DESIGNING FOR EXPERIENCE: EXAMPLE EXPERIENCE DESIGN PROJECTS ON WORKSPACE

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by
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ABSTRACT

The great experiences can be deliberate and are based upon principles that have been proven. This thesis study explored the most important of these principles before the practical study. After that, the study focused on making a practical study on the workspace domain in three main phases.

In the data collecting phase, experience data was collected for a workspace domain by observing workspace activities. Used methods were photographing, informal interviews, field notes and ethnographic observation.

In the data modeling phase, a data model were constructed. Pattern language was used as a base for re-modeling the experience data. The data model is simply a framework that allows the designer to document, collect, communicate and understand all design related information quickly and easily. During the design phase, this framework became the design guideline and was used as a roadmap for every single design idea.

Framework also gives the opportunity of defining relations from patterns to patterns and from design ideas to patterns. This flexible opportunity lets the designer visualize experience scenarios with design ideas in a higher level of understanding. Framework has a special data encapsulation format which is inherited from pattern language. According to that format, short pattern names, short essence paragraphs and other sections makes easier to remember, communicate and connect the patterns with new ideas. At the end of the design phase, three different products which are actively related with the experience patterns were designed.

ÖZET

Başarılı deneyimler tesadüfi olarak oluşmazlar önceden ispatlanmış bir takım prensiplere dayanırlar. Tez bu prensiplerin bazılarını incelemekte ve ardından çalışma mekanı alanında üç aşamalı bir uygulama çalışmasına odaklanmaktadır.

Veri toplama aşamasında çalışma mekanı aktiviteleri gözlenerek ilgili deneyim verileri toplanmıştır. Bu aşama fotoğraflama, formal olmayan mülakatlar, alan notları ve etnografik gözlem gibi veri toplama yöntemleriyle gerçekleştirilmiştir.

Veri modelleme aşamasında, deneyim verilerinin modellenmesi için örüntü dili tabanlı bir model kullanılmıştır. Bu veri modeli, tasarımcıların deneyim verilerini kolaylıkla biraraya getirmesini, dokümente etmesini, anlamasını ve paylaşmasını sağlayan bir bilgi mimarisidir. Bu bilgi mimarisi, tezin tasarım aşamasında, herbir tasarım fikrinin geliştirilmesinde bir yol haritası niteliğinde kullanılmıştır.

Bilgi mimarisi aynı zamanda örüntüler arasında ve örüntülerden tasarım fikirlerine ilişkiler tanımlanmasına olanak vermektedir. Bu esnek yapı, tasarımcıya deneyim senaryolarını tasarım fikirleriyle birlikte görselleştirmesine ve yuksek seviyede anlamlandırmasına olanak sağlamaktadır. Bilgi mimarisindeki deneyim örüntülerinin örüntü dilinden gelen özel bir biçimleri vardır. Bu biçime göre, her bir deneyim örüntüsü yeni fikirlerle ilişkilendirilmeyi, hatırlamayı ve paylaşımı kolaylaştıran kısa pattern ismi, pattern esasını anlatan kısa bir paragraf ve konuyu detaylandıran diğer bölümlerden oluşmaktadır. Tasarım aşamasının sonunda da deneyim örüntüleri ile ilişkili olan üç farklı ürün tasarlanmıştır.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Table **Page**

CHAPTER 1

INTRODUCTION

1.1. Motivation

In the context of my master thesis project, my personal interests, research interests and future expectations converged on the approach of "design for experience" which is not a field but a mindset to creating successful experiences for users.

There are a lot of understandings and approaches for the successful design process with different names like human centered approach, usability, emotional design etc. In fact, each one of them tries to give an explanation and understanding for the design from different perspectives. Sometimes they repeat each other in some points. This diversity in the approaches world is quite perplexing for designers and also for anyone who would like to learn about it.

In this context, I have been in search of an integrating understanding of the design for a long time. I was looking for very simple core value that can explain successful design in a very clear way. When I discover about design for experience, I came to the conclusion that experience focused view is a pretty good understanding for successful design. No one needs crowd of concepts, mass of keywords to understand a simple thing. As anyone can know, simplicity is always the key for the clear understanding of a concept also for other things.

I would like to end this section with the words of a Native American proverb that defines experience in a very creative way. "Tell me and I will forget. Show me and I will remember. Involve me and I will understand."

1.2. Defining Problem

The main idea can be defined simply with that question: How can we learn designing successful and unique experiences rather than just designing products? Actually, answering that question requires not only understanding the theories on experience but also making a practical design project with the focus of experience.

In that sense, making a design project is just the visible part of the iceberg. But more deeply, essence of the problem is to learn how to create unique and seducing experiences for users of a product in a certain context.

Since experience design is mostly mentioned with the interactive media field and since it is very young approach there are not many studies in industrial design field. So, making experience design concepts accessible to industrial design field is also one of the important points of the study.

Apart from that, design research is a great challenge for every design project. Every designer has a need for organizing the design research data in the form of certain information architecture. Looking for an alternative data model is also one of the problems of my study. For that purpose I have developed a hybrid information architecture called "Experience Mapping".

This information architecture is a sort of mixture of different methods and models. It is simply a framework to let the designer to document, collect, communicate and understand all the design related information quickly and easily.

In conclusion, I aimed to understand the experience by making a practical study on a specific domain in three main steps.

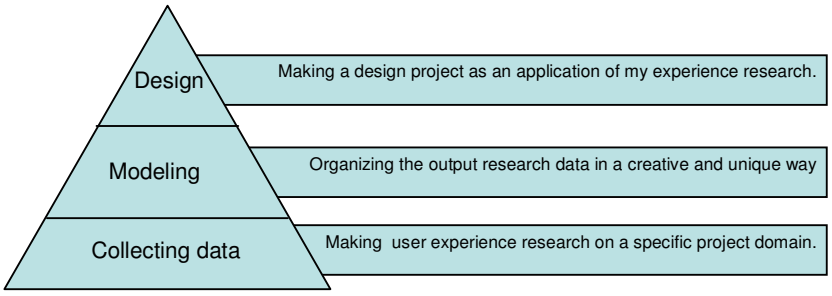

Figure 1.1. Steps of the study

1.3. Scoping Design Project Domain

At the beginning of the study, I was looking for a project domain to study experience on. There are some other project ideas at the beginning. The comparison table shows my personal rankings for different parameters.

Table 1.1. Comparison table for other project domains

	exploration place? Suitable for me to observe?	Does it make a significant social, economic contribution?	Compatible with my career objective	Sponsor , opportunities? Can I promote the project ?	total score
Social interaction in public spaces	2	1	3	1	**7**
Remote education	1	3	3	1	**8**
Mobile flow	3	3	3	2	**11**
Workspace	***3***	***3***	***3***	***3***	***12***
Home office	2	3	3	3	**11**
Music flow	3	3	3	2	**11**
interactive toys/games as learning tools	2	3	3	2	**10**
Home-life and furniture	3	3	3	3	**12**
Stress related sleep problems	2	2	3	2	**9**

Point Scale		
1= poor	2= good	3=excellent

The result of that comparison showed that workspace study would be most appropriate for my personal expectations and limitations. Idea of workspace was the most appropriate one for a lot of reason. Most important reason was the fact that I am already an office worker and I have already been observing the experiences for a long time. That choice made my job much easier at the exploration and discovery (data collecting) phase of the project.

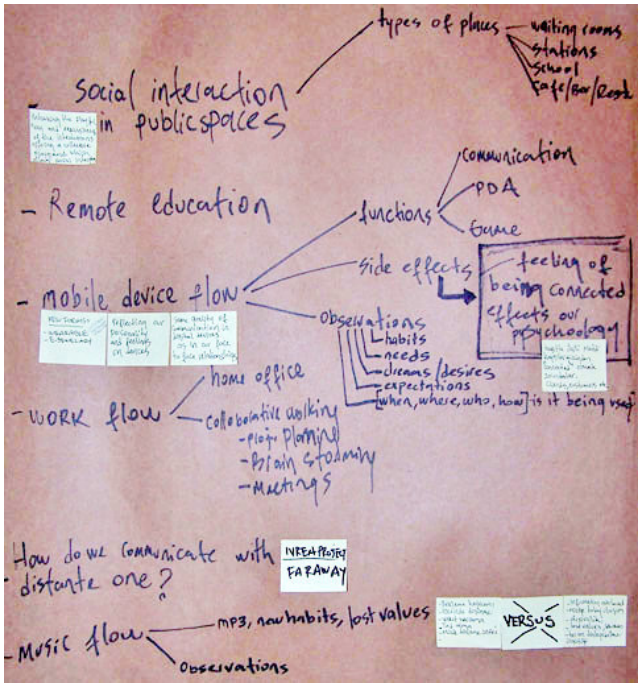

Figure 1.2. A brainstorming map that I made while deciding the project domain

When we look at the workspace domain, it is still possible to see many design opportunities and currently accepted truths that need to be replaced with new ones.

First of all, changes in work practices and processes defined a new set of experiences for its users. New developments in information and communication technologies are just one of these new challenges. Working styles, locations and communication patterns have changed. New businesses were born in our new information age. We need to create new systems that facilitate or enhance collaboration and co- creativity amongst individuals and organizations in the "Knowledge Society". All these changes in our lives require new and fresh design suggestions for the new experience patterns.

Secondly, emotional well-being is one of the most important keywords in a workspace. There are many currently accepted "truth of office design" that needs to be replaced with a "new attitude in which human feeling dominates". People must work in emotionally enriching workplace environment. That should not be a luxury expectation but ordinary requirement for the design of workspaces. Christopher Alexander says on pleasant workspaces in an interview with David Creelman (Creelman 2002).

> When you are working, the quality of your work depends on the extent to which you are able to put your spirit, your heart into it. It's not necessarily about being intellectual; it's just a question of staying very sharp, of doing what's really needed rather than something else. All this requires a genuine sense of well- being. It's not a problem of efficiency. It's a problem of whether overall—in motivation, in atmosphere, in congeniality—the well- being of the people working has been nurtured.
>
> You can see from this very simple description that most of the workplaces couldn't possibly fulfill that prescription because they weren't thought about that way. The workplaces were talked about in quite different terms, in mechanical ways, that have very little to do with emotional, psychological, or intellectual well- being.

All these factors and goals should take us toward new experience researches and design ideas for workspaces.

1.4. Methods of the Study

As I mentioned in previous section, my study has three main steps which are collecting data, modeling data and design.

In each step, I have tried to use unique and customized approaches that are specific to my individual case. I have tried to combine existing methods in a creative way to be able to find new interactions between methods that might take us to new insights and methods. I achieved this objective mostly in the data modeling phase since I have developed an information architecture for experience data.

In the data collecting phase, I collected experience data for workspace domain by observing the workspace activities. I collected user experience data by using methods like photographing workspace activity, informal interviews, field notes and ethnographic observation. Since I am already an office worker, I have been observing these experiences for a long time. I already had a good collection of notes and observations from the past. Additionally, most of the new set of observation data came from the field study that I made in my office. I am working in the İzmir office of a company called Confida Consulting. It is a sofware development company wtih 5 employees in the İzmir office. This work environment has been observed and

photographed in the data collection phase of my study. Details of the data collecting phase are explained in the related chapter.

In the data modeling phase, I have tried to construct an alternative data model. I have used the "pattern language" as a base for re-modeling the experience data. For that purpose I have developed a hybrid information architecture called "Experience Mapping". This information architecture is a sort of mixture of different methods and models. It is simply a framework that allows the designer to document, collect, communicate and understand all the design related information quickly and easily.

Prior to experience mapping, I tried to develop some other frameworks that might gather all the experience data. They were successful synopsis. Finally, I preferred using pattern language since it is very clean way of binding all the data. Another reason was the fact that I could not find any other academic study using pattern language and experience research together. And I wanted to show a new application by combining them.

In design phase, only method I have used was the approach that I have developed in my thesis study. Experience map became my design guideline during design period. I put a printed large scale copy of the map on my wall in my work room. I have used this map as a roadmap for every single design idea.

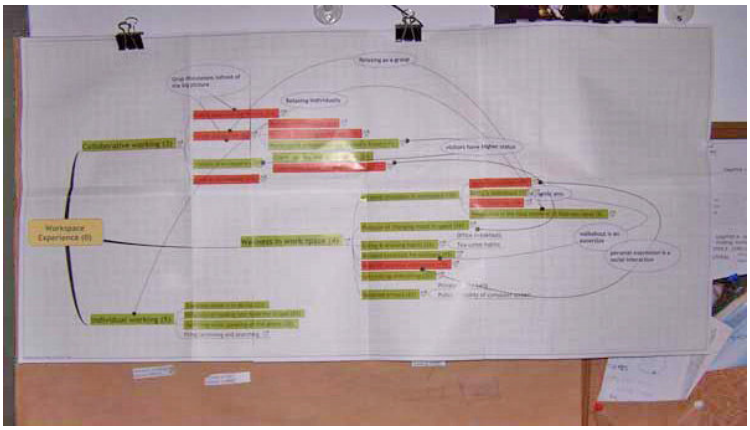

Figure 1.3. Large scale copy of the map on my wall

One of the strengths of the experience mapping is the opportunity of defining relations from patterns to patterns and from design ideas to patterns. This flexible opportunity lets the designer visualize experience scenarios with design ideas in a

higher level of understanding. Whenever I got a design synopsis, I was trying to conceptualize the idea in relation with related patterns.

Experience mapping framework has a special data encapsulation format which is inherited from pattern language. In that format, short pattern names and short essence paragraphs made my job easier to remember, communicate and connect the patterns with new ideas.

1.5. Background on Experience

1.5.1. Introduction

We can define the experience term in two level. The first one is *experience*, which means a continuous stream that flows through the human mind. People acknowledge the passing of experience by self-talking or self- narration (Forlizzi and Ford 2000). This experience is something that a user experiences all the time and even totally subconsciously.

Second definition is the experience in the context of use. Users experience things, they observe, think or desire something or they start and stop to do something. They stop because something else came into their mind or something interrupted them. Hence, they have some experience in the context of use. No matter what kind of experience it is, there is an experience, which is something extraordinary and satisfactory (Dewey 1980). From this perspective, successful experience results with the fulfillment of experience. In addition, an experience can change the user and the context in some way. An example of influences of an experience is that when man hears a tale, which makes him to feel strong emotion that may influence his values and even make changes to his behavior (Forlizzi and Ford 2000).

Furthermore, an experience has been economy field's research target for several years (Pine and Gilmore 1998). They have been interested in what experiences they can sell to the customer. In order to improve sale, economists are started to study characteristics of experience so that they can offer customers what they want and need at least what companies think that they want and need.

1.5.2. Alben : Quality of Experience

Lauralee Alben and her colleagues developed a set of criteria for evaluating the quality of user experience while judging the entries in the first ACM/interactions Design Awards. The jury was interested in how effective interaction design could provide people with successful and satisfying experiences. They defined experience. (Alben 1996)

> the way it feels in their hands, how well they understand how it works, how they feel about it while they're using it, how well it serves its purpose, and how well it fits into the entire context in which they are using it. If these experiences are successful and engaging, they argue, then they are valuable to users.

Understanding of users refers to how well the designer understood the needs, tasks and environments of the users. *Effective design process* refers to having a well thought process that addresses various project concerns and included user involvement, iteration, and multidisciplinary collaboration. *Needed* refers to whether the product meets some recognized need, and makes some significant social, economic, or environmental contribution. *Learnable and Usable* refers to how well a product communicates its purpose and operation, and how well it supports different personal styles, given users different knowledge, skills, and strategies for problem solving. *Appropriate* refers to whether a product solves the right problem at the right level, with a good fit to social, cultural, economic and technical factors (Alben 1996).

Aesthetic refers to whether the product is aesthetically pleasing and sensually satisfying, and whether it performs well within its technological constraints. There is also some reference to contributing factors, such as cohesive design, and continuity across interaction, information, visual, and industrial design. *Mutable* refers to how well the product can adapt, both to individual needs and over time. *Manageable* refers to whether the designers have taken a more systemic view of the product, for example by thinking about how the product might be purchased, installed and maintained(Alben 1996).

1.5.3. Battarbee : Defining Co-experience

Battarbee proposes that users be considered the designers of experience. In addition, the concept of co- experience is introduced, to take into account the social nature of experience. Using a study of mobile multimedia messaging, the author demonstrates that experiences creatively come to life when they are created together or shared. (Battarbee 2003)

1.5.4. Cain : Experience-Based Design

Key element of Experience-based Design is a simple model of experience that looks at what people *think* (ideas, beliefs, attitudes, and expectations that are informed by socio-cultural systems); what people *do* (patterns and routines of action, their meaning and identity) and what people *use* (artifacts and environments and their impact on what people think and do). (Cain 1998)

Another key element is to understand the relationships between think, do, and use. Once you build the framework, you have a tool for understanding the structure of the experience. And then you will have three opportunities;

- frame the problem in the customer's terms,
- identify opportunities to change the experience,
- know the levers that will allow you to effect positive changes the experience.

Experience-based Design also introduces the POSE model, which defines a sequence of developmental targets in moving from problem to embodiment (form).

P stands for defining and framing the problem, and is an area where understanding consumer experience is key. **O** stands for identifying opportunities, which brings an understanding of experience together with business goals and objectives. **S** stands for inventing solutions, in which concepts for a specific opportunity are developed, keeping in line with a company's core competencies and market strengths. And **E** stands for creating embodiments, in which particular solution concepts are developed through detailed design and form- giving.

1.5.5. Dewey: Experience and Education

Dewey uses continuity and interaction to describe the dimensions of the experience. Continuity describes the aspects of experience as they relate to the individual. An appropriate experience modifies the person who has the experience, and the quality of subsequent experiences. (Dewey 1980) Continuity is desirable when it fosters growth, arouses curiosity, and carries a person to a new and stronger place in the future.

Interaction describes the aspects of experience as they relate to the environment. An experience has an active component which changes the context in which experiences are had: society and the physical world and its conditions.

Figure 1.4. Continuity and interaction as the aspects of experience.

(Source: Dewey 1980)

An experience should have appropriate interaction between objective and internal conditions. When the individual components and environmental components of an experience are working together, they form a complete and whole experience which changes both the user and the context of use.

1.5.6. Rhea: Experience Life Cycle

Rhea has developed a model to conceptualize how a customer's everyday experience with products moves through a cycle. The cycle is comprised of four stages.

