P.2

project two

Designing Interactive Exhibits/ Installations for information access

Rahul Anand
126130006

Project guide:
Prof. P. Kumaresan

Industrial Design Centre
IIT Bombay

DECLARA

DECLARATION

ATION

The research work embodied in the written submission titled "*Designing Interactive Exhibits/Installations for Information Access*" has been carried out as Project Two by the undersigned as part of the post graduate program in the Industrial Design Centre, IIT Bombay, India under the supervision of Prof. P. Kumaresan.

The undersigned hereby declares that this is an original work and has not been plagiarized in part or full from any source. Appropriate reference information or links have been provided wherever due.

Furthermore, this work has not been submitted for any degree in this or any other University.

I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action if need arises.

Rahul Anand
126130006
Industrial Design Centre
Indian Institute of Technology, Bombay.

APPROVA

APPROVAL SHEET

AL.

This design project entitled *" Designing Interactive Exhibits/Installations for Information Access"* by Rahul Anand, 126130006, is approved in partial fulfilment of the requirements for Master of Design Degree in Industrial Design.

Project Guide

Chair Person

Internal Examiner

External Examiner

Date : 26 SEPTEMBER 2014

ACKNOW

ACKNOWLEDGMENT

VLEDGE

This work is dedicated to my family. To my loving parents and sister, thank you, for all your enduring support and endless encouragement. It kept me going.

To my project guide, Prof P. Kumaresan, for being a fabulous support throughout these formulative years. For the discussions and ideas that we had openly, and learning through them. For the freedom to explore and experiment, that was allowed.

To all my faculty members, for shaping me as a designer, and being there to help, when things got worse.

To my friends, for the thoughts we shared, for all the lighter moments, and helping me sail through difficult times. For the memories created, and keeping me sane.

Rahul Anand
September 21, 2014 at Bombay

STRUCTU

REPORT STRUCTURE

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Essay. 01

Answers to questions asked throughout the project, and attempting to understand the core of the subject. Through numerous discussions with people, research and observations, this is the synthesis of whatever my learnings have been and the thought philosophy developed during the course of this project.

Pages : 05 —43

Case Studies

Live and literature Case Studies to find inspirations and problems, and getting design directions.

Pages : 45 —65

Design. 02

Solutions to the design brief, and an attempt to achieve a design responding to the ideas developed during the research and understanding.

Pages : 67—89

ESSAY

ESSAY .01

.01

INTRO.

INTRODUCTION

Exhibit design (or exhibition design) is the process of developing an exhibit—from a concept through to a physical, three-dimensional exhibition. It is a continually evolving field, drawing on innovative, creative and practical solutions to the challenge of developing communicative environments that 'tell a story' in a three-dimensional space

(Wikipedia Definition[1])

Exhibitions are spaces where emotional connections and experiences happen. As a child, I was fascinated with exhibitions, and science museums, because these were the spaces where information was experienced through moving, and getting involved with the objects. The joy of watching little turbines generating electricity in a dam model was unparalleled. These experiences and information was not available anywhere.

A lot has changed since then. Information technology has made information and experiences available in the virtual world. Slick animations, websites and apps make all rich information accessible at your fingertips.

Why would people go to an exhibition anymore?
How does Exhibition design shapes up in this world?

1 *http://en.wikipedia.org/wiki/Exhibit_design*

How this project works?

This project asks a few questions to understand the art and craft of exhibition design, and applying the learnings gained to design solutions.

.Why?

Why do we exhibit something? It tries to explore the core of displaying something, of creating alternative worlds and how has it changed and evolved through human history. How did these worlds were created, the logic and inspiration behind them.

.What?

What is the context that exhibitions respond to? Understanding The Context of the rapidly evolving information culture. How information creation and accessibility is changing our behaviour. How can exhibition design respond to this and create a culture of virtual use in real spaces.

.How?

how can an exhibition become a coherent space for interactivity and a fun place to learn, a unique forum other than television, conference rooms and internet for communicating ideas.

WHY.

WHY EXHIBITIONS?

"Featuring space, collections, images, text, light, photography, film, new media and interaction, an exhibition is a unique position to inform and seduce, to create wonder, involvement and experience in visitors."

(Herman Kossman :Engaging spaces:2010)

An exhibition space is not just a display of things and content. It's a world, an alternative world about things being displayed. Imagine an exhibition displaying an artist's work. A collection of an artists work is his thoughts, his struggle, his whole life and philosophy on display, it's a world inside him, and its intense. And visitors are having a glimpse into that world, walking through that world, almost metaphorical to walking through his mind/brain if that was possible. Exhibition is as close as someone can take you, and that's why it's a very interesting opportunity for a designer, to convey thoughts ideas and much more than that in a spatial 4d environment.

It is a story being communicated, some narrative being told. And humans as a species which loves to imagine, these fantastical alternative worlds have always been build throughout our history.

We have always indulged in creating alternative environments that attract visitors and leave them both

sensually and intellectually aroused and astonished. Such worlds can be found in the religious structures throughout the world. These are spaces where structure, sculpture, elements, form, content, paintings and environment all come together to create a very strong deep experience of mystery and power. From scale to hierarchy, these structures are stunning exhibits about Gods, Goddesses demons and their stories, fantasy worlds of Angels and Rama.

Fantasy of Ancient Worlds

The form of shikhara in Indian Shiva temples e.g. Kandariya Mahadeo temple at Khajuraho,*(Image 01)* is a symbolic representation of Mt Kailāsa. Surrounded by urusringas, which denote the lower mountain ranges around kailasa. The temple symbolically depicts a different world. The world where Lord Shiva resides.The act of entering a temple becomes like entering the home of Shiva and spaces have been treated in the same way. The high plinth, makes it grand and the scale over powers a human. When you climb up the stairs to reach the plinth, it metaphorically represents the climb to reach to the base of mount Kailasa. Once here, one notices the beautifully detailed sculptures on the outside wall, which creates an intense visual attraction. These sculptures say stories about the gods and their lives. The whole surface becomes a spatial narrative. While one enters the temple, proceeding from ardha mandapa to the garbha griha, the walls, the character of the light and the environment, changes, bringing in more mystery, darkness and simplicity as you reach garbha griha.

Along with the chanting of mantras, which echoes softly within the temple, It invokes a sacred feeling, a space where there is no material, but only energy. All the high walls, sculptural decorations, light shafts sound of mantras creates a total environment which transports the visitor into a different world, through a series of narrative spaces that one walks through.

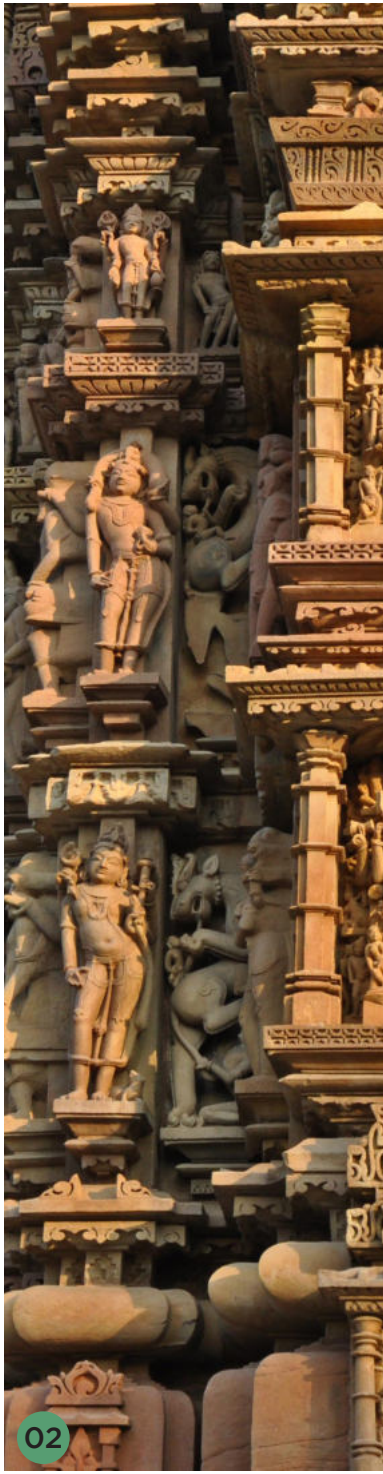
The Stupa Of Borobudur in Java, Indonesia is another beautiful space where architecture, sculpture , form and symbolism come together to create the world of Buddha himself. Its takes the shape of a spatial mandala, with nine floors, which have to be traversed to complete the journey to nirvana. The lower square floors have galleries with walls depicting stories of birth and life of Siddhartha and his transition to Gautama Buddha. The galleries in which the visitors walk are narrow and hence visitors are kind of forced to look to the narrative sculptures that is a like comic book strip. When the users reach the top floor depicting the tenth level of enlightenment they have travelled both physically and mentally to this stage, at which the floor becomes a circle and open, depicting the cosmos. Buddhist pilgrims still come here to experience the ten stages and nirvana of Buddha. The transformation is the character here, and everything depicts this theme.

Such wonderful examples of alternative worlds range from the Gothic cathedrals to the beautiful mosques, even apart from religion, there have been other spaces ranging from royal palaces(Versailles) and gardens, mausoleums (Taj mahal) to wonder rooms curated by the rich and powerful.

Cabinets of Curiosities

The wonder rooms, also known as *cabinets of curiosities* acted as predecessor of museums. They were personal collections of weird artifacts and objects from around the world being displayed in a room. These spaces were exhibitions of the experience, power and taste of the kings, rich men and powerful. The whole idea of displaying the heads of hunted animals was a process of narrating the huntsmen-ship of the person. These rooms were personal exhibitions on a large scale, and they usually took the form of architectural spaces and elements that were mostly permanent in nature, to generate and create wonder over a period of time, some of them even became the first museums to be opened for the public.

01



02

03

Kandariya Mahadev Temple

01

Side view. Notice the form of shikhara and how it almost looks like a mountain range, and the high plinth, which increases the drama.

***source**: http://goo.gl/PcNDe6*

Kandariya Mahadev Temple

02

Sculptures on the outer walls of the temple denoting stories

***source**: http://goo.gl/19CDXe*

Borobudur Temple.

03

The spatial mandala with 10 stories depicting the journey to nirvana

***source**: http://goo.gl/CP2rge*

WHY.

WHY EXHIBITIONS?

Industrial Revolution and World Expos

Then came the industrial revolution, and a rapid change happened in technology and culture. A new temporary space was required now, so that the advancements of technology can be displayed to the people, to the interested businessmen and consumers. This led to birth of the world fairs, and for the first time, the exhibition came into its modern, “temporary spatial” avatar. This was the time when kings, and monarchy was diminishing and the political nature of the world was changing. It was being restructured as a world of nations and countries rather than kingdoms. And every nation wanted to supersede the other, proving its power and advancement. Suddenly, these Nations found exhibitions as an effective medium to show the world their expertise in technology, and encourage improvements, hence attracting industries and money.

The Crystal Palace Exhibition

The Great Exhibition of 1851 at Crystal Palace (Hyde park, London) with its whopping 14000 exhibitors and 92000 m^2 area was one of the trend setters. A huge temporary structure, almost all made of plate glass and cast iron, created an awe among visitors with its high ceilings, clear walls and abundant light. It was the largest use of glass in any building at that time. It was the

outcome of a recent technological advancement in the production of plate glass that made it easier and cheaper to manufacture. The structure itself became an expression, symbolizing the technology it exhibited inside. Since then, the culture continued, and over the period of time these world exhibitions became the showcase of human achievement.

A lot of structures built for these expos, though conceived as temporary were retained after the exhibits and later on became iconic landmarks within the cities all around the world. The Eiffel tower was originally conceived as the entrance to the 1889 world fair. It denoted the human achievement of engineering design and its mastery over the iron as an material. It became an inseparable symbol for the city of Paris in the later years.

Modernism, Installations & Futurism

During the early 1900s there was an upheaval everywhere, confusion, world war, depression and a mental war among people. Out of this turmoil, rose the experimental artists, architects and designers who were to change the world with their new visions. The ideas of *Modernism* and movements such as *De-Stijl* and *Avant Garde* redefined the art, architecture and design all over the world.

In terms of exhibition design there were a lot of artists and designers using the medium of exhibition to communicate bold and experimental ideas and thoughts. It is very interesting to see the exhibitions designed by artist & designer Friedrich Kiesler. His Art of this century gallery is an interesting study in creating spatial narratives.*(images 6,7, page 17)*

Another very interesting thing that started growing in and out of such exhibitions were installations. Installations had this inherent sculptural and artistic quality, but now the artists started considering the viewer also, being present in the space with the art-piece. This created the opportunity of user engaging and feeling the artwork with all the senses rather than just seeing it from a distance. And this suddenly opened up a lot of interactivity between the exhibit and the visitors. A very interesting and intimate example of such early installation can be seen in ***"the man who flew from his apartment"*** by Ilya Kabakov *(images 8,9, page 19)*. This installation or exhibit takes the shape of a scene, with daily objects to concur images and connect with a fantasy that emerges from reality.

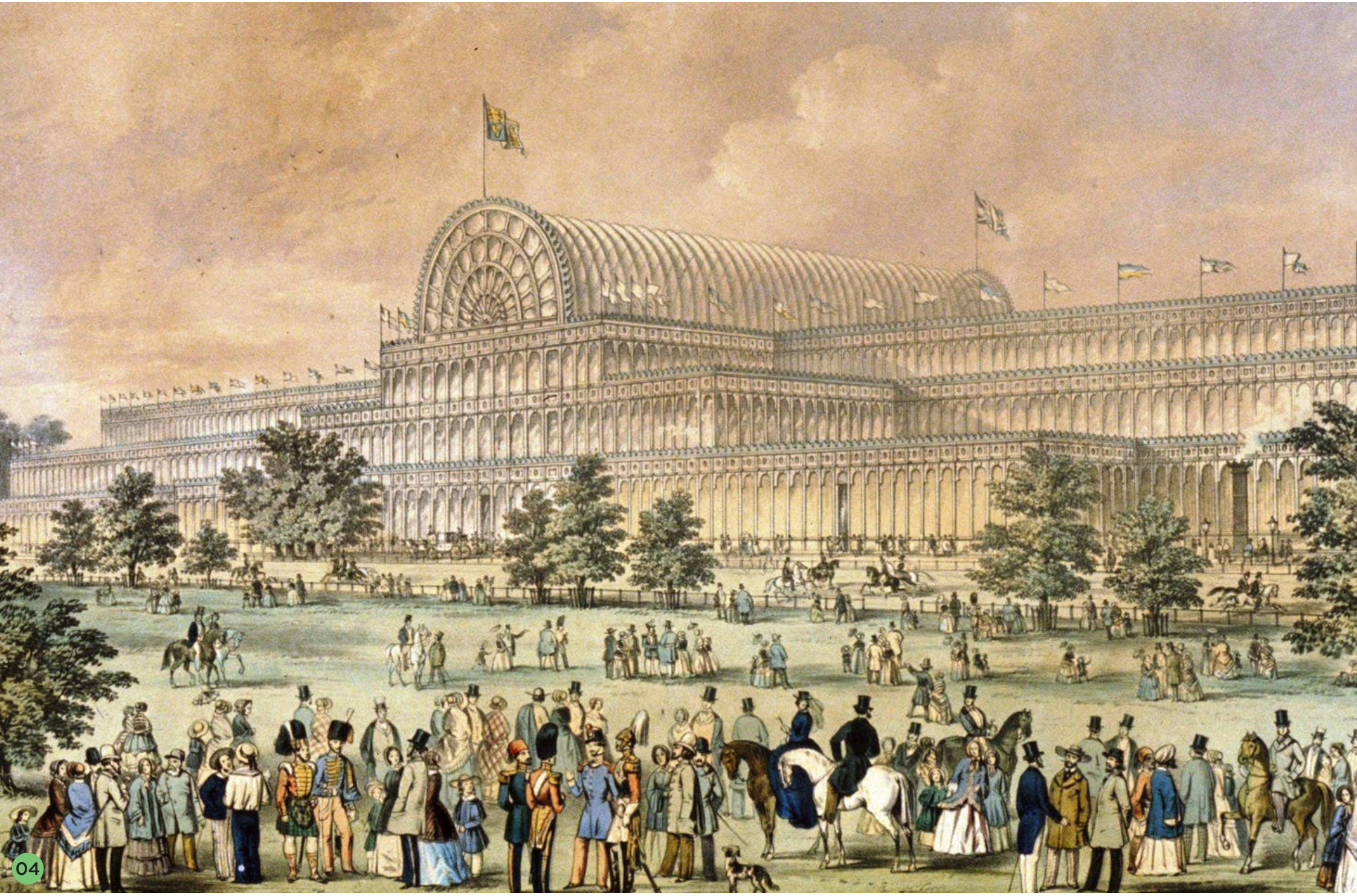
The world fair of 1939 is a particularly interesting example where people from varied backgrounds, including architects, industrial designers, film makers, lighting designers, set designers animators came together to create a new type of multimedia experience to give a glimpse of the future.

The Futurama pavillion was an interesting installation where the visitors flew over a model of a future city, in a cable car, giving them a taste of tomorrow.

Changing Character

The Character of the world exhibitions kept on changing over the period. Starting as showcases of technology and industrialization in the late 1800s and early 1900s ,to becoming a space of cultural exchanges and envisioning future during mid 1900s.The late 1900s saw exhibitions becoming platforms for nation branding. No matter what the character was, they kept on getting more and more multi-media and diverse in nature all the time. Designers were creating exhibitions as whole installations where visitors are lead into a world of different medias*(see Cites Cines, image 10,page 21)*, and they unconsciously Wander through a narrative. The Danish pavilion *(images11, page 21)* by big architects is a refined example of creating a total experience in modern way. The loop structure brings in elements from Danish culture(the designers even bought the very iconic actual little mermaid statue to the pavilion all the way from Denmark to China) and places them carefully in a fashion similar to the temple of Borobudur.

- *Related Images follow in next pages*



Crystal Palace, Exterior

04

The all glass and iron structure was huge in scale and nothing like ever seen before by humans.

***source**: http://goo.gl/HsGFJm*

Crystal Palace,Interior

05

High Ceiling and abundant light created a different atmosphere inside the palace.

***source**: http://goo.gl/oBJdkg*


07

Art of this century Gallery.

Friedrich Kiesler.

New York City, 1942

Friedrich Kiesler, was an Austrian-American artist, architect and designer who believed in the active participation of the visitor with their environments. In this semi-permanent exhibition of works of noted European surrealist artists, he designed four spaces: the Abstract Gallery, the Surrealist Gallery, the Kinetic Gallery, and the Daylight Gallery.

He used a lot of different media, like light, sound and colour to create total environments. It indulge the user in an experience. He believed in intensifying the emotional impact that art has, on people and use all sorts of techniques to create worlds where people experienced traditional 2 dimensional art in a 3 dimensional space, leaving perplexed and astonished at the same time .

Surrealist Gallery. 06

***image source**: http://goo.gl/EwOx4L*

One of the most-recognized and reproduced exhibition spaces of the twentieth century, the Surrealist Gallery was Frederick Kiesler's design masterpiece. Within the long black-painted room, hanging curvilinear wall units displayed all the Surrealist works jutting out toward the viewer on adjustable arms. As originally presented, spotlights illuminated the paintings individually in a random electrically controlled sequence. At times the gallery was plunged into complete darkness accompanied by the ominous sound of an oncoming train.

(Wikipedia: http://goo.gl/NVDxgX)

Abstract Gallery. 07

***image source**: http://goo.gl/4fi3kt*

"The Abstract Gallery was the entrance space featuring undulating walls of ultramarine canvas and a Thalo-blue-painted floor. All of the paintings were suspended within the room from either diamond-shaped or inverted-pyramid rope modules or from parallel or V-shaped straps. Some sculptures were also suspended midair within these modules. As in all the gallery spaces, Frederick Kiesler's Surrealist furniture also served as easels for paintings and pedestals for sculpture."


РЕШЕНИЙ
АПРЕЛЬСКОГО (1984 г.)
ПЛЕНУМА ЦК КПСС —
ДЕЛО ПАРТИИ,
ДЕЛО

Ten Characters

Ilya Kabakov

Artist & Author

Ilya kabakov is a Russian born American artist, who has created a lot of paintings, books and installations. He created a lot of albums, almost 50 in number, prior to creating installations. He later on went to create installations responding to his stories and illustrations. One of these installations is Called "Ten Characters" is about creating a spatial story, about ten different people who are living in an apartment in ten different rooms. So you go, one room to another room, and discovering the character of those ten people by seeing the room. In the room he has placed normal, daily objects which instantly connect you to daily day to day life, but then there is this element,which gives you a strong clue about the aspirations and habits of the ten characters.

The Man Who Flew Into Space From His Apartment 08

image source: *http://goo.gl/TxZU8R*

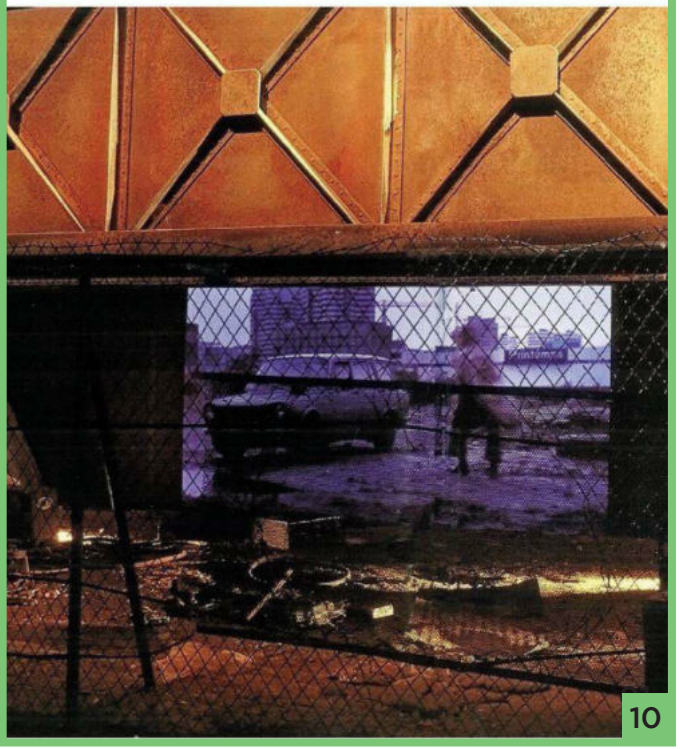
The Man Who Flew into Space from His Apartment tells the story of one of the residents who built a catapult-like contraption to shoot himself through the roof into outer space, where he would travel on powerful streams of energy. The room still contains the contraption, a gaping hole in the ceiling, and scientific drawings and diagrams tacked to a wall that is covered with wallpaper composed of old Soviet propaganda posters. A diorama of the town shows the man's expected projectile path into outer space.

(Wikipedia: http://goo.gl/NVDxgX)

The Man Who Never Threw Away Anything 09

image source*: http://goo.gl/lue3hT*

Another character, The Man Who Never Threw Anything Away collects and treasures ordinary and discarded items, because he is afraid to lose the memories attached with those objects. Strings are tied in rows several feet above the floor, from one wall to the other. Countless items hang from the strings and below each item a small piece of paper explains its origin.



