

Sabancı
Universitesi

PROJECT DOCUMENT

**AUGMENTED
INVITATION**

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CONCEPT

Augmented reality (AR) is a term for a live direct or indirect view of a physical real-world environment whose elements are augmented by virtual computer-generated imagery. With the help of advanced AR technology (e.g. adding computer vision and object recognition) the information about the surrounding real world of the user becomes interactive and digitally usable. Artificial information about the environment and the objects in it can be stored and retrieved as an information layer on top of the real worldview.

In the light of this information; this is an interactive invitation project, which uses Augmented Reality technology. This invitation gives the opportunity to users get more information more than they can get from a normal information, more visuality and suggesting a control mechanism without touching the mouse or the keyboard.

Invitation designed by the shape of cube, which can also fit into an envelope to send when it is unfolded. This cube has four faces, which has markers on it. In the other two faces are only informative such contains the link that user should reach and see the real virtual invitation. Four markers include the information of layout, replacement of the exhibition area and invitation text in 3D environment so that user can navigate in the 3D models, see the layout, experience the space before he/she go there.

The real aim of this project is to combine real movements with virtual environment. Adding a new, attractive and enjoyable way to computer addict lives, add a new movement more than typing or clicking. With this invitation, user can get in the address, reach more information about the event, and by the help of the 3D models, user can also hold the environment of the event in his/her hands. User can turn the place, seek the place, get closer or far, understand the architecture and structure of the event, see the inner parts, what is included in the event; if it is an exhibition, which artwork is placed to which part of the exhibition or they can learn how to reach the museum.

Augmented Reality technology is used in video games, advertisements and real time activities in all around the world. Even though it is a new technology, inventors contribute on the usage and development on it and because of that; every day it becomes more popular and beneficial. The basic aim of inventors is reduce instability in front of the computers and screens as most of the people spend hours in front of them. With the developing technology we all become dependent on computers but with this technology it is aimed to lessen the dependency on our chairs. It becomes possible to play computer games in the streets with your whole body by the help of LCD glasses.

And in this project augmented reality offers a new way to add interactivity to printed media. We do not expect to interact with a printed material but in Augmented Invitation project, you can use you invitation as a tool to lead yourself in the website. It can be your steering wheel to change the menu and get different information from different animations. This project's prototype made for Sabancı University's VACD students' exhibition, Flow/Debi which contains a website, invitation and augmented reality. You should visit the website to reach the animations and further more you can find various information about previous exhibitions and the whole concept of Flow. By this way, even it is an invitation, as a package it passes more information than a regular invitation. The users find it more interesting, exciting and special than a piece of paper. Also this kind of invitation creates an exclusive situation that only the ones who have invitation can see the animations otherwise the website only remains informative for the general concept.

TECHNICAL DESCRIPTION

In technical terms, to use Augmented Invitation, the only need is a internet connected computer which has a webcam. Under these circumstances, if one has the invitation it is possible to reach the invitation anywhere he/she wants. The easy accessibility is an important property of the project, even it seems complicated as an invitation, it is exact opposite, very easy to use and easy to access in the Internet era.

To make the Augmented Invitation, there were several phases; Augmented Reality technology, designing invitation and website needed separate time schedule to do. The first phase was to make the technology, which is made with the programs called FLARTollKit, FLARSquidderKit, Maya, Flash and Papervision3D. Models, textures and animations are made in the Maya program and exported as Collada file so that it can be integrated to Flash. FLARSquidderKit and FLARToolKit have the library to make the Augmented Reality technology, but they need to be modified according to the project. Also there are several forums and tutorials, which show how to make the AR, write and modify the code. These libraries also include the database to get the marker as a base and take its coordinates to calibrate with the model. They also contain the webcam data, lighting and some basic shapes to put on the marker. Specifically FLARSquidderKit offers you to work with multiple markers, which is one of the most important issues to create the navigation system inside the invitation in a webcam window. And these programs come together in the Flash program, but it is needed to be familiar with ActionScript3 code language. Further more; these libraries give you automatically markers but if you do not like them, it is also very easy to change the markers in the way you want. Any shape can be a marker by the help of Marker Generator program, as long as it has the black and white contrast.

During designing process, many samples, books, used examples and even juice box are searched and considered as a potential invitation design. It was again an important process because it had to contain information, navigation and markers at the same time. So cube shape is found proper to reach the aim, and several cube shaped invitations are tried. There were pop-up, tear -do, box-like invitation choices to make the invitation in the sense of both able to send in an envelope and can be easily shaped as a cube. The most proper and popular ones are the pop-up which is more interesting but slightly more difficult to use, and box-like one. So it is been used as a box in the prototype, which can easily fit in an envelope when it is unfolded and easy to make a box when it is folded.