Stages are Life Context, Engagement, Experience, and Resolution. Rhea states that while the emphasis on any given stage may be different for different products, customers do move linearly through the stages, progressing as long as their product experience remains satisfactory.

Figure 1.5. Design experience model

(Source: Rhea 1992)

Rhea describes each stage in detail. Briefly, *Life Context* refers to the background of consumer's lives, including everything the consumer thinks, feels, and does.

Engagement refers to the initial interaction a customer has with an object. The importance of this initial involvement may be influenced by a number of factors, including prior experience with the product, advertising, word-of- mouth, the product's "cognitive presence", attraction, and communication.

Experience refers to the period of ownership and use. During use, customers continually assess the quality of their experiences with the product. In this stage, the product must be reliable, creating a pleasing experience that meets expectations, addresses concerns, solves problems, and fits into customers' lives.

Resolution refers to both the experience of disposing of the product and how customers resolve their overall experience with the product to form a lasting impression. This impression then feeds back into Life Context, and forms a basis for expectations and desires for the next cycle.

1.5.7. Margolin : Getting to Know the User

Margolin uses four dimensions to describe the relationship between the designer and the user: the social dimension, which relates to values that shape a collective group of people; the inventive dimension, which relates to the needs of the user and the utility of the product; the operational dimension, which refers to product simplicity; and the aesthetic dimension, which relates to individual values and how meaning is attached to products. (Margolin 1997)

1.5.8. Pine & Gilmore : Experience Economy

Pine & Gilmore see the history of economic progress as a four- stage evolution: from agrarian to industrial, to service, and now, to the emerging experience economy. Each stage is characterized along a number of points, such as the primary offering (commodity, product, service or experience) and relationships between buyers, sellers, and suppliers.

Pine & Gilmore claim that "consumers unquestionably desire experiences." The mark of success is the ability to wrap products and services with deliberately designed, engaging experiences that command a fee. An experience occurs when a company intentionally uses services as a stage and goods as props, to engage individual customers in a way that creates a memorable event (Pine and Gilmore 1998).

1.5.9. Hudspith : Utility, Ceremony, and Appeal

Hudspith's work aims to help designers think beyond the usability of products that they design. According to Hudspith, designers need to consider the psychological experience needs of the user. He proposes a three dimensional model to help designers derive psychological information (perceptions, latent needs, beliefs, and emotions) from the user (Hudspith 1997).

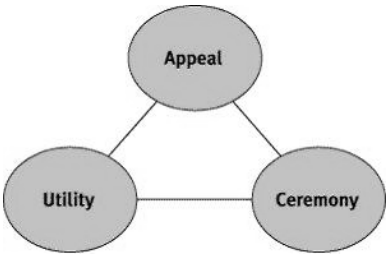

Figure 1.6. Three dimensional model of Hudspith

(Source: Hudspith 1997)

Utility is a dimension that has been traditionally addressed by usability studies. It is how well an artifact accomplishes its intended task.

Ceremony describes how well an artifact satisfies human ritual surrounding its use. Rituals can be public or personal.

Appeal describes the emotional aspects of user experience that depend on the user's perception of an artifact, or how well they become connected to it. For example, gifts are often object that have high appeal to those who have received them. Brands, such as Nike or Starbucks, can have appeal.

1.5.10. Makela and Fulton Suri : Motivated Actions in the Context

Makela and Fulton Suri discuss the role of the consumer experience in the design of new digital consumer products. They also presents a framework for understanding user experiences. According to Makela and Fulton Suri, experiences are subjective resulting from motivated actions in context. Experiences are also influenced by previous experiences and expectations for future experiences (Makela and Fulton Suri 2001).

Makela and Fulton Suri highlights that the most successful digital products will be the ones that support users' creativity in creating new experiences, rather than designing particular kinds of experiences for them. They also advocate that new products should be designed with the following design principles: open- ended, social, user- controlled, robust and forgiving, physical and sensory, flexible, and personal.

CHAPTER 2

DESIGNING FOR EXPERIENCE

2.1. Introduction

Experience design is newly defined title. Even though it has not been defined for a long time, it has almost longest history within the other fields. To define experience design, we should begin from understanding experience itself. Then, it would be much meaningful and clear. From the perspective of design, an experience is the mental and cognitive taste that user gets from the interaction with the product. Interaction itself is not the experience.

By "experience" we mean all the aspects of how people use an interactive product: the way it feels in their hands, how well they understand how it works, how they feel about it while they're using it, how well it serves their purposes, and how well it fits into the entire context in which they are using it. If we can say these experiences are engaging, then we can also say that they are valuable to users.

Figure 2.1. Designing for the experience creates business value with higher prices by moving up the experience chain

(Source: Pine and Gilmore 1999)

In this context, simply, experience design is an approach to creating successful experiences for people. It is about creating and specifying the quality of a person's

experience throughout the entire period of engagement with a value proposition such as a product. Experience Design can be seen as the dynamic glue that binds together all elements of design identity in terms of cultural style, character and personality.

Experience Design is not only the design of interactive media. Designed experiences can be in any medium, including spatial/environmental installations, products, services, events, digital and online media, etc.

I liked very much the description of experience design in the article "The Making of a Discipline: The Making of a Title" He wrotes (Shedroff 2001)

> The most eloquent description of Experience Design I've read comes not from the design world but from a New York City restaurant reviewer named Gael Greene. In an interview with Matthew Goodman in the June 2001 issue of Brill's Content, she said:
>
> "I thought a restaurant review should describe what your experience was like from the moment you called to make a reservation. Were they rude? Did they laugh at you for trying to get a table? …" That's what it's all about: the complete experience, beginning to end, from the screen to the store, to the ride and beyond.

2.2. Flow, Optimal Experience and Design

2.2.1. What is Optimal Experience?

Mihaly Csikszentmihalyi is a psychology professor at the University of Chicago, who has been studying human enjoyment since 1963. The question he posed himself was simple: What is fun? What makes some experiences enjoyable, and other experiences not?

Some people become so deeply focused when writing, they experience an almost euphoric state of joy and pleasure in the process. They lose track of time, are highly alert and feel they are writing to the best of their ability. According to Csikszentmihalyi, such people are most likely experiencing 'flow,' a state of deep focus that occurs when people engage in challenging tasks that demand intense concentration and commitment. Flow occurs when a person's skill level is perfectly balanced to the challenge level of a task that has clear goals and provides immediate feedback.

Figure 2.2. Playing computer games can produce flow in players mind

(Source: http://images.google.com.tr/images?q=computer+game)

Almost any activity can produce flow if these elements are present and making them a constant part of your life can enhance your work, personal relationships and leisure time.

People enter a flow state when they are fully absorbed in activity during which they lose their sense of time and have feelings of great satisfaction. Csikszentmihalyi describes flow as: (Csikszentmihalyi 1991)

> ..being completely involved in an activity for its own sake. The ego falls away. Time flies. Every action, movement, and thought follows inevitably from the previous one, like playing jazz. Your whole being is involved, and you're using your skills to the utmost.

Figure 2.3. Music making causes flow with the sense of ecstasy for the musician

(Source: http://www.deflamenco.com/actuaciones/bienal/7.jsp
Musician: Tomatito, Photographer: Rafael Manjavacas)

Csikszentmihalyi explored the lives of more than 90 of the world's most creative people to find out how creativity has been a force in their lives. He's discovered that some highly creative people find satisfaction by inventing a career or job for themselves, like a scientist who creates a new field of study. These findings are described in his book "Creativity: Flow and the Psychology of Discovery and Invention" (Csikszentmihalyi 1996).

When Csikszentmihalyi interviewed all the kinds of people, he discovered a common thread to their stories. Csikszentmihalyi is describing some of the painters he interviewed: (Csikszentmihalyi 1993).

> When a painting was beginning to get interesting they could not tear themselves away from it; they forgot hunger, social obligations, time, and fatigue so that they could keep moving it along. But this fascination lasted only as long as a picture remained unfinished; once it stopped changing and growing, the artist usually leaned it against a wall and turned his or her attention to the next blank canvas. It seemed clear that what was so enthralling about painting was not the anticipation of a beautiful picture, but the process of painting itself. At first this seemed strange, because psychological theories usually assume that we are motivated either by the need to eliminate an unpleasant condition like hunger or fear, or by the expectation of some future reward such as money, status, or prestige.

Csikszentmihalyi concluded that stepping outside of normal daily routines is an essential element of what he was looking for. This might be obtained through diverse routes or activities, such as reading a novel or becoming involved in a film. In simple terms the research showed that people were generally unhappy "doing nothing", were generally happy doing things, and generally knew very little about what made them happy.

2.2.2. Optimal Experience and Design

Obviously, understanding flow and using it in design processes is important. Paul Thursfield says about how Philips uses flow theory on their research in volume 18 of the new value news magazine (Philips Design 2003).

We have all experienced flow at some point in our lives. We do not even have to be doing something that is useful or easy; on the contrary, it is often the challenge that appeals. As long as the activity is engaging, relevant or enjoyable, then there is potential for flow. Flow, identified in the 1991 book by Mihaly Csikszentmihalyi, is a fascinating notion because it describes the state we want people to be in when they use the products we develop. Understanding flow, and using it in our design processes, is therefore essential.

As can be seen from the figure below, Csikszentmihalyi summarized the results of his empirical research in terms of the main feelings reported for the various combinations of skills and challenge in the various activities undertaken.

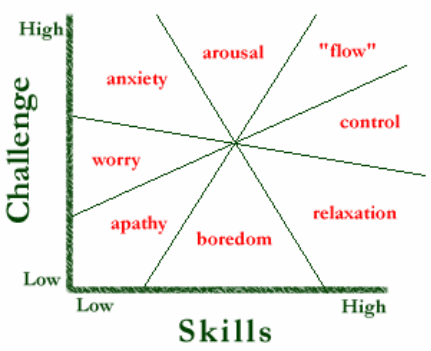

Figure 2.4. Main feelings according to the challenge and skill balance

(Source: Csikszentmihalyi 1991)

Csikszentmihalyi focused particularly on the home life aspect. People don't seem to know how to use their leisure. With perhaps less certainty in the placement of the different activities, he used the same chart to show the typical placement of "home life" activities:

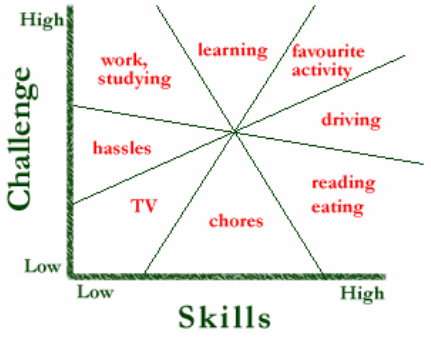

Figure 2.5. Home life activities according to the challenge and skill balance

(Source: Csikszentmihalyi 1991)

Why then is it that most people find it "too difficult" to organize themselves towards more satisfying activities, but rather pursue apathetic ones like watching TV? There is a clear need to overcome the initial resistance to do other than apathetic activities.

Figure 2.6. Tennis is a good example of 'immediate feedback' in flow

(Source: http://images.google.com.tr/images?q=tennis)

In the figure 2.6, tennis is illustrated. This is a good example of 'immediate feedback' characteristic of the flow mind. While playing tennis, player always concentrates on current shot. Player doesn't care too much about previous or next shots. Instead, player just narrows his or her attention on the ball coming at that instant of the time. This is the nature of the tennis play.

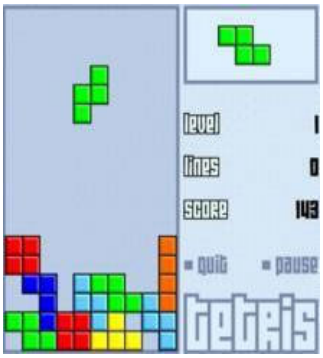

Figure 2.7. Another example of narrowing of attention on a clearly defined goals

(Source: http://images.google.com.tr/images?q=tetris)

It is also same for the tetris game. On each step, just one block drops from the top. Player has very clearly defined goal each time. As a conclusion, the narrowing of attention on a clearly defined goals at each step is one the essential characteristics of the flow state of the mind. This is also very important design clue for the designers who like to design engaging products that creates unique experiences for its users.

So, I have made a useful summary of flow theory below from the perspective of the designer. I will highlight some key indicators of the flow state of mind here. These key points would be very important design issues in the design process of any product.

- *Balance between challenge & skills* The skills of the user should be adequate. User should be neither anxious nor bored.
- *Expansion of self through experience* Flow tends to result personal growth
- *Immediate feedbacks* On each step, narrowing of attention on clearly defined goals
- *Sense of ecstasy* Stepping outside of daily routines and being outside everyday reality
- *Completely involved, focused, concentrating* Either due to innate curiosity or as the result of training
- *Great inner clarity* Knowing what needs to be done and how well it is going
- *Sense of serenity* No worries about self, feeling of growing beyond the boundaries of ego - afterwards feeling of transcending ego in ways not thought possible
- *Timeliness* Thoroughly focused on present, don't notice time passing. Focused on present not noticing time.
- *Intrinsic motivation* Whatever it results, action becomes its own reward. Primary driver is not results, rewards, money, status etc. but fun, its own sake, process itself and engagement of experience.

2.3. Seductive Qualities in an Experience and Design

Even if the word seduction is primarily used for the human relationships, the basic point is the same for the user product relationship. Some well designed products in our lives just seduce us to buy, get and use them. So, how does it happen? All examples of seductive experiences go beyond beauty and efficiency. What they have in common is the ability to create an emotional bond with their audiences.

It's important to understand what makes an experience seductive. Because, if we, designers, can understand the basic qualities behind the phenomenon, we can reproduce the same results in the design process of different products. Seductive product is described in the article "Understanding the Seductive Experience" (Khaslavsky & Shedroff 1999)

> Most important, the design of a successful seductive product or experience is not simply visual or functional. Seduction involves a promise and a connection with the audience or user's goals and emotions. Everyday objects, like French industrial designer Phillipe Starck's juicer and Japanese fashion designer Issey Miyake's fashions, go beyond mere visual innovation to spark human emotions—especially curiosity, surprise, and imagination. One way these objects do so is by going beyond the obvious and the efficient, being not only original but more of everything than they need to be. Whether elaborate or simple, seductive objects need to promise to be more than what is expected of them. They stimulate the imagination on many levels and seem to espouse values or allude to connections with what a person wants to have or to be. The customer's imagination is where the first connection is made.

Seduction is defined as a three stepped process in the same article. These three are the basic time periods of the experience.

- *Enticement:* Enticement by diverting attention (grab attention and make an emotional promise)
- *Relationship:* make progress with small fulfillments and more promises (note, done correctly, this stage can continue almost indefinitely)

- *Fulfillment:* fulfill on the final promises and end the experience in a memorable way

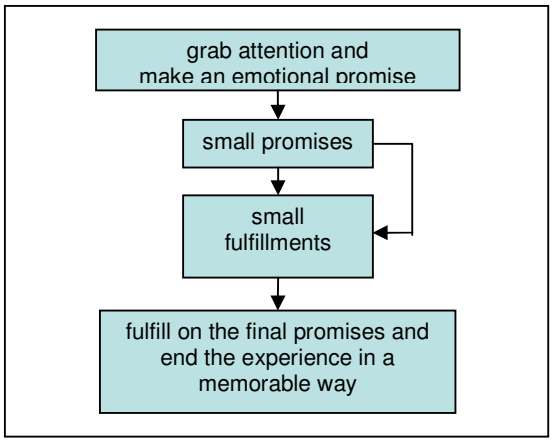

Figure 2.8. Process of seductive experience

The first step is enticement. It is the initial contact attracting a potential customer or user. This contact may be through advertising which establishes the product's tone, mood, and message. Enticement step is defined as: (Khaslavsky & Shedroff 1999)

> the initial experience with the product itself needs to entice the viewer, customer, or audience. The key to enticement is first to get the audience's attention, then to make a promise. It might be a promise to be interesting, exciting, or beautiful, but the more closely the promise connects with the goals and emotional aspirations of its viewers, the more deeply it begins to seduce. Being loud or diverting attention momentarily is not enough. If the promise doesn't hook the customer, the product won't have an opportunity

Figure 2.9. An eccentric restaurant as an example of enticement by diverting attention

(Source: http://images.google.com.tr/images?q= restaurants)

The next step is to reward for the attention given and a reason to invest more emotion into the experience, or the audience will simply leave. This step is where the quality of interaction design in a product is most critical. The product itself has to fulfill based on its function and feel. The longer it can do this , the more successful it will be.

In conclusion, we can summarize seductive qualities of the products with following key points. They are enticing by diverting attention, delivering surprising novelty, going beyond obvious needs and expectations, creating an instinctive response, espousing values or connections to personal goals, promising to fulfill these goals, leading the casual viewer to discover something deeper about the experience and finally fulfilling these promises.

2.4. Personas

A persona is an artificial person, invented for the purpose of helping a designer understand the people who will be using their product. Designers also need to communicate the user scenarios to other designers in a collaborative work. In order to communicate effectively, the designer must have a clear and understandable image of the user.

Personas, by emphasizing the several different kinds of unique individuals who will be using the product, aid the designer in maintaining focus, concentrating on design aspects that the individual Personas need and eliminating from the design things they will find superfluous.

In other words, the Persona is a tool for focus and an aid to communication, and for this purpose they only need to be realistic, not real, not necessarily even accurate. Even if that much details on their private and social lives looks useless, it is often fun to read the detailed descriptions of Personas and to pry into their private and social lives. All story captivates the people reading them creating complete life stories. This is basically a flow effect that I have mentioned in previous section.

Personas is the establishment of empathy and understanding of the individuals who use the product. It is important that each Persona seems real, allowing the designer to ask, "how would she or he respond to this?"

To illustrate the persona idea visually, let's assume that an automobile manufacturer wants to design different car models for the market. Manufacturer chooses three specific drivers, who were representative of larger groups of similar drivers. and tries to please each of them.

Marry,38, mother of three children, wants safety and room for many passengers. A minivan meets her needs. James,29, construction worker wants cargo space and the ability to carry heavy load. A pickup truck meets his needs. Otto,27, software engineer, wants sporty looks and speed. A two-door sports car meets his needs.