11

Cite Cines, *Paris (1980)*

10

image source: *http://goo.gl/TxZU8R*

Exhibition Designer Francois Confino put up 17 film sets in a hall in Paris. Augmented by light, sound effects, the 35mm film projectors showed the different segments of films in which these sets were used. Visitors could touch the sets, walk freely in these live scale sets, giving a feeling of walking through city, the same city as shown in these films, again creating a spatial narrative.

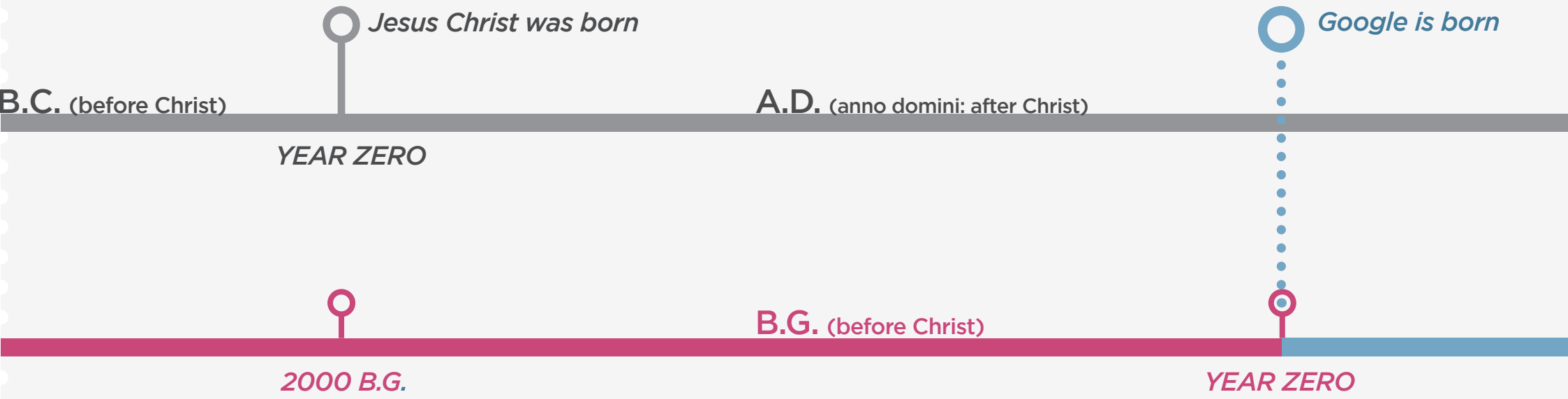
The Danish Pavillion, *World Expo (2010)*

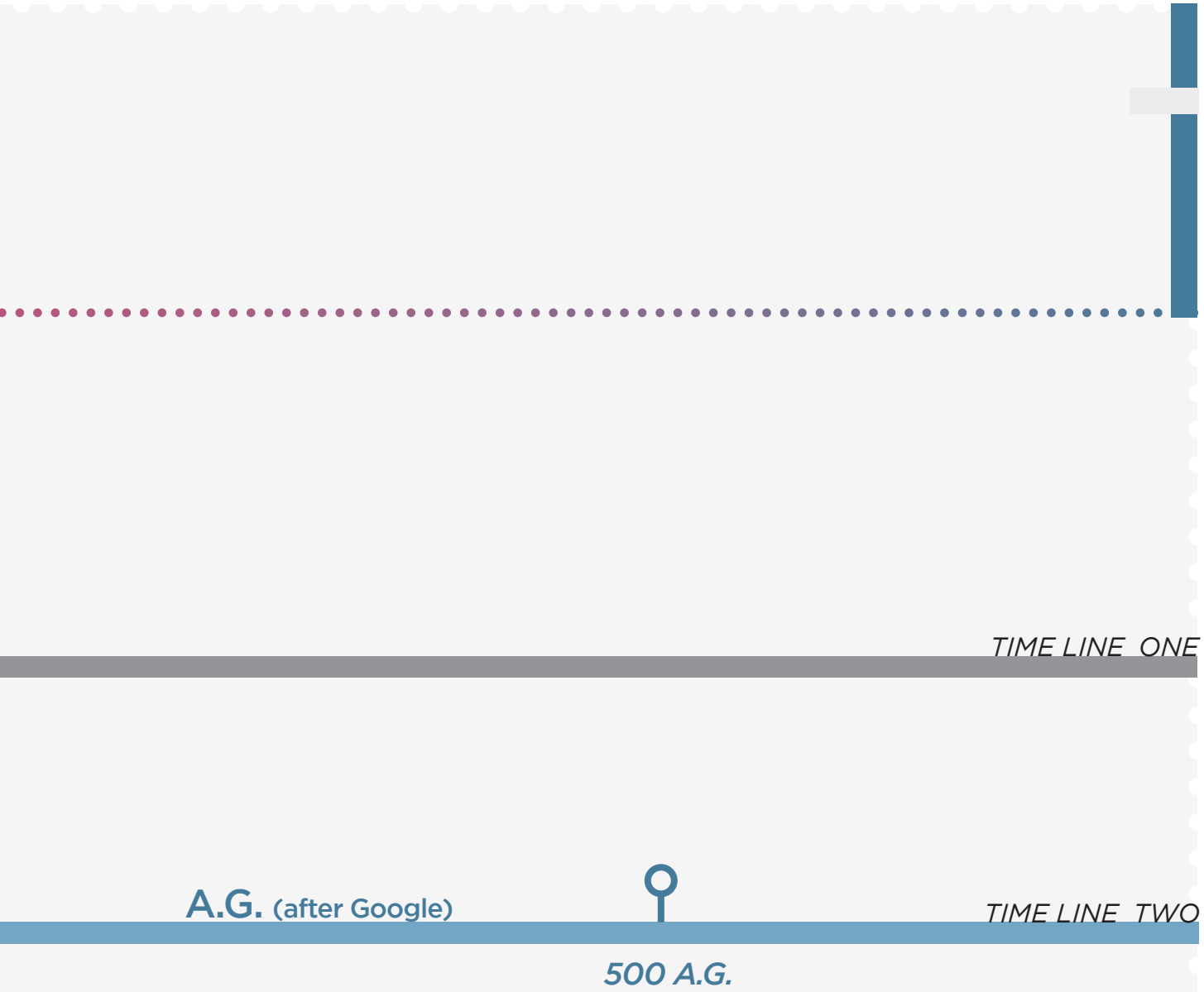
11

image source*: http://goo.gl/lue3hT*

The Danish pavilion by big architects is a refined example of creating a total experience in modern way. The loop structure brings in elements from Danish culture(the designers even bought the very iconic actual little mermaid statue to the pavilion all the way from Denmark to china) and places them carefully in a fashion similar to the temple of Borobudur. As the visitors traverse the loop structure they learn about Denmark, the culture and the skyline of Copenhagen in one experience. There are bicycles which you can use to go around the slope structure.(bicycles being a very important part of contemporary Danish culture. Such pavilions leave a strong impact on the visitors because of the profound experiences they create. They become memorable.

B.C. TO B.G.


Jesus Christ was born
Google is born
B.C. (before Christ)
A.D. (anno domini: after Christ)
YEAR ZERO
B.G. (before Christ)
2000 B.G.
YEAR ZERO



What Context?

From: Culture Of Religion To A Culture Of Information

This graphic compares two time-lines, the upper one that is prevalent today and marks birth of Christ as a starting point of modern calendar, dividing the era into Before Christ (B.C.) and After Christ (A.D.)

The lower parallel time-line is from the future, say five hundred years from now. Here the information revolution would hold such significance that it would be considered as a start of a new era thus dividing the history into Before Google (B.G.) and After Google(A.G.), Google being an indicator of the internet based information explosion, demarcating another revolution in the ability to create, store, access and share information from anywhere and everywhere. Information flows in the air, almost acquiring the omnipresent status. Thus a new culture of information supersedes the culture of religion that dominated the human history for almost 2000

WHAT.

WHAT CONTEXT ?

Exhibitions and Information Culture

Exhibitions are about communicating information through form and physical presence of objects. From the temples to world expos they have been hubs of "dissipating information". And that's a very critical aspect in present world context, where information is literally available at your fingertips.

Why would anyone go and visit the exhibition when the whole information is available on the internet?

How can Exhibition design and designers respond to this context and contribute to it?

To understand and tackle this aspect, we need to look upon the nature of information and how it is processed in present world.

Communication & Information Society

Being able to communicate and exchange information has always been a very important factor in human living and development, and any change in that, is a substantial change in the whole human culture and society.

We have been long a culture powered by religion, and in the past few centuries we are witnessing a drive where our culture is powered by Information.

Information technology has seen quite a few evolutions during the ages from writing, printing, television and now internet (Monge, 2003). And with every stage, sharing and accessing information became easier, thus changing our ways to communicate and hence our behaviour drastically.

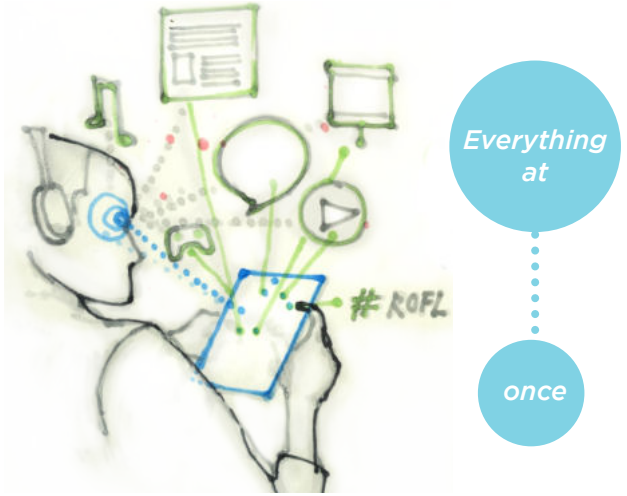
"In addition to being transmitted by the traditional media, such as televisions ,radio, the newspaper, the book, the telephone, the mail, information is conveyed to us in electronic form by the home or office computer, public billboards, private hand-held PDAs, Cellular phones and soon even by our wrist worn watch and clothes. The potential offered by the rapid and efficient exchange of data, globally, between individuals and organizations, delineates new social , economic, and cultural models based on the exchange of knowledge. The information society is defined by the primary role of information such that power and growth are associated to our ability to receive, store, process and transmit information instantaneously."

(Flavia Sparacion,MIT Media Lab)

There are Large panel displays to tiny 4.5 inch mobile screens, everywhere, working 24/7 as our modes of interacting with information. Information is everywhere, constantly being accessed, changed, and updated. And in spite of in-numerous benefits(sketch how it is beneficial) of the present dynamic and Omni present information technology over earlier static ways of exchanging information like books, we are now fiddling with other problems. Decreasing attention spans, lesser concentration levels, over-processing, and addiction to just scrolling and skimming through information.

We have become addicted to this virtual world and our screens, that provide the only way to access such vast information. Recently the technology has been all about making these screens cheaper, faster, thinner ,lighter, and smarter but the fact they still all remain screens is a messy situation. And the problems with information access through screens are many: primarily it limits our reactions to engage with something.

We are basically looking and interacting with a two dimensional rectangle. And this fact limits the unique experiences we can have with information in our daily lives, and hence limiting the learning and joy that comes with such unique engagements with information.



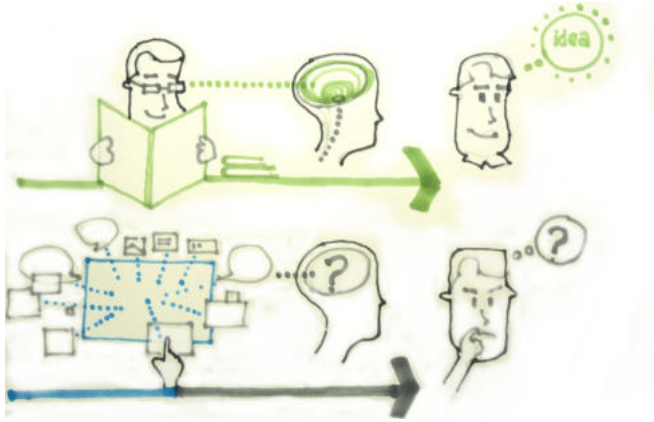
The other issue that it creates is , everything has "equal importance". The project report that you are working on, the random video that just appeared on your Facebook feed with #Funny #ROFL, the notification that just buzzed on your phone (or did it?, you maybe victim of phantom vibration syndrome also), that game of candy crush saga ,etc. All of it happens together almost at the same time, you can call it multi-tasking but it isn't.

WHAT.

WHAT CONTEXT ?

Although we are processing a larger amount of data, probably doing more activities, but nothing gets held up in the brain. Because there is not enough time span we are spending on something , to understand it, to grasp it, to let it brew in our sub conscious and let it become knowledge. It always remains, just an(other) information, and at some point of time we stop learning.

Day by day, we are spending more time in virtual worlds



rather than real physical space. We read news online, we check our mails online, we access library online, we meet and chat with people online, we shop online, we book our tickets online and manage our bank accounts online.

A Few Questions

- *What does that mean for learning and making Knowledge out of information?*

- *What does that mean for physical spaces? What does that mean for Architecture? For Products? For Exhibitions? How does the culture of information changes the design and core of physical space?*
- *Will the physical 3d space cease to exist?*

- *Will we become like those, all-time plugged in species as shown in dystopia n Science fiction books and movies? Living and dying in virtual worlds?*
- *How can we change this? Is there a way out of this?*

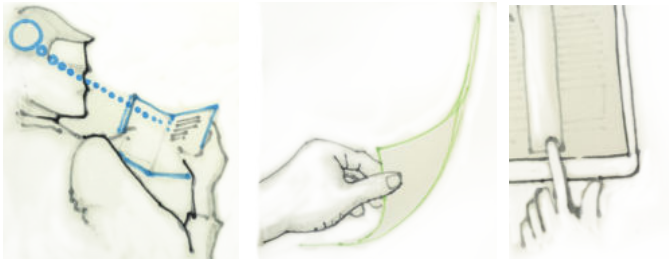
What Exactly Has Changed?

To answer this we need to understand what has changed and how it has affected our perception.
Take simple example of rainy weather. I still remember my grandpa telling us to pick up the umbrella before going to school on certain days and almost half of the time he used to be correct. He used to know whether it will rain today or not, by some magic. I once asked him the secret behind his amazing predictions, and he told me the importance of sensing your environment, from the direction the wind blows to the moisture in the air, the shape and colour of the clouds ,the smell in the air, the presence of ants and insects, and so on and I wondered how does he notices so much , analyses everything and gives prediction. Later as I grew up I understood that it becomes subconscious, our mind processes and predicts it almost intuitively and gives us the signals, and it almost feels magical. But the important thing was the sensitivity to the physical world, and the environment.

Come to present day. I have, the temperature, the wind direction, speed, atmospheric pressure and forecasts available all the time, neatly packaged as an app on my phone. But when did I last checked it? I don't know. Does it benefit me? I still see the clouds outside and decide to take the umbrella or not. Yes on some unfortunate sunny turned rainy occasions , I miss checking the app before going out. *So what happens to this information? why is it rendered useful. Are they meant to be pretty icons, widgets and apps on our screens?*

And that's what has changed, information has become active and available all the time, hence overlooked and rendered superfluous.

We have stopped engaging with things, and information in a personal way.
The physical experience of performing an activity to carry out a certain task makes it more impactful and meaningful.



The simple activity of picking up the book, smelling the pages, flipping each page with our fingers and while doing so, *only being indulged in the book* made it enriching and enjoyable. The book didn't pop up the messages or the latest statuses from your friends. Reading the same book on a tablet? The experience is different, no matter how much we emulate the animation of flipping pages, in our software, the experience is killed at the moment a notification pops up. Yes it is easy for me to carry a hundred favorite books on my tablet and access them anytime, but it just doesn't have the same joy, same impact and same magical transportation that happens with a real paper book.

WHAT.

WHAT CONTEXT ?

Of Narrative & Perceptive Spaces

And this “experience and engagement” with things, happening one at a time, is what has changed. We need such simple experiences back, our surprises back. We need to take a step back and make the these virtual bits available at the right time through right activities, and in physical space.

How do we achieve such practices? How do we design our world which takes the best of both worlds?

To answer this question lets go through some of the research and experiments that have been happening around the world.

Architecture is no longer simply the play of masses in light. It now embraces the play of digital information in space

(W. Mitchell :E-topia).

In a research paper titled Narrative spaces by Flavia Sparacino published at MIT media labs, a group of people experiments with technology, space and products to come up with hybrid solutions. Their experiments like Gesture based browsing through a spatially laid out information city, Dance-Space,etc.provide interesting solutions to provide unique ways of interacting and presenting content to people.

In this paper she talks about how, as individuals, we experience our lives as narratives. How narration is a very important tool in structuring our perception and thoughts. The thought process cannot be merely reduced to information processing and sorting into categories and that narration is our main instrument of making meaning out of things.
We saw a very similar approach in temples of Kandariya Mahadeo and Borobudur, narration was embodied in the space itself. How a circle, square or a triangle became a metaphor and gave a message, a story for us to remember, thus enabling us to relate to time, culture, life, nature and existence.

Our interactions with technology have become two-dimensional in nature, all we have is a portal, a screen. And everything happens there. While we live in 3d spaces, we interact with 3d objects, textures, sounds, lights, and interaction with other people are in 3 dimensions which require involvement of all of our senses. And that involvement is missing.

"We are used to moving around rooms, working at desktops and spatially organizing our environment. We've spent a lifetime learning to competently communicate with people. It follows that a natural and comfortable interface may be designed by taking advantage of these competences and expectations."

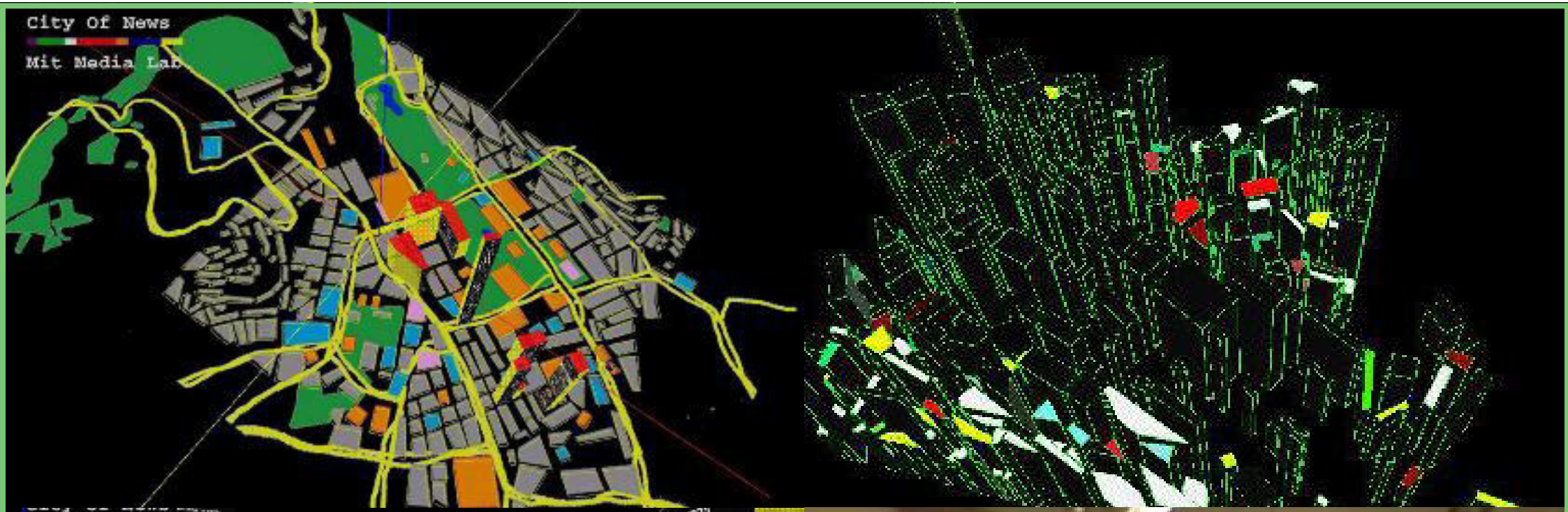
(Perceptive Spaces, Flavia Sparacino)

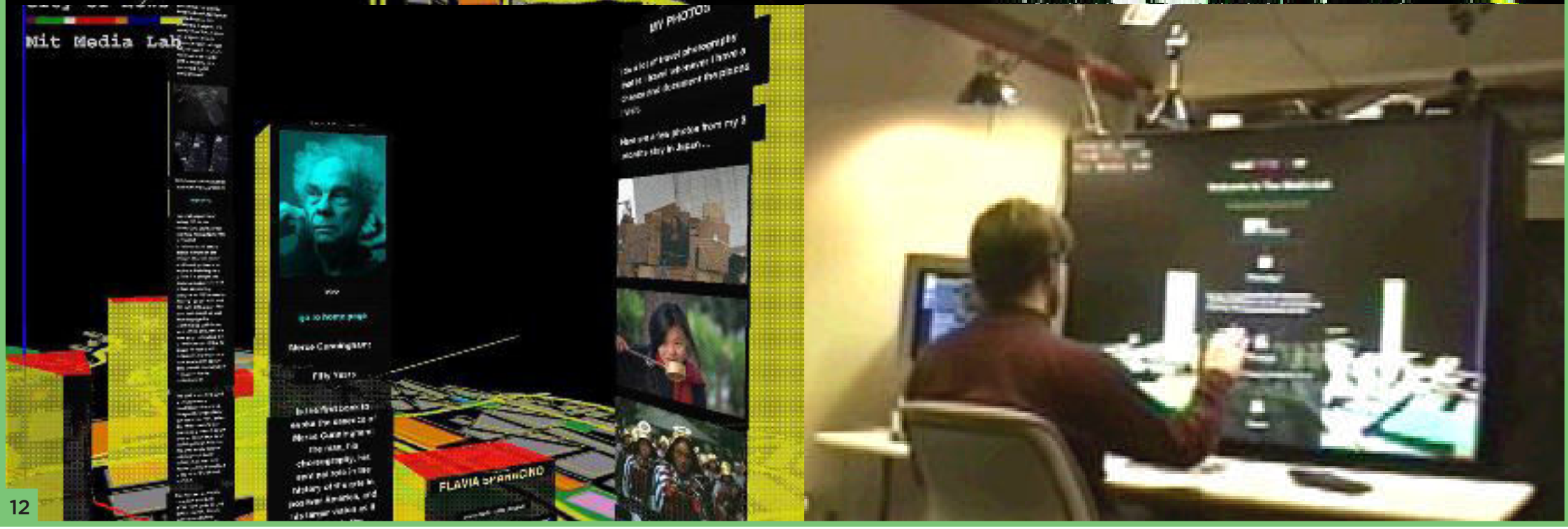
We need to distribute the information and channelize it through varied and more natural mediums. We have put everything in and on to screens, sensors, cameras, keyboards, recorders and speakers, and though it is an easy approach to put everything into something that people carry with them all the time, it's the reason the information has lost its meaning and purpose.
We need to put these sensors back into our environment, into objects, 3d objects, and take those finger gestures out of the screen and convert them into real, more involving natural interactions.
We should move towards a philosophy of making our environments and objects more intelligent and smart. And that's exactly what David rose is doing with his ideas.
Remember the weather App. ? With his umbrella you wouldn't need to, because his umbrella glows up indicating you to pick it up, as it knows it is going to rain today, by taking information from the Internet.

