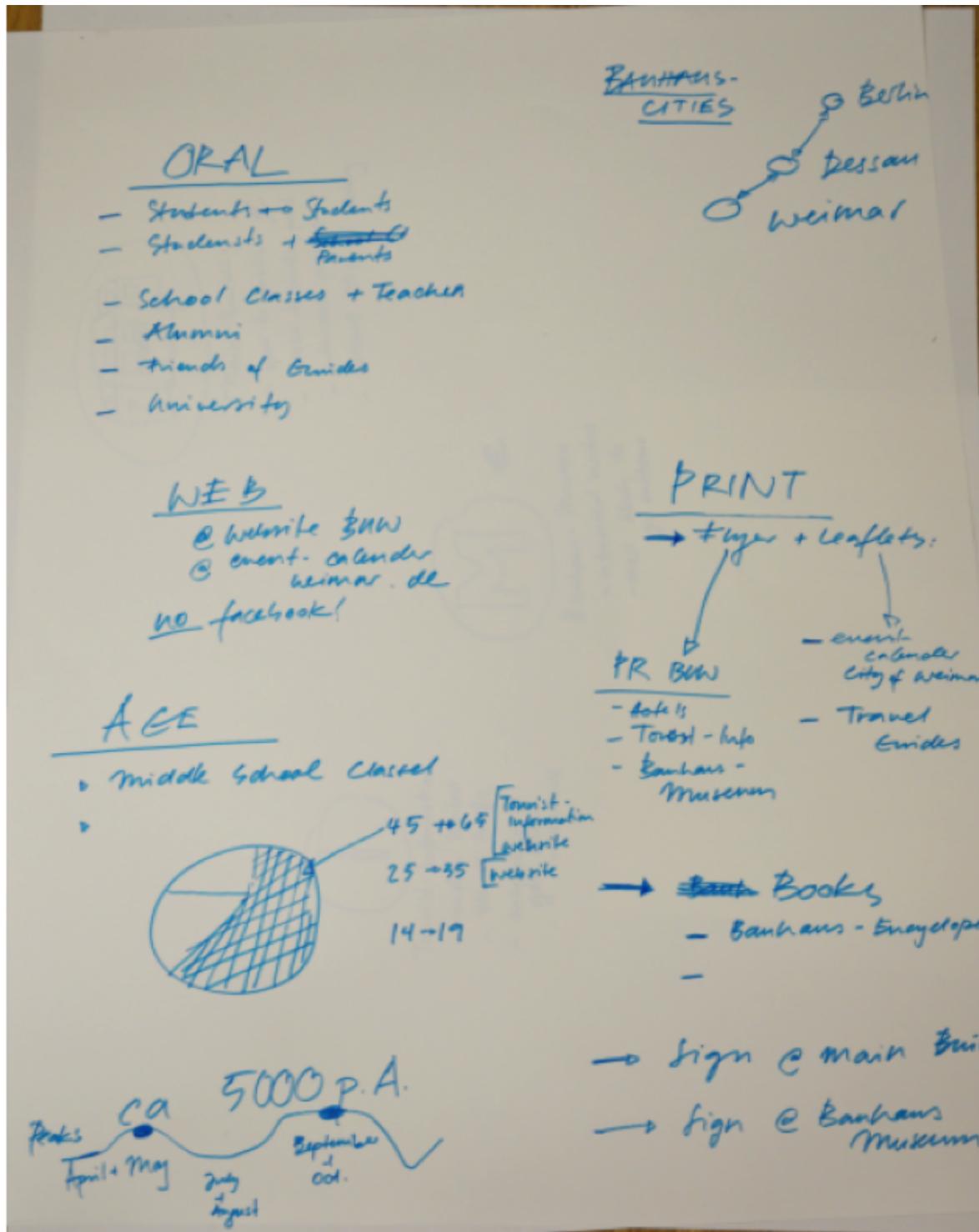


FIGURE B.1: First sketch

## B.2 Second sketch

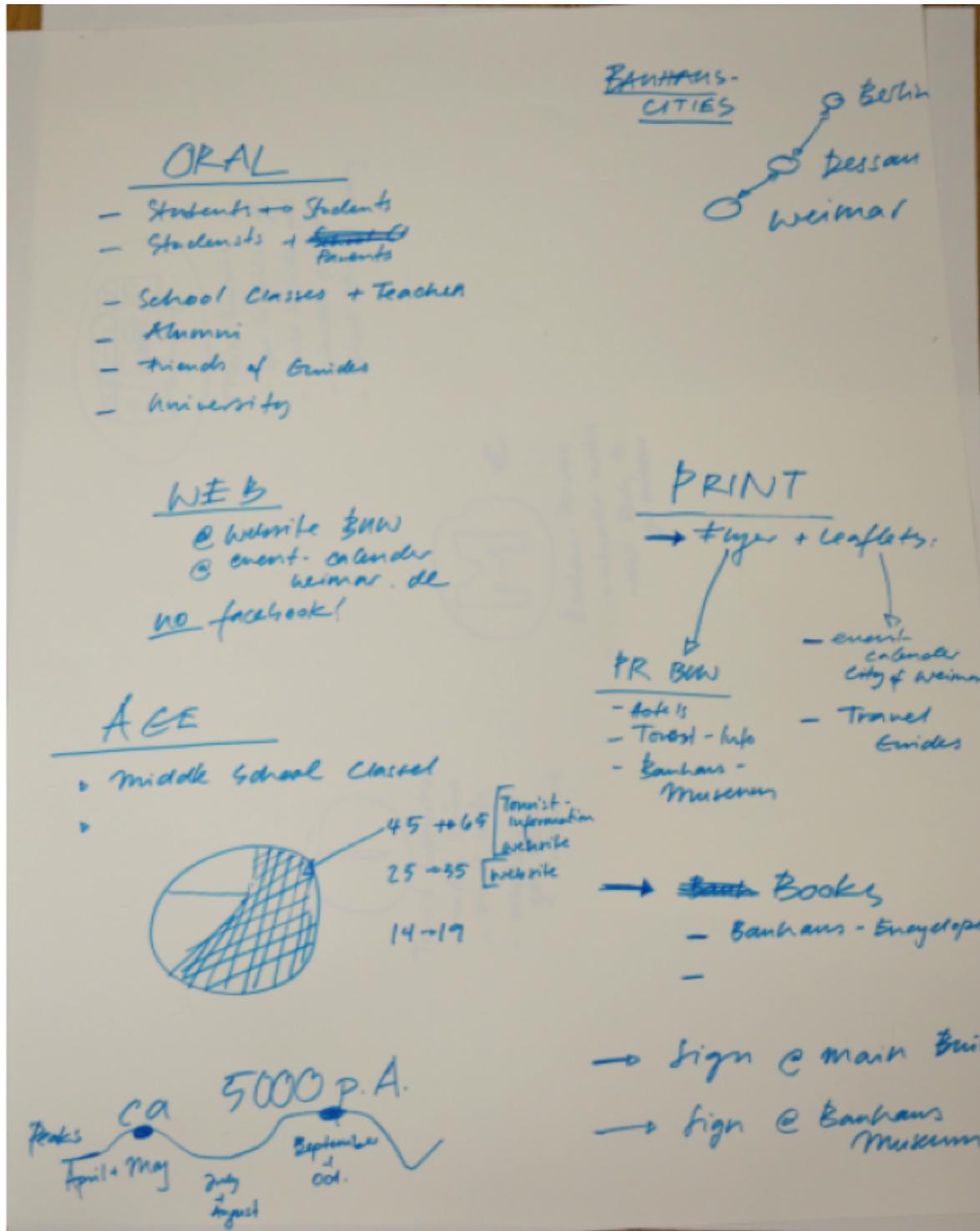


FIGURE B.2: Second sketch