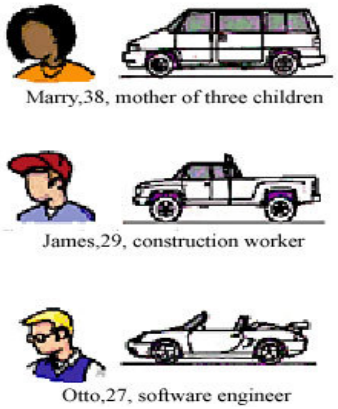

Figure 2.10. Example personas for an imaginary scenario in the car market

The purpose of the persona is to add empathetic focus to the design. Design is not a collection of features added, even if each feature by itself makes sense. Rather it is having a clear image of what the product is meant to be. By empathy, I mean an understanding of and identification with the user population, the better to ensure that they will be able to take advantage of the product, to use it readily and easily with pleasure.

Paul Thursfield explains how Philips used the personas for the design of music products in volume 18 of the new value news magazine (Philips Design 2003)

> Central to the project was the creation of 12 separate personas, which collectively mirrored the taste, needs, aspirations and frustrations of the public at large with respect to music.The personas were amazingly diverse, ranging from a five-month old baby, to an adolescent hip- hop fan that argues a lot with his stepfather, to a 65- year-old French woman. There were a number of steps involved in creating these personas. ...The personas we developed give detailed information about peoples lives that is different

from, say, a segmentation model.... Each persona was then placed in a context.Where do they listen to music?How? How often? What do they enjoy about music - purely listening, or also buying, sharing, creating? Only then was it possible to properly brainstorm about how their music needs develop over time.The results of these brainstorming sessions were developed into a storybook to be presented back to Philips Consumer Electronics.The storybook doesn't contain concrete suggestions for specific solutions or products. It merely indicateswhat may be possible, and serves as a framework for further development.

2.5. Pattern Language

The concept of a pattern language has been developed by Christopher Alexander and his colleagues in architecture. In brief, a pattern language is a network of patterns of varying scales; each pattern is embodied as a concrete prototype, and is related to larger scale patterns which it supports, and to smaller scale patterns which support it. The goal of a pattern language is to capture patterns in their contexts, and to provide a mechanism for understanding the non-local consequences of design decisions. Christopher Alexander describes the pattern as follows (Alexander 1977).

> A pattern is a careful description of a perennial solution to a recurring problem within a building context, describing one of the configurations which brings life to a building. Each pattern describes a problem which occurs over and over again in our environment, and then describes the core solution to that problem, in such a way that you can use the solution a million times over, without ever doing it the same way twice. A pattern language is a network of patterns that call upon one another. Patterns help us remember insights and knowledge about design and can be used in combination to create solutions.

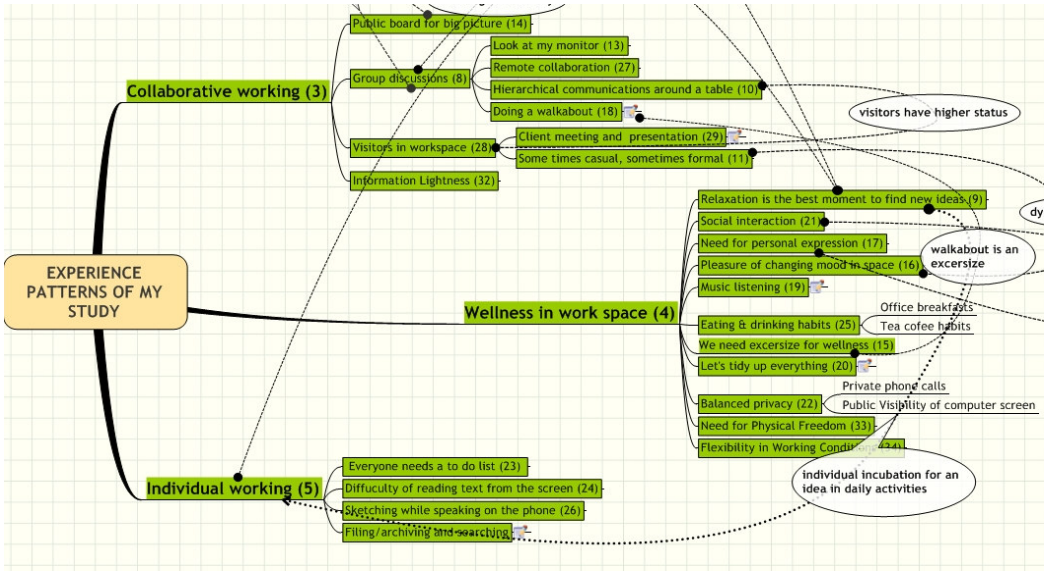

Figure 2.11. Pattern language map of my study based on the workspace research (See appendix A)

Each pattern is presented in a standard form. For example, a pattern begins with its name, number. The first paragraph describes some of the larger scale patterns of which it is part. Next is a statement of the essence of the pattern which illustrates the various forces responsible for the existence and nature of the pattern. This is followed by a longer section which describes the background of the pattern, evidence for its validity, ways in which the pattern can be manifested.

Then, last section is the solution which describes the field of physical and social relationships which are required to solve the stated problem, in the stated context. This solution is always stated in the form of an instruction - so you know exactly what you need to do, to build the pattern.

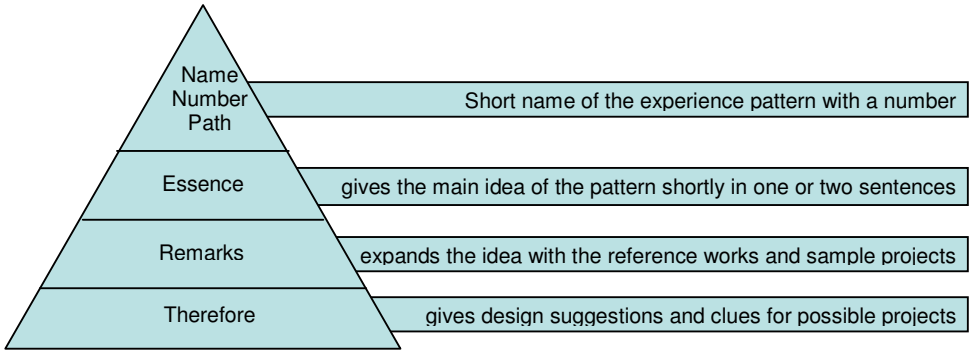

Figure 2.12. Pattern language format of my study

A central idea behind the common structure is that, while individual patterns are exciting and useful, the structure of the language will also make it easier to integrate the patterns into a collective body. In addition, this model allows designers to build networks sharing a common language. Because, pattern language makes the information reusable with it's unique architecture. It is a descriptive device for creating a common ground among people who lack a shared discipline or theoretical framework.

The pattern language approach has attracted a lot of interest also in other fields. There is an active software patterns community for example. Software patterns have been receiving increasing attention from mainstream computer science, with a special issue of The Communications of the ACM on software patterns joining the growing number of books on the subject.

CHAPTER 3

AN IFORMATION ARCHITECTURE FOR EXPERIENCE DATA: EXPERIENCE MAPPING

3.1. Collecting Experience Data

3.1.1. Background on Some Methods

There are ranges of methods to help gathering design data. In my study, I have used some them. Following are brief descriptions of some of those methods.

3.1.1.1. Ethnographic Observation

Ethnographic observation is a method borrowed from social science research. Designers utilize this method to understand unarticulated needs and issues that users of particular products, environments, software, and systems have in order to create innovative design solutions.

3.1.1.2. Video Ethnography

Video ethnography is a way to capture human behavior in the context of the person's natural environment as a means of gaining insights about user behavior and needs. Videotaping allows designers to view and re- view user behavior. The analysis of the tapes is used to present insights and implications for design solutions. Not only is videotaping essential at the beginning of the design process as needs are identified, but it is also key throughout the process as designers gain an understanding of a particular user context and as prototypes are developed.

3.1.1.3. Disposable Camera Studies

Disposable camera studies is a new method that enables designers to gain insights about places they cannot access, such people's homes. Because they are so inexpensive, designers can give disposable cameras to users so they can document their environments and objects in context. Because this method involves the subjectivity of the participants instead of the designer doing the research, designer get a glimpse of life through the users' eyes.

3.1.1.4. Contextual Design

This term describes a customer- centered process that explores how people work in order to optimize systems of work. The process includes methods for gathering and processing data as well as elucidating and implementing the design implications of the data (Beyer & Holtzblatt 1998).

3.1.1.5. Contextual Interview

In this technique the interviewer observes the interviewee in the context of doing the actual work task that was being analyzed. The interviewer assumes a role similar to an apprentice. The goal is to understand the work in the natural setting as it normally occurs. Contextual interviews typically last approximately two hours and the interviewer is guided by a specific predetermined focus. Data are gathered and notes are taken during the interview. Data are gathered specifically to allow the interviewer to construct diagrams that describe and define the work tasks that are being analyzed (Beyer & Holtzblatt 1998).

3.1.1.6. Heuristic Evaluation

Heuristic evaluation is the analysis of a user interface to determine what is good and bad about the usability of the interface. Generally this was accomplished through systematic inspection of the interface using a set of usability principles as criterion for determining what is good. The goal of heuristic evaluation is to identify usability problems so they can be eliminated (Nielsen 1993).

3.1.1.7. Hierarchical Task Analysis

Hierarchical task analysis (Shepherd 1998) is a specific framework for analyzing tasks. This framework involves identifying the goal of a task within a specified context and examining if the goal can be met. Hierarchical task analysis provides a flow chart for completing task analysis, but does not define a specific methodology for analyzing tasks.

3.1.1.8. User and Task Analysis

User and task analysis is a collection of methods that have the purpose of understanding human performance. These methods systematically explore user goals and means of reaching these goals. The personal characteristics of the user and the environmental context of task performance are addressed.

The process of user and task analysis involves either systematic observation or interviewing users or both observation and interviewing. Data from these observations and interviews is organized and analyzed (Hackos 1998).

3.1.2. How I Have Captured User Experience

Repeating the basic steps of the study again, we can see the order of data collection phase in the study. General order was as follows:

1. Making a user experience research on a specific project domain.
2. Organizing the output research data in a creative and unique way
3. Making a design project as an application of my experience research .

Obviously, prior to section 2 of the above order (modeling an information architecture), I had to make an experience research to collect related user experience data. Firstly, I made a review of current methods for gathering user experience. Then I have used some of them for my own study.

I collected user experience data by using methods like photographing of workspace activity, informal interviews, field notes and ethnographic observation.

Since I am already an office worker, I have been observing the experiences for a long time. I already had good collection of notes and observations from the past. Additionally, most of the new set of observation data came from the field study that I made in my office.

I am working in the İzmir office of a company called Confida Consulting. It is a software development company with 5 employees in İzmir office. This work environment has been observed and photographed in the data collection phase of my study.

Figure 3.1. Some workspace activity photographs from the office that I observed in my study

3.2. Mapping the Experience

Design requires building bridges that connect practitioners, researchers, users and designers throughout the world. It also requires shaping information and communication systems to meet human needs. In order to promote this bridge building, we need focusing on the idea of the shaping and representing the information. Need for representing the design related information is mentioned in the article "Towards a Pattern Language for Interaction Design" (Erickson 2000)

> I suggest that we are faced with a problem of representation. We need ways of representing knowledge about the workplace so that it is accessible to the increasingly diverse set of people involved in design. Ideally, we want not only to represent workplace knowledge, but to provide a framework within which it can be discussed, explicated, extended, and generalized. In the absence of a shared discipline or conceptual framework, I believe that this means that knowledge must be embodied in a concrete, recognizable form, in the terms of the design's target domain: the workplace.

My initial study for understanding the experience took me to the idea of creating an information architecture to organize the design research in a creative way. And, idea of "Experience Mapping" was born. Experience Mapping is a framework based on the pattern language.

Patterns were originally conceived by Christopher Alexander and presented in his book "A Pattern Language" to provide structure for a theory of living architecture. The following is the definition of pattern language (Alexander 1977).

> A pattern is a careful description of a perennial solution to a recurring problem within a building context, describing one of the configurations which brings life to a building. Each pattern describes a problem which occurs over and over again in our environment, and then describes the core solution to that problem, in such a way that you can use the solution a million times over, without ever doing it the same way twice. A pattern language is a network of patterns that call upon one another. Patterns help us remember insights and knowledge about design and can be used in combination to create solutions.

My framework lets the designer to document, collect, communicate and understand the all design related information quickly and easily. I have created a unique framework to present the experience scenarios. Each pattern has been presented in a customized pattern language format. This framework contains some subsections for each experience story in below format.

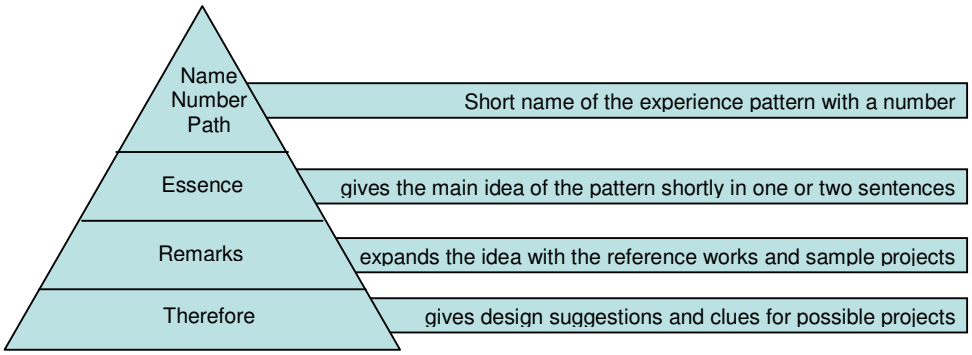

Figure 3.2. Data encapsulation format for a pattern

Experience mapping framework has a special data encapsulation format which is inherited from pattern language. Short name, number and hierarchical location on the map make designers job easier to remember, communicate and connect the patterns with new ideas.

Essence section gives the main idea of the pattern shortly.While communicating the patterns, essence section is the first thing to read after the name of the pattern. If collaborators want to learn more about that pattern they can go on reading following sections for more detailed experience information.

Remarks section expands the idea with the reference works, studies and sample projects if they exist. In this section, experience pattern is evaluated in its own context with related aspect like psychological, technological etc.

Therefore section gives design suggestions, clues and synopsis that may lead us to the possible design projects regarding and supporting the current pattern. Moreover, the patterns are visually supported by the photographs that I have taken in my office during the research phase of my project.

Therefore sections are full of design suggestions for next generation workspaces. While generating these suggestions I have utilized the map itself at the same time, All patterns are somehow in interaction with each other. So, every single design suggestion

is the result of the holistic view of all patterns that considers interrelated technological developments as well as emotional and humanistic part of the activities. This feature is the real strength of experience mapping. It gives the designer very wide scope of understanding experiences with the interaction and interrelations with each other.

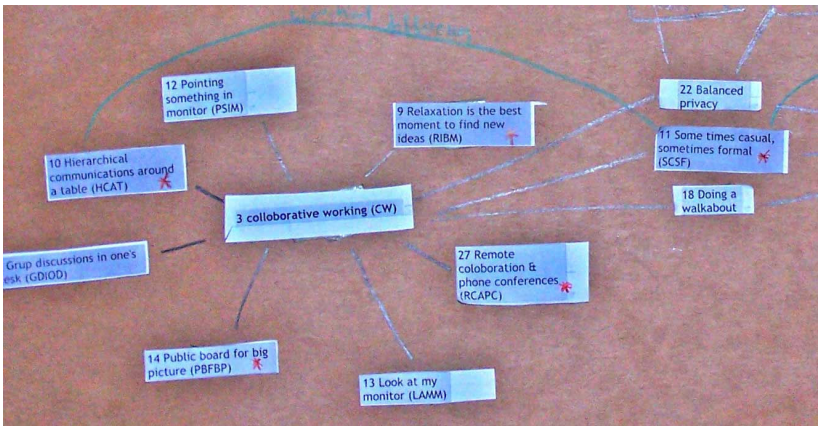

Figure 3.3. One of the first drafts of the experience map

Experience map became my design guideline during design period. I hang a printed large scale copy of the map on my wall in my work room. I have used the map as a roadmap for every single design idea. One the strengths of the experience mapping is the opportunity of defining relations from patterns to patterns and from design ideas to patterns. This flexible opportunity lets the designer visualize experience scenarios with design ideas in a higher level of understanding.

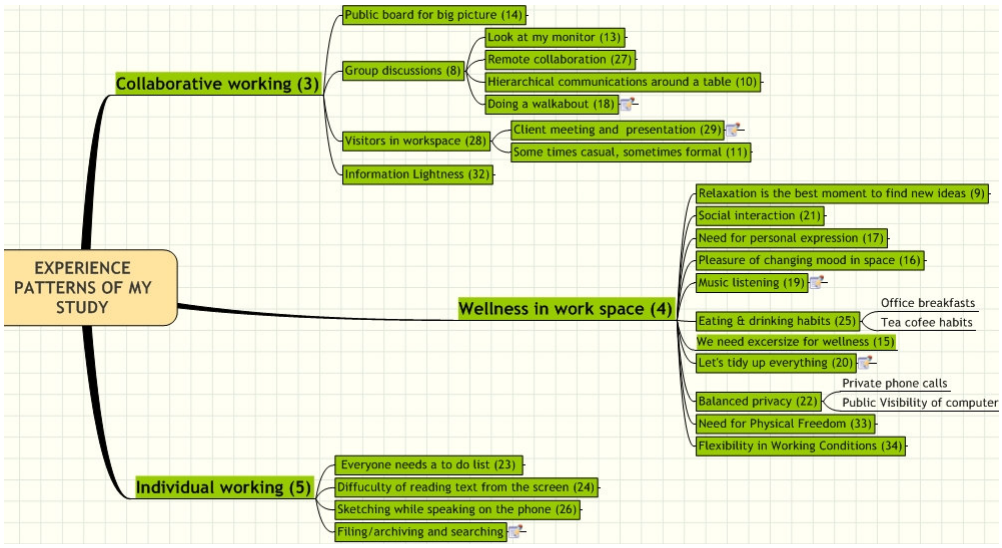

Figure 3.4. Pattern language of my study (see appendix A)

Eventually, this framework can be transformed into a very effective design tool that allows the designers to work and design together effectively in a collaborative design project.

3.3. Personas Study of the Current Case

A Persona is an artificial person, invented for the purpose of helping a designer understand the people who will be using their product. Designers also need to communicate the user scenarios to other designers in a collaborative work. In order to communicate effectively, the designer must have a clear and understandable image of the user.

So I created an imaginary scenario based on two main personas working for an imaginary design company called Gerga. Company has 2 offices in Los Angeles and Milano.