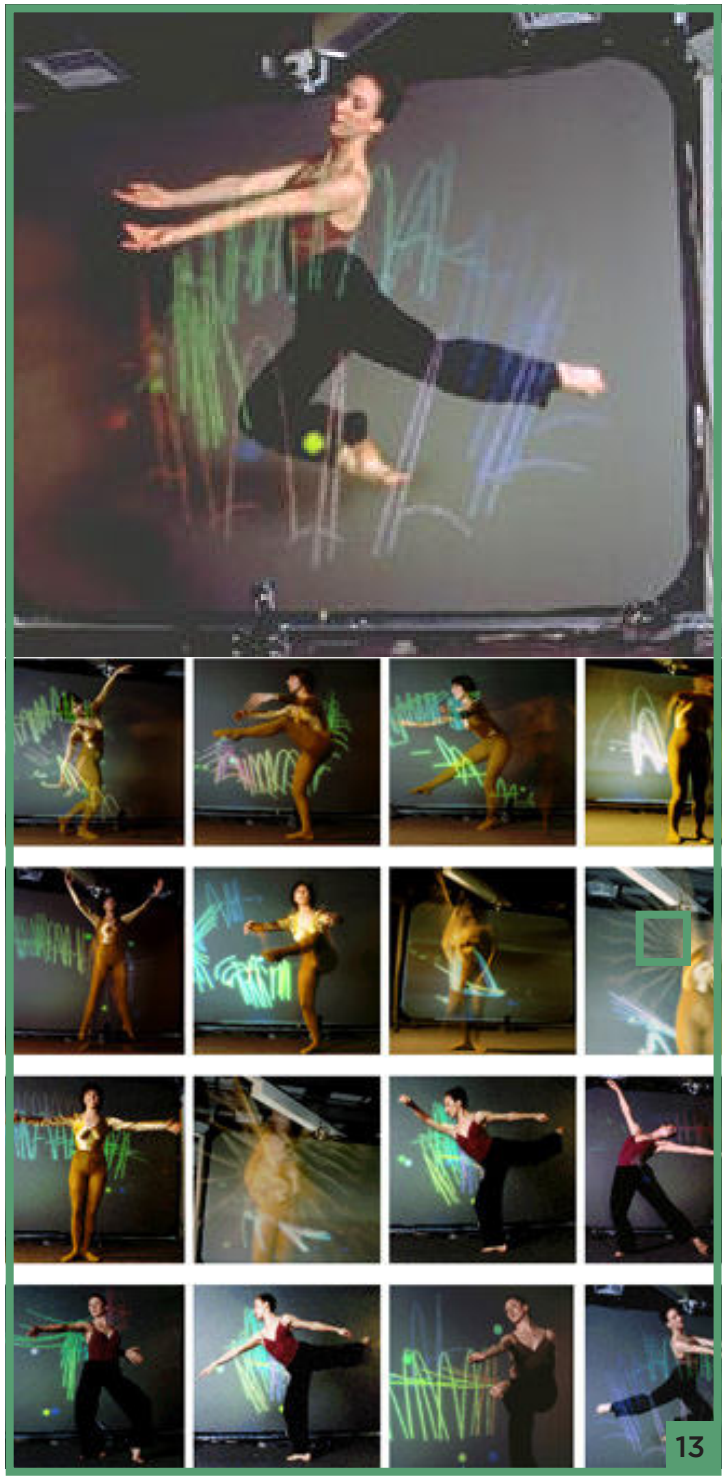
Another design intervention puts vibrating motors in the shoe. The shoe can connect with Internet and vibrate to tell you to turn right or left , hence guiding you effortlessly through the world, without you ever sticking your eyes on the screen and missing the real world around and the experiences related to it.

Putting that simple sense into the right objects makes for a much more natural and useful communication and interaction with our world., leveraging the best of both worlds. Notice how the designers have put the function and information in a *logical semantic response*.
Putting the rain information to the umbrella suddenly makes that information actually useful and satisfactory to use. And that's the kind of design direction we need to embrace and work upon.

- *Related Images follow in next pages*


City Of News
Mit Media Lab


Mit Media Lab
MY PHOTOS
FLAVIA SPARACINO



13

City Of News, *MIT media labs, 1997*

image source: *narrative spaces.*

12

City of News is an immersive, interactive web browser that reads web pages from the internet and embeds them inside a three dimensional city-scape. It fetches and displays URLs so as to form skyscrapers and alleys of text and images through which the user can "fly" using body movements. Known cities' layout, architecture, and landmarks are given as input to the program and are used as organizing geometry and orientation cues.

This virtual internet city grows dynamically as new information is loaded: following a link causes a new building to be raised in the district to which it belongs, conceptually, by the content it carries, and content to be attached onto its "facade".

By mapping information to familiar places, which are virtually recreated, City of News stimulates in its users, association of content to geography. The spatial, urban-like, distribution of information facilitates navigation of large information databases, like the Internet, by providing the user with a cognitive spatial map of data distribution.
To navigate this 3-D environment, users sit in front of a large screen and use hand gestures to explore or load new data. Pointing to a link will load the new URL building.The user can scroll up and down a building by pointing up and down with either arm. Side-pointing gestures allow users to navigate along an information path back and forth.Raising both arms drives the virtual camera above the internet city and gives an overall color-coded view of the urban-like information distribution.

DanceSpace, *MIT media labs.*

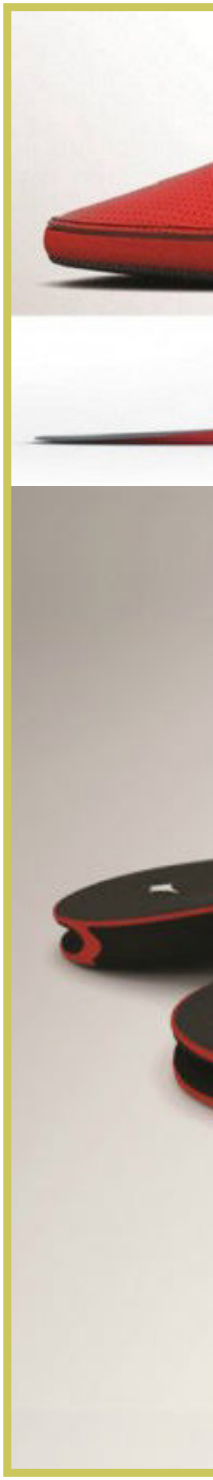
image source*: narrative spaces*

13

In Dance-Space, there is a stage in which music and graphics are generated on the fly by the dancer's movements. A small set of musical instruments is virtually attached to the dancer's body and generates a melodic soundtrack in tonal accordance with a soft background musical-piece. Meanwhile, the performer projects graphics onto a large back-screen using the body as a paint brush moving in the air, thereby .

13

14



15

Enchanted Objects 13

image source: *http://goo.gl/DknRW7*

Inventor and MIT Media LAB researcher David Rose is afraid the way our current society is addicted to screens and the limited interactions with technology. He wants to put sensibility in our objects around us, making them "Enchanted objects"

His enchanted Umbrella has a handle that illuminates when rain is expected in the next 12 hours. Embedded in the handle is Ambient's wireless data-radio. This chip receives accuweather.com data and pulses when rain is forecast.

Apart from the umbrella, there is a cup that analyzes the liquid you put in it, and - two Rose creations - a medicine bottle cap that glows or chirps to remind users to take pills and an orb that glows to communicate data about the stock market, air quality, or whatever else you want.

"Any sufficiently advanced technology is indistinguishable from magic."
Arthur C. Clarke

MemoMi Mirror 14

image source: *http://goo.gl/oHwR-*

MemoMi is a kind of magic mirror that records outfits and lets you compare them. Using patented perspective distortion correction technology to allow shoppers to interact with the mirror through simple body gestures – This allows the users seeing themselves in different outfits from every 360-degree angle without having to turn or pivot.

LeChal Shoes, *Ducere Tech* 15

image source*: http://lechal.com/shoes.html*

Indian startup Ducere Technologies Pvt. is going to start selling its Bluetooth enabled Lechal shoes in September 2014. The shoes sync up with a smart-phone app that uses Google maps and vibrate to tell users when and where to turn to reach their destination.Just tell your phone where you want to go and then you can leave it in your pocket because the buzzing in your left or right shoe will lead the way.
The shoes were initially developed for the blind but later on the inventors found it useful for wider applications.

WHAT.

WHAT CONTEXT ?

Gaping the Physical Divide

While the virtual world of websites and apps provides an intoxicating array of new experiences, it is not realistic to think that we dissociate ourselves from our physical environments. Rather the rise of cyberspace begs an examination of its connection to the physical world, the world of bricks and mortar.

(Thomas Horan: Digital Spaces)

There is a gap between the virtual world and the real one, and with current trends, the gap is only increasing. This has to change, and we need to make these two realms meet more often.
When an object does not exist physically, like information in digital world, then its existence in a perceivable from can only come from creating an awareness or experience of it. Experiences around this digital information need to be established which evokes curiosity, delight and change the way we process information.

The virtual world exists in reality, and is waiting to come out of screens and get fully realized to a better potential. And this would require designing and making our spaces , objects and environments as part of the interactions, acting as semantically mapped interfaces between the two worlds, leading to more unified, coherent and natural narratives.

Through Exhibition Design

Exhibitions are about reflecting the culture, from the times of elaborate temple complexes to con-temporary structures of technology. Exhibitions are spatial in nature at their core and that gives them a different edge than other communication mediums.
In this world of information technology, Exhibitions provide a 3-dimensional space where such 'one to one; interactions and meaningful surprises can happen, where visitors can experience narratives augmented and enhanced with technology.
Becoming the modern age laboratories, where designers, engineers and people come together to devise, and experience new ways of interacting with information. In such exhibition spaces, different mappings, metaphors and semantics can be tested and understood, with active viewers, what works for them and what doesn't. We can have a better understanding at what people like, how do they respond , which can then be analyzed to come up with solutions to a better world. The way we design and approach exhibitions has to change in this context.

Exhibitions need to become more than just showcases of content and objects, to be more like playgrounds of technology, art, science all working together to create new and interesting worlds of vivid experiences.

HOW.

HOW EXHIBITION?

How To Design An Exhibition

We have discussed why exhibitions are an important reflection of our culture, and how they have always been a representative of innate human desire to show, create wonder, and transport into a different world. We understood that in contemporary times with the ever changing, ever Omni present information and the culture addicted with information, Exhibitions have to evolve .

But How? What is the language of Exhibition Design?

Every exhibition has a message to convey, and it is the designers task to make that message stay with people. When they leave that exhibition they should be able to have some kind of memorable experience. And though simple it may sound it's a very tough thing to achieve.

How do we convey that message?

How do we attract the visitor to listen to the message in the first place?

How do we make it enjoyable to a range of different visitors?

In his research journal(1994), titled "Designing Effective Exhibits", Stephen Bitgod says that there are three basic approaches to Exhibition Design:

Subject Matter : *saturation of the exhibit with detailed information without regard to the interests and/or cognitive processing abilities of the audience.*

Aesthetic : *primarily adhering to the traditional principles of art, focusing on the looks and visual impact.*

Hedonistic : *Involves fun experiences with less concern for educational or aesthetic goals.*

He further emphasizes the fact, that all of these have their merits and over emphasizing one and neglecting the other is likely to create problems in exhibit effectiveness. He further puts a few examples to prove this point.

In one project, visitor evaluation revealed that visitors did not understand that a model of a small, little-known animal was magnified 200 times. When the evaluator suggested that a brief label be placed directly on the model indicating that it was magnified 200 times, the curator of design argued that a label would ruin the aesthetic appeal of the model.

This curator clearly placed aesthetic considerations above didactic. Communicating with the audience was valued less than aesthetic appeal in this example.

In another project, visitors rarely paid attention to an interpretive device placed on a stand in front of an art object. The evaluator suggested that the device be made more visually salient by placing on the device bright colors or a sign with large letters indicating that information about the exhibit object was available. The curator, however, was concerned that these changes would detract from the appeal of the art objects. Again, communicating with the audience was considered less important than aesthetic presentation.

A children's museum asked a design firm to develop children's exhibits that would be fun. When the design firm attempted to develop these exhibits with accompanying educational goals the museum staff argued that it doesn't matter if children learn anything as long as they have fun. It was argued that children should be given the opportunity to play, rather than forced to learn something. There was no appreciation of the fact that both could occur at once.

Its obvious from the above approaches that the best will happen when all of them are mixed and well laid out in an exhibition. (All three examples are quoted as it is, from Designing Effective Exhibits,Stephen Bitgod)

Although my initial ideation and exploration started with form and physical aesthetics of the exhibition, as I delved deeper into the subject, the importance of merging content with the form and creating a seamless environment for the visitors to explore, and have fun, became more important.

The whole idea of creating a different world, with a narrative and inviting engagement from the visitors, became the guiding factor.

A small set of questions helped in discovering the language of exhibition design and how those variables can be used to create spaces of immersion.

- ***What is this world composed of?***
- ***How does it attract viewers and how does it Sustain that attraction throughout ?***
- ***How does it delight both the casual and the expert visitor?***
- ***How do we make it an Experience, something to remember?***

HOW.

HOW EXHIBITION?

What is this world Composed of?

An exhibition is composed of Form and Content.
And a visitor.

Form is the physical aspect of the exhibition consisting of the structural elements, objects, displays and other surfaces where content is displayed or aesthetically enahnced. Content is basically information that exists within the space, and the form should help this information to be dispensed in an interesting manner.
Form and *Content* give birth to a *Story*, a narration that is told throughout the exhibition, as a visitor moves within the *Space*.

A lot of designs and designers forget the active presence and movement of the visitor while designing the exhibition. And it is this movement which makes exhibition a different communication medium than television, radio, books, films and Internet in which the visitor sits in the chair. What does this means for presenting content?
The form and content has to merge to give birth to a spatial narrative, a story that takes happens in 4 dimensions including time. The viewer has to be intrigued enough to get into the exhibition, sustain this curiosity and interest to keep on going.

How does it Attract Visitors?

How does it Sustain that Attraction?

First glance, Points of Tension and Narrative.

Like the Gothic churches, the exhibition must be inviting, and visually interesting, to capture the visitor in the *First Glance*. It should invoke the curiosity and fascination. Also it is this first glance that will stay with the user, after the exhibition. After it has managed that, it needs to offer a casual , landscape like quality to the visit. This will ensure the visitor feels free to explore and take his/her own paths. The story unfolds, and is unique to every visitor due to his/her choices and the path taken and also depending on the knowledge, and experience of the visitor.

"One can move slowly or quickly, stop to let the exhibition sink in, look up or bend over to notice the small details others miss. The walking phenomenon determines the order of scenes in the story."
(Engaging Spaces)

And no matter what the order is, the story should convey a similar but not same message. As the person walks through, there is this continuous change of the perspective and that should be leveraged to create these *Points* which keep on intriguing the user to explore more. Also there should be these gentle spaces, where the user can pause, stop down and ponder over, a transition space which leads to the next part of the story, very much in a fashion we wander through old city streets.

In one dimensional, boring streets, you easily lose interest, but on a journey of discovery full of curiosities, with small streets, squares and exciting encounters, you can last a long time.

(engaging spaces)

How does it delight both the casual and the expert visitor?

Layering, Parallel stories, Mixed media.

The exhibitions are meant for people, and they should have something to appeal to a broad range of people. They should communicate and connect with all kinds of visitors. A visitor will be interested if the exhibition presents something which he/she can relate to.

Visitors can vary from someone who has no knowledge about the kind of work displayed to people who are experts. The first user won't be interested in reading a lot of information, or too heavy treatment of the subject, but the latter is looking for it. *How does an exhibition achieve this duality?*

I would revert to Gothic churches, and their beautiful stained glass windows. These windows, have different stories going on simultaneously.
The lowermost layer is the most detailed and images are small, it needs people to come close and read through those stories.
In the higher windows, are the holy figures in large images which are visible from a distance, you can just have a walk in the church and see them.
Then there is a rose window, which is almost metaphorical, with epic stories such as the last judgment being told. You see a rose window as soon as you enter the church. Also it is something that holds an important connection between outside and inside.

HOW.

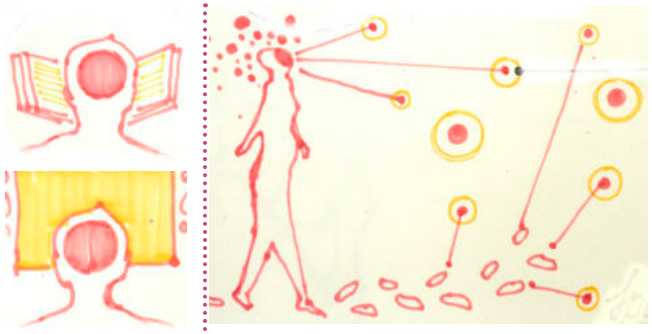
HOW EXHIBITION?

It is the layering and structuring of the content in a way which caters and delights both kinds of visitors. This achieves multiple, parallel stories going on within the same place, and Depending on how *long you stay, you will discover more.* This parallel stories effect can be achieved by using hierarchal spaces, layering the content with different accessibility methods, and by use of mix media. Different medias have different power to convey the content. The medium of video is suitably the most easy to follow, while images convey one particular frame which is more memorable than videos. Text, sound, voice overs, graphics are all different in their ease to understand and in the impact they create. All of these can be mixed and used, to layer any content and make the experience, rich, vivid and available to all. Each part of the exhibition can be treated as a series of stories which can be developed and conveyed with different mediums or a mix of them.

How do we make it an Experience?

Engagement, Abstraction ,Immersion

An Exhibition should not become like a leaflet of information or a virtual website, which you can just take/open and go through, in the comfort of your chair, but due to its spatial nature it should offer more opportunities to engage with the content, involving one or multiples senses.
This is where it becomes different than other mediums. It can be used to narrate a story in physical 3-dimensional space, providing an opportunity to excite different perspectives and engagement points.



Static, 2 Dimensional Communication | *Dynamic, 3 Dimensional, Spatial Communication*

It has to become an environment for the story, that is being conveyed, considering the visitor as an active participant. This *Active Participation* adds something more, contributes something special to the exhibition. By combining form, space and new media, simple, natural interactions to access the media, visitors can be engaged, thereby increasing the impact and memorability of the exhibition.

The *Narrative* will become more meaningful, by implying intuitive but still abstract ways of mapping both the information and the interactions.
Abstraction/Metaphors helps in showing the content in a new way, and giving a new meaning to it. Abstraction is important , because it gives the visitor, a space to interpret the content/story in his/her own way. Metaphors can be expressed and used both in the design of physical forms and engagements.

All visitors bring along their own cultural and social baggage. In an ideal situation, this spatial story telling would have a different effect on each individual visitor. Finding the right metaphors to hang the various parts of the exhibition on creates and important handle on how to abstract certain parts.

(engaging spaces)

It is when the carefully selected metaphors, and interactions engage the visitors, *Immersion* happens. And that leads to an experience where the visitor will leave differently as to when he/she entered the exhibition. It can be a new perspective, it can be a meaningful understanding gained, it can be having fun and play, it can be sensitivity to something, whatever it is, it will be an memorable *Experience*.

At best, an exhibition is an experience of total immersion. What can be more wonderful than being absorbed mentally, shutting out everyday reality, and being safely directed towards experiencing a newly created world.

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CASES.

CASE STUDIES

LIVE STUDIES.01

Experience and observations done by visiting different exhibitions, to find design issues and design achievements. Analysis on basis of different criteria and asking the visitors about the experience there.

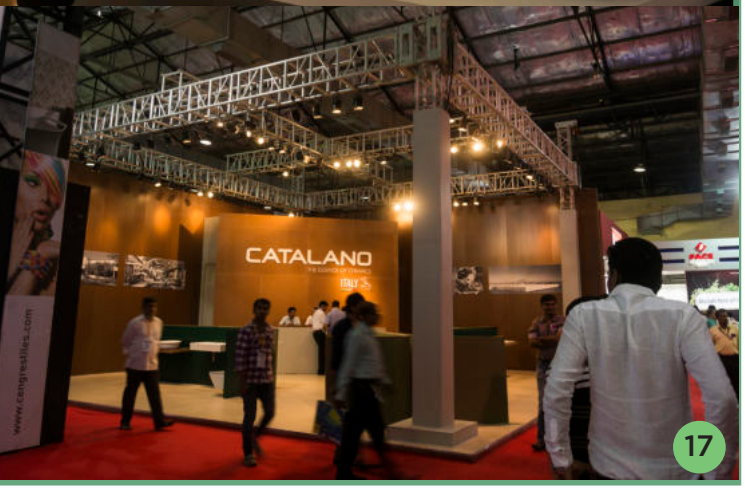
INSPIRATIONS.02

Two selected examples of exhibitions from around the world, which inspired my thought process.


FAASOS
rajdhani


LANE 4


ALC



17

Architecture Exhibition

Nesco Exhibition Centre

This was a commercial exhibition which was a display of latest trends, technology and materials for buildings, houses and architecture in general. More than 750 different vendors participated and showed their products, ranging from bathroom accessories, elevator systems , lighting to complete modular housing units. Each exhibitor had a different space.

Character

Probably due to the fact that this was a commercial exhibition, and of such a large scale, there was no perceptible story, and no visible thematic structure,although it had a character.

The exhibition was visually vivid, colourful and the interestingly lighted up.

The whole exhibition space was doted with sculptures, installations and even live music performances, which made it just more than a showcase of products.

First Glance

16

image source: *author*

As soon as you enter the exhibition, this colourful installation of umbrellas welcomes you to the place and holds your attention for quite a few seconds. Lots of people stopped to click a picture and then moved forward. It acted as canopy for the food court that was setup for the exhibition.

Exhibits & Layout

The individual elements varied from visually plain to visually exciting but there was rarely a connection between the form and the content. There were exhibits which employed interesting ways of displaying the products. They utilised interesting forms and colour schemes to attract visitors which worked

The layout of the exhibition was grid based which was easy to navigate but due to the scale ,it resulted in visually long walkways which looked endless and overwhelmed the visitors. There was no clear signage and mapping and due to lack of proper categorisation, the visitors never knew what kind of display is where. Though it gave the freedom to walk and discover, being a large scale commercial exhibition, chunking of similar product exhibition spaces would have helped visitors make better choices as per their interests.

Individual Exhibits

17

image source: *author*

Set in a large hall space, the individual exhibits tried to achieve uniqueness by Utilising interesting forms, thereby trying to attract visitors and customers.