### B.3 Third sketch

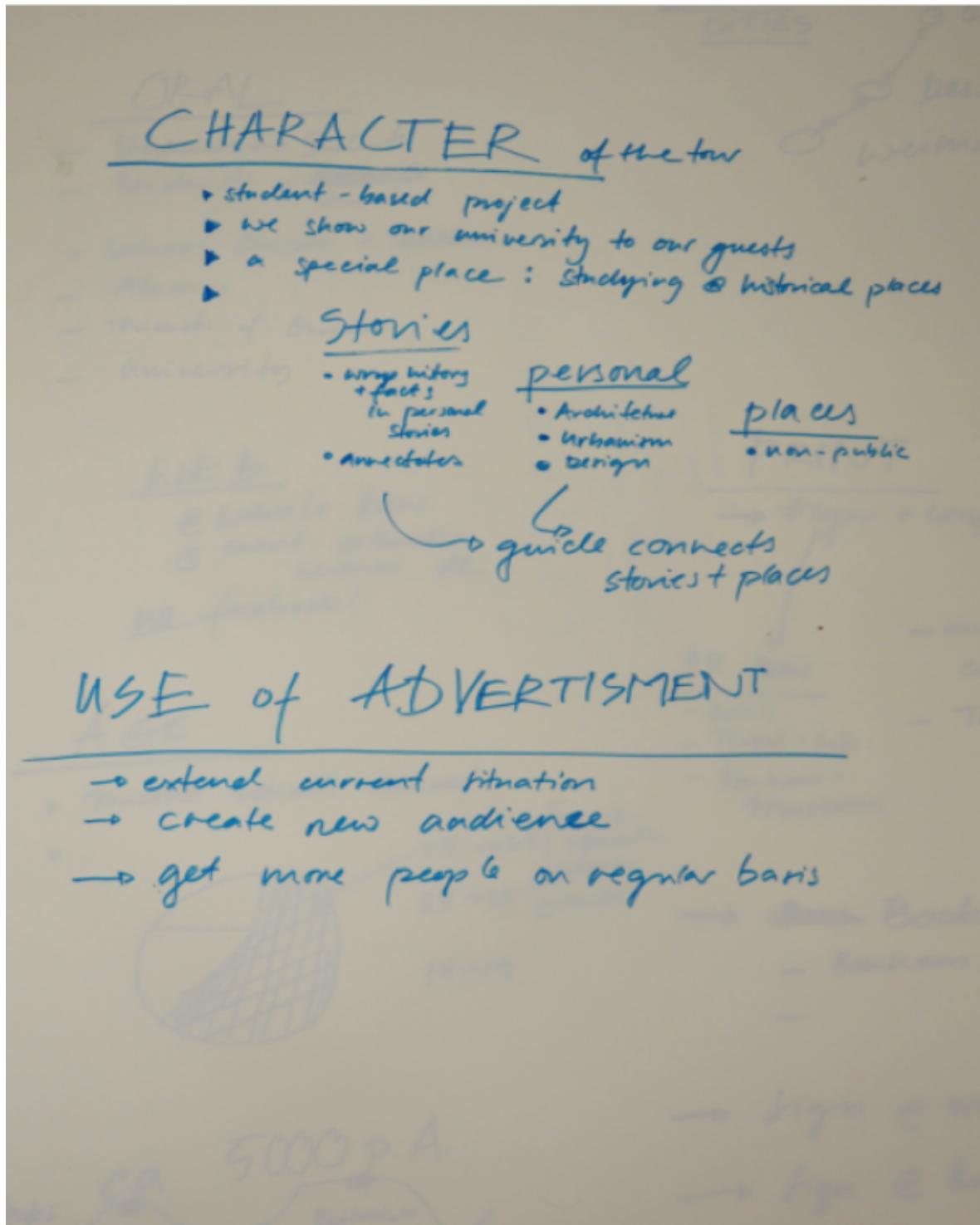


FIGURE B.3: Third sketch



## 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

$\mathcal{D}$