Figure 3.5. Milano Office of Gerga Design Company

Milano office has a large office room where everybody works in. Even if there is a separate room for client meetings, there is always a need to discuss the project in main office room with clients. So, there is an important visitor traffics in main office room. Visitors of the designer's room are not just clients. Because, CEO of the company also visits the Milano office once in 2-3 months.

Figure 3.6. David,38, is a traveling businessman and CEO of Gerga design company

(Source: http://creative.gettyimages.com/source/home/homeCreative.aspx)

The CEO of the company, David , is very formal manager and all designers behaves very carefully and formally when they are talking to him. How they sit, how they speak even how they walk changes as a consequence of the formal atmosphere.

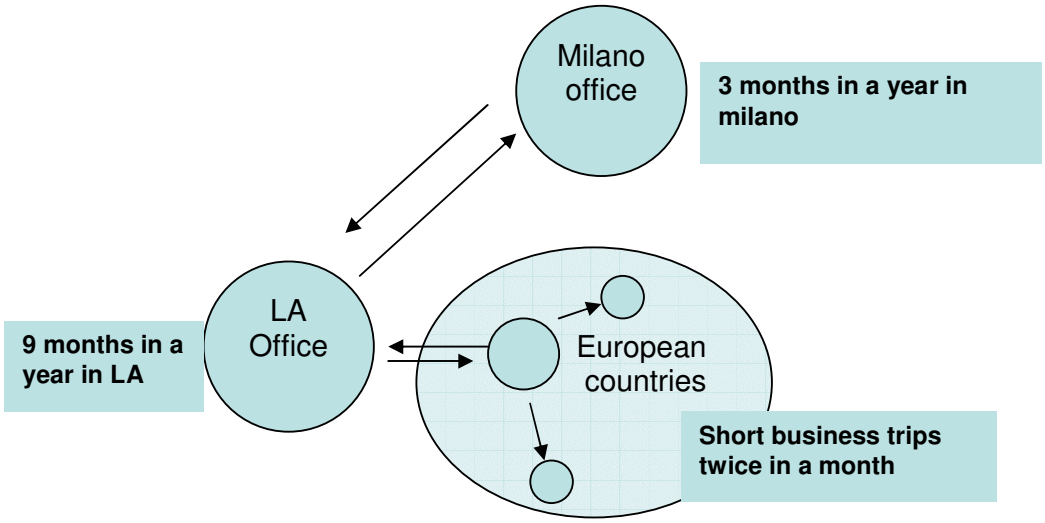

Figure 3.7. Yearly travel schedule for David

David travels a lot for his business. He spends 3 months in Milano and 9 months in LA in a year to manage the works in two offices. In addition, he has to make short business trips twice in a month to some European countries. He carries out his works to different cities. It is important for him to access, download, upload and share information from everywhere.

Figure 3.8. Julia,25, part-time designer & student

(Source: http://creative.gettyimages.com/source/home/homeCreative.aspx)

Julia, 25, is one of the part time designers in Milano office. She is a university student at the same time.

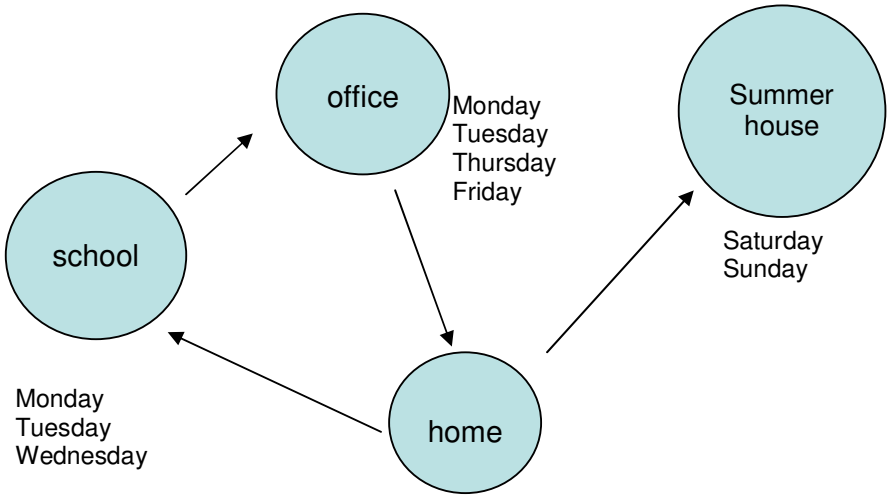

Figure 3.9. Julia's weekly schedule

Sometimes she carries out her works between school, office and home. She needs to share and transport information from one place to another. She also needs to communicate the ideas to the colleagues in different places.

Figure 3.10. Julia carries out her works between school, office and home.

(Source: http://creative.gettyimages.com/source/home/homeCreative.aspx)

Her works consist of inspiration, research, reading, data collection, discussion and writing. Therefore, her workspaces are nearly all the places where she is either alone or with colleagues during daytime or nighttime.

Gerga company provides flexible working conditions for the designers. Work evaluation is result and deadline oriented that let them work from anywhere anytime rather than sitting in an office 9 to 5.

Sometimes Julia needs to think, brainstorm, discuss the work from anywhere like kitchen, living room etc. She needs to solve the problems and communicate the ideas at the just right time when something occurs in her mind.

Figure 3.11. Julia needs to take notes and record ideas in the daily rhythm of her life rather than interrupting her creativity.

(Source: http://creative.gettyimages.com/source/home/homeCreative.aspx)

A new idea or inspiration might come anywhere like kitchen, while watching TV etc. She needs to take notes and record ideas in the daily rhythm of her life rather than interrupting her creativity. This reduces the total unproductive time spent in office, on the desk etc. It improves her life quality and enjoyment as well as work quality.

Julia uses both physical and virtual work settings for her works. All physical and virtual work settings provide her to access and store information that is necessary for the work.

3.4. Conclusion and Remarks on Model

My study became a useful application of pattern language in the field of experience. I have developed many experience patterns related to the workspace

scenarios. Pattern sections are full of design suggestions for next generation workspaces. While generating these suggestions I have utilized the map itself at the same time. All patterns are somehow in interaction with each other.

Therefore, every single design suggestion and remark is the result of the holistic view of all patterns that considers technological developments as well as emotional and humanistic part of the activities. This is the real strength of the model. It gives the designer very wide scope of understanding experiences with the interactions and interrelations with each other.

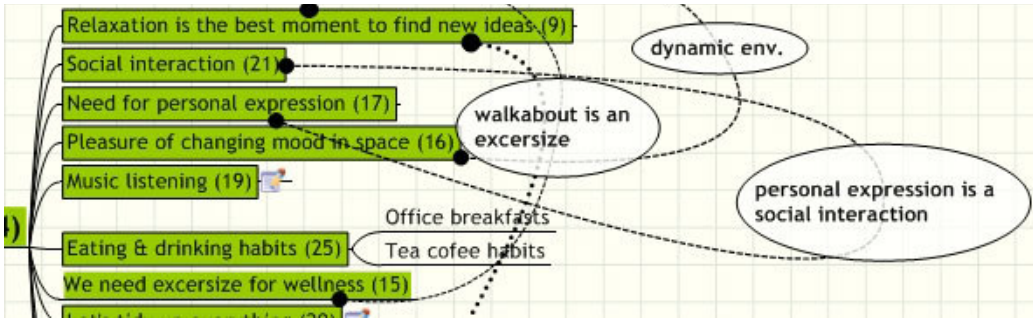

Figure 3.12. Example of relations between patterns

Strength of the model is the unique opportunity of defining relations from patterns to patterns and from design ideas to patterns. This flexible opportunity lets the designer visualize experience scenarios with design ideas with the higher level of understanding. For example, in design phase of my study, whenever I got a design synopsis, I was trying to conceptualize the idea in relation with related patterns.

Since the framework is quite flexible, eventually it could be transformed into a design tool that consist of pattern cards and the map. Idea of pattern was already trying to make scenarios visible for designers. Card like representation of the experience patterns would be much tangible and more communicative for the designers. Designing with the model might be much convenient and comfortable with this kind of visual representation.

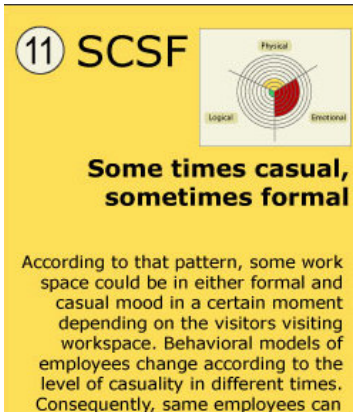

Figure 3.13. Example card representation of an experience pattern

In design phase of my study, I have used similar representation to handle all the experience data. The figure above shows an example card representation.

Additionally, model could work much better and find many opportunities in a design team, since it is a creative communication approach that can create a optimized information architecture for large amount of data. Moreover, it is a flexible framework which allows data set easily growing and evolving. Anyone in the team can add new nodes according to the unique and different perspectives obeying the architecture of data, since it is a data model. I have also proposed three stepped group discussion sessions to use the model in a design team.

1. Synopsis session: In a group discussion, designers can ask the questions on the cards. Using the answers and other experience research data, they can try to generate possible experience synopsis and give them a title with a short context text. Finally, they can attach related information package for another group discussion session (visual image, video and scientific background, articles, etc.)

2. Storytelling session: Designers can take 5-10 minutes to write a story or recall a user scenario regarding the selected experience synopsis and document it in a experience mapping format.

3. Design session: Designers can suggest 1-3 concept ideas for products, services, or experiences that address the emotions and experiences in the stories.

Consequently, my study became a good example of the approach. Using that approach, I had very flexible opportunity to document, collect, communicate and understand the all design related information quickly and easily.

CHAPTER 4

EXPERIENCE PATTERNS OF MY STUDY

4.1. Introduction

4.1.1. Format of Patterns

In this chapter I will present a specialized experience framework of my workspace study. I have created a unique framework to present the experience scenarios. Each pattern has been presented in a customized pattern language format. This framework contains some subsections for each experience story in below format.

Each heading is the name of that pattern with a number at the same time. That number at the end of the heading refers the pattern number on the map which makes the all patterns unique and easily accessible.

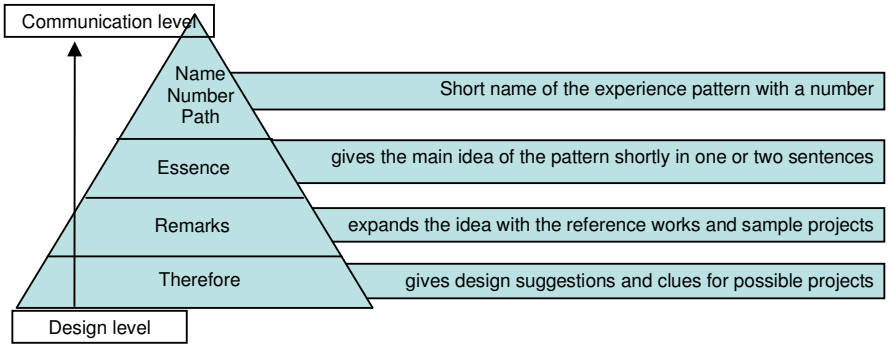

Figure 4.1. Data encapsulation pyramid for an experience pattern.

"Essence" section gives the main idea of the pattern shortly. "Remarks" section expands the idea with the reference works, studies and sample projects if exist. "Therefore" section gives design suggestions, clues and synopsis that may lead us to the possible design projects regarding and supporting the current pattern. Moreover, the

patterns are visually supported by the photographs that I have taken in my office during the research phase of my project.

4.1.2. Content of Patterns

I did not map all possible scenarios in a workspace that I defined in fist chapter. I made my research more specific giving borders in two steps. In first step, workspace was too general for such a research. Workspaces change lot according to the working field. So, I narrowed my problem to more specific work environments dealing with creative works like design, software, research etc. Any work places requiring collaborative effort on projects is also in focus of my research. Some of patterns are directly related to the use of computers since I have observed such patterns in my own work place where I work on developing software for business consulting. But, anyway most of the patterns are common in most of the different type of workspaces.

Secondly, I have used my own personal preferences while finding patterns. There could be many more patterns in the same case. But, current patterns were just the most elegant ones that I like to think and design over them according to my own design taste. At the beginning of the project, I did not want to determine what I will design exactly. Since this is a research project, I just wanted to focus on experiences that let me have a flexible playground rather than working on specific problem or product synopsis.

Actually, this doesn't mean that experience mapping is not applicable for very specific design projects. Framework could be applied to any case. Because, the pattern language and its one step further form, experience mapping, is just a flexible framework that let anyone to create proper information architecture. It is just like a zooming in to the network of nodes. If you zoom in to a specific node and generate patterns for some specific branch, you can apply the framework in any case, project or situation. This is already the core idea and the spirit of the way how the framework is going to be used. The figure 4.2. shows the different scopes that belong the same roots. So designer are just free to generate new patterns in any branch to focus on in design phase. In my case, I did not focus on any specific branch I just created a general network of patterns that are common in predefined workspace. This two leveled filtering over the whole workspace experience created a very customized map that let me design what I like to design.

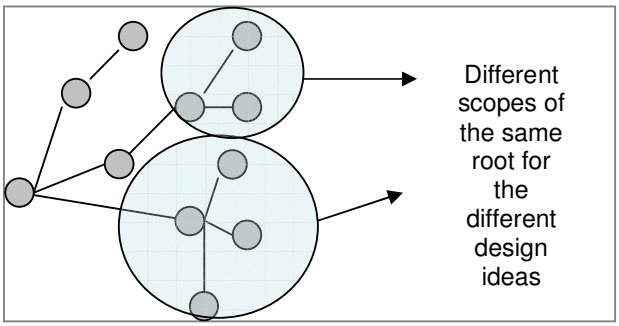

Figure 4.2. Flexibility of the framework allows the designer to map for any case in any detail

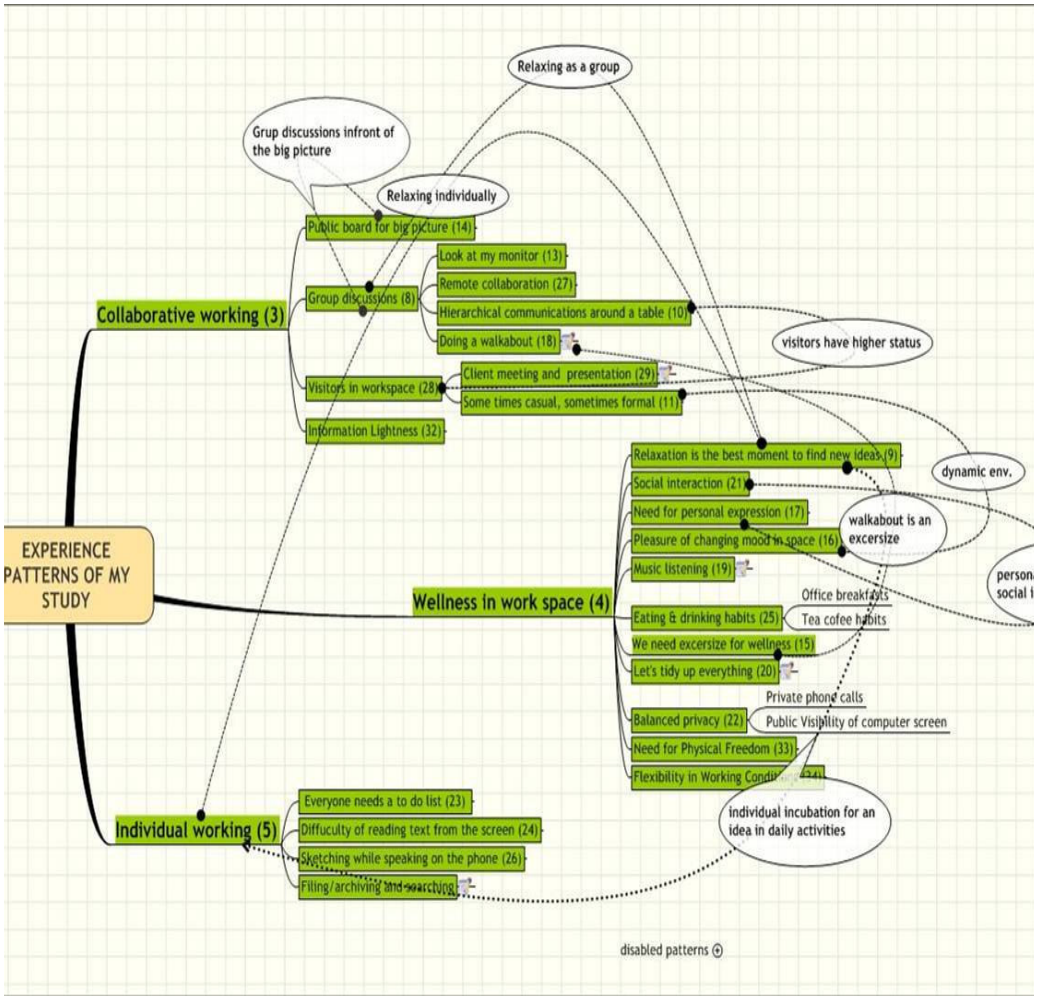

Figure 4.3. Map of all experience patterns (see appendix A)

4.2. Group Discussions

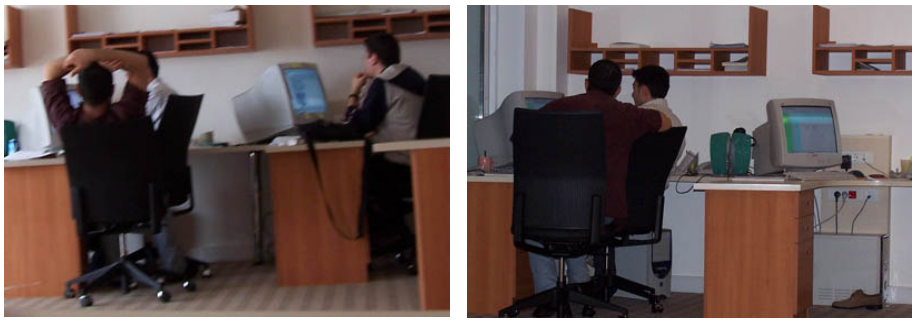

Figure 4.4. Some group discussion scenarios in front of the computer.

4.2.1. Essence

Pattern number is (8) and its location is *"Root > Collaborative working* . This is a higher level pattern that covers all discussion activities like decision making, brainstorming and small meetings.

