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The Role of Interaction in Service Design

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Abstract

Service Design is multi-disciplinary. To deal with the complexity of a system, Service Design has to integrate and link various fields of expertise, not only from the fields of design, but also from such fields as marketing, managements and engineering. Service Design, as an ongoing process, happens in the pre-service, service and post-service phases, in which stakeholders are involved.

The core of Service Design is interaction between the service system and the users. Interaction takes the form of “service interface.” Users go through a sequence of actions to complete their journeys for service. The success of a service lies in the experience that customers get from the journey to meet their expectation of service. Designing interactive Multiple Touch Points between users and the service system becomes especially important and is the topic of this thesis.

This thesis focuses on the interaction between a service system and users, the purpose is to explore the role of Interaction in Service Design, and formulate principles and methods for designing such interaction.
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Chapter 1

1.1 Introduction

Our life is surrounded by services. We use wireless Internet, listen to the radio, watch HD TV, mail packages, travel by air, buy insurance, and more. The service economy is booming, as more and more companies have realized that to satisfy customers’ individual needs, they may need to deliver services to customers, instead of products. Services have unique features. They are performed instead of produced as a product; they are intangible, and cannot be owned or stored; service is an on-going process, that is, the production and consumption of a service happens at the same time. As a result, to deal with an abstract service strategy, the service provider has to build a complete and complex system to support the delivery of their services.

The focus of my research is on designing of multiple Touch Points for a service system. The design of multiple Touch Points should be one specific area of Service Design.

There are three main parts of the research. The first part discusses concepts regarding service. This includes a clarification of which aspect of service is researched in this thesis. An example of a journey of mailing a package leads to the explanation of the concept of Customer Journey and Multiple Touch Points. A classification of Multiple Touch Points is also provided in this part. The research of a Customer Journey views services from a customer’s point of view, at the same time, the research of Multiple Touch Points provides a perspective to view a service system holistically. The perspective of viewing a service as
an ecological system helps to explain the feature of services that users are consumers and produces and that service is a ongoing process.

The second part focuses on Service Design. This chapter provides a definition for service design to support the context of the research. The following research includes a brief review of the development of service design, as well as summarizing features of service design. Several case studies are reviewed to discover and classify the types of service development. I also conducted a research comparing Service Design processes and methodologies to provide a basis for creating methods of designing service Touch Points.

The third part is the conclusion of the research and is described in three parts. The first part explains the role of Interaction in Service Design; the second part claims the role of other design fields in the emergence of Service Design, which focuses on how designers from various of design field can participate in Service Design area and contribute to a integrated design project. In the third part I provide several principles for designing Multiple Touch Points based on the previous research and conclusions.
Chapter 2

2.1 Which aspect of Service?

When we talk about the concept of Service Design, one initial question we will be “What service are you talking about?”

The research is not about a specific kind of service, but a certain aspect of service. Services became an important topic first in marketing from the 1970s when researchers realized that the economic value of services was beginning to exceed that of other kinds of activity. (Kimbell) People started to working out the definition of services, four characteristics of intangibility, heterogeneity, inseparability and perishability (IHIP) were first put forward by Zeithaml, Parasuraman and Berry (1985), but shortly it was shown that they were not generalizable across all kinds of service. Till now, conceptualizing services is still an unresolved topic. Meanwhile other researchers have transformed the direction from traditional marketing’s emphasis on pricing and transactions toward the interaction between individual customers and firms.

Following the current research direction of design services, my thesis takes the perspective that the task of service is for the customers to accomplish a goal; the aim of designing services is to help service providers build a differentiated service system, which could effectively lead customers to reach their goal efficiently and obtain a desirable experience. Some times the goal and the experience is the same, some times not. The process a customer uses is a series of interactions between the customers and the service system through many different Touch Points during the Customer Journey. Each Touch Point is a
component, all the components work together concordantly with a certain sequence and rhythm to accomplish the goal with providing customers good experiences.
2.2 A Package’s Journey