Interesting Ways to Display Products

Orange Ribbon 18

image source: *author*

This particular furniture exhibitor used a mood around the exhibit. The dark environment was accented with a bright orange ribbon like form encompassing the exhibit and connecting different display items, ranging from a chair , sofa to wine holder. The objects were highlighted by spot lights to emphasize the products in the whole setting.

A Wall of Bathroom Accessories 19

image source: *author*

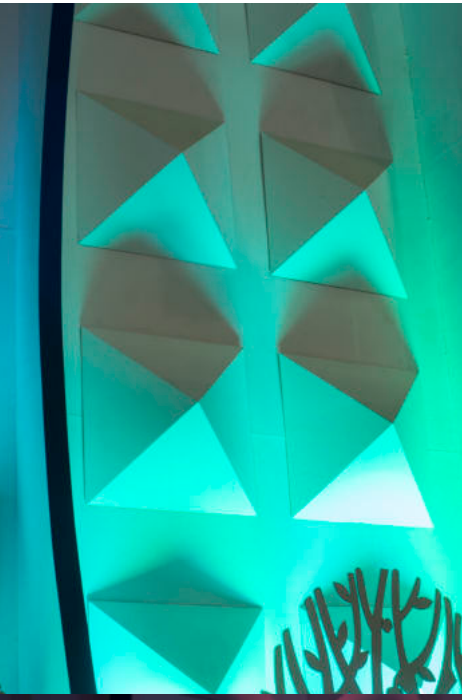
A full wall installed with different products from the company which effectively showcased the different forms, varieties and options they offer. The wall had this sculptural quality, which attracted a lot of visitors.

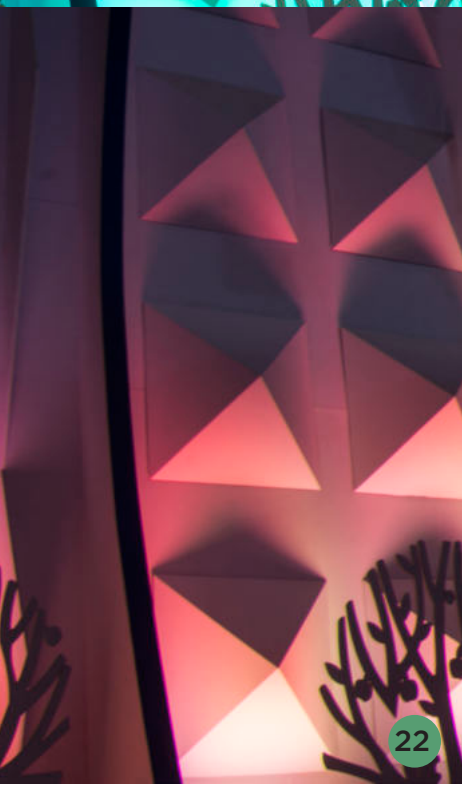
The Play of light 20

image source: *author*

This was an exhibit of lighting solutions. It was visible and inviting due to its clever use of bold gray cuboid frame structure which was all white inside thus creating a mini world of its own. There were three such frames arranged side by side, and the showcased different ranges of products available.
These three frames had a background, a wall which had the text “Feel Light” made of cylindrical structures, and it was lighted up by spotlights. The resulting effect of light and shadow was visually attractive and invited curiosity among the visitors


Kajaria





Installations and Engagement

Light Patterns 21

image source: *author*

An installation of up and down wall lights arranged on the side of walking alley created interest.

Colour Changing Panels 22

image source: *author*

Another similar installation installed at the gate from one hall to another hall created a point of interest and depicted the change from one space to another.
It created a portal effect, making the transition from one hall to another hall attractive to follow.

Sitting canopy 23

image source: *author*

To allow a pause to the visitors from walking, intermediary sitting structures were made. These structures had live music performances and coffee shops in their vicinity where users could refresh themselves and carry on with the exhibition further. These structures were unusual in shape and form and sponsored by different vendors exhibiting in the exhibition.

Live Music Performances 24

image source: *author*

Entertained the visitors and gave them a break from the showcases and displays everywhere. People actually stopped, sat down or stood up to watch these performances.


TANMAY OHRI

26

Design Degree Show 2014

Industrial Design Centre, IIT Bombay.

The Design Degree Show (DDS) at IDC, IIT Bombay is a showcase of the two year work of around sixty students, enrolled for masters of design course. As one of the best design schools in India, the exhibition displays a variety of projects ranging from product design, animated movies, websites to print and game design.
It was a good opportunity to understand what goes in a design exhibition and how it can be evolved further.

Character

The show had a thematic approach, following the philosophy of *Deconstructivism.* The theme had its presence in form of graphics and on the stationery that was part of the show branding, but didn't stretch to the overall look and feel of the exhibition. The exhibition lacked a narrative, which could connect the individual exhibits and convey or create a sense of complete environment.

Exhibits & Layout

The exhibit stand or structure, was triangular, and displayed the work of three different students on each side. Each student panel consisted of 3 projects from the students. Due to the limited space, only a few pictures and text was put, which couldn't do justice with the depth and detail of the projects exhibited. The layout was simple, and based on five different courses, the projects were grouped together. The graphics on the floor acted as signage and visual connection between two exhibit stands.
There was not much consideration given on lighting of the exhibits, utilising the already available light sources on the venue.
The overall effect of the exhibition was moving through leaflets of information.

First Glance

25

image source: *author*

Entering the exhibition, an installation of paper cup surface catches your eye. The whole structure kind of flows down from first floor to the ground, adding dynamism to the show.
Though it would have been better if it responded to the individual exhibits and the overall theme of the show.

Individual Exhibits

26

image source: *author*

There are variety types of projects (products to animation movies)on display, and all such varied content was treated similar and put to the visitor in text and images on panels. It affected the impact of the projects. For some visitors, it was too much information while for others, it wasn't enough.


RESHAL SHAH
Young India - Then & Now
CHINMAYE ANIRUDDHA BHAVE
Stick To Dreams
ASHOKA MAHARAJ
Balaram (Short Film)
Darya Firasti
Window Seat
Speaking Image

27

Common Sight

A very common sight at the exhibition was the presence of the students on their exhibits*(panel 27)* Here they were explaining their projects to the interested visitors. This process continued throughout the event. To understand why this happened and how did it affected the students, a few questions were asked.
As visitors and students puts in their words:

"The panels have limited information, its difficult to understand the projects and the process. People are also interested in the process, and the panels don't convey that at all. We have to stand all day, attend to visitors, and say the same things again and again, which tires us out. Now i feel like a tape on repeat. "
Siddhartha Mukherjee (Exhibiting Student, Industrial Design)

"There is no way to know more about a project, other than contacting the designer, and the book also conveys the same information, i waited, half an hour to meet the designer to know more about a certain project i was interested in"
Dashyant Daryani (Visitor, Ex IIT Bombay Student)

"Its difficult to understand what is happening in the projects, the perception i had about one of the project, changed completely after i heard from the designer speaking about it, there was a lot more to it, than what was displayed"


DESIGN
DEGREE
SHOW
2014

Although it had a positive effect too and there were a lot of conversations, and discussions, but majority of the students felt, it would have been better if the panels conveyed more, and they could display movies, prototypes and other things with more ease and without being present there all the time.

" Its a good opportunity to talk with people directly, and interact on a one to one basis, some conversations had me send into rethinking a few aspects about my project, and improving on them, but doing it throughout the day is unrealistic and the information is insufficient. So a lot of visitors return without understanding much of it, which is something to take care of. We need to sensitise people to our projects. And yes, i would have loved a way for people to give feedback on my project, without me being there"

- Pritam Pebam (Exhibiting Student, Interaction Design)

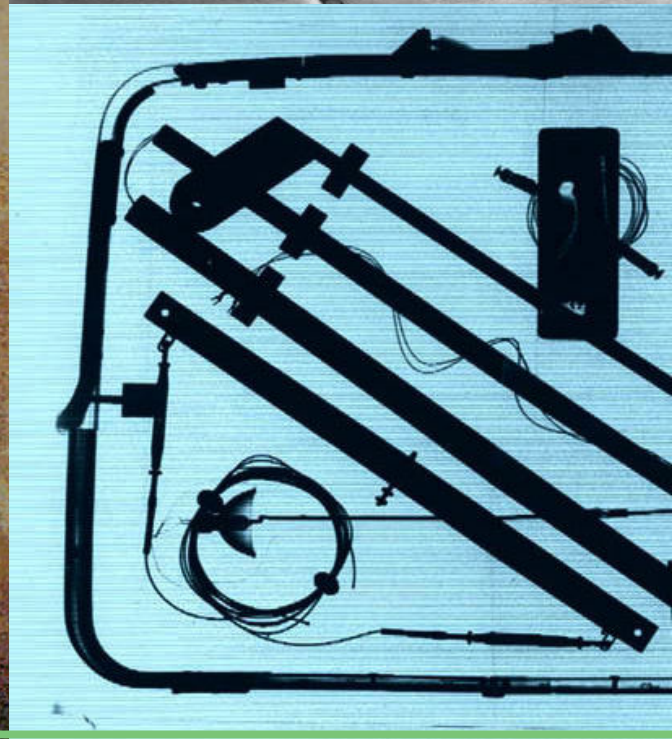
"i wish i could put my thumbnails, storyboards and the process here, which would show more depth about the project."

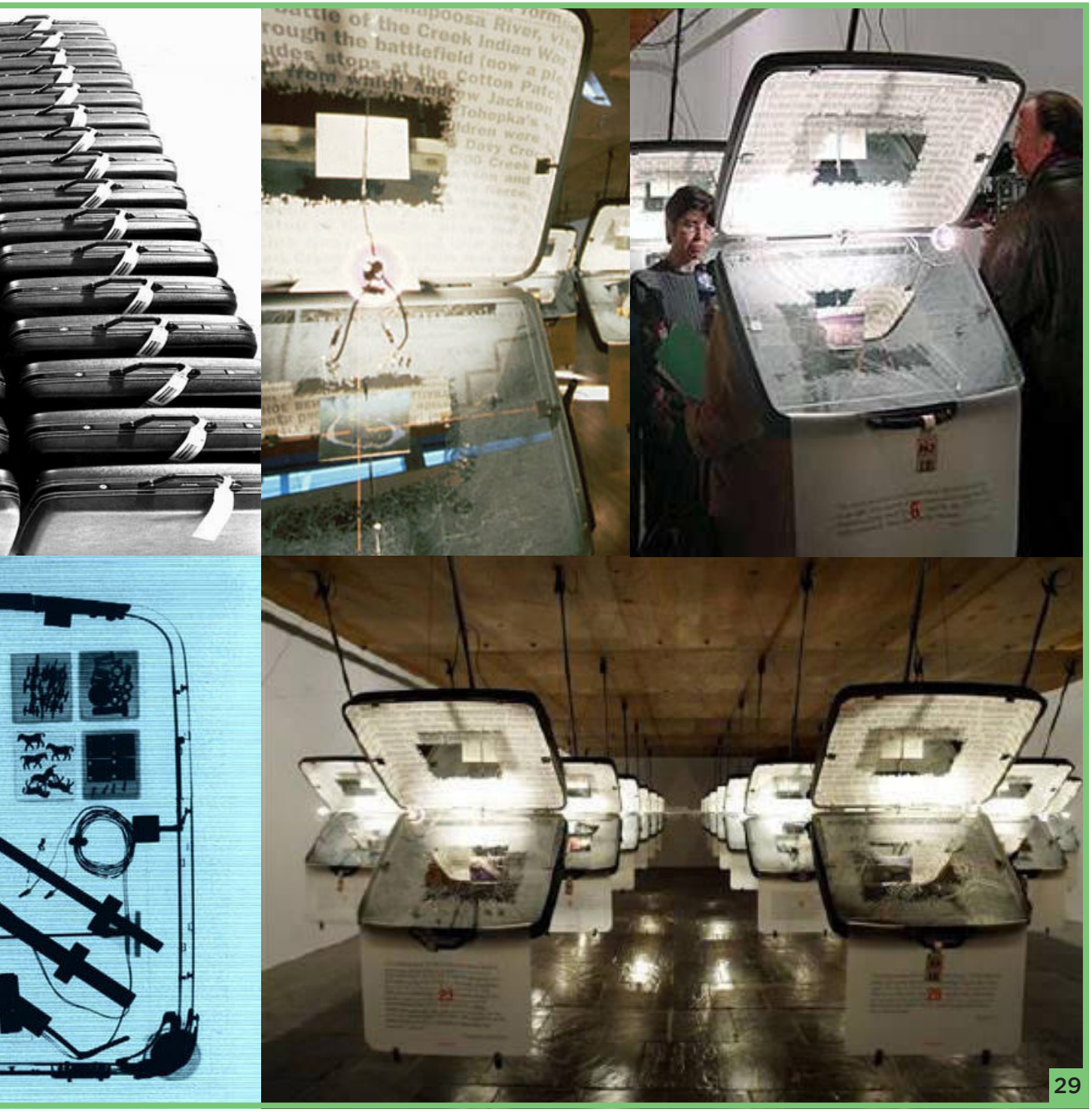
- Abhishek Verma (Exhibiting Student, Animation)

It was interesting to observe people looking mostly towards the designer and not at the information displayed. Its clear, there was a gap between the information and the visitors' understanding of it.

In the age of internet and omni present information, its possible with use of different media and technology to convey more information in the same space. And not only convey it, but make it engaging to consume. Could the exhibition have gone further and got people engaged, more intimately with the projects without the presence of respective designers? through design interventions? and created a deeper imapct on the visitors? Could the form and content had a more meaningful relationship?

Understanding the perception of the visitors and students exhibiting, left me with a lot of unanswered questions, wishes and design problems to deal with while coming up with design solutions. These were the existing problems, which people faced in live scenario hence giving some very clear design directions to the project.





29

Tourisms

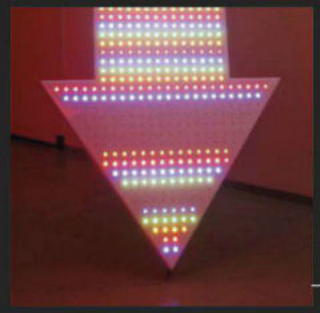
WALKER ART CENTER
Minneapolis, USA

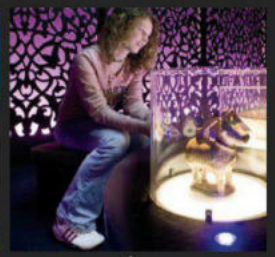
Designed by DILLER, SCOFIDIO + RENFRO, this is a traveling exhibition about the important tourist attractions in each of the 50 states of United States.
“One of the most popular forms of tourism in US is travel to the national past. With such short history, the American public savours every detail, particularly with the aura of a place- to stand on the site where general fell, to occupy the space of boyhood bed of the 16th president.”

The exhibitions takes the form of 50 suitcases displaying two important landmarks. These suitcases double up as containers to transport the exhibition to different states. Each case contains official and unofficial images, a description and a commentary related to the landmarks.

These suitcases were hung from the ceiling in a space, and I found them to be a fine example of content and form coming together to create an unique experience.

/All Images/ Source/
(http://www.dsrny.com/#/projects/tourisms-suitcase-studies)

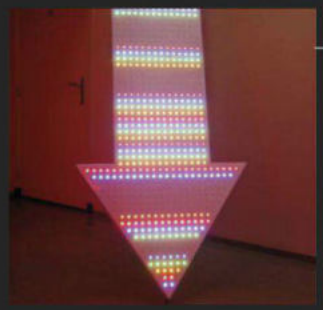














Entrance with staircase
Function and Decoration
Once Upon a Time
Architect Berlage
Imitation and Inspiration
Silhouettes
Workstations
Reception area
'Open depot' arrangement
Sample
Track
Perform
music studio
Entrance with staircase
Unique and in Series
Value and Valuation
Just Like the Real Thing
A New World
In the Work-shop

30

Wonder Rooms

Gemeent Museum , Denmark

Wonder rooms is an exhibition designed by Kossman.Dejong, where the objects and collection of the museum are displayed in experimental and interactive way.being targeted towards youth. The designers understood the fact that youth and museums don't go together, so in this exhibition, they do away with a linear way of exhibiting. Rather it is based on the pleasure of looking, which happens before learning. So throughout the space, interesting experimental setups have been created.

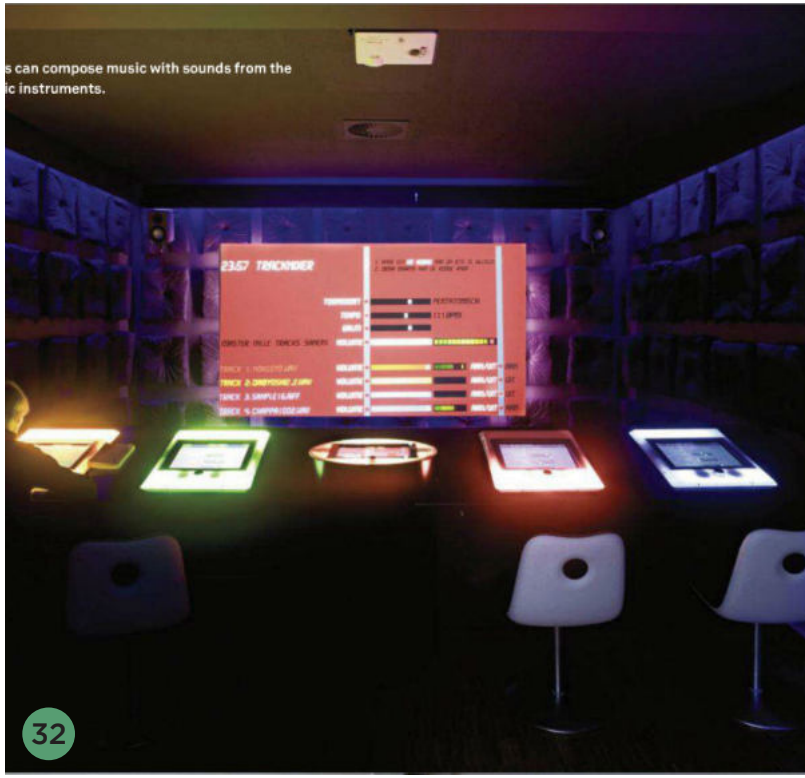
There are 13 different rooms around a main central hall. The central space has the main collection of the museum, and contrary to expectation, it is not arranged historically but associatively. Like gold objects from different eras are placed together, and similar arrangements like flowers, woman, blue,etc exist. This helps the young ones to make better sense out of things, they are able to associate the objects more with their own lives.

"The rooms have different themes. The space with antique Islamic ceramic objects breathes a kind of fairytale atmosphere from A thousand and One Nights. Interaction is the key in The Studios where visitors can pick up music samples and create their own compositions..In new world visitors are sit on a sofa and get submerged in projected content."

Source : www.kossman.Dejong.nl/projects/view/43


FREE AMI

31


s can compose music with sounds from the
ic instruments.

32


ORIGINAL

33

A Wonder Room about Fashion 31

image source: *www.kossman.Dejong.nl/projects*

A black and white film with attractive music about fashion silhouettes in an endlessly mirrored space creates the atmosphere. Visitors can interact with the collection by trying on replicas of historical clothing.

The Studios 32

image source: *www.kossman.Dejong.nl/projects*

Visitors compose music by pressing buttons , the sound samples are from the collection of music instruments in the museum.

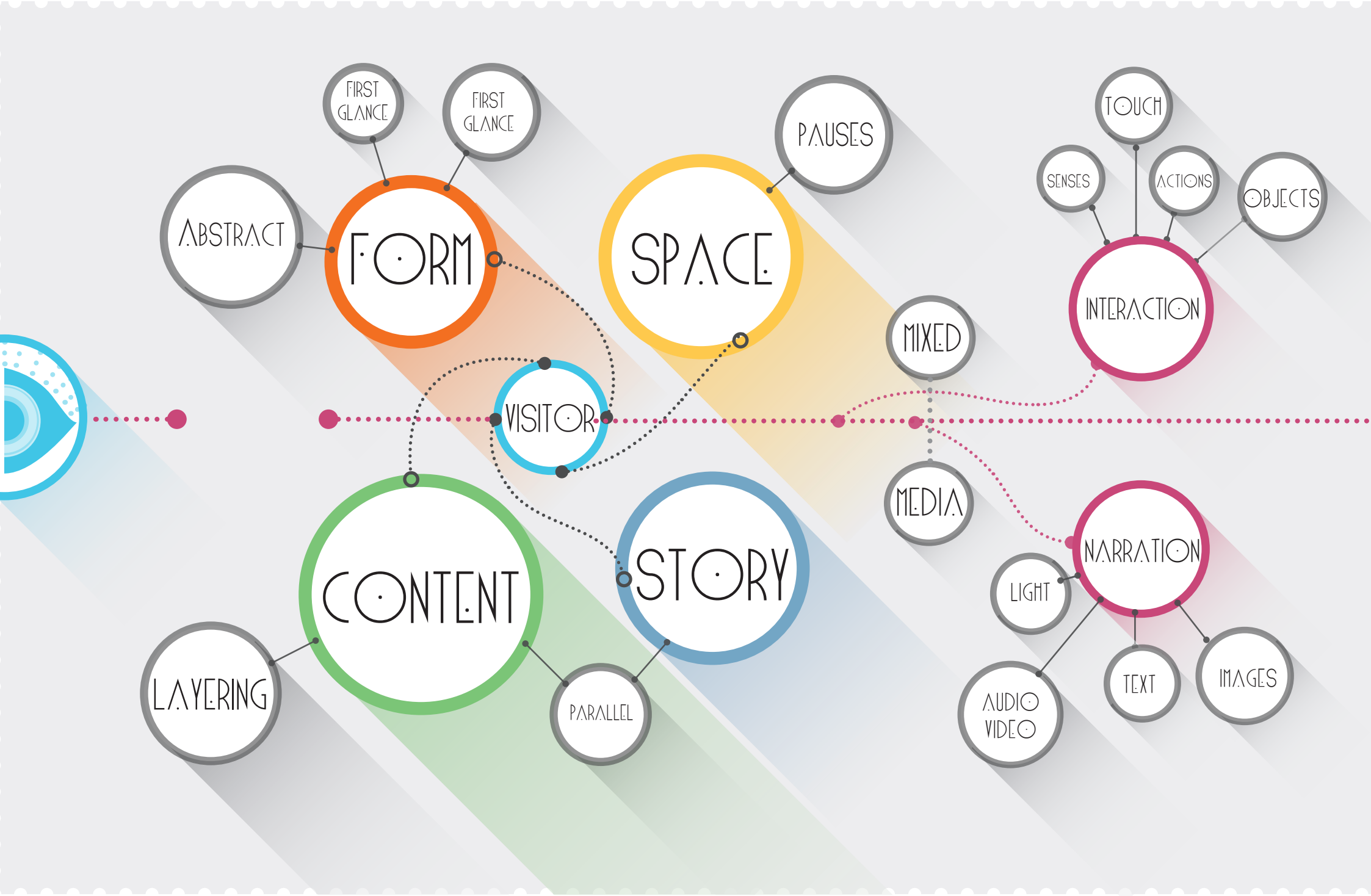
The Islamic Style Ceramic Collection 33

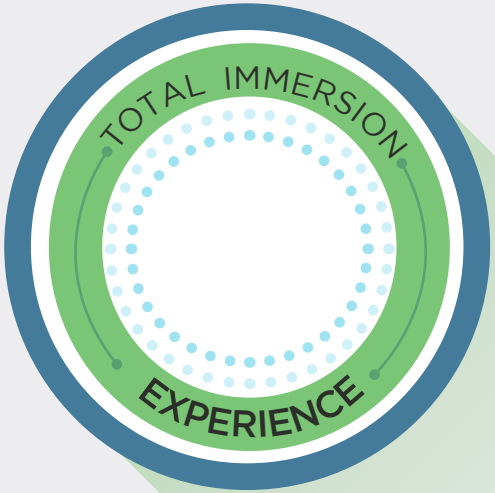
image source: *www.kossman.Dejong.nl/projects*

The New World 34

image source: *www.kossman.Dejong.nl/projects*

Visitors sit, together, in a room like space on which different images and short videos about the objects were displayed, mixed with random motion graphics in between. The projection literally submerges the visitor.