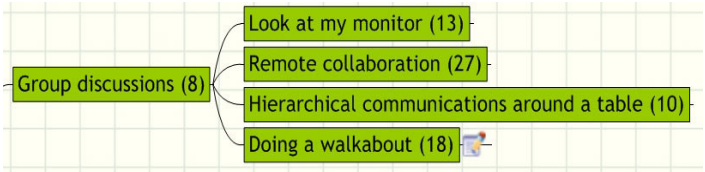

Figure 4.5. Detail of the group discussions pattern from the map

Member patterns are Look at my monitor (13), Remote collaboration (27), Hierarchical communications around a table (10), Doing a walkabout (18).

4.2.2. Remarks

Although that pattern is very simple and usual, there are some important remarks and new challenges that should be highlighted. New developments in information and communication technologies are just one of these new challenges. Working styles, locations and communication patterns have changed.

Additionally, there are many interpersonal communication experiences that are ignored by designers. In the members of that pattern, these experiences will be discussed in detail.

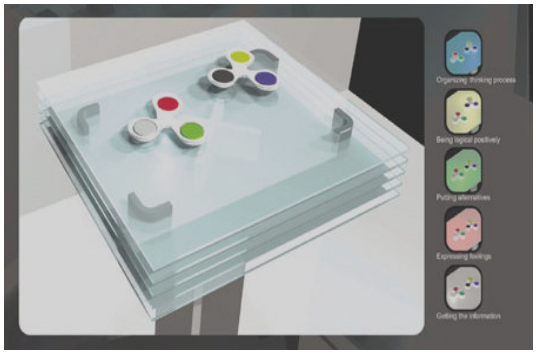

Figure 4.6. Brainstorming Light project as a new way of thinking and using furniture
(Source: http://www.uiah.fi/page_exhibition.asp?path=1866;1919;3765;4680;4663)

Brainstorming Light is a special light for brainstorming which turns on each color light by being pressed on top of it. When you feel like you have new ideas coming out of you, the leader or you will choose the Red light which means expressing ideas. Then, the members in the group will be thinking in Red way. When the problem needs to be defined, you can go to Blue light mode which means organizing processes. Then, people will try to criticize or find the fault. Like this way, this product will give you the new way of brainstorming. Besides, it will make the way of using furniture various when attached on the walls or the table.

4.3. Public Board for Big Picture

The figure 4.7. illustrates the use of physical walls for displaying and working with large quantities of information. In the figure 4.7, we should note the diversity of information posted on the wall, from sketches to photographs to Post- It notes, and the abundance of printouts of digital media.

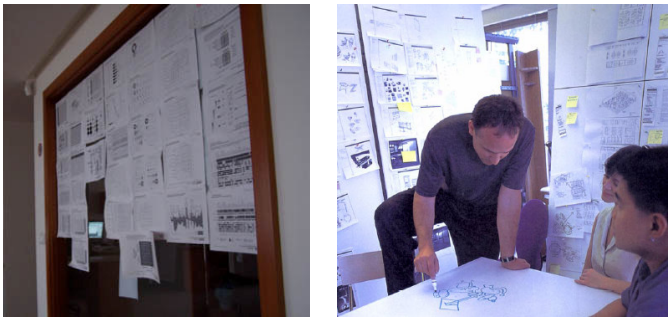

Figure 4.7. The use of physical walls for displaying information.

4.3.1. Essence

Pattern number is (14) and its location is *"Root > Collaborative working >"***.** In a situation, particularly where a complex task is broken down into sub tasks, use of a public artifact demonstrating the overall picture can be useful in promoting dependability in the system. The public persistence of the artifact means that it is always available as a resource and it promotes teamwork. It provides an opportunity to oversee and monitor one another's work. This pattern comes with the need for drawing, writing in front of that board. So, pattern should be considered not only viewing but also active discussing on it with activities like drawing and writing.

4.3.2. Remarks

The InterWall is one of the projects supporting that pattern. Interwall intended for use as a presentation and work surface in training, teamwork and lecture environments. Its design blends perfectly with any existing ambience. The frame structure also has an integral tray for an interactive pen or a remote control. If you mark, emphasize or delete information directly on the glass panel, the virtual world of your computer is quite naturally linked to your real actions. If you have the relevant standard software, all steps will be documented online, can be sent by e-mail and can be referred to at a later time.

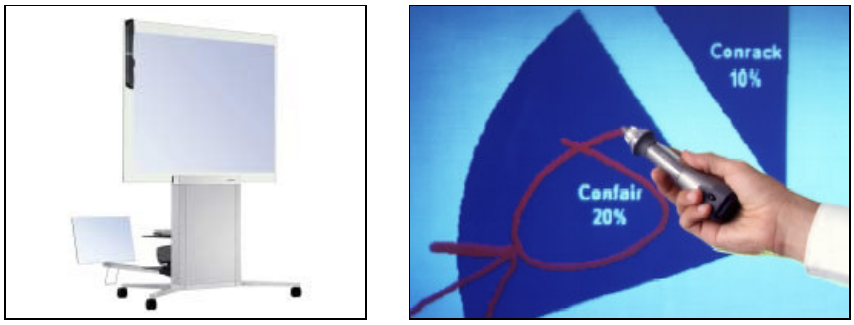

Figure 4.8. InterWall by Wilkhahn

(Source: http://www.wilkhahn.com)

The InterWall combines the advantages of rear projection with the spatial mobility of direct front projection. You can work directly on the InterWall using a special pen. Instead of presentations being steered anonymously by a keyboard and mouse, this innovation supports direct, lively contact between the speaker, the audience and the digital presentation.

Another project supporting that pattern is PostBrainstorm project by Human computer interaction group at Stanford University. PostBrainstorm is an interactive wall for design brainstorming.

Figure 4.9. PostBrainstorm is an interactive wall for design brainstorming

(Source: http://interactivity.stanford.edu)

On this interactive wall, users can work with high resolution images, application windows, 3D models, hand drawn material, and information structures such as lists. The pen is used for all interactions including sketches and annotations directly on graphical objects or on transparent overlapping sheets.

PostBrainstorm integrates several new interaction techniques into a visual brainstorming tool for direct pen-based interaction on the Interactive Mural, a large high resolution display. Its “interactive wall” metaphor for interaction has been guided by several goals: to support both freehand sketching and high-resolution materials, such as images, 3D models and GUI application windows; to present a visual appearance that does not clutter the content with control devices; and to support fluid interaction, which minimizes the amount of attention demanded and interruption due to the mechanics of the interface. We have adapted and extended techniques that were developed for electronic whiteboards and generalized the use of the FlowMenu to execute a wide variety of actions in a single pen stroke. While these techniques were designed for a brainstorming tool, they are very general and can be used in a wide variety of application domains using interactive surfaces.

4.4. Remote Collaboration

Figure 4.10. The use of the conference room in our office for the phone conferences with our bosses abroad.

4.4.1. Essence

Pattern number is (27) and its location is *"Root > Collaborative working > Group discussions >"*. There is a need to see and hear one another and to work together in situations where one of the collaborators participates remotely.

4.4.2. Remarks

Changes in nature of work made that pattern more visible in last years. According to the third European survey on working conditions, (Paoli and Merllié 2000) flexibility is widespread in all aspects of work including working times, work organization. Working from home has a higher rate among the occupations like managers and professionals. Additionally, the survey reveals that teleworking is no longer an exceptional phenomenon in 2000 (Paoli and Merllié 2000).

> One self-employed person in ten and 4% of all employees telework for at least onequarter of their time. Teleworking on a full-time basis is carried out by just over 1% of the working population (1.5 million). Occasional teleworking is more widespread (5% of workers), particularly among northern European countries. …..Telework is often carried out under a 'particular type of contract': around half of these are self-employed; among employees who telework 10% have fixed-term contracts and 11% have 'atypical' contracts (classified 'other'). Teleworking is more common in certain occupations and higher professional categories: 15% of managers, 12% of professionals and 8% of technicians engage in teleworking at least one quarter of the time, compared to only 1% of craft workers and machine operators. Teleworking is also common in the financial intermediation and real estate sectors.

Internet telephony or VoIP (voice over internet protocol), instant messaging over internet and video conferencing are some of the current technologies supporting that pattern. Market for internet telephony is exploding. Companies such as Skype, a leading VoIP provider, have already teamed up with handset makers such as Motorola to incorporate their software in mobile phones. Microsoft aims to move telephone calls to Windows- powered PCs.

Also, third generation (3G) mobile internet technology with 2megabit per second speed is very suitable base for real time audio, video transmission over internet using mobile devices.

4.4.3. Therefore

We need to simplify the way we communicate offering a greater sense of presence, a more unified experience and a more secure trusted environment.

The 3G technology will change the way how the designers think about the mobility and internet. It will open a new age for mobile devices and define new set of services.

4.5. Hierarchical Communications Around a Table

4.5.1. Essence

Pattern number is (10) and its location is *"Root > Collaborative working > Group discussions >"*. In almost every company, there are different hierarchy and respect relations among employees also in client employee relations. These inequalities become more dramatic in sitting scenarios around a personal desk of an employee depending on the fact that other side of the regular office desk refers to a lower level status.

4.5.2. Remarks

Other side of the regular office desk is always refers to a lower level status. On the other hand the main chair of owner of the desk has the focal point of importance. For example, You can not invite a CEO for sitting to the other side of your desk unless form of your desk supports that experience. This is a very clear example of how form of a product determines the experiences of people. These inequalities can cause some limitations and also difficulties unless form of your desk supports that special experience pattern or you consciously prefer ignoring these inequalities.

4.5.3. Therefore

We need the products that contribute and support that pattern and its variations. There are many possible interaction scenarios that could be experienced around a desk. Utilizing that pattern while designing can be crucial in two ways for scenarios.

Firstly, This pattern can generate design scenarios that requires obeying social status. I already mentioned that scenario above. This is the expected usage of that pattern which has no any challenge for the users.

Secondly, we can also think a different scenario in such a way that same transformable qualities can help us to control and realize our ego playing with our free choices. As a design suggestion, we can imagine two level transformable system with two modes as "ego" and "non-ego". To illustrate that ideas, let's give an example; Let's assume that I am a professor in a school. And I prefer using my desk on the "non-ego" mode while sitting with my student.

A design solution that raises my self awareness and allows me to control my ego would be very revolutionary approach and be appreciated by the guests in my desk. The key point here is that the user is free to choose any scenario he like to experience . He is the one who will decide what he want to experience. Because, there could also be some guests who don't deserve "non-ego" scenario. Consequently, that second scenario would really be very revolutionary approach on business communication.

4.6. Sometimes Casual, Sometimes Formal

4.6.1. Essence

Pattern number is (11) and its location is *"Root > Collaborative working > Visitors in workspace>"*. Formality of every workspace has a certain level in an ordinary work day. That usual level is a consequence of the scale, hierarchy levels and corporate identity of the workspace.

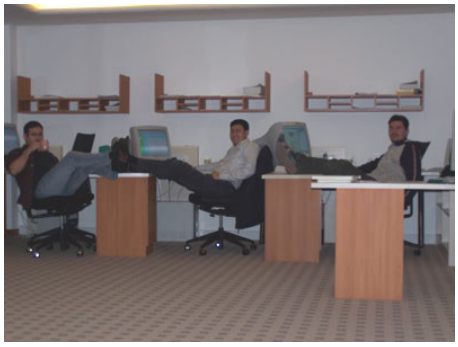

Figure 4.11. Employees when the office is in casual mood

But that stable level could change when a visitor, client or some higher level manager visit workspace. Then, the casual mood in the same room suddenly changes to the very formal mood. In that mood of the room , behavioral models of the people also change. How they sit, how they speak even how they walk changes dramatically.

4.6.2. Remarks

Workspaces may change with their types and sizes. But anyway, this pattern is somehow common in most of them. According to that pattern, some workspace could be in either formal or casual mood in a certain moment depending on the visitors visiting workspace. Consequently, same employees can experience different moods at the different moments of the same workspace. Below is a sample scenario of an imaginary design company, Gerga.

Gerga design company has 3 offices in İzmir , Los Angeles and Milano. Gerga design company has 3 junior designer in İzmir office and one senior designer who is also general manager of İzmir office. 4 designer works in a very casual way in a regular work day. All meetings and brainstorming are not held in a formal mood.

İzmir office has a large office room where everybody works in. Even if there is a separate room for client meetings, there is always a need to discuss the project in main office room with clients. So, there is an important visitor traffics in main office room. Visitors of the designer's room are not just clients. Because, CEO of the company also visits the İzmir office once a month. The CEO of the company is very formal

manager and all designers behaves very carefully and formally when they are talking to him.

Gerga design company seeks a new investor for a long time. That's why, CEO sometimes visits the İzmir office with a possible investor candidates which makes the atmosphere much formal than usual. In that client, CEO and investor meetings in the office room, behavioral models of the designers in the office obviously changes. How they sit, how they speak even how they walk changes as a consequence of the formal atmosphere.

4.6.3. Therefore

Understanding that casualty/formality rhythm of a workspace will provide designers very wide perspective for the design of related products. The mood in the workspace changes when somebody comes in. But how about the workspace? Obviously, workspace also must change somehow. Workspace and related products must have some transformable qualities to adapt themselves to that mood changes.

4.7. Look at My Monitor

Figure 4.12. Possible scenarios for sharing our computer display.

4.7.1 Essence

Pattern number is (13) and its location is *"Root > Collaborative working> Group Discussions >"***.** Most of the time, we need to share our views in our personal computers with others. Sometimes we might need getting feedback, asking question or just showing something.

4.7.2 Remarks

Regular monitors are heavy devices fixed in their places. Therefore, we have to stand up and go the other desk to see the other monitor.

There are some software solutions like VNC remotely connecting someone's computer to see and use the computer. However, this solution is just suitable to connect shared computers like servers and workstations, not the personal ones.

Figure 4.13 Some physical manipulation solutions rotating computer displays

(Source: http://www.humanscale.com/products/monitor_support_main.cfm)

There are also physical manipulation solutions rotating computer displays (see figure below). However, in the future, computer displays will have challenging features for that pattern with their light and slim structures. Then, we will have opportunity to grab our display and go anywhere easily.

Figure 4.14. Adaptive Workstation with the flexible display device .

(Source: http://www.uiah.fi/page_exhibition.asp?path=1866;1919;3765;4680;4663)

The Adaptive Workstation is characterized by an increasing size and flexibility of displays and input devices. The physical and virtual adaptation guarantees that this universal computer workplace fits to the personal demands of different users and feels like a private tool for a certain time. The personal device is the initial tool to configure all favorite individual settings automatically: heights and angles of the desk, chair and screens. It also regenerates the right network connections and makes all personal data available: favorite software structures, programs, menus, short keys. One of the most important features is the communication screen beside the main studio screen, which offers every kind of communication separately without interrupting the work.

4.8. Wellness in Workspace

4.8.1. Essence

Pattern number is (4) and its location is *"Root >"*. This is a higher level pattern that covers all patterns which human feeling dominates. The quality of our work depends on well- being in workspace. There are many currently accepted truth of office design that needs to be replaced with a "new attitude in which human feeling dominates".

Figure 4.15. The detail of the "wellness in workspace" pattern from the map

Member patterns are Balanced privacy (22), Music listening (19), Social interaction (21), Need for Physical Freedom (33), Let's tidy up everything (20), Need for personal expression (17), Relaxation is the best moment to find new ideas (9), Flexibility in Working Conditions (34), We need exercise for wellness (15), Eating & drinking habits (25), Pleasure of changing mood in space (16).

4.8.2. Remarks

Well-being is one of the most important keywords in a workspace. There are many currently accepted truth of office design that needs to be replaced with a new attitude in which human feeling dominates. People must work in emotionally enriching workplace environment. That should not be a luxury expectation but ordinary requirement for the design of workspaces. Christopher Alexander says on pleasant workspaces in an interview with David Creelman (Creelman 2002).

> When you are working, the quality of your work depends on the extent to which you are able to put your spirit, your heart into it. It's not necessarily about being intellectual; it's just a question of staying very sharp, of doing what's really needed rather than something else. All this requires a genuine sense of well- being. It's not a problem of efficiency. It's a problem of whether overall—in motivation, in atmosphere, in

> congeniality—the well- being of the people working has been nurtured. You can see from this very simple description that most of the workplaces couldn't possibly fulfill that prescription because they weren't thought about that way. The workplaces were talked about in quite different terms, in mechanical ways, that have very little to do with emotional, psychological, or intellectual well- being.

Alexander reminds us that people spend most of their time at work; But anyway, office environments are almost empty of real vitality (Alexander 1987).

> They are missing a depth of feeling and richness of function that lets people reach into those parts of their everyday life and work that are really important.

Alexander criticizes stereotyped office furniture as one of the prime contributors to an inhuman work environment. Not only is the situation oppressive, but our culture has invested considerable resources to teach people to accept it without question. Architecture schools and the professional media deliberately mislead the public by insisting that emotional well-being is not a requirement of interior design. As a result, few people imagine that a pleasant work environment is even possible today.

Alexander's group proposes broad and immediate solutions to the current situation. They offer a new type of office environment, where a person can feel at ease emotionally. The following philosophical and practical principles, summarized below, underlie their thinking (Alexander 1987)

- People have a right to expect an emotionally enriching workplace environment.
- It is possible, with materials and methods already available, to achieve this.
- The actual cost is not significantly greater than what it costs to create an oppressive work environment.

4.9. Social Interaction

4.9.1. Essence

Pattern number is (21) and its location is *"Root > Wellness in workspace > "*. It is the member of " Wellness in workspace" pattern. Successful Social interaction is the crucial part of a pleasant work environment. In every kind of workspace, people need certain level of social interaction. In case of lacking that pattern, people works less productive also think quitting their job since they don't find emotional well- being in their workspace.

4.9.2. Remarks

The Chi house is designed by Noriyuki Tajima/ tele-design in 2002. It is an open workspace stimulating spontaneous communications and interactive collaborations among workers. Its flexibility, with mobile furniture and adjustable sliding-doors, create changing spaces according to the purposes and functions that changes everyday. The spiral plan therefore represents the new open-end policy for the future enterprise.

Figure 4.16. The chi house is an open workspace stimulating spontaneous communications and interactive collaborations

(Source: http://www.tele-design.net/data/0_english/index.htm)

4.9.3. Therefore

Designers need to understand the social dynamics and enhance the playfulness and expressiveness of the interactions between people offering a collective playground which allows social interplay.