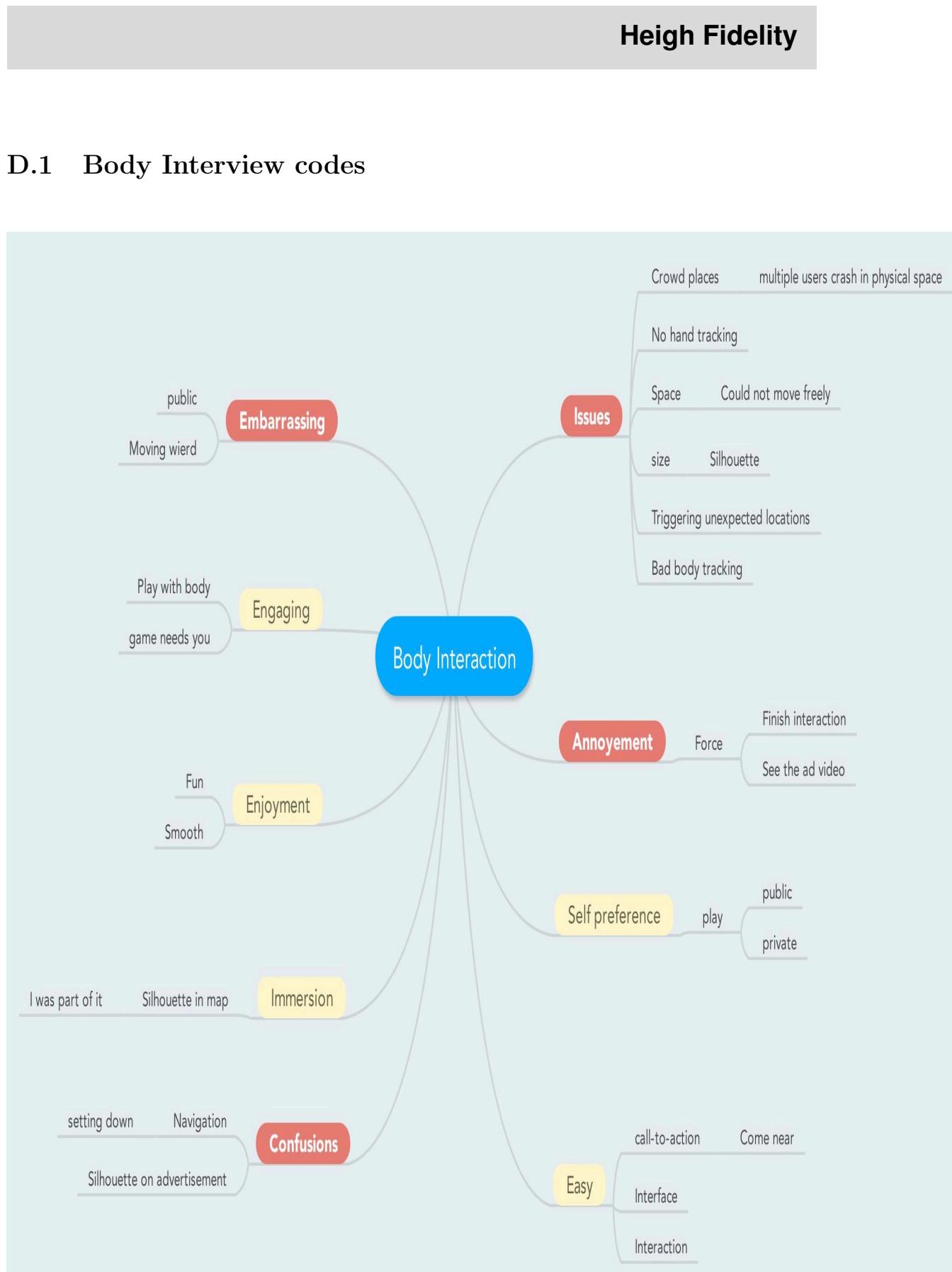


FIGURE D.1: Body Interview codes

## D.2 Mobile Interview codes



FIGURE D.2: Mobile Interview codes

### D.3 Participant performance