FIRST GLANCE
FIRST GLANCE
ABSTRACT
FORM
PAUSES
SPACE
TOUCH
SENSES
ACTIONS
OBJECTS
INTERACTION
MIXED
VISITOR
MEDIA
CONTENT
STORY
NARRATION
LIGHT
LAYERING
PARALLEL
AUDIO VIDEO
TEXT
IMAGES



Conclusion

From the temple of Borobudur to the Wonder rooms exhibiton discussed on the previous pages, exhibitions have always responded to the society and prevalent culture. They have been used as an unique medium to communicate messages to the audience. Their ability and way of storytelling is unique.

In contemporary times, exhibitions should evolve from being mere leaflets of information. Exhibtion spaces provides an oppurtunity to go beyond just telling or showing the content. It allows the visitors to get involved with the content, and while doing so, it takes a step back, providing the visitor an opprtunity to act, to discover freely.
It is this very process of inter acting with the content, that allows absorbing the different layers of the subject, leading to total immersion.

Using light, colour, audio, video, projection mapping, motion sensing, sensors, and mix-matching them together through abstract ideas and metaphors, such wonderful worlds of engagement and delight can be created. Through interpretation, abstract measures and ideas can be translated into something that the visitor can connect to and understand from their own life. The exhibition designer can help facilitate this process by designing spaces which act like bridges between the experts on the one hand, and the public on the other, posing as the 'interested layman'.

The foundations of this bridge lie in the mix of form and content through the use of appropriate language, elements and exhibition mediums that helps to *EXCITE CURIOSITY, PROVOKE, RELATE and REVEAL* information to the visiting audience.

The info graphic alongside, is an attempt to find and define the basic elements, the core language of exhibition design.It exlplores the connections between these elements, acting as a visual guideline as to how an exhibition should respond to and impact a visitor.

DESIGN.B

.version one

To design the physical display units of an exhibition, intended for displaying Design/ Art projects & objects in a configurable, modular fashion.

This design brief, kept changing throughout the project. The more I understood about exhibition design, I realised that it is not just about designing physical units, which although are a part of the space, are not the whole experience. it has to do with designing an experience, a story which unfolds with the visitor's actions and movements.

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ESSAY

RIEF

CASE STUDIES

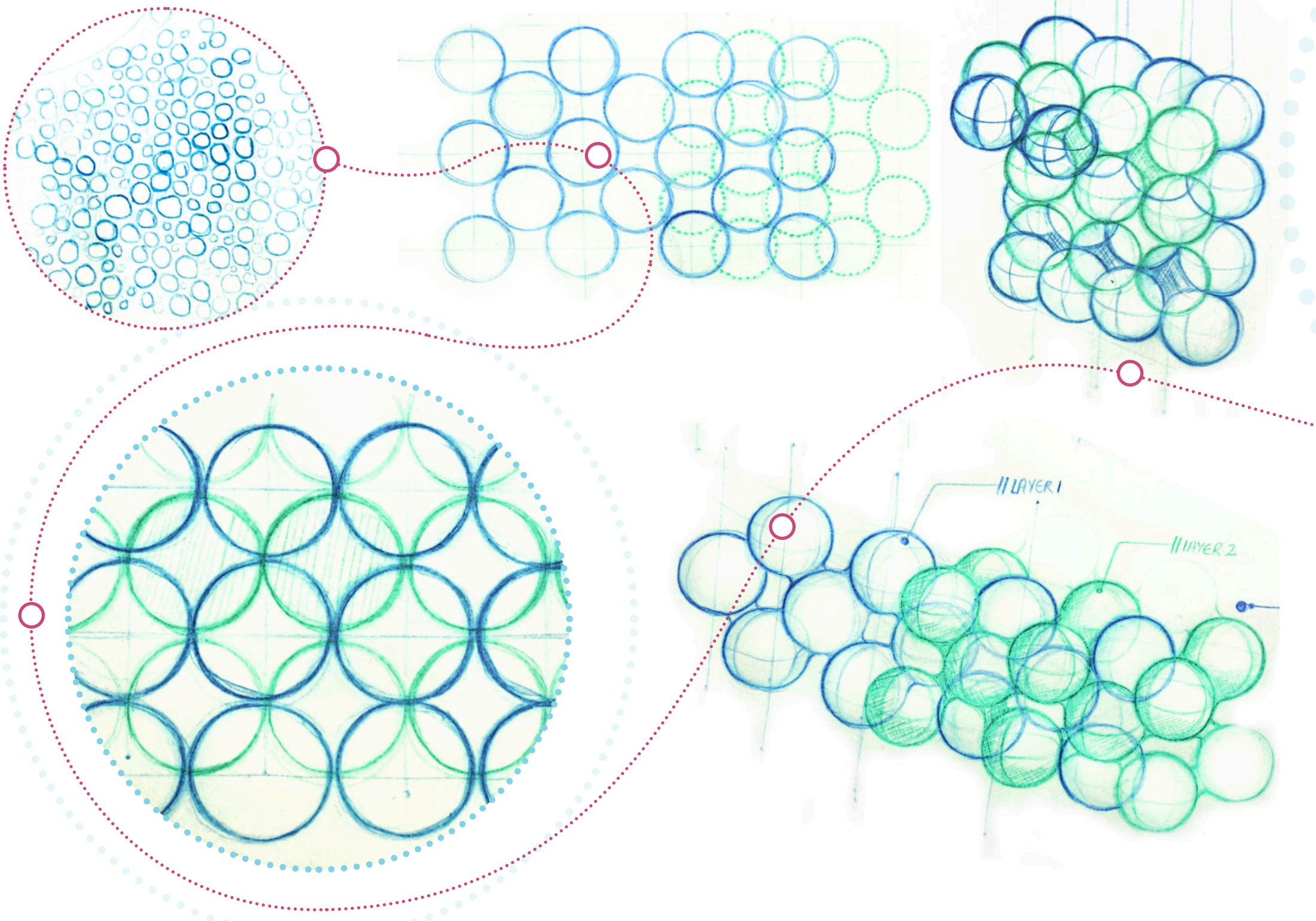
.version two

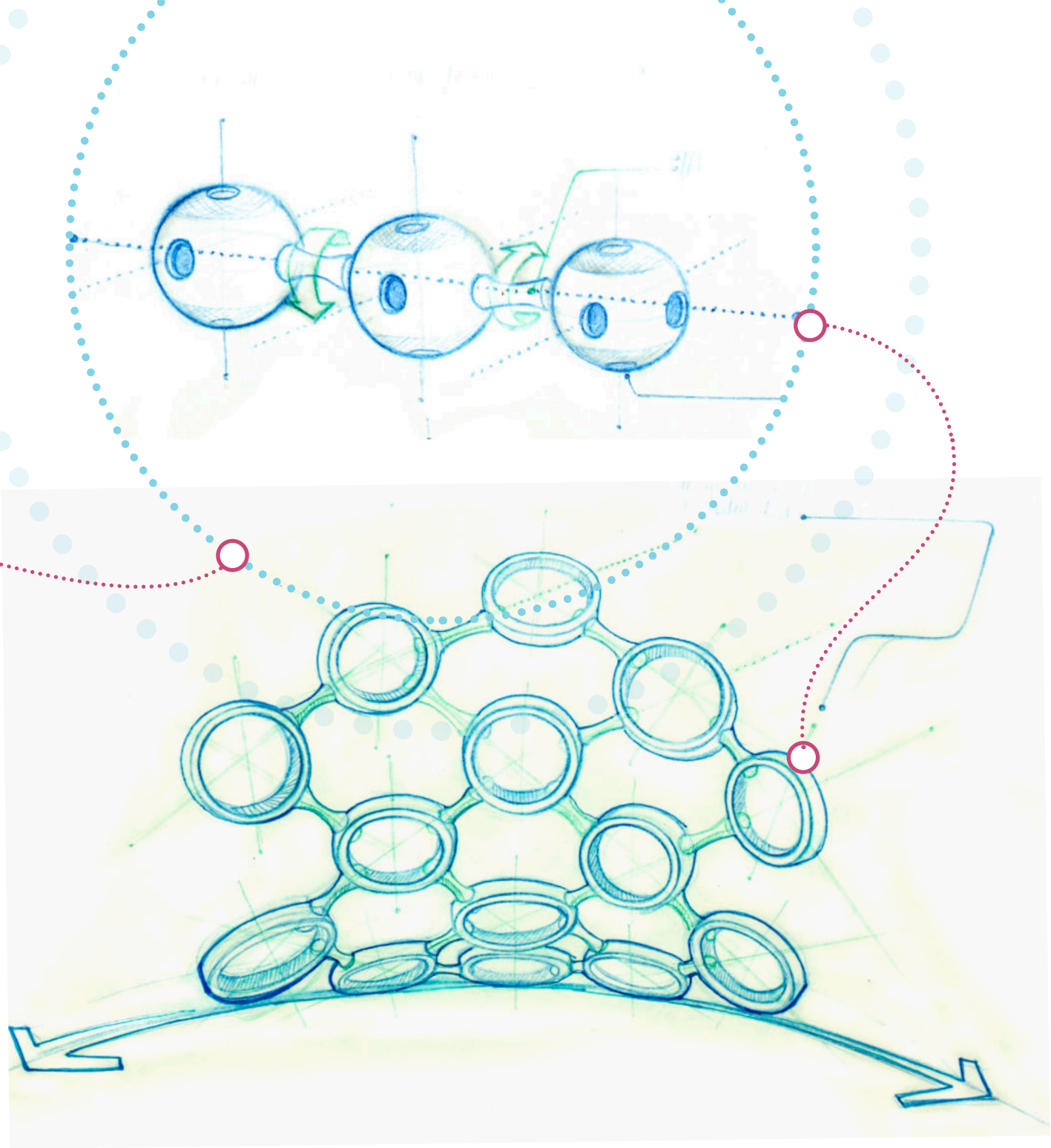
To design an element/installation which facilitates engagement with the content of the exhibition, i.e. information (static/ digital/both) using real objects(form) in physical space, thereby creating a bridge between digital and physical world.
The design should allow for layering of the content, and devise fun and intuitive ways for the visitors to explore these information layers.

DESIGN //

DESIGN IDEAS

The following pages describe the various ideas, and design solutions in response to the design brief.


LAYER 1
LAYER 2

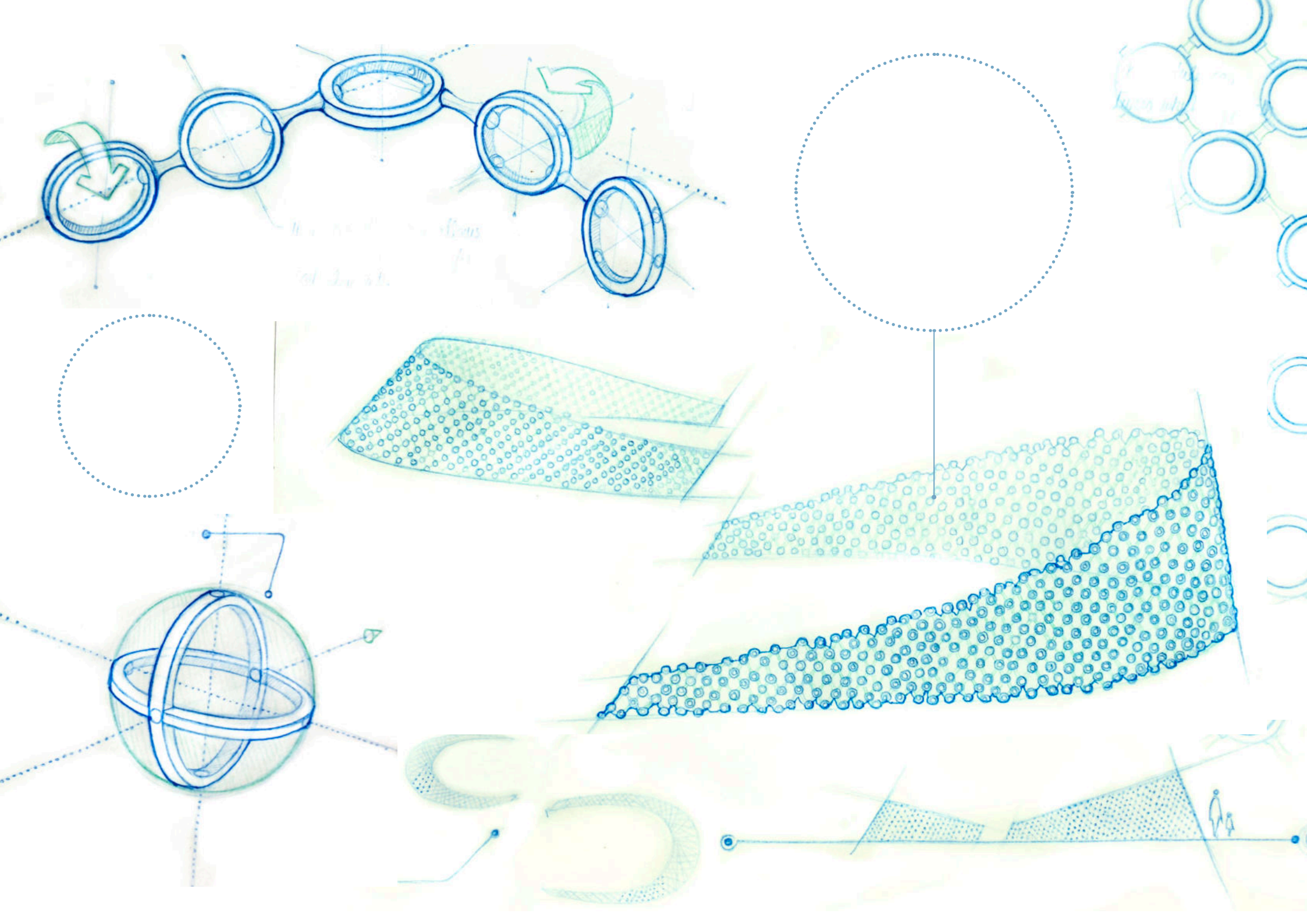


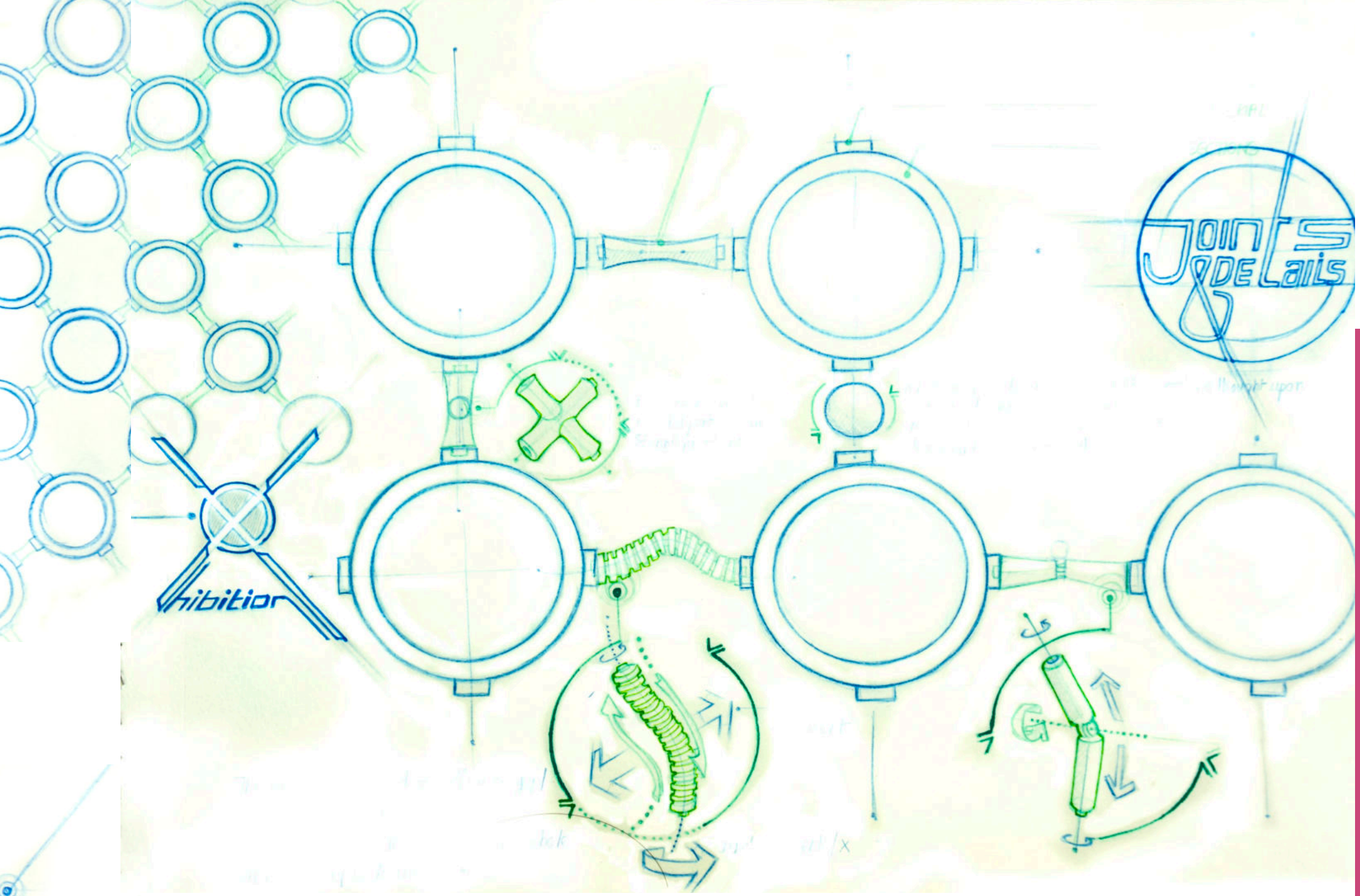
Idea ONE

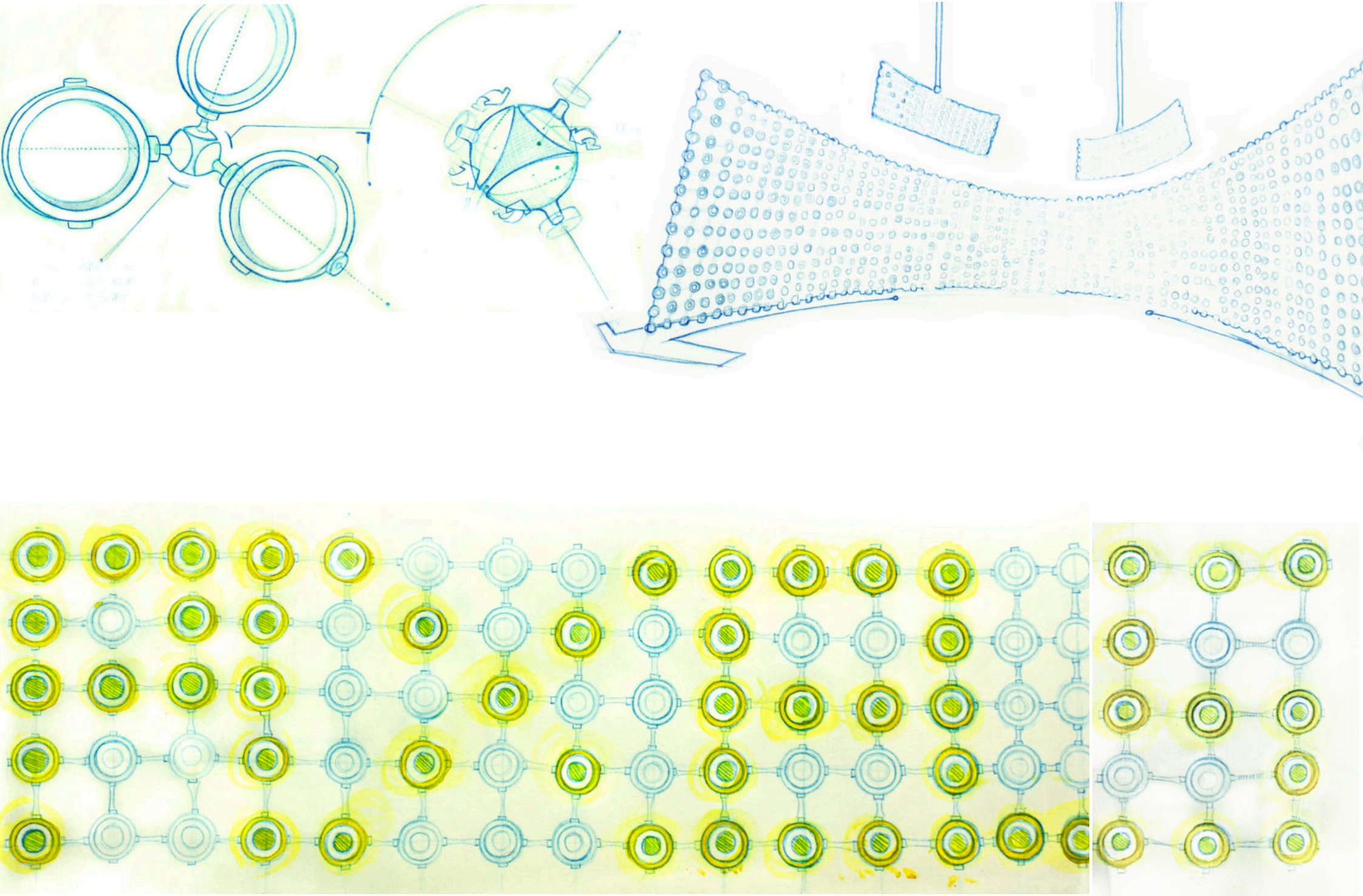
This idea started with the exploration of form. To find a unit/module which can be used to make exhibition structures. For inspiration, i started with imitating biological cell. How cells are arranged and how they form a skin. On growth and form by D. Thompson is a very interesting read on how biological and animal structures have evolved and it proved a tremendous inspiration in doing early ideation.