This might be achieved by designs that play with eye contacts, directions of sitting. Directing the walking paths of people from different departments is also a good synopsis. Stimulating spontaneous communications and interactive collaborations among workers is the main idea.

4.10. Relaxation is the Best Moment to Find New Ideas

4.10.1. Essence

Pattern number is (9) and its location is *"Root > Wellness in workspace > "*

Problems are being solved mostly when we are out of the everyday routines. When we did not feel the pressure of the problem, our minds becomes much productive. Relaxation is the best moment to find new ideas. Because we do not feel weight on our shoulders once we reach the relaxed state of mind.

Figure 4.17. Two examples of working in relaxed mood at comfortable places.

(Source: http://images.google.com.tr/images?q=work+environment)

4.10.2. Remarks

There are already some indications in some survey studies. According to a EU survey, Flexibility is widespread in all aspects of work including working times, work organization. Working from home is one of the new trends in future of working according to the third European survey on working conditions (Paoli and Merllié 2000).

The ConsulTable is for consultation discussions, with two or four participants, either sitting or standing. The horizontal integration of the 15" touch-sensitive display into the round table tops promotes a confidential atmosphere and active involvement on the part of the customer or other conference partners. By lightly touching the touch screen, the contents of the screen can be rotated by 180°. The high-quality pedestal tables have high stability.

Figure 4.18. The ConsulTable by Wilkhahn & Wiege is meant to be used by small groups for informal communication.

(Source: http://www.wilkhahn.com)

Turn table project is a part of the Humantec Reflexive Spaces studies in the University of Art and Design Helsinki. With turntable you can draw, write, and explain your ideas directly on the table. You are able to turn the interaction ring around and move it to create a better understanding. Since a special technology is integrated into the tabletop, it is possible to save data directly on digital media or erase it quickly. It is a table, which can both stand alone or be integrated into existing furniture systems.

Figure 4.19. With Turntable, you can draw, write, and explain your ideas directly on the table

(Source: http://www.uiah.fi/page_exhibition.asp?path=1866;1919;3765;4680;4663)

Pattern 34 , Flexibility in Working Conditions, is related with that pattern. Creative jobs requires flexible work environment and relaxation is an important part of that environment. This new way of looking at work and workspace will accelerate the performances of workers mostly in creative area.

4.11. Pleasure of Changing Mood in Space

4.11.1. Essence

Pattern number is (16) and its location is *"Root > Wellness in workspace >"*

Essential problem for an employee is the fact that office space remains always same and does not let the individuals have a control over it to change or customize. The lack of dynamic qualities is a problem not only from the functional point of view but also from the emotional side in the old generation offices.

4.11.2. Remarks

In his book, Toward a Personal Workplace, Christopher Alexander talks about the dynamic qualities in a work environment (Alexander 1987)

> Many office systems have been designed to be "flexible", yet they often involve merely the rearrangement of standard components. While the size of the space may change, the character really does not. … Thus an individual has control over his or her own workspace; the workgroup has control over the group working area but not over the individual workspaces; the department has control over its space but not over the workgroup spaces, and so on. Therefore, we suggest using materials and structural systems which would invite change, and allow changes to accumulate, gradually fine-tuning some areas very closely to the real human needs that exist there. Other arrangements, for which the need became obsolete, would disappear over time.

Herman Miller and designer Ayse Birsel examined the full range of work trends occurring throughout North America and the world. They saw the sweeping and ongoing changes in people, the rise of collaborative work, and the expansion of complex technology as a great opportunity to reexamine the work environment and "re-solve" critical issues.

Figure 4.20. Resolve office furniture system by Ayse Birsel

(Source: http://www.hermanmiller.com)

The patterns of Resolve are based on five organized, repeatable configurations called "constellations" Each offers a different level of enclosure, from open, two-sided constellations to more private, five sided ones. Designers can cluster and mix the constellations to form more complex patterns that yield the optimum floor plan, create higher-density layouts that use floor space most efficiently, and support group and individual work. The geometry allows more planning options and efficient use of materials. Taking a different angle on things can open up all kinds of possibilities.

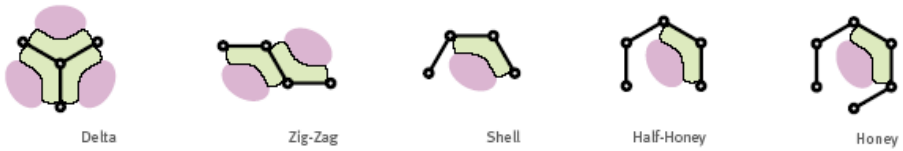

Figure 4.21. Repeatable configurations for Resolve system

(Source: http://www.hermanmiller.com)

The Adaptive walls project is another project which is a part of the Humantec Reflexive Spaces studies in the University of Art and Design Helsinki. System consists of re-configurable and flexible space divider/display screens that are suspended from modular tracks attached to the ceiling.

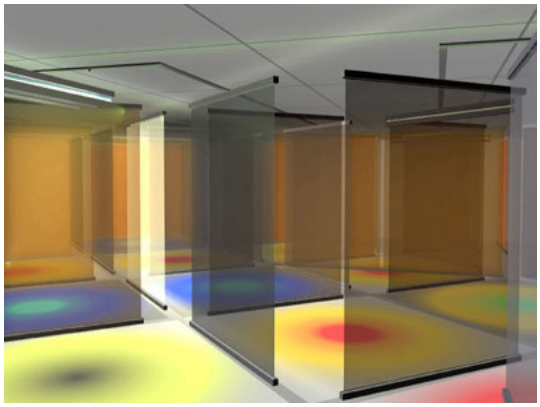

Figure 4.22. Adaptive walls, flexible space dividers for multi-purpose spaces

(Source: http://www.uiah.fi/page_exhibition.asp?path=1866;1919;3765;4680;4663)

In the Adaptive walls, each screen can slide and rotate along the tracks to specific locations, and roll-down to divide the space or to display information. Through a digital interface you can choose preset space configurations. An intelligent electromechanical floor recognizes the location of screens and designates color to an 'active' cell or area, along with sound dampening or amplification.

4.11.3. Therefore

Therefore, we can prefer using materials and structural systems which would invite change, and allow changes that cover real human needs. Dynamic qualities in a

workspace can be created on visual elements like color, light, texture that could change not only how the environment looks but also how the people feel.

Also the design solutions that play with the physical locations of the furniture and the other stuff could contribute to purpose of that pattern. Designing a complete framework for the modularity of components is an essential.

4.12. We Need Exercise for Wellness

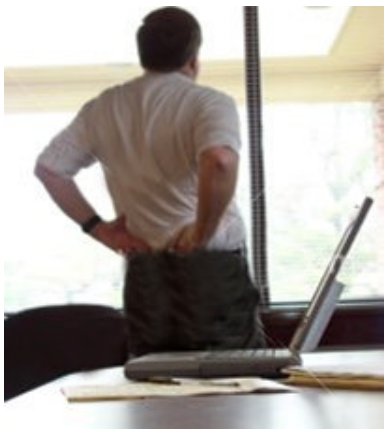

Figure 4.23. Muscular pain is one of the major work related health problems.

(Source: http://www.stockphoto.com)

4.12.1. Essence

Pattern number is (15) and its location is *"Root > Wellness in workspace >"*. According to the studies, we all need certain level of physical activity everyday for well being. But our life styles began evolving according to the office conditions that gives us less opportunity for physical exercise. Therefore, our workspaces might have some qualities that improves our quality of life through physical exercise. This will not only improve our quality of life but also our performance at work.

4.12.2. Remarks

We spend dramatically long time in our workspaces. Considerably long part of our lives passes in our offices. There are many employees who are complaining about work- related health problems. Our office life not only requires less physical activity but also causes work- related health problems like muscular pains, stress and fatigue.

According to the findings of the third European survey on working conditions (Paoli and Merllié 2000); work is getting more and more intensive: over 50% of workers work at high speed or to tight deadlines for at least a quarter of their working time. The number of people working with computers has increased: from 39% in 1995 to 41% in 2000. Major work- related health problems backache (reported by 33% of respondents); stress (28%); muscular pains in the neck and shoulders (23%), overall fatigue (23%). All these problems reduce our quality of life and also make it hard to concentrate on our jobs.

4.12.3. Therefore

Since we all need certain level of physical activity everyday, our workspaces must support some creative solutions to improve our well being. This will not only improve our quality of life but also our performance at work.

4.13. Need for Personal Expression

Figure 4.24. An example of the basic need for personal expression from our childhood times

(Source: http://images.google.com.tr/images?q=child+drawing)

4.13.1. Essence

Pattern number is (17) and its location is *"Root > Wellness in workspace >"* Everyone needs to express, share and sometimes teach their way of looking at life to the other people. Favorite music pieces, loved artist, some good videos even some personal hobbies are the visible elements of ways of looking at life. People would like to share those things with the people in their office.

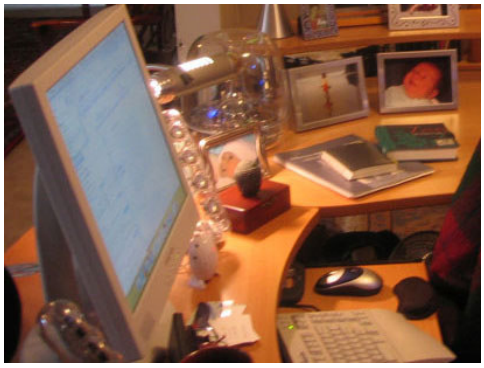

Figure 4.25. An example of personal expression in a regular desktop

(Source: http://images.google.com.tr/images?q=office+desk)

4.13.2. Therefore

In a workspace, there is a need for some sort of expression space or surface. Any personal element of an employee could be designed associating with the emotional and personal character of the employee. This could be applied by coloring, signs, logos, nick names or any kind of identity related elements. Basic example of a sample solution on that pattern is the Msn Messenger's profile image feature.

Employees somehow should feel that they are expressing themselves to the world with their jobs and productions. They also should realize that their standpoint in their job is meaningful. Having meaningful work life and passion to their job, their work life would be beyond just making money for living. Instead, it would be living itself.

4.14. Balanced Privacy

4.14.1. Essence

Pattern number is (22) and its location is *"Root > Wellness in workspace >"*. The right balance should be established between privacy and connection in office work. Totally private workspace can damage the flow of human relationships in a workspace.

Figure 4.26. An example of poor privacy in a workspace.

(Source: http://images.google.com.tr/images?q=workspace)

4.14.2. Remarks

Alexander has a suggested a pattern named "The Half Private Office" in his study (Alexander 1977). This pattern addresses the question, “What is the right balance between privacy and connection in office work?” The discussion of this pattern notes how a totally private office can damage the flow of human relationships within a work group. They conclude that every workroom, whether for two, three or only one person, should be half-open to other workgroups and the office as a whole. There should be an inviting place to sit near the door, with the actual desks further back away from the door (Alexander 1977).

> Office design presently stresses solutions at opposite poles of the privacy spectrum. Neither isolated offices (commonly used by executives) nor sprawling, open staff pools with little or no subgroup definition satisfy the need for a balance of autonomy and

community within the workplace. Isolation from the primary workspace tends to enhance the "Us versus Them" mentality, decreasing both functional efficiency and job satisfaction. The atmosphere within large homogeneous pools of workers with little or no privacy is characterized by high noise levels and constant visual distractions. This sort of situation leads to high stress levels and ultimately, worker burnout.

Figure 4.27. An Example of different level of privacy. Employees have eye contact but they can not see eachother's computer display.

(Source: http://images.google.com.tr/images?q=workspace)

Alexanders expands the idea of right balance of privacy with the "Half- Private Office" pattern in his book "A Pattern Language" (Alexander 1977).

The intimacy gradient in any office building should allow a comfortable level of privacy for workers within their individual workspaces. If primary workspaces cannot embody the necessary privacy, designated spaces which do should be accessible. A delicate balance between autonomy and community is needed in order for individuals and groups to function effectively. Partially enclosed workspaces allow visual and verbal inter workspace communication while buffering workers from random, uncontrollable interruptions.

4.14.3. Therefore

There are some observations that I made in my design research regarding that pattern. One is the fact that employees usually have difficulties while making private phone calls in some office conditions that has no privacy. In those situations, they tend to find somewhere else to talk on the phone not to bother others.

Public visibility of computer screen is another issue of balanced privacy in office. In most of the interviews that I made in my study, people were mentioning this issue. Therefore, it is an important design parameter in design for offices.

4.15. Flexibility in Working Conditions

4.15.1. Essence

Pattern number is (34) and its location is *"Root > Wellness in workspace >"* Nature of creative works requires flexibility in working conditions. In future, companies will provide more flexible working conditions for their workers. Those changes will define new set of requirements, devices and equipments supporting physical flexibility and mobility.

4.15.2. Therefore

In future, work evaluation will be result and deadline oriented that let us work from anywhere anytime rather than sitting in an office 9 to 5. We need to think, brainstorm, discuss the work from anywhere like kitchen, living room etc. Changes will define new set of requirements, devices and equipments supporting physical flexibility and mobility. Even if it seems that work will occupy our lives too much in future, people will gain much more time that let them spend with their families and hobbies etc.

People must solve problems at the just right time when something occurs in their mind. Creative works are not very suitable just for the office environment. A new idea might come anywhere like kitchen , while Watching TV etc. This people must align their work times according to the their mind rhythms rather than interrupting their creativity. They need to take notes and record ideas in the daily rhythm of my life rather than interrupting their creativity.

This will reduce the total unproductive time spent in office, on the desk etc. It will improve people's life quality and enjoyment as well as work quality.

4.16. Need for Physical Freedom

4.16.1. Essence

Pattern number is (33) and its location is *"Root > Wellness in workspace >"*. Our works consist of inspiration, research, reading, data collection, discussion and writing. Our workscapes are nearly all the places where we are either alone or with colleagues during daytime or nighttime. So we need physical flexibility in where we seat, pose, think and work.

Figure 4.28. Different work settings that allows physical freedom at home

4.16.2. Remarks

The DiamondTouch table is a multi-user, debris-tolerant, touch-and-gesture-activated screen for supporting small group collaboration. The DiamondTouch table is available commercially as a developer's kit and includes a selection of demonstration applications; a mouse emulator with onscreen keyboard to support common Windows applications; and a Software Developer's Kit allowing the development of new software applications that support gesture inputs and multiple simultaneous users.

Figure 4.29. Diamond Touch project in Stanford University.

(Source: http://interactivity.stanford.edu)

DiamondTouch supports small group collaboration by providing a display interface that allows users to maintain eye contact while interacting with the display simultaneously.

DiamondTouch is front-projected and uses an array of antennas embedded in the touch surface. Each antenna transmits a unique signal. Each user has a separate receiver, connected to the user capacitively, typically through the user's chair. When a user touches the surface, antennas near the touch point couple an extremely small amount of signal through the user's body and to the receiver. This unique touch technology supports multiple touches by a single user and distinguishes between simultaneous inputs from multiple users.

4.16.3. Therefore

The undisturbed flow of information is important for creative workers. We use both physical and virtual work settings for our works. All physical and virtual work settings provide us to access and store information that is necessary for the work.

Our works consist of inspiration, research, reading, data collection, discussion and writing. So our workscapes are nearly all the places where we are either alone or with colleagues during daytime or nighttime. So we need physical flexibility in where we seat, pose, think and work.

4.17. Information Lightness

4.17.1. Essence

Pattern number is (32) and its location is *" Root > Collaborative working >"* . Essence of this pattern is based on how easy to share and transport information from one place to another. People need simpler, clear and easier ways of playing with information.

Our activities in work consist of capture of various types of content (pictures, audio, video, other media), search, editing, sharing. There is great need to fluidly integrate technology into existing practices to develop new ways of playing with information.

Figure 4.30. An example of the need for the playing with information

(Source: http://www.sapdesignguild.org/editions/edition3/interact_design.asp)

4.17.2. Remarks

IDeas is a project initiated by Stanford University HCI Group. Main purpose is capturing design activity electronically. Design students and practitioners use physical notebooks and walls for their expressive power, sketch-based interaction, and familiarity. Unfortunately, conservation of matter limits the amount of sharing that can occur with physical media, and electronic media offer affordances, such as search, that could considerably augment project-based learning.

Figure 4.31. Elements of the iDeas notebook. Left to right: camera phone; digital pen; physical notebook page after Idea Log activities; electronic file automatically created from notebook page.

(Source: http://interactivity.stanford.edu)

Ideas project proposal presents the iDeas learning ecology for electronic capture of design activity, which integrates digital notebooks, blogs, walls, and other technologies to allow designers to move ideas more seamlessly between the world of bits and the world of atoms, marrying the benefits of the physical with those of the electronic.

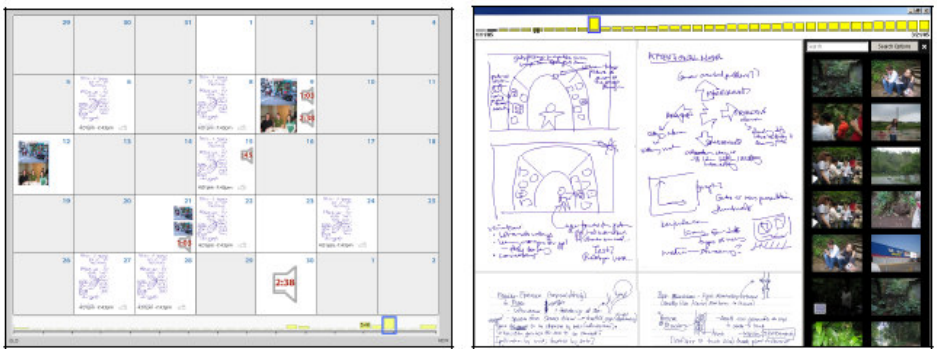

Figure 4.32. The iDeas blog desktop interface. Left: Flash design sketch. Right: Java screenshot. Users browse and annotate captured content.

(Source: http://interactivity.stanford.edu)

Moving Communication is an another project related to the pattern. Non-verbal interaction, whether a handshake or a cold shoulder, are an important part of

communication and how we build relationships, yet audio and image remain the only modalities explored in mobile products. Moving Communication project creates a physical link for a discreet, fuzzy, gestural language to emerge alongside voice communication.