#### D.3.1 Body

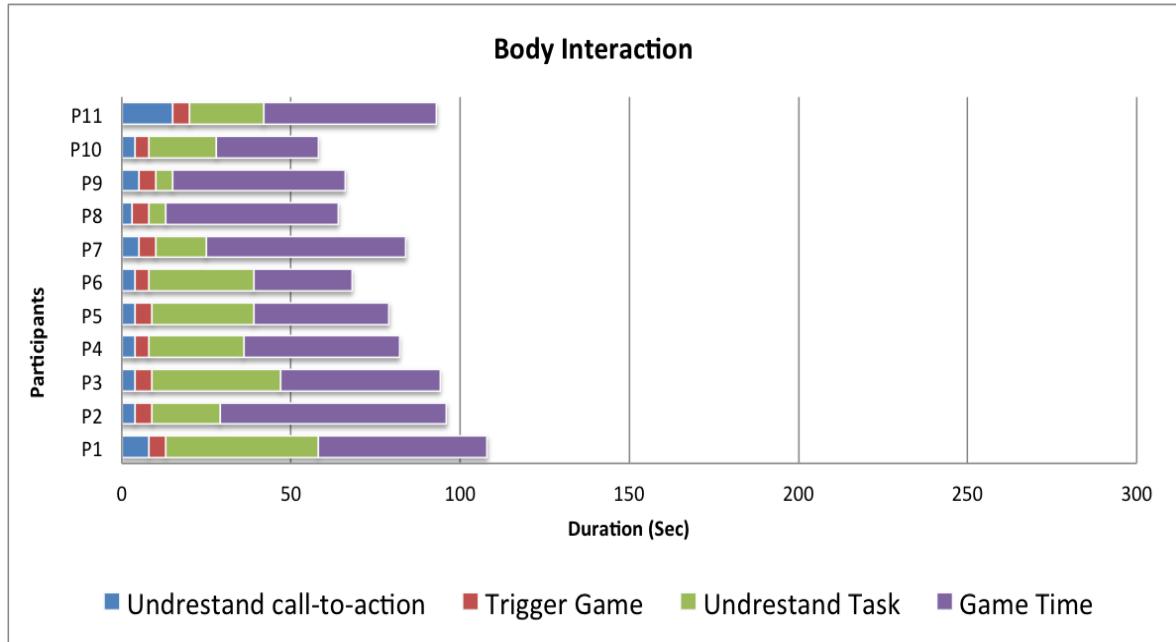


FIGURE D.3: Pariticipant's body performance

#### D.3.2 Mobile

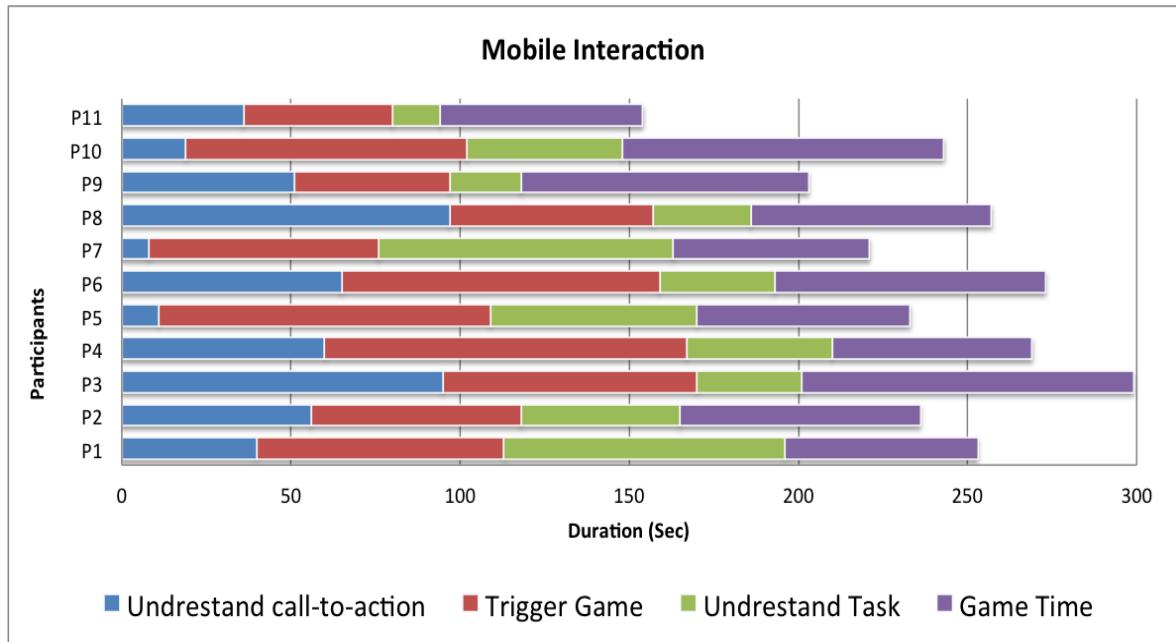


FIGURE D.4: Pariticipant's mobile performance

$\mathcal{E}$

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

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