Website was the last phase of the project, which should include information about the exhibition itself and previous ones, also it should have the access of the invitation itself. The most important part in this point is, making website might be challenging in some conditions such as webcam may not be open in all browsers. That is why, it should be needed to have the general information about making website and Internet security properties. In another aspect; website design is also important because the visuality of the AR and website should fit each other. Otherwise the styles of both visuals may not be fit and the general design of the website may look off grade. Because of that, the existed website designed as simple as possible to look consistent and easy to use. Little 3D cube elements added to refer the whole three-dimensional invitation idea and visual, and the cube shape is chosen because of the shape of the invitation. With this reason, it is likely to see three-dimensional cubes in the general design concept.

In addition to that; in the general design manner, Phatone and Helvetica Light used as type

faces- specifically Helvetica used because it also used in the Flow logo-, black and white used as the general color scheme because of the markers' obligatory colors. To sum up, markers' and AR's 3D visuals shaped and directed the whole design process.

GENERAL DESCRIPTION

Augmented Reality has many usages nowadays, especially by big companies such as Coca-Cola, Mini Cooper, Esquire magazine, PlayStation, Elidor, and Adidas etc. It is possible to play games through markers on the products like in Adidas and Coca-Cola, to see all pieces of the car like in Mini Cooper, or to make more interesting a special part such as Esquire magazine's fashion part or to try new hair models like in Elidor's example. It is more likely using in the advertisement or entertainment business but it can also be used in many beneficial ways. For instance, there are iPhone applications which can identify its environment and give information about them, or a new implementation begun in newspapers nowadays which you can get more information when user shows the marker in a website. There are many ways to use the technology but however in Turkey only a few examples can be seen, and they are not so developed and interesting. One of them is made for Garanti Bank in July of 2009, which is the first example of it, and the second is the application of Elidor, which is made in May of 2010 by help of foreign coders from France. Augmented Invitation can be the third application, which is really accomplished and used. Also it is not in the league of advertisement opposed to the examples, it is more informative application and it can be improved in the near future with many other different applications. Using the technology in the printed medium may open a new approach in the meaning of interactivity, which may lead to a new cast of mind. It can be used in many different mediums such as business cards, invitations, magazines, advertisements and several other printed usages. Even maybe in a near future the need of text and pictures will decrease because everything around us may become animated, 3D based and video based visuals, which explains what a text should state.

Flow Exhibition was suitable for an invitation like this but of course in the sense of applying the project in different activities the whole design of the website and invitation should change. And there may have different design solutions for the project too such as it does not have to be an invitation it can be applied different mediums and according to that different navigation solution can also be found. It can be developed as, a project working without specific marker, it can change into different variables of AR but this time coding part should change completely. The risk in these kind of projects that because of it works with online camera, webcam may not always work, the situation may differ from browser to browser or if the speed of internet is not enough, the animations may not be seen properly.

To sum up; it is a developing technology, it becomes very popular in the interactive world and even though there are many different kinds of examples about it, this project was the first invitation project done as that informative and serious. It can be used in many events beginning with Flow/Debi exhibition because the exhibition contains student works and all of the ideas inside are fresh, unique and worth to be presented in the best way. This invitation made for Flow exhibition and from website to invitation it fit very well to the uniqueness of the works because it is a unique example too. That is why "We invite you to an extraordinary experience" sentence used as the text of it because both the works inside and the invitation itself is extraordinary and people should see it. To make people see it, something should be attractive and this invitation makes people interest more about the exhibition because it is more enjoyable and special way to invite people. This project is an invitation to Flow and a new technology called Augmented Reality, an invitation especially for Turkey.