Figure 4.33. Moving Communication Project

(Source: http://www.dh.umu.se/default.asp?sida=583)

4.17.3. Therefore

Our activities in work consist of capture of various types of content, search, editing, sharing. Therefore, there is great need to fluidly integrate technology into existing practices to develop new ways of playing with information. Bridging the gap between electronic and paper worlds is another issue on that pattern.

4.18. Conclusion and Discussion

Experience mapping process was quite iterative. As I progressed generating new patterns, new design ideas were born and that ideas were being evaluated on the basis of the current patterns.

Until I reach the final design ideas, I have designed many conceptual products as rough sketches. Once the core idea of the project begun growing, some of the patterns became more highlighted and they gain priority compared to others. In that time, new patterns were also added supporting the current project idea.

Generating new patterns and designing were the parallel processes. That's why I had an opportunity to gain wider perspective about what and how I can design for a special set of experiences.

Additionally, that framework could work much better and find many opportunities in a design team, since it is a creative communication approach that can create an optimized information architecture for large amount of data.

Moreover, it is a flexible framework which allows data set easily growing and evolving. Anyone in the team can add new nodes according to the unique and different perspectives obeying the architecture of data, since it is a data model.

Consequently, my study became a good example of the approach. Using that approach, I had very flexible opportunity to document, collect, communicate and understand the all design related information quickly and easily.

CHAPTER 5

EXAMPLE DESIGN PROJECTS

5.1. Pad PC: Communication Computer for Collaborative Working

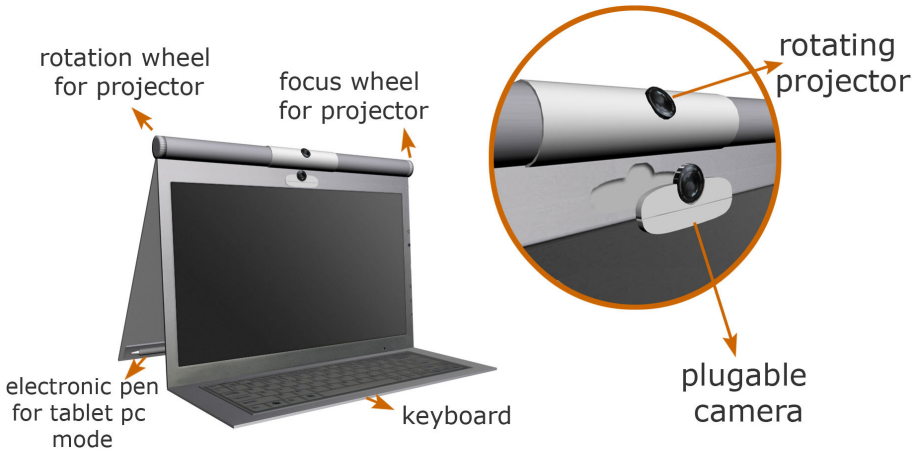

Figure 5.1. General appearance of PadPC

5.1.1. Idea/Problem/Context

There are already many types of computer products in the market. But a few of them are offering a greater sense of presence and a unified experience of communication. Also, third generation (3G) mobile internet technology with 2megabit per second speed is very suitable base for real time audio, video transmission over internet using mobile devices. The 3G internet connection will change the way how the designers think about the communication, mobility and internet. It will open a new age for mobile devices and define new set of services.

Our works consist of inspiration, research, reading, data collection, discussion and writing. Our workscapes are nearly all the places where we are either alone or with

colleagues during daytime or nighttime. So we need physical flexibility and mobility in where we seat, pose, think and work.

Another is question is how easy to share and transport information from one place to another. People need simpler, clearer and easier ways of playing with information.

Many technologies being developed are continuously changing the future of computers that we are using today. Those changes will define new set of requirements, devices and equipments supporting technological opportunities, physical flexibility, mobility, greater sense of presence and experience of communication.

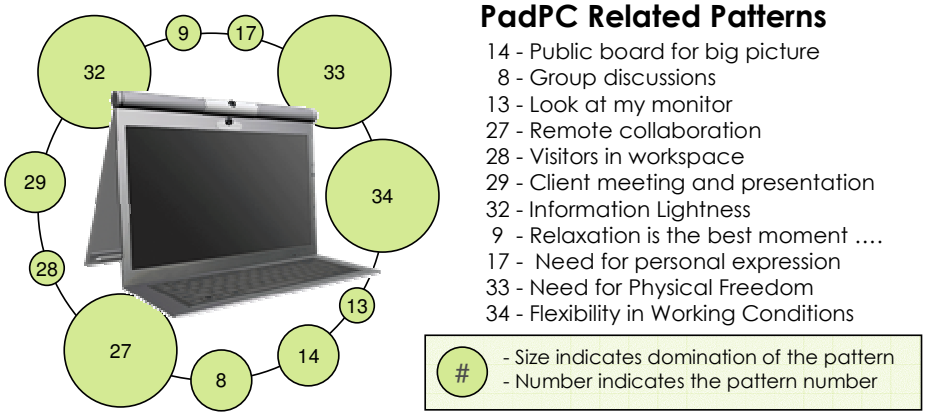

Figure 5.2. Pattern relations for PadPC

5.1.2. How It Works

PadPC, first of all, is a communication tool which has a computer function. Projector module allows projecting the screen to any suitable place.

Figure 5.3. PadPC is portable, easy to carry personal computer

When network connection is not available, 3G feature will provide high quality video/audio streaming for remote collaboration. It is portable, easy to carry and functions independently from the movement and the environment.

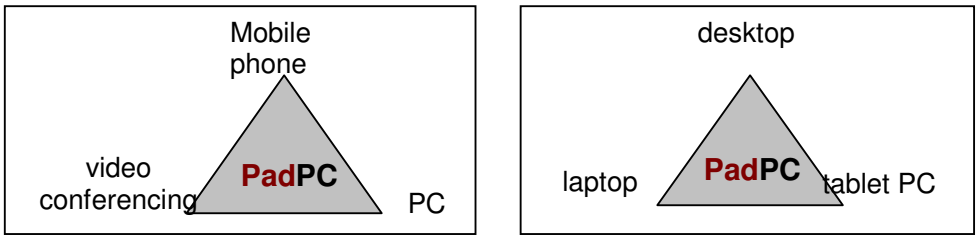

Figure 5.4. Left: PadPC is a communication tool somewhere between phone, PC and video conferencing. Right: it is a computer somewhere between desktop, laptop and tablet PC

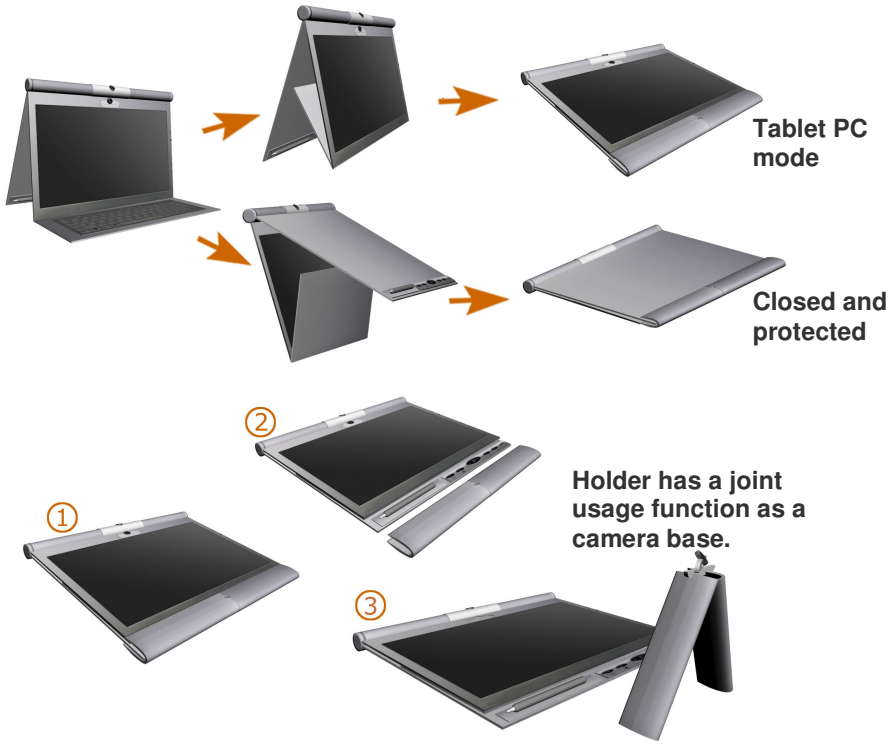

Figure 5.5. Folding details and joint usage of the holder as a camera base.

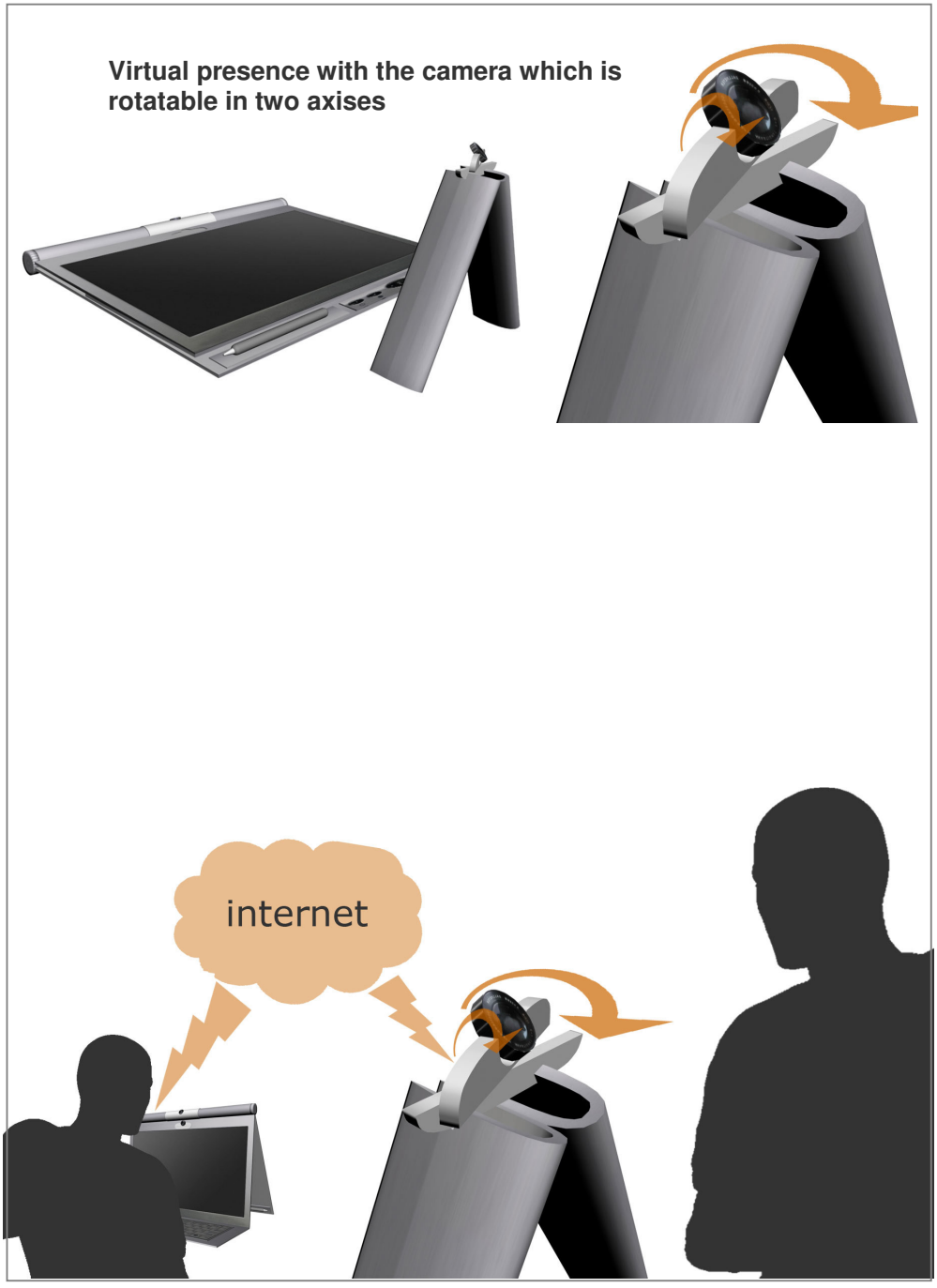

Figure 5.6. Remote user can manipulate other user's camera by rotating it in two axises.

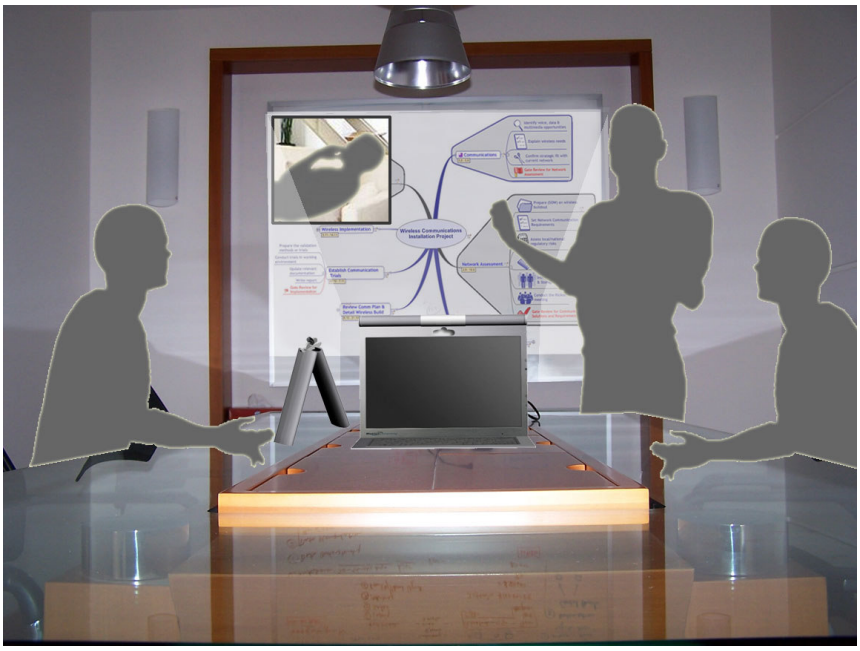

Figure 5.7. Meeting in the office is shared with a remote participant (see figure below)

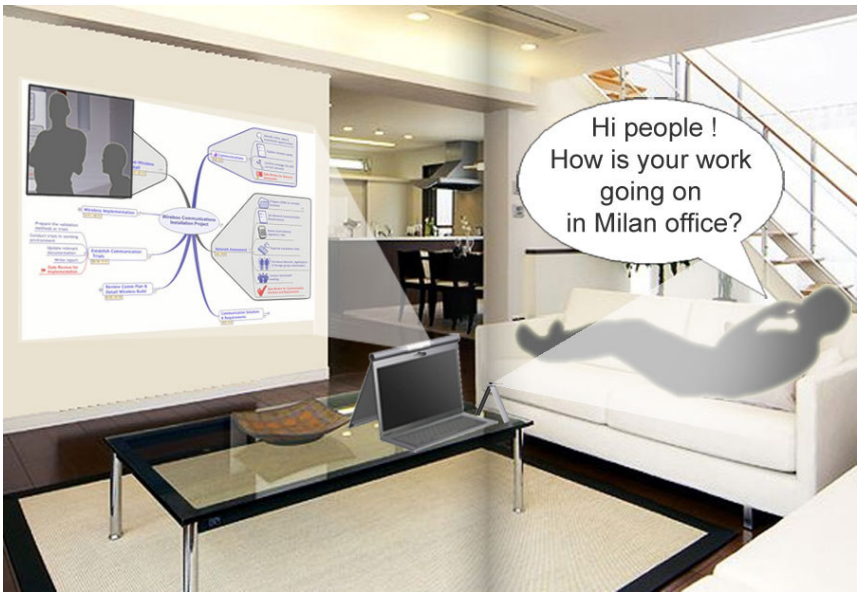

Figure5.8. Remote participation to the meeting with the physical freedom from the work conditions. (see figure above)

Figure 5.9. Whereever you are, PadPC lets you stay connected.

Figure 5.10. PadPC is a way of personal expression and sharing in office

Figure 5.11. Camera can be used also as embedded.

Figure 5.12. Family members can stay in touch with a greater sense of presence.

5.2. “Let’s be serious” Sofa : Adaptive Furniture in Your Office

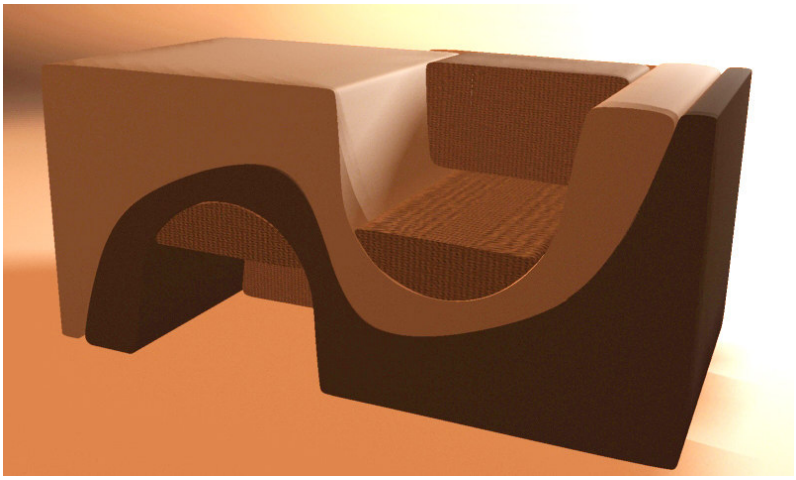

Figure 5.13. General appearance of the “Let’s be serious” Sofa

5.2.1. Idea/Problem/Context

Formality of every workspace has a certain level in an ordinary work day. That usual level is a consequence of the scale, hierarchy levels and corporate identity of the workspace. But that stable level could change when a visitor, client or some higher level manager visit workspace. Then, the casual mood in the same room suddenly changes to the very formal mood. In that mood of the room, behavioral models of the people also change. How they sit, how they speak even how they walk changes dramatically.