When I wanted to mail a package, I went online to see and compare three express companies: United States Postal Service (USPS), FedEx, and UPS. After comparing the rate and shipment time I decided to use FedEx. Then I went to the FedEx website, located a FedEx office near me, grabbed the item that needed to be mailed out, and drove to the office. I went into the store, scanned the interior environment quickly, stepped up to the service desk behind which the shop assistant was standing and smiling at me. After a short conversation, I was guided to the self-service table, checked out quickly and picked up the form I needed to fill out. I chose a right size envelop from the lower cabinet, put my item in it, and sealed it. I went to another service desk to weigh the package with help from a shop assistant, slid my credit card on a Point Of Sale terminal. I saw the shop assistant put my package in the basket at the back of the office, which meant my package was checked to be onboard. The shop assistant printed out my receipt, told me which day my package would be delivered and marked out the tracking number for me. After getting back home I went on the FedEx website again, input my tracking number, saw the status was “in transit.” One week later, I received an email said that my package had been delivered.

From the mailing, to the delivery of my package, I completed my “journey,” in the FedEx service system. During the journey I was led through a sequence of Touch Points, which were provided by FedEx, and chosen by me from a pool of FedEx Touch Points. My expectation is that my item be delivered to the destination on time.
Figure 1: A Package's Journey
2.3 Customer Journey & Touchpoints

The package’s journey can lead to two core concepts in the process of delivering a service: Customer Journey and Multiple Touch Points.

2.3.1 Customer Journey

Customer Journey is a series of sequenced interactive actions that happened between users and the service system while they were accessing the service.

For example in the my FedEx journey, the interactions can be listed as below:

- FedEx website, to compare the service between three main mailing service providers, and to locate the nearest FedEx office
- FedEx office interior environment in general
- Shop Assistant
- Self-Service Table
- Express Form
- FedEx Envelope
- Weighting Machine
- POS Terminal
- Shop Assistant
• Receipt

• Website for tracking my package

• Email

This is not the complete journey yet, my FedEx journey starts from the web search, went through all these and other upcoming interactions led by the FedEx system, ends at receive the confirm email indicated that the package had been delivered. Each step during the journey had been thought through. My journey is just one in the varies different trips which are happening every day, all the time, all these journeys are well managed by the designed FedEx service system, which is desired to be able to deliver to the customers a satisfied unique experience. To summarize, each step during the Customer Journey is a scene in which the customer faces a situation or a task, take an action, interacts with a product, interface of a service representative, and gets the motivation to move forward, and relatively gets an emotion at that point.

Research on a Customer Journey is crucial to consider a service from the perspective of one specific group of customers. It helps to get a high level overview of the factors correlated influencing one group of customers’ experience to the service. The analysis of a Customer Journey is to see what are the uncertainties, jargon, or other issues preventing the customer from moving to next step, (Richardson, 2010) as well as what structural, process, cost, implementation, or other barriers stand in the way of moving on to the next stage. (Richardson, 2010)
For example, the sequential and rhythm of a Customer Journey influences the mood of customers. When customers walk in an airport to approaching a flight, they might get bored if something progresses too slow (e.g. waiting at the airport check-in) or they might get stressed out if it goes too fast (e.g. rushing through the airport security check). (Stickdorn & Schneider, 2011) The reality that we need to face is that there is more than just one customer group, and a service system should consider all stakeholders, such as front-line staff, back-office employee, service representatives, to be not only the actors during these scenes but also the secondary users to the service.

Customer Journey Map is one of the most popular methods for analyzing Customer Journey. It is a diagram that illustrates the steps customers go through during the process they access a service.

Figure 2: A part of a Customer Journey Map
2.3.2 Multiple Touch Points

Look back to my “FedEx Journey,” what FedEx offers me is the delivery service, which itself is immaterial intangible. Customers use and communicate with the FedEx service by interacting with physical or digital elements, such as the FedEx store assistant, FedEx envelope and deliver confirmation email. These types of elements that customers interact with for the purpose of experiencing a service, which play a role of the medium during the communication between customers and service system, are called service Touch Points. Since they take variety of forms, they can be considered as Multiple Touch Points.