Examples in Turkey:

<http://www.101cennet.com/augmented/augmented.html>

<http://www.sacabaksaca.com/>

Examples from other companies:

<http://www.esquire.com/the-side/augmented-reality>

<http://www.ineedcaffeine.com/content/2009/01/mini-cooper-3d-print-ad-must-see/>

<http://adland.tv/content/adidas-augmented-reality-sneakers-2010>

<http://augmentpro.com/coca-cola-avatar-movie-augmented-reality-experience/>

<http://www.good.is/post/recognizr-an-augmented-identity-app/>

<http://www.good.is/post/ behold-tokyo-s-new-augmented-reality-architecture/>

<http://www.good.is/post/better-choices-through-technology/>

<http://www.bigumigu.com/haber.asp?hid=4753>

<http://www.bigumigu.com/haber.asp?hid=5368>

<http://gamesalfresco.com/2008/03/03/top-10-augmented-reality-demos-that-will-revolutionize-video-games/>

<http://www.good.is/post/maybe-your-avatar-controls-you/>

<http://augmentpro.com/coca-cola-avatar-movie-augmented-reality-experience/>

<http://adland.tv/content/adidas-augmented-reality-sneakers-2010>

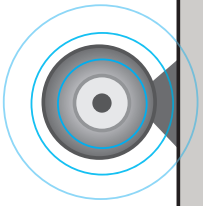
<http://www.ineedcaffeine.com/content/2009/01/mini-cooper-3d-print-ad-must-see/>

<http://vimeo.com/1766816>

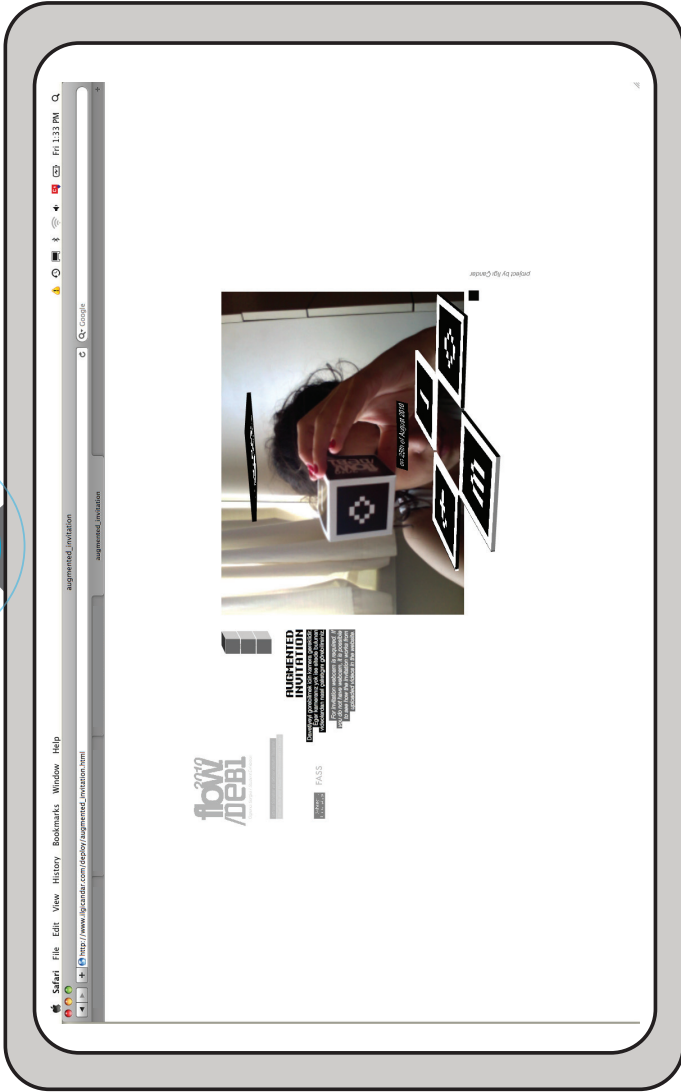
<http://www.esquire.com/the-side/augmented-reality>

TECHNICAL RIDER

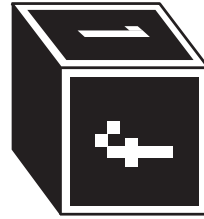
a webcam



computer



internet

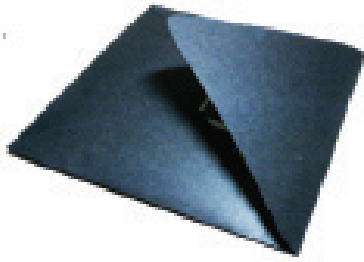


invitation

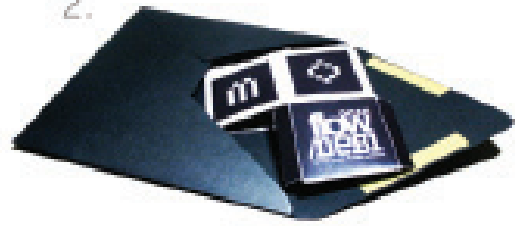


THE INVITATION

1.



2.



3.



4.



5.



6.



7.



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