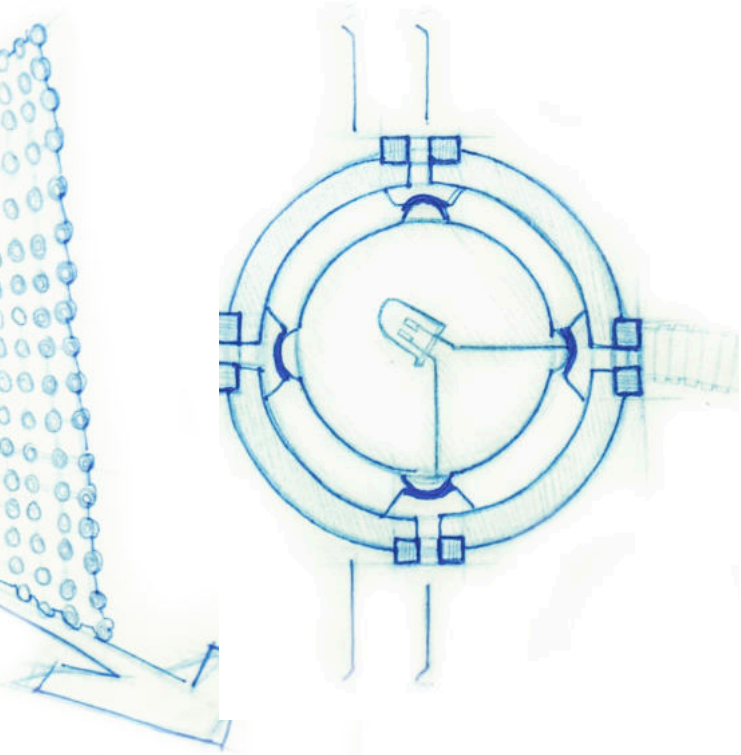
The sketches alongside depict the evolution of the circular units, and the possible structure that the units can generate. It became clear that the connection between units is an important aspect, and needs to be designed carefully to allow required degree of movement.

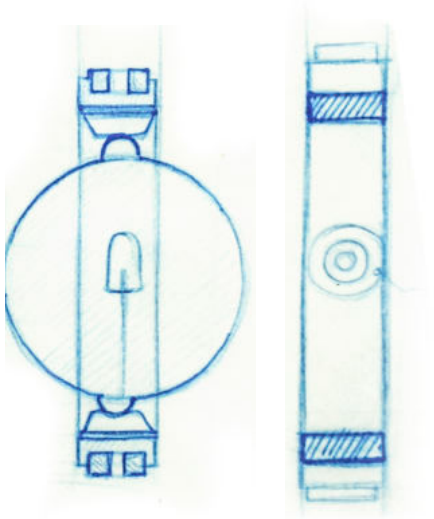
Another thing was the material of the units and after fiddling with plastics, metals, i decided upon bamboo.
Bamboo was an instant choice of material because of the rings that can be cut out of it to generate the units.
Bamboo is light weight too and provides good structural strength. Being a natural material, and an easy method of being able to produce the units, the overall cost and energy involved becomes less.




Joints
&
Details







Idea ONE

Putting exhibition design within the context of contemporary technology and world, helped in adding the next layer to these units.
During sketch explorations, the structures generated, looked as if composed of round pixels. The idea stayed,and led to a quick prototype. A light emitting diode was added within the bamboo ring.
Now a very interesting thing happens, the whole fabric like structure becomes a giant light unit. A structural fabric made of these pixels. In another prototype, units were made to light up, as soon as you connect it to the structure. But what is this giant pixel fabric good for?
As the prototype was done, it was realised that, what is being conceptualised here is a giant screen.And that gave the next challenge. If it is a screen, it is required that every unit/pixel should be individually controllable.
And thats where electronics were involved. An arduino UNO micro-controller can be used to create a lattice structure of these units, and turn them into a screen.
This becomes a screen, a low resolution screen, which has the capability of being moulded in various forms. And that opens up a world of possibilities.With the help of softwares such as Touch Designer, various things can be displayed or conveyed through the screen.

The screen structure becomes the background of the exhibition, it can take shape of galleries, walls, display units, augmented with one more layer of information.
What can this information possibly become?
What kind of engagements can it produce?

The low resolution nature of the screen doesn't allow very precise text /graphics to be displayed, so the information has to be limited to basic symbols, shapes and colours.
This can be used to become the signage, and guide directions. It can generate colour coded zones, signifying similar display objects.
Employing RFID tags, and giving them to users, another layer of information can be revealed and displayed. Depending on the number of visitors and how long they stand at a certain exhibit, the units around that exhibit can show this change through colours, hence generating this hot-spot like colour zones.
This can be calculated though the rfid sensor embedded near the exhibit. Once the data is collected ,it can be fed into computer through arduino, and using visual programming software, the data can be projected on the screen in real time.


Every-time
the plant is watered,
the bamboo leaves
glow up
the glowing/ growing
watering the tree
A metaphor from watering can. This allows people to show their like and love to the project
Display
When bamboo is cut at an angle, the curve becomes an oval. Cut at a steep angle, the oval starts looking like a leaf. A collection of such end cut bamboos give a tree like appearance.

the nourisher

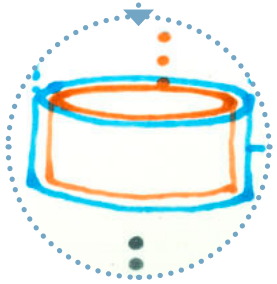
Here the Visitor is performing "watering the tree" gesture, thereby liking the project. A sensor accounts for this, and the colour of the units change, the more people like the project, the tree will change from yellow at the start of the event to green at the end of the event. Also as the gesture is performed the pixel z brighten up to respond visually, and this creates an interest in other visitors walking by. People tend to see the things that others like, and due to this visual response, they might get curious.

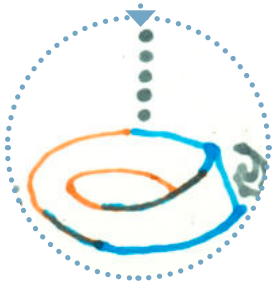
Due to different number of likes, each tree will have a different colour all through the event, thereby creating a very dynamic and colourful environment.

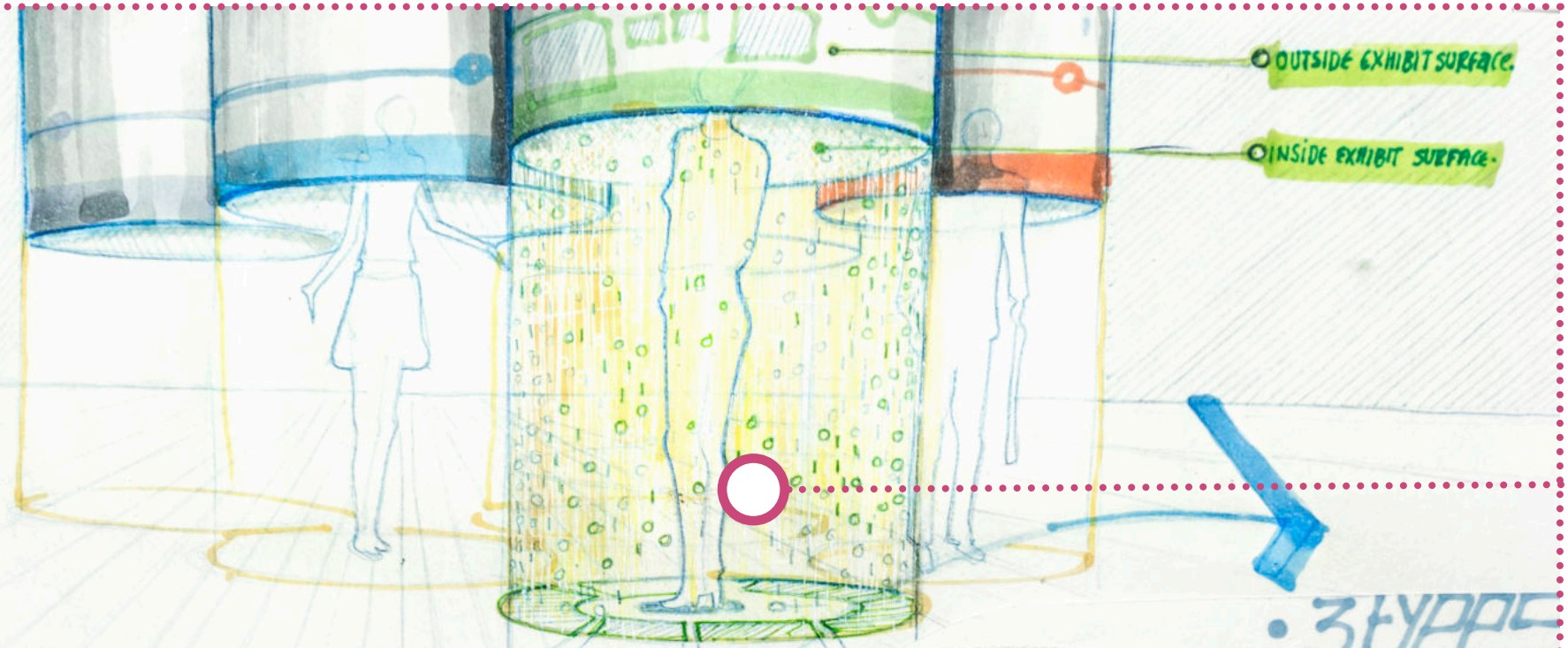
Idea TWO

This idea builds upon the pixel z and its application to design brief to be able to generate an exhibition space.
The form here becomes like a giant banyan tree with its roots coming down from the roof and establishing themselves in firm ground.
Philosophically the journey of the student at a design institution is like getting nurtured by the main tree, the institution and the faculty there, absorbing the knowledge acquired and at the end of it, growing out, and establishing themselves as independent designers.
The fruit of their work are the projects on display, which hang from the tree.
The whole structure is made of different bamboo sections. The rings and the bamboo sections have light emitting diodes inside them.
Here the visitor is acting like a person who is looking at the fruits of labour, trying to connect with them, understand them. We are a culture who loves to like and appreciate. Recently , this has become a click of a mouse or a tap on a screen.
Here, the gesture adopted to achieve this is a real event, where you rotate a watering can, in a fashion similar to watering the tree, thereby nourishing the idea, the work, the tree that represents the individual student.

halo

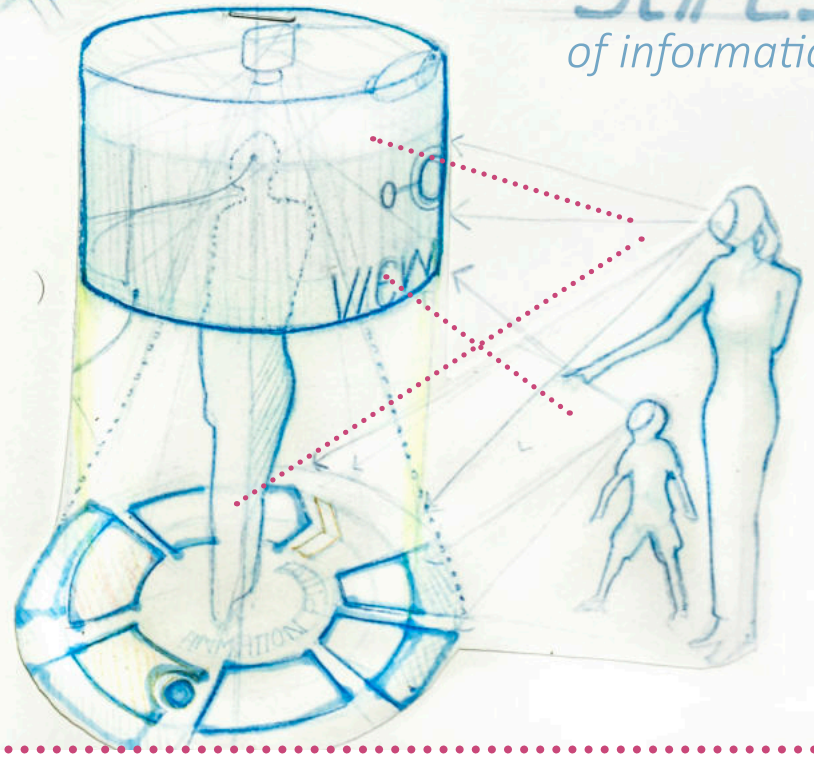




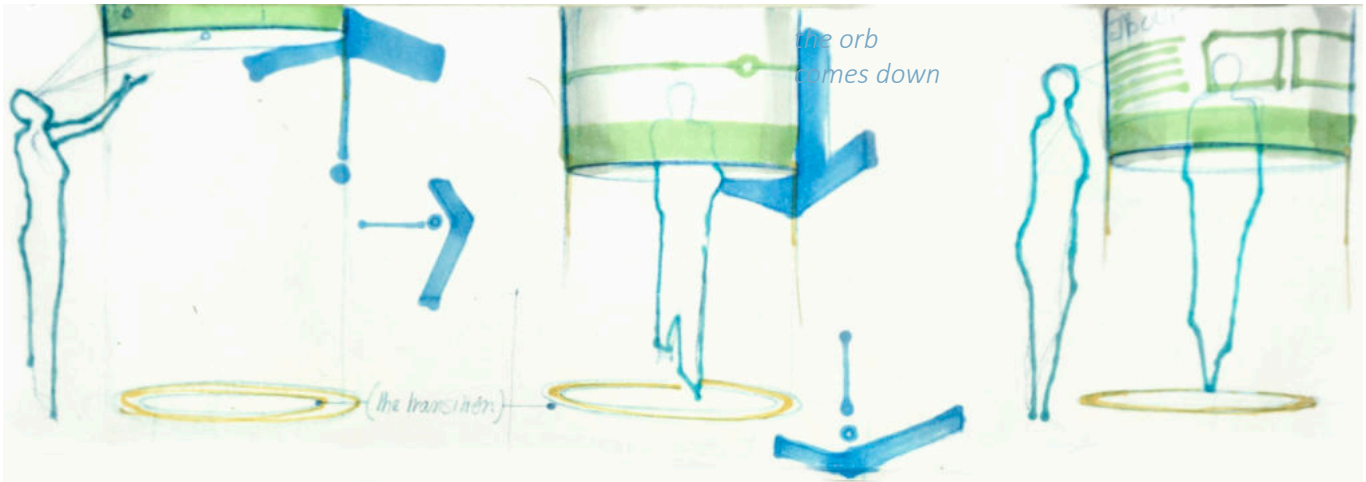


• 3 TYPES
of information

OUT

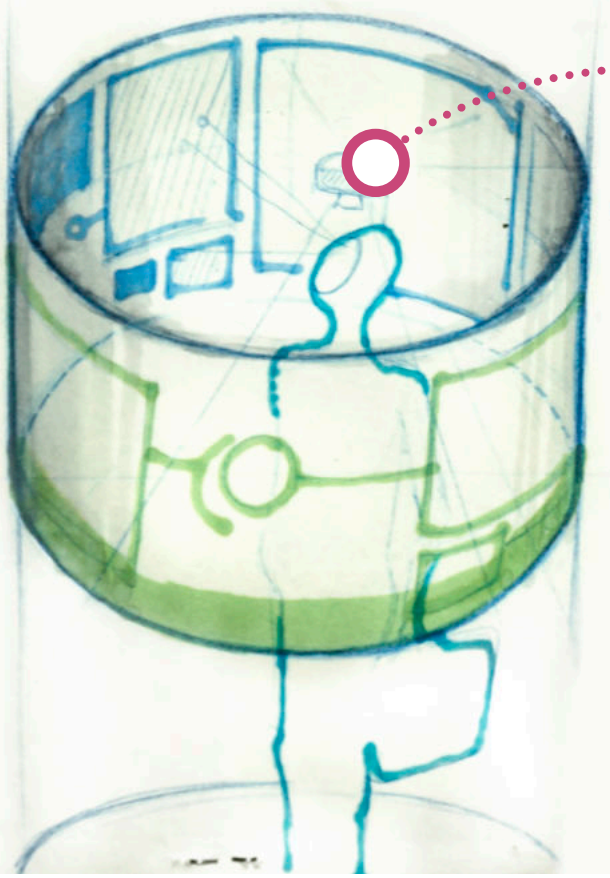


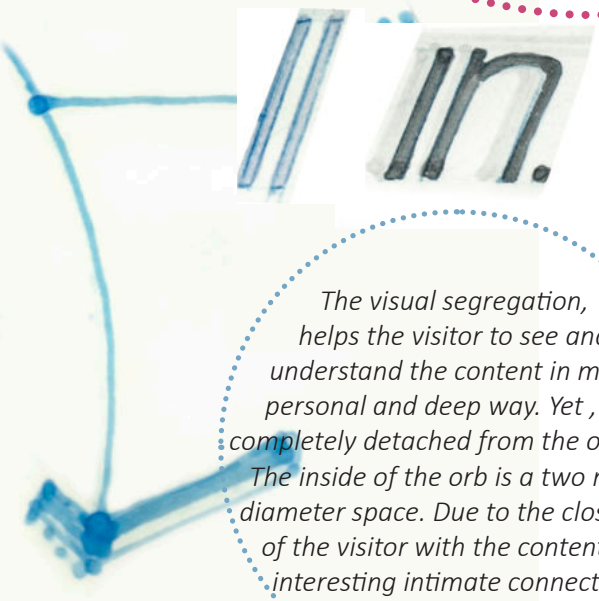
The outer surface of the orb is used to display the main projects/information. It can have simple information with big pictures and little text. The orb has a projector inside which throws projection on the ground, displaying the title, designer and type of the project. This information helps the visitors to navigate throughout the exhibition.



Entering the orb :lift

inside the orb : visual segregation



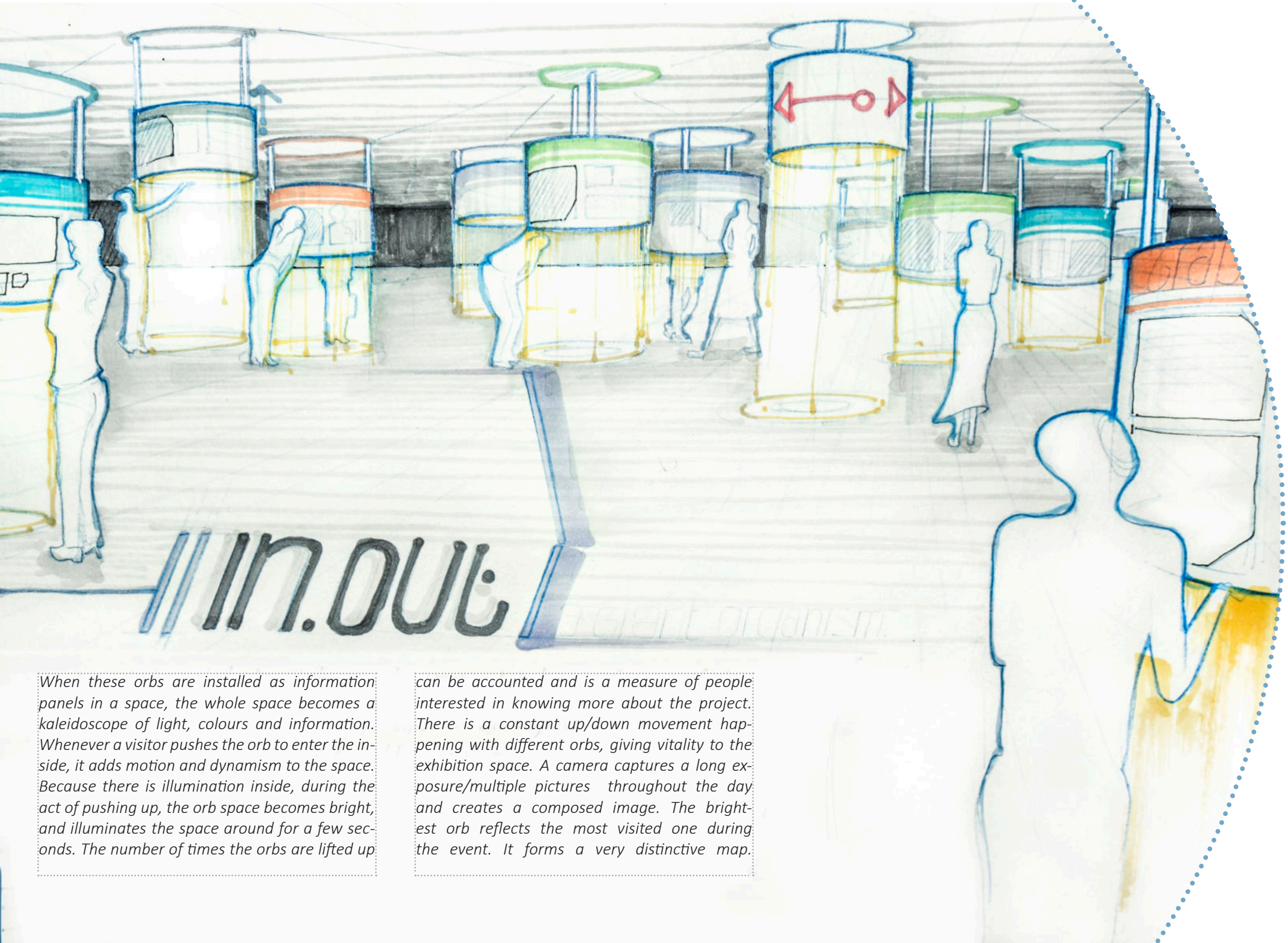


The visual segregation, helps the visitor to see and understand the content in more personal and deep way. Yet , not completely detached from the outside. The inside of the orb is a two meter diameter space. Due to the closeness of the visitor with the content, an interesting intimate connection happens.