Figure 3: Multiple Touch Points in the "FedEx Journey"

Steven Moritz described a metaphor that all Touch Points can be considered experience puzzle pieces of the service. They complement the overall experience across the service
interface. Each piece helps to shape a whole. (Moritz, 2005) Marc Stickdorn claimed that Touch Point interaction takes place human-human, human-machine and even machine-machine, but also occur indirectly via third parties, such as reviews from other customers or via print or online media. (Stickdorn & Schneider, 2011)

Touch Points are one of the central aspects of service design. (Clatworthy, 2010) As the key of delivering a service is the interaction between customers and the service system, the core of designing the service is to design multiple Touch Points.

Even though almost all the research and practices regarding service design mention Touch Points, most of them are using the concept of Touch Points in the research or methods discussion for customers journey. The research about concept clarification, classification, and methodology of designing, managing and organizing Touch Points is rare.

Combine the description from Marc Stickdorn, and some existing knowledge comes from consultancy practices and literatures, such as “Touchpoints Bring the Customer Experience to Life” from Adam Richardson in frog design, as well as some service module case studies, I classify Multiple Touch Points into the categories of Product, People, Third-Party, and Environment.

**Product**

The category of “Product” refers to the products from the brand of the service provider. The generalized product could take any form, includes physical products, digital interface, publications, multimedia, and more.
Digital interface, as nowadays Internet has been widely popularized, sometimes plays crucial role in a service system. For example in FedEx system, the FedEx website could be the entrance to every aspect of FedEx service.

Even though product design has undergone changes during the past decades, the role of physical products still plays a unique role in service. Both for the product producers who are transforming themselves into service providers, or so called product – service hybrid systems; and the pure service systems.

As the task of service is for the customers to accomplish a goal, the function of each product as a component, contributes to accomplish the goal and providing customers good experiences together with other Touch Points, with a certain sequence and rhythm.

Koivisto defines hybrid products as products where the service has been designed as an inseparable part of the product. In this model products are part of Touch Points but they have a unique level in the system, the function of products is tied closely and should match with the goal of service, the value of the product is almost equal to the experience of using the service. OnStar is a drive assistance service based on subscription communications, includes in-vehicle security, hands free calling, turn-by-turn navigation, and remote diagnostics introduced by General Motors. When a customer signed up to use the service he or she will receive a replacement rare-view mirror, which is the device for the driver to communicate with the OnStar service center for abovementioned functions, so that we can say the service is embedded in the device. There are other Touch Points during the complete process customers using OnStar service for sure, but most of the time the replace rare-view mirror product is the “avatar” of the product.
Value is the level of effect that people personally expect from products and services, represented through lifestyle impact, enabling features, and ergonomics, which together result in a useful, usable, and desirable product. (Cagan & Vogel, 2002) In the service-products hybrid module is directly linked with the useful, usable, effective, efficient, and desirable of a service.

The unique for product Touch Points is that they keep the same brand identity and deliver consistent brand values to customers. The product graphics, packaging, instructions for assembly and use, and any digital interaction screens fit into a brand identity that complements the product and extends the brand. (Cagan & Vogel, 2002) Actually the brand identity itself could be one of the Touch Points. During the FedEx journey we can see that every product Touch Point has a bold purple and orange FedEx logo on that and keeps a relatively rigid color theme. The consistent brand identity represents that you can use their services because you can rely on them to deliver what you send on time and to the intended recipient. Starbucks on the other hand, uses a flexible identity allows each coffee roast to take on its own identity while keeping a constant core logo and style across products. (Cagan & Vogel, 2002)

**People**

The category of “People” refers to the people who work for the service provider and communicate instantly and directly with customers. These people could be service representatives, managers, store clerks and any other people that are hired by Service Providers. The value for this category of Touch Points is that customers can feel they have
been take care directly by people, which could make them feel much better than interaction with machines.

One trade-off for this is that the Touch Points of people will help greatly increasing customer satisfaction, but it is relatively expensive to the service provider.