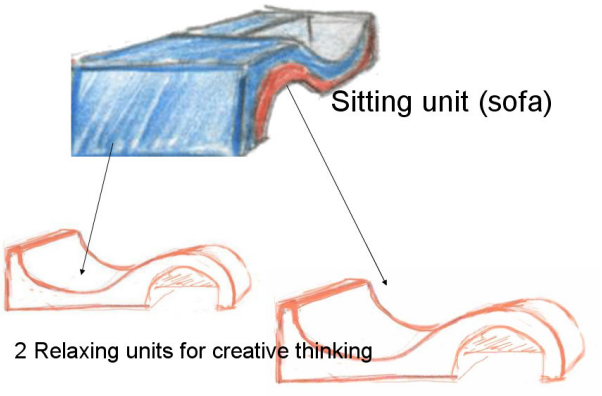

Figure 5.14. Initial sketch of the idea

Understanding that casualty/formality rhythm of a workspace will provide designers very wide perspective for the design of related products. The mood in a workspace changes when somebody come in. But how about the workspace? Obviously, workspace also must change somehow. Workspace and related products must have some transformable qualities to adapt themselves to that mood changes. Relaxing is also triggering driver for creative tasks.

Figure 5.15. Ergonomics study for the curvature of the product form

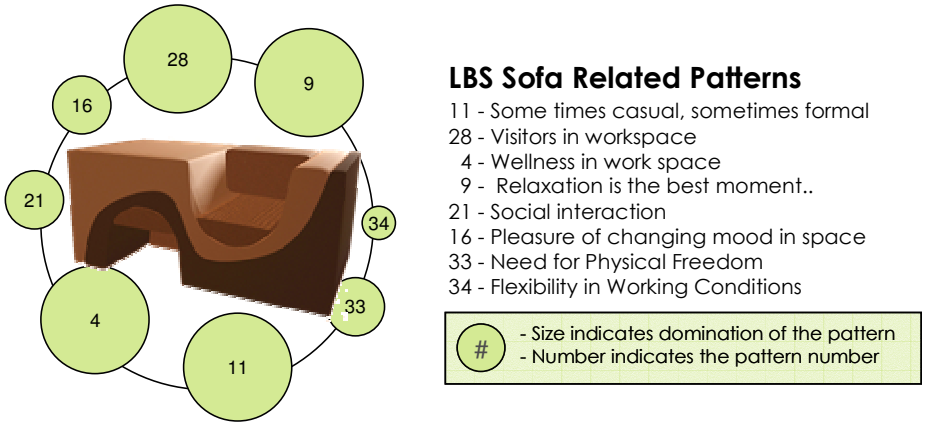

Figure 5.16. Pattern relations for "Let's be serious" sofa

5.2.2. How It Works

"Let's be serious" is a bi-functional office sofa that has some transformable qualities. Main idea is making furniture adaptive to the casualty/formality rhythm of a workspace.

In the armchair mode of the product, the form of the product creates a table like area that allows employees putting some papers and documents.

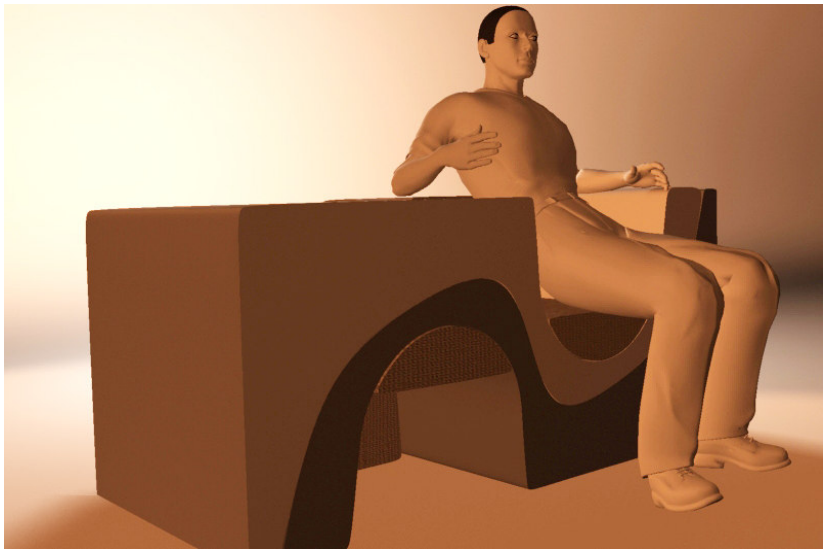

Figure 5.17. Sofa is in formal mode

Figure 5.18. “Let’s be serious” sofa consists of two complementary elements

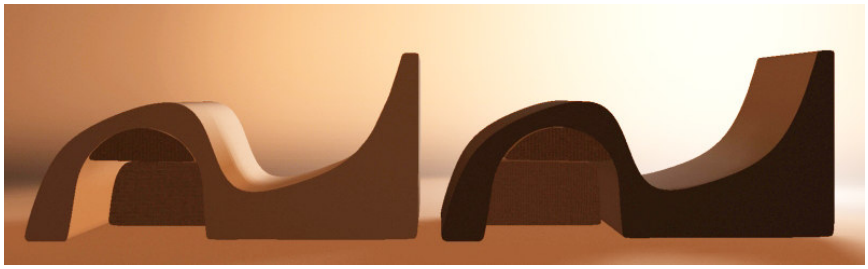

Figure 5.19. You can easily split up parts to have two relaxing units

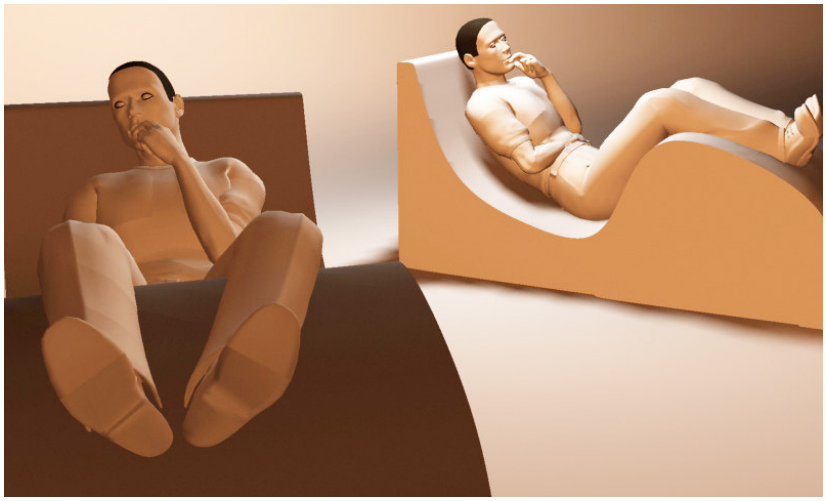

Figure 5.20. Sofa is in casual mode

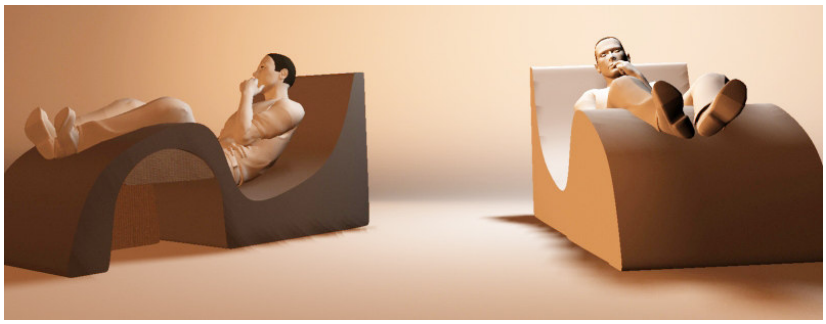

Figure 5.21. Relaxing unit is a must for emotionally enriching workplaces

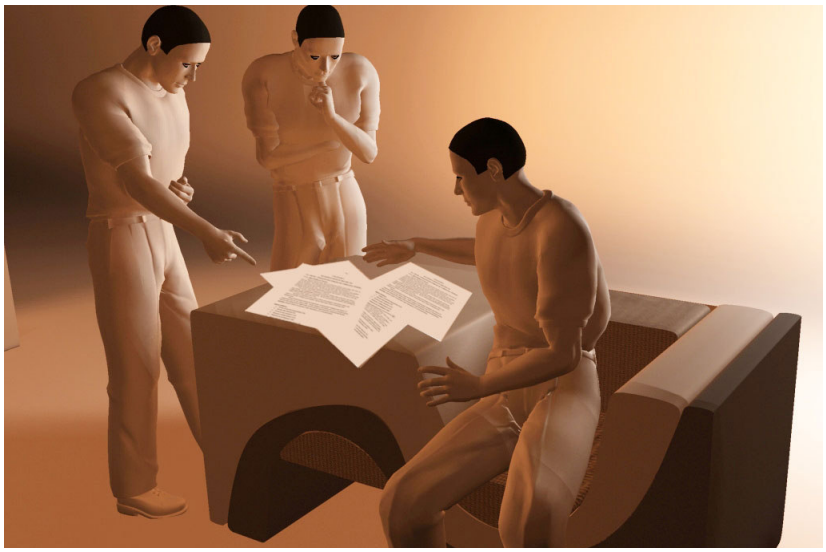

Figure 5.22. The form of the product creates a table like area that allows employees putting some papers and documents.

5.3. Think Time Cup : Time Saving Cup For Offices

Figure 5.23. General appearance of the "Think Time Cup"

5.3.1. Idea/Problem/Context

A cup is the important element in the meeting between the visitor and host. So form and function of the tea/coffee cup could be aligned according to the office experiences.

Time issue is very important for office people especially for managers, directors who are too busy with many activities. However, mentioning about your time limit to the visitors has always been difficult.

Aim of the product is to tell such a thing in a humorous and ambiguous way with the help of the cup. You will not have to mention it, the cup will do it for you.

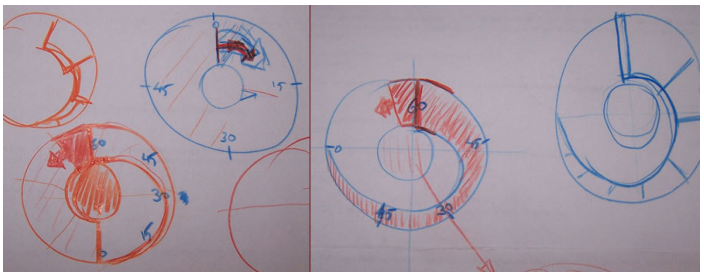

Figure 5.24. Initial sketches of the idea

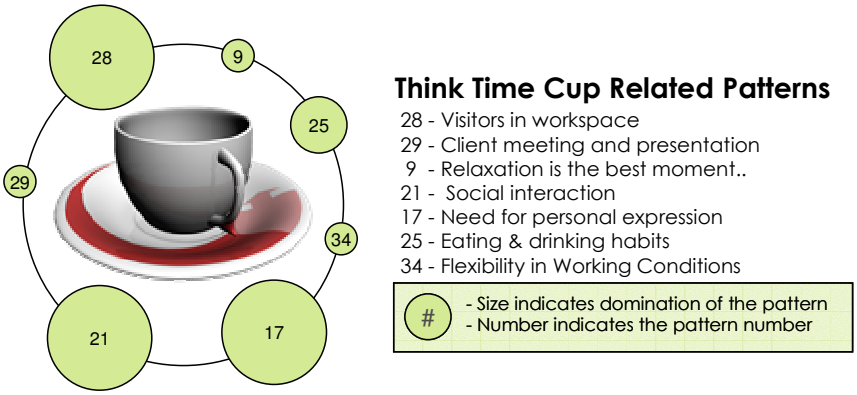

Figure 5.25. Pattern relations for Think Time Cup

5.3.2. How It Works

The Think Time Cup is a provocative office cup especially designed to grab and keep visitor's attention on the time passing by. It is an interaction tool between visitor and host in the office. It is the fun way of mentioning the time dimension of meeting ambiguously.

Before servicing the tea or coffee, office host sets the red indicator of the cup according to his time intention. Actually, indicator does not tell any precise time value. But, It can give different messages like short time, medium time, long time and the message "I don't care time for our meeting". These are not very precise messages. They are open to argue. However, the form of the cup would grab and keep the attention on the time dimension of the meeting.

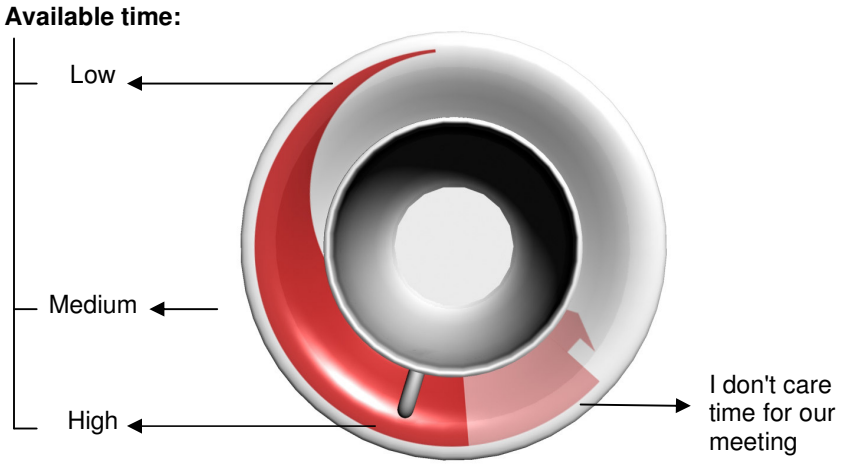

Figure 5.26. Top view of the cup

Figure 5.27. When visitor grab the cub, the text would direct the attention to the time dimension of the meeting

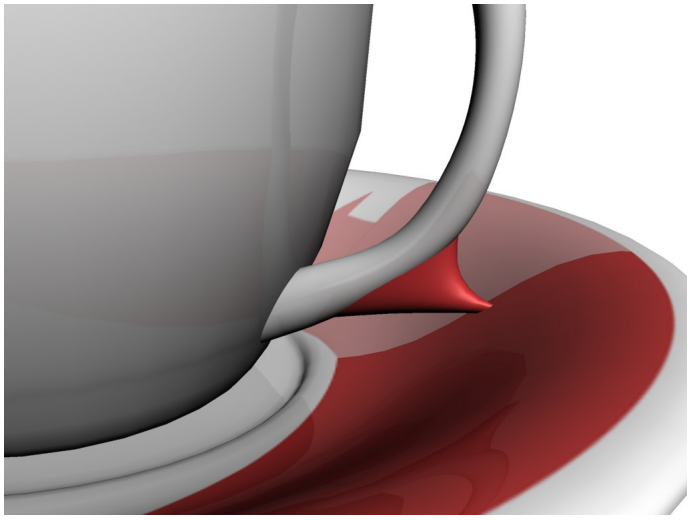

Figure 5.28. Detail view of the red indicator giving an ambiguous message about the host's available time.

If some loved one come to the office, host can set the red indicator of the cup to the unlimited time section.

Figure 5.29. Before servicing the tea or coffee, you need to set the red indicator

Design solution might seem a little bit discouraging for the visitor, but time issue is very important for office people especially for managers, directors who are too busy. From this point of view, product is meaningful, functional and also funny.

CHAPTER 6

CONCLUSION

It's important to realize that great experiences can be deliberate and are based upon principles that have been proven. This thesis study discusses most important of these principles before the practical study. Then, I aimed to understand the experience by making a practical study on a specific domain in three main steps.

In each step, I have tried to use unique and customized approaches that are specific to my individual case. I have tried to combine existing methods in a creative way to be able to find new interactions between methods that might take us to the new insights and methods. I achieved this objective mostly in data modeling phase since I have developed an information architecture for experience data.

In data collecting phase, I collected experience data for workspace domain by observing the workspace activities. I collected user experience data by using methods like photographing of workspace activity, informal interviews, field notes and ethnographic observation. Since I am already an office worker, I have been observing the experiences for a long time. I already had good collection of notes and observations from the past. Additionally, most of the new set of observation data came from the field study that I made in my office. This work environment has been observed and photographed in the data collection phase of my study.

In data modeling phase, I have tried to construct an alternative data model. I have used the "pattern language" as a base for re- modeling the experience data. For that purpose, I have developed a hybrid information architecture. This information architecture is a sort of mixture of different methods and models. It is simply a framework that allows the designer to document, collect, communicate and understand the all design related information quickly and easily.

Prior to experience mapping, I have tried to develop some other different frameworks that might gather all experience data. They were successful synopsis. Finally, I preferred using "pattern language" since it is very clean way of binding all the

data. Another reason was the fact that I could not find any other academic study using pattern language and experience research together. And I wanted to show a new application by combining them.

In design phase, only method I have used was the approach that I have developed in my thesis study. Experience map became my design guideline during design period. I put a printed large scale copy of the map on my wall in my work room. I have used this map as a roadmap for every single design idea.

My study became a useful application of pattern language in the field of experience. I have developed many experience patterns related to the workspace scenarios. Pattern sections are full of design suggestions for next generation workspaces. Every single design suggestion and remark is the result of the holistic view of all patterns that considers technological developments as well as emotional and humanistic part of the activities. This is the real strength of the model. It gives the designer very wide scope of understanding experiences with the interactions and interrelations with each other.

Information architecture has a special data encapsulation format which is inherited from pattern language. In that format, short pattern names and short essence paragraphs made my job easier to remember, communicate and connect the patterns with new ideas. Real strength of the model is the unique opportunity of defining relations from patterns to patterns and from design ideas to patterns. This flexible opportunity lets the designer visualize experience scenarios with design ideas with the higher level of understanding. For example, in design phase of my study, whenever I got a design synopsis, I was trying to conceptualize the idea in relation with related patterns.

Since the framework is quite flexible, eventually it could be transformed into a design tool that consist of pattern cards and the map. Idea of pattern was already trying to make scenarios visible for designers. Card like representation of the experience patterns would be much tangible and more communicative for the designers. Designing with the model might be much convenient and comfortable with this kind of visual representation.

Additionally, model could work much better and find many opportunities in a design team, since it is a creative communication approach that can create a optimized

information architecture for large amount of data. Moreover, it is a flexible framework which allows data set easily growing and evolving. Anyone in the team can add new nodes according to the unique and different perspectives obeying the architecture of data, since it is a data model.

Experience design is quite new approach for the design. But it will gain much popularity in next years. Many study groups, labs and communities are already being established. It already has the deserved reputation among other design philosophies currently.

At the end of the design phase, I have designed three different products which are actively related with the experience patterns. Those design projects have given the idea of how it makes difference to care about the user experience while designing products. Those three projects will be evaluated and presented to some companies which can be interested in solutions for workspaces.

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APPENDIX A

PATTERN LANGUAGE MAP OF THE STUDY