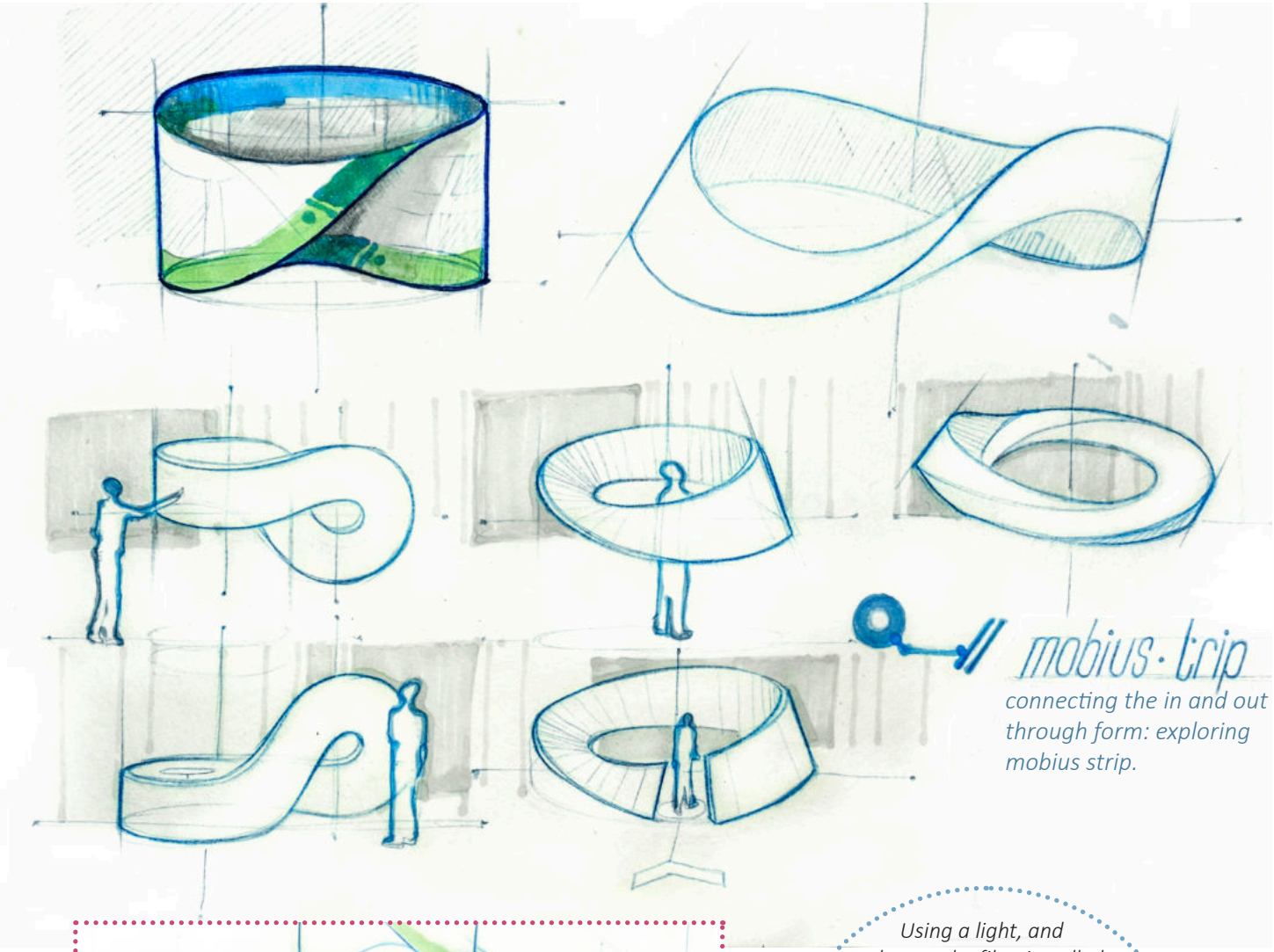
Idea THREE

The idea drives its inspiration from the ”iceberg” nature of the design projects. What is generally shown through exhibitions is a small part of the project, the journey, the process, the difficulties and interesting things that happened during the project are left out. In short, a project has two sides, one “out” side, the one that people see, and the “in”-side, which the designer goes through but remains behind the screens.
This idea gives the exhbitor, a space and form to show both types of content in the same place.

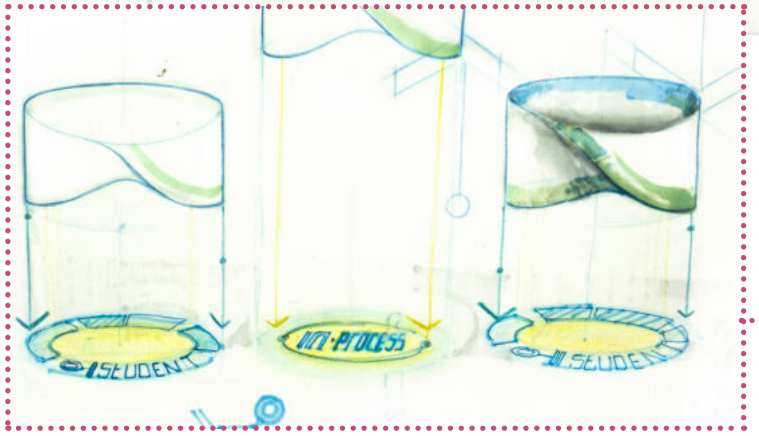
The main display panel takes the form of a hollow cylinder surface, metaphorically representing the halo/orb which has two surfaces to display information. Scaling this to human proportions, the inside of the cylinder becomes an accessible space.
The outside surface consists of primary data,and can be more pictorial in nature, while the visitor has to enter inside (literally here) to know and discover more about the project.
This inside world is curated and designed by every individual, reflecting their character. It may consist of sketches, pictures, notes, thought process, etc. With the same form and structure two different worlds are created, with the way of access forming the link between them.



When these orbs are installed as information panels in a space, the whole space becomes a kaleidoscope of light, colours and information. Whenever a visitor pushes the orb to enter the inside, it adds motion and dynamism to the space. Because there is illumination inside, during the act of pushing up, the orb space becomes bright, and illuminates the space around for a few seconds. The number of times the orbs are lifted up can be accounted and is a measure of people interested in knowing more about the project. There is a constant up/down movement happening with different orbs, giving vitality to the exhibition space. A camera captures a long exposure/multiple pictures throughout the day and creates a composed image. The brightest orb reflects the most visited one during the event. It forms a very distinctive map.



connecting the in and out through form: exploring mobius strip.

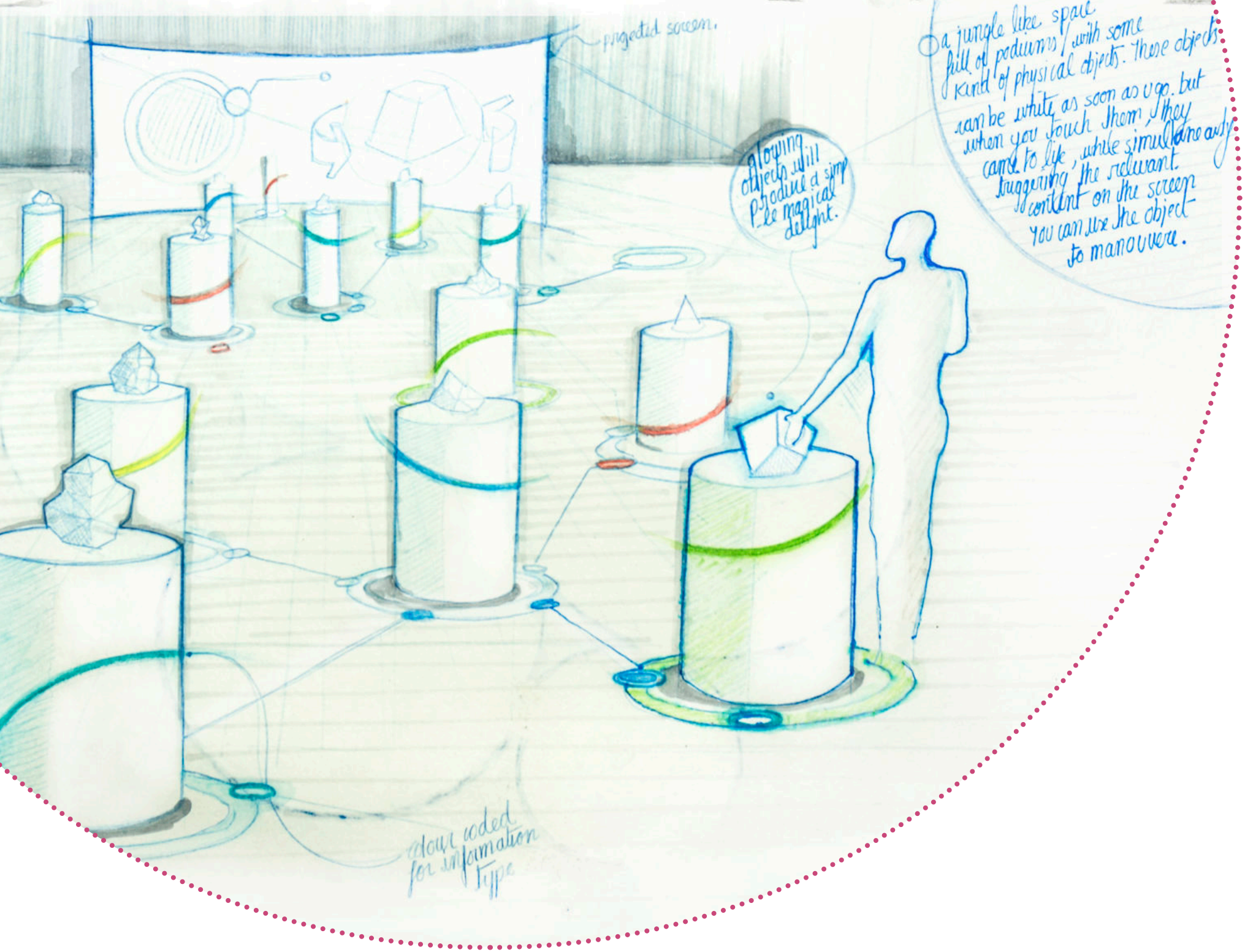


Using a light, and a lens and a film, installed in the orb , the title, and type of the project is projected on the floor. There is one more subtle information waiting only for the curious user to discover. As soon as the orb is lifted, due to change in position the current projection gets out of focus and reveals another information for a couple of seconds when the orb is top. This can be a personal message from the designer.

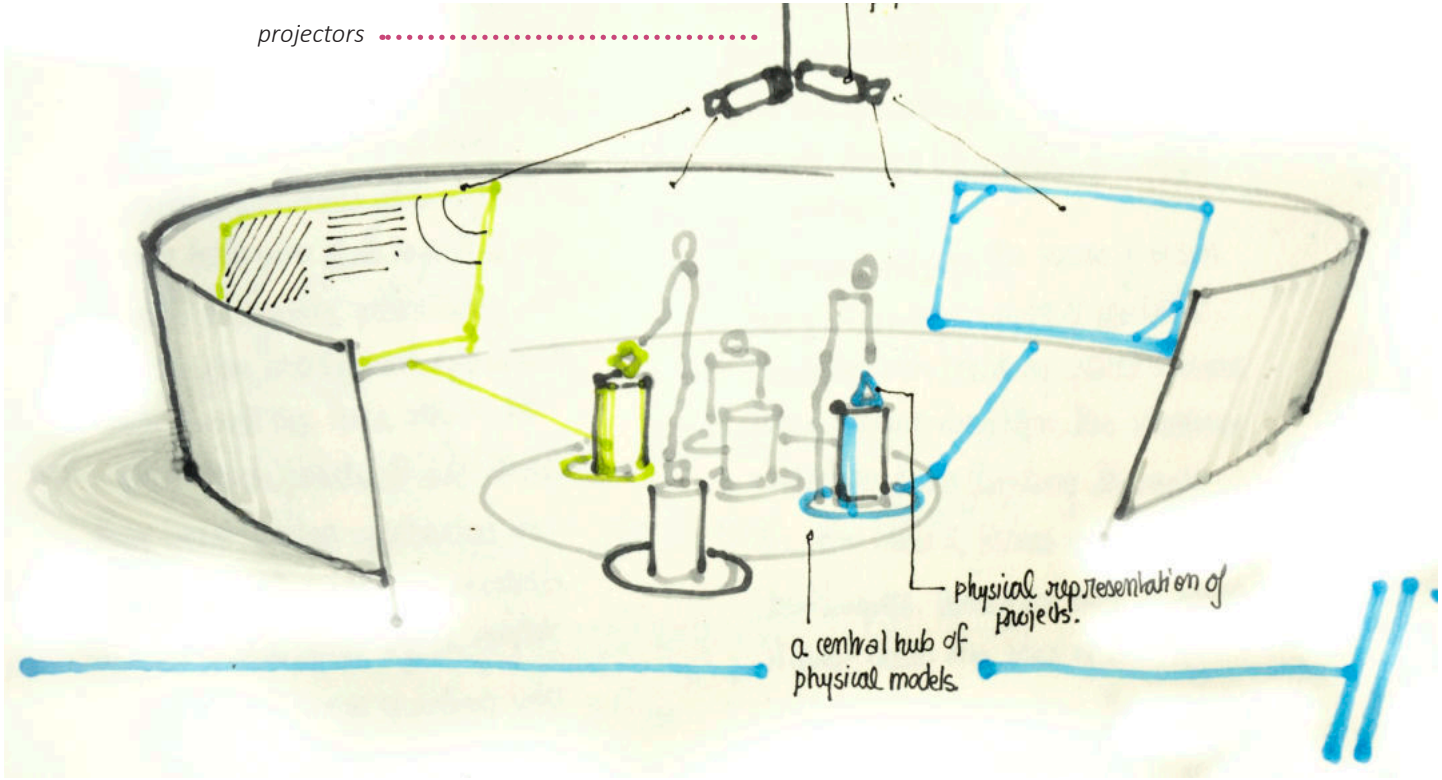
Idea THREE

The concept is developed further, and in an attempt to connect the inside and the outside content, because they are a part of each other, the idea of introducing a twist in the orb and turning it into one surface came up. This surface is known as mobius strip. And philosophically, it represents the idea of in and out in a more seamless way. The sketches alongside show the explorations of various forms and possible shapes done within the mobius strip parameters. The scale of the structure and its placement is changed to explore new possibilities of engagement and experiencing the content.

The orbs can be made with bamboo stripes acting as a frame and utilising fabric between , to create the surface. The fabric and its colour/translucency makes the orb glowing due to the internal illumination.


projected screen.
Allowing objects will produce a simple magical delight.
a jungle like space full of podiums with some kinds of physical objects. These objects can be white as soon as u go. but when you touch them, they came to life, while simultaneously triggering the relevant content on the screen. You can use the object to manouvere.
colour coded for information type

Idea FOUR



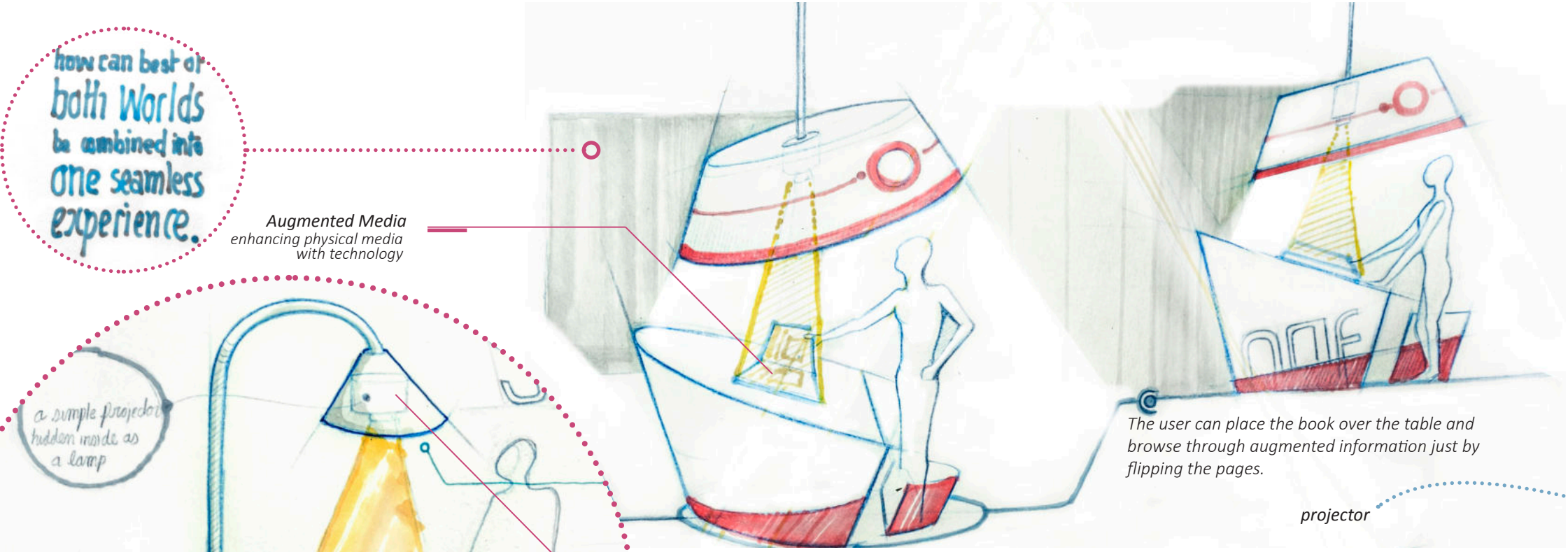
Involving the visitors, and enraging them to do something is a careful task. An activity, that people already do, subconsciously, can be mapped to present content. This idea explores one such interaction, and that is touch. Museums and exhibitions around the world have "Do Not Touch" tag stuck to the displayed objects. But the tendency to hold something and understand it is a basic way of gathering information. It is one of the most used sense after vision.

This idea lets the visitors do the same thing.The idea is to create a space with podiums holding real objects. These objects can be physical models accompanying the projects or just an abstract form representing the project, much like a 3 dimensional icon/symbol.Placed closely to each other, when an user goes close and touches the object, the sensor takes the input, and sends the information to the computer, which triggers the relevant project information to be displayed on a screen.The objects are then used for navigating through the information.

By letting people touch 3d objects and mapping relevant information, layering of content is achieved with a simple but delightful interaction.

how can best of both Worlds be combined into one seamless experience.

Augmented Media
enhancing physical media with technology



The user can place the book over the table and browse through augmented information just by flipping the pages.

projector

RFID sensor

a simple projector hidden inside as a lamp

table with sensors to navigate information

Projector

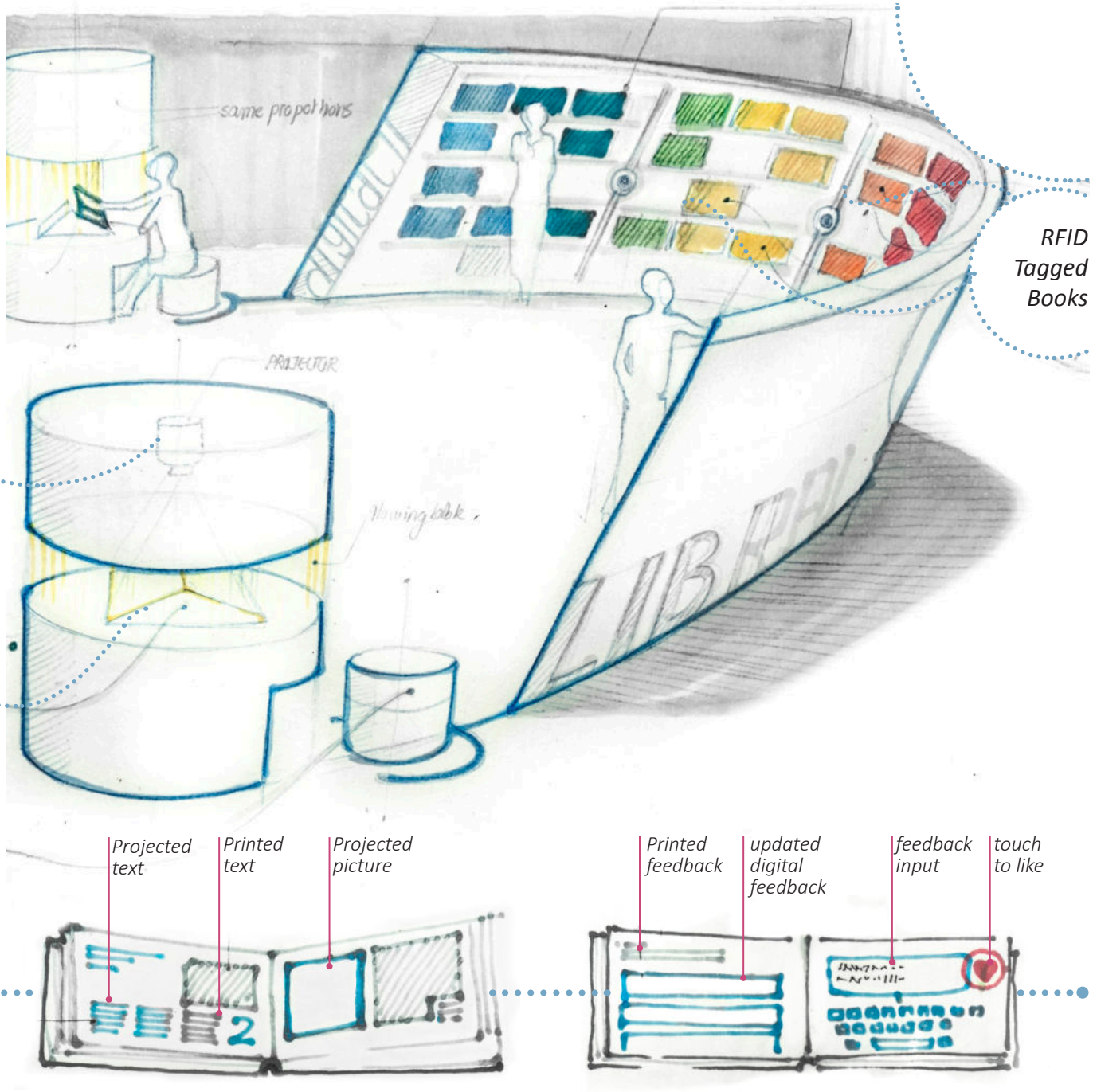
Digital Light

Sensors in Table

The idea originated with metaphorising a study table lamp into an actual life size table and a lamp.

Book Design

The book is designed to have particular sections which have space for virtual information to be augmented and projected. The book becomes a key to access the extra information. Also, updating content and information becomes easy. Less printed media on the book saves ink and cost.