Progressive Insurance minimizes in-person interaction to reduce costs and tries to have customers self-serve on website. While they introduced a new Touch Point that, their Immediate Response Vehicles (IRVs) shows up at the scene of the accident as soon as it’s reported, which helps the customer feel taken care of at a stressful moment, at the same time it minimizes the possibilities for fraud because the accident can be verified. (Richardson, 2010)

Interaction with people could be either face-to-face communication, like in a store to talk to the shop assistant, or virtual interaction such as talk to a service representative over the phone or chat with them on a webpage.

**Third-Party**

Third Party Touch Points refer to the elements or platforms that are not produced by Service Providers, but are used by them to deliver or promote their service.

There must be overlaps for third-party Touch Points and products, since service providers will implant their brand identification into third-party platforms. For example the advertisement on traditional newspaper or TV can be count either third party Touch Points or products. Third-party websites currently compose the most part of third-party Touch Points. These websites fall broadly into two categories: Social Media and Social
Networking websites such as Twitter, Facebook and LinkedIn and template design services such as the Word press, Typepad or Blogger hosting services. (Design Council) As the development of Social Media Services and Service Networking Services, service provider will actively use them as third-part platform to broadcast services and advertisement. On the other hand, the discussion of experience of using services, comparison of similar services, or reviewing of the quality of services will be conducted and posted on these Social Media or Social Networking websites, these are passive to service and cannot be controlled directly by service providers.

Third-party can provide either positive or negative effect to service providers. FedEx has a main page on Facebook and more and more corporation embedded a facebook “Like” button on their website. More and more service providers Sharing information on Social Networking websites since they realized that it is more a cost-effective way to broadcast services. On the other hand, in some service reviewing website such as Yelp, service experiences are evaluated, ranked, and discussed by customers themselves. These kind of websites also plays the role of third-party Touch Points, but service providers don’t have power to control them directly, so there are potentials that they may have negative influence to service providers. Meanwhile, the positive effect is that to review a service from customers directly, instead from service providers, could be believable to potential customers.

*Environment*
Adam Richardson claims a similar category called “settings” refers that anywhere that the product is seen or used: a retail store, a friend’s house, TV product placement, events, or shows will affect how a service is presented.

Environment refers to the context and channels service providers use or created, to promote their service, or guide customers to go through their journeys.

When Apple got fed up with retailers not doing a good enough job demonstrating the Mac experience, it opened up its own stores. At the time it was widely considered foolhardy; today they are considered a retail benchmark and a key reason why Apple has been able to attract a broader audience. (Richardson, 2010)
2.4 Ecological System

All Touch Points of Products, People, and Third Party constitute the service ecological system. People are users of the system and at the same time they are components of the system that keeps it running, they consuming the service while it is being produced. From this perspective the service as an ecological system is on going. The actions happen in the system, no matter consumption or production, are the interaction of human-human, human-machine, and machine-machine. The perspective of ecological system provides designers a theoretical framework to frame design opportunities and propose integrated systems level solutions. (Scupelli, 2010) It is the level to holistically view, design and manage the Touch Points and variety of Customer Journeys, consider about the impact and collaboration of individuals in multiple scopes.

When faculties and researchers in Carnegie Mellon University developing the Fitwits research project, the team considered the system from five contexts level: individual context, interpersonal context, organizational context, community context, and public policy context. (Scupelli, 2010)

The Fitwits research team conducted 6 weeks community wide game called “Fitwits Zones”, during the campaign each participant had their weekly activity menu, was asked to complete specific tasks or respond to specific questions. To complete the weekly homework participants had to organize or participate activities among friends or in a family context. Then at each weekly group session participants turn in their weekly activity menus, healthy choice coupons and homework. Each participant was interviewed to determine goals, challenges, and successes. By went through these activities from
individual level, interpersonal level, and community level, the purpose is to use games and character-driven narratives to transform unhealthy lifestyles into healthy ones and promote common sense among a integrated context includes families, schools, and community health services.