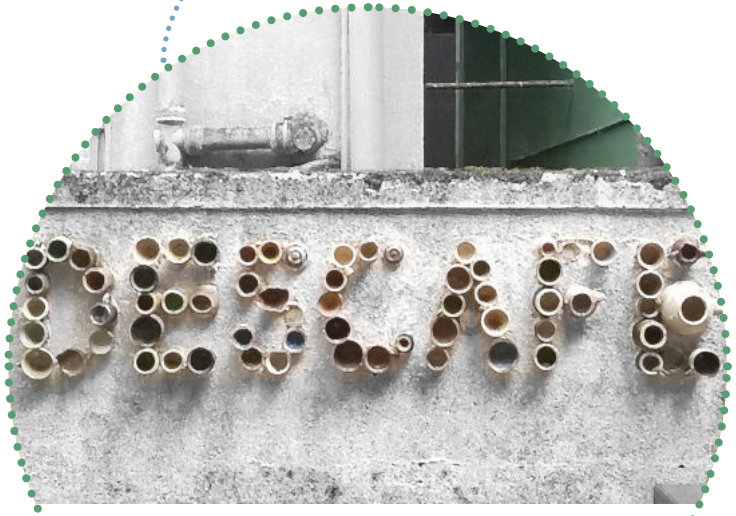
Idea FIVE

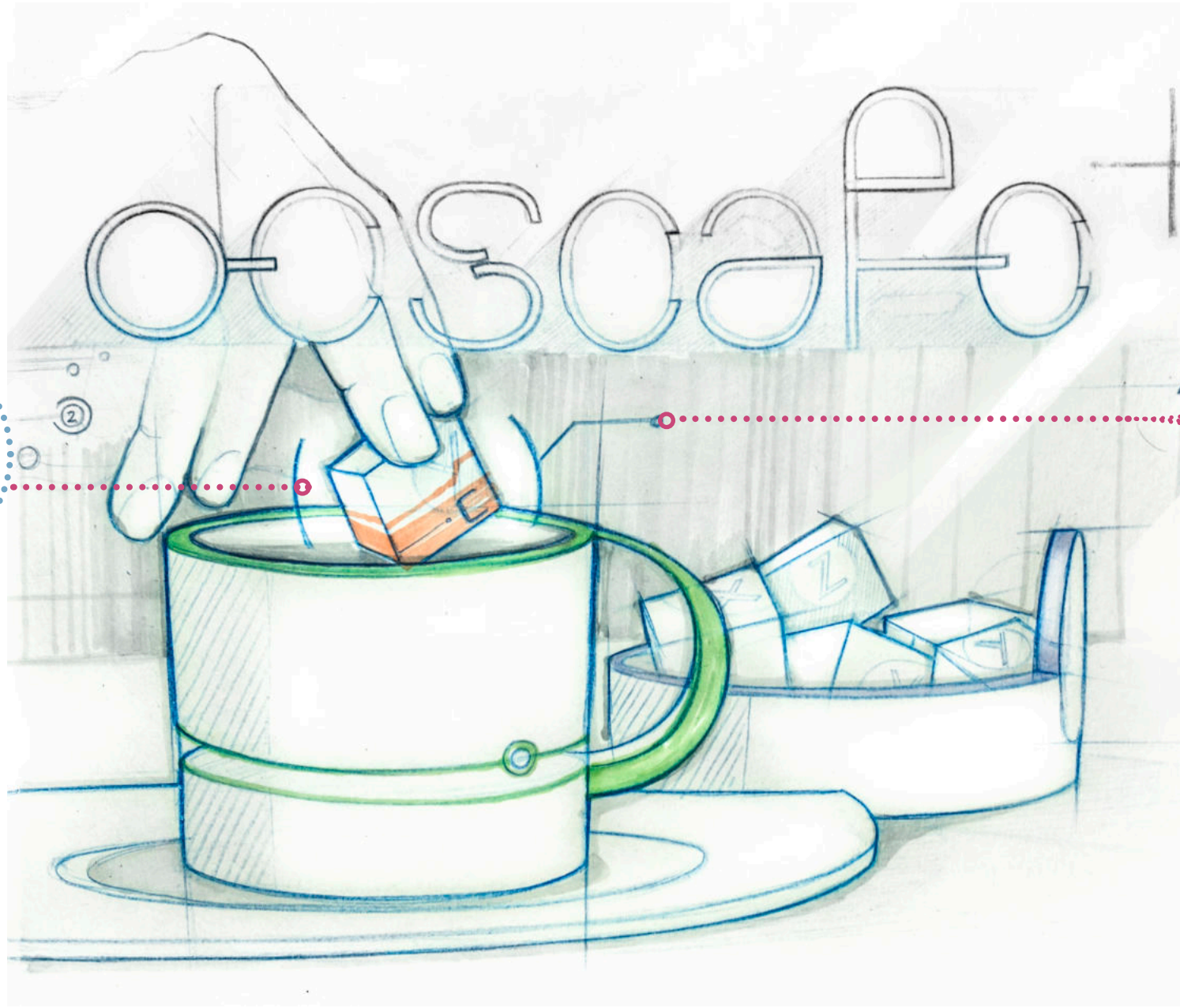
This idea explores the possibility of merging the virtual world and the real world objects to create a seamless experience. The book as an physical object, provides ease and simplicity of browsing through information. But due to the limitation of the media, the information once printed cannot be altered enhanced or updated, like digital media.

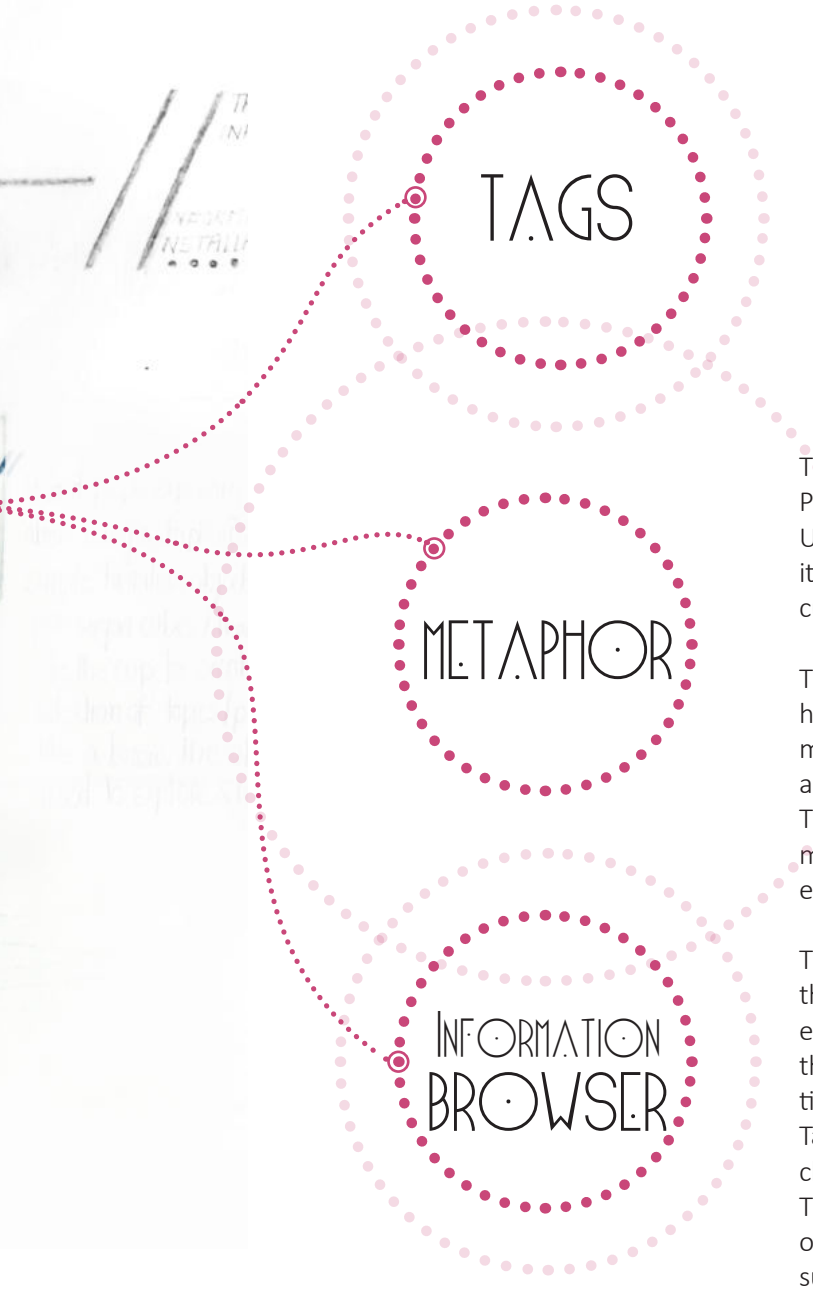
So how can we make the best of both worlds?

The idea was inspired from the table lamp and the activity of studying under it . In this installation, the table lamp becomes a table and a lamp. Instead of a traditional lamp, it contains a projector. The table has an rfid sensor. The books can be arranged, on a wall like a colourful aesthetically pleasing arrangement. visitor comes and picks up the book. The books in their printed form have just some pictures and little text. The user can sit down and place the book in position on the table, and switches on the lamp. The books are embedded with rfid sensor which triggers the relevant projection, on the book. The book suddenly becomes much more dynamic. A lot more information and pictures can be projected on the book .The book now becomes an augmented way to navigate the virtual information, utilising a very natural universal gesture of flipping pages.

CONTENT
+
INTERACTION







Idea SIX

This idea has its inspiration from a couple of things.
People, coffee and conversations over various topics.
Using these elements, can we somehow juncture a digital cafe where information can be accessed and discussed upon?

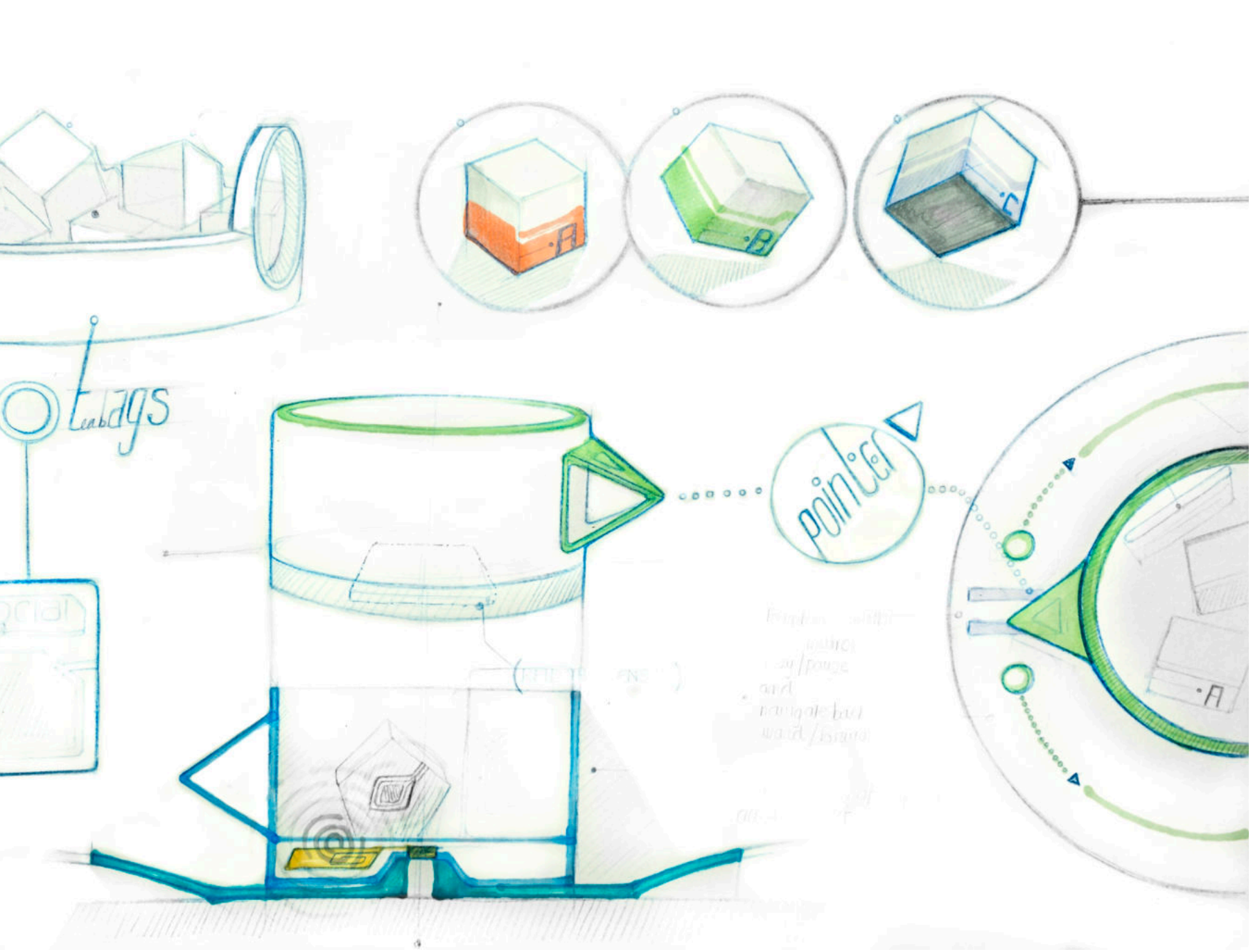
The idea originated when i saw a mural. The cafe at IDC, has this mural which is a text saying “descafe” .What makes it interesting is the use of ceramic cups, kettles and other objects to create the text.
Though i had seen it quite a lot of times, this time a new metaphor developed, when it was put in the context of exhibition design and making information accessible.

The idea utilises the tag based nature of information. In the present context, all our virtual information is collected, sorted and accessed by these little tags attached to the information. This helps in storing the same information under various heads.
Tags are also like keywords we look for while searching or choosing information.
The idea takes form of an installation, including physical objects like a chair, a table, a few cutlery items, tea bags, sugar cubes and a projector.

In a way similar to how people make their tea/coffee as per their choice, here the visitor brews a particular set of information of his choice. For e.g. we saw the projects being categorised as per the course they belong to, in DDS 2014. But that was not the only category, and there are a lot more categories and connections between different projects that can be explored. This will give a new perspective to understand the relation existing between different projects.

Here in this installation, a similar way of exploring different associations between objects has been applied.
WIth the help of choosing Tea bAGS, the visitors will create new associations and discover information in a non linear fashion. For e.g. projects can be categorised by their user type, by material, by their nature of service and impact and so on. For e.g.some possible tags could be #social, #entertainment, #healthcare, #illumination, etc. Further more, extra layers of such information can be added. There can be tags for student/faculty projects, and for conceptual/live etc.

Giving the user the choice to discover the projects/information in a fun way is the aim.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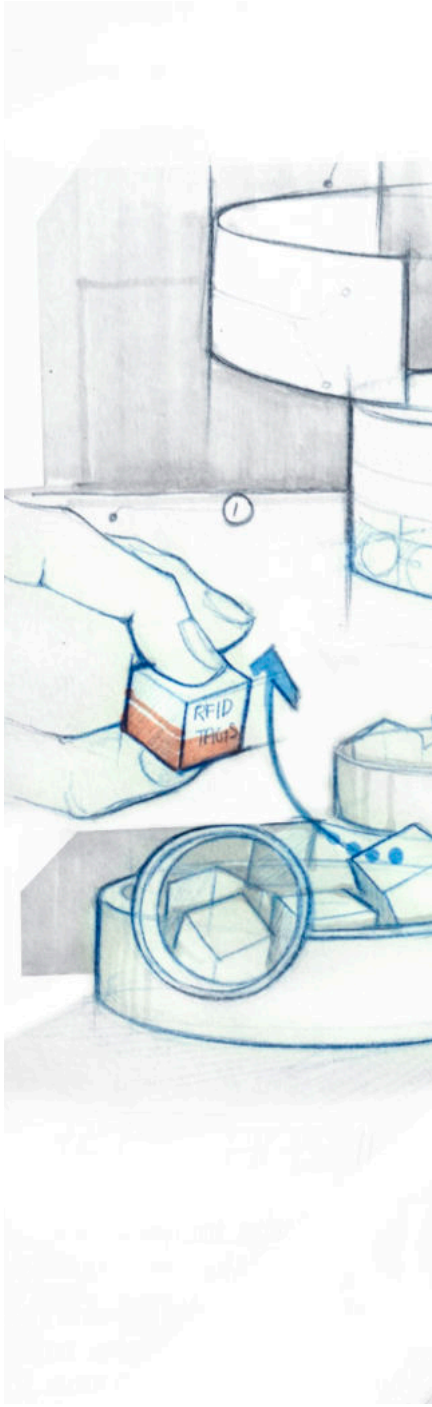
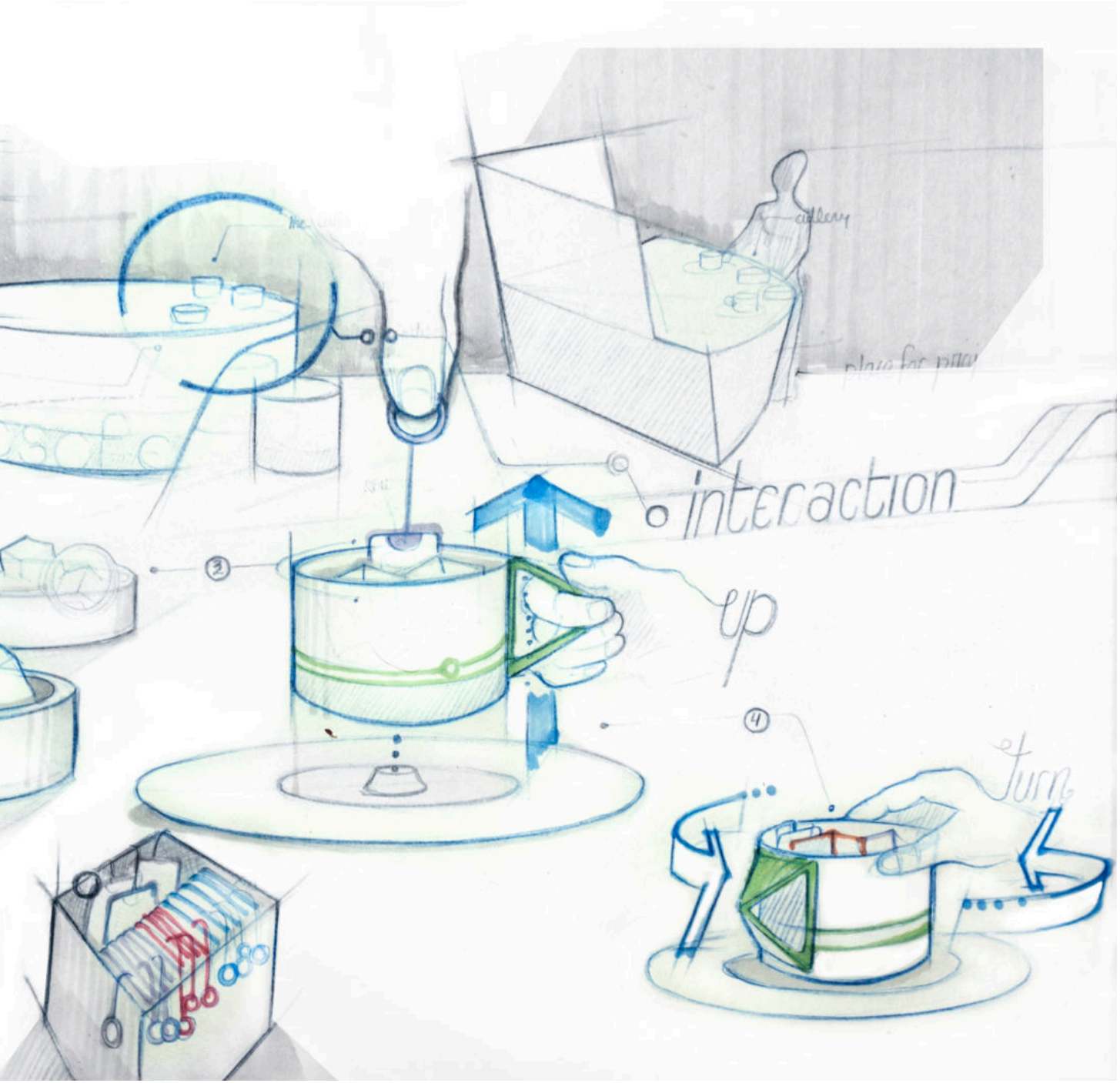

RFID



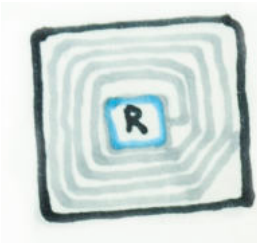
Idea SIX

The visitor comes to the table ,sits down. Animation on the screen asks them to create their own brew. On the table, cups, saucers and teabags are placed. These teabags are differently coloured and have a unique tag title on them.
The user starts picking the tags of choice and putting them into the cup. Once done, the user stirs the mix with a spoon. This triggers an animation on the screen telling them the brewing has started. The rfid sensor in the cup reads all the tags(rfid tags embedded in teabags) and presents the visitor with a perosnalised set of information responding to his/her tag choice.
The cutlery is then used for navigating through the information as shown in sketches alongside.

The data of usage can be collected and analysed. This will give an indication of the type of information or projects that people selected the most. A lot of new selections and relationships between the projects will be revealed. This installation aims for layering of information,using an interesting metaphor to engage with virtual content using a physical object based interaction.

TECH. //

RFID TAGS



Radio frequency identification system is a technology which uses electromagnetic frequencies to communicate data. It is a system of tags and tag reader.
Although similar to bar codes and QR codes, it helps in tagging objects with particular information field. But rather than using optical reading, it is read wirelessly through a reader device, which detects the electromagnetic pulse embedded in the rfid tags.
This allows the possibility of it being used without scanning, it can be hidden in objects without the user realising how it works.
The rfid tags are active and passive type, passive types being lighter, cheaper and simple in construction.

SENSORS

To take inputs from the environment, and gauge the user interaction, various sensors ranging from piezo sensor to light dependent resistors have been utilised in the ideas discussed here.
A piezo sensor is a pressure based sensor which can detect the pressure of human fingers. This allows it to be embedded inside the physical objects and using the sensitivity to create touch/pressure based interactions.
A light dependent resistor, works when it is exposed to a specified intensity of light. It can be put to many uses. For example, if you put your hand over the sensor, thus blocking the light, the resistance increases which can be trigger to a particular event.

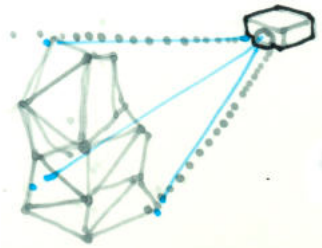
KINECT

Microsoft KInect is a 3d environment sensing device which works on infrared radiations. It can detect the presence of human body, and various gestures performed. It has a RGB camera, a depth sensor, and multi-array microphones, all of which combine to sense the movements of human body.
This allows designers, to design spaces and interfaces where you don't require any other object/sensor to interact and trigger events.The events can now be triggered by particular gesture which has been programmed to respond, or by tracking your movement in space.
This allows non-encumbered interactions in real physical space and environments.

Arduino Uno

Arduino UNO is a micro-controller, which can perform a lot of electronics operations, and acts as a medium between computer software and sensors, which otherwise requires complex hard-coded circuits. With the help of programming language "processing", it can interface between computers and other sensors to create a sensor augmented environment.
For example it can take input from a piezo sensor, and then use the values to run a particular program.
This makes it easy to change, try and experiment with different possible functions, by just experimenting with the code. In case of idea one, an arduino is used to turn the pixel units into a digital low res screen.

Projection Mapping



Projection mapping is a technique, which uses a projector, a software and a computer to project on any surface. This means that various textures, graphics and other things can be precisely projected on surfaces which have shapes other than being flat.
This allows for clever experimentation with computer-graphics and interesting possibilities to project virtual world onto real world surfaces, thereby creating augmented worlds.
Derivative Touch Designer is one of the many softwares used to program, map, and project the information.
Projection mapping is being used by installation artists all over the world to create new experiences.

END. //

Refrences

All refrences have been put at their appropriate places for both images and text.

Rahul Anand
IDC , IIT Bombay