At the individual level, choices may be based in people’s attitude, values, and intentions. At the interpersonal level, people’s choices may be influenced by relationships. At the organizational level, people’s choices may be affected by rules, policies, procedures, and incentives in organizations. At the community level, people’s choices may reflect social norms, social networks, standards and practices. Finally, at the public policy level, people’s choices may be linked to government policies, regulations and laws at many levels. (Scupelli, 2010)

Figure 4: Fitwits System Ecological Model
Chapter 3

3.1 What is Service Design

Frankly, one of the great strengths of design is that we have not settled on a single definition. Fields in which definition is now a settled matter tend to be lethargic, dying, or dead fields, where inquiry no longer provides challenges to what is accepted as truth.

- Richard Buchanan, 2001

Service Design helps to innovate (create new) or improve (existing) services to make them more useful, usable, desirable for clients and efficient as well as effective for organizations. It is a new holistic, multi-disciplinary, integrative field.

- Stefan Moritz, 2005

Service Design is an emerging field focused on the creation of well thought through experiences using a combination of intangible and tangible mediums. It provides numerous benefits to the end user experience when applied to sectors such as retail, banking, transportation, and healthcare.

- The Copenhagen Institute Of Interaction Design, 2008

“What is Service Design” is an evolving debate, but it is important to appreciate the diversity and the creativity that allows pioneering practitioners and researchers to experiment with new ideas, new tools and new frameworks. (Han, 2010, p. 16) Current literature have a variety of definitions of Service Design, or some of them hesitate to define
Service Design due to the complexity and multi-disciplinary, I respect the comment that lack of a clear definition helps to keep this area open and dynamic. Meanwhile, for the purpose of researching the role of interaction design in service, I am trying to provide a definition from a specific point of view, which is open for discussing and update.

Service Design is the activity of planning and organizing Touch Points of a service, to improve the interaction between service provider and customers, in orders to lead or support customers to go through their service journey, to accomplish their goal along with a satisfied experience.

### 3.1.1 The Development of Service Design

Service Design is not a new subject but an emerging discipline. The earliest contribution discussed Service Design in the frame of marketing and management discipline. Service is viewed as a part of the product/service combination that forms larger market entities (Shostack, 1982). Approaches and concepts as Molecular Modelling Approach, Service Evidence and Service Blueprinting had been proposed (Shostack, 1982).

During the early days research on service design focused on connecting the field to other design disciplines and arguing for service design in its own right. The first service design researchers were all trained in other disciplines and moved into service design gradually. (Blomkvist, Holmlid, & Segelstrom, 2011) From the design's point of view, the researchers with background of interaction design was dominant during those days since more research was done in the intersection of interaction design and service design, rather than service design and other design fields.
Service Design was formally introduced as a discipline in 1991 by Professor Dr. Michael Erlhoff at Cologne University of Applied Sciences. (Jung, Nam, & Yu, 2009) Understanding value and the nature of relations between people and other people, between people and things, between people and organizations, and between organizations of different kinds, are now understood to be central to designing services. (Kimbell) So research on Service Design focus more on the interaction within a service system or among several systems, as well as design techniques, such as tools and processes. Topics include; the development of new tools that meet the specific demands and challenges associated with designing for services; evaluations of and improvements to existing tools, and research relating to bigger trend of co-creation. Segelstrom and Holmlid conducted research and create methods on furthering the understanding of visualizations in Service Design. (Segelstrom & Holmlid, 2009)

For people who practice Service Design in companies, they publish case studies. Although there are plenty of published case studies in service design, there is a lack of case studies in which the results have been scrutinized academically. (Blomkvist, Holmlid, & Segelstrom, 2011)

Service Design is multidisciplinary, disciplines that could contribute to further widening of service design research could be Cognitive Science, Service Science, Anthropology and Sociology. Requiring an interdisciplinary foundation and methodological rigour are key practices for universities in setting this trajectory. (Blomkvist, Holmlid, & Segelstrom, 2011)
Figure 5: Service Design Mind Map of the current Service Design ecology by Stefan Moritz
3.1.2 Features of Service Design

To explain Service Design is to build a platform, there are several existing features on it, but it is still open for adding features that will be discovered one day in the future. And when the concept of Service Design needs to be explained, people will choose characteristics from their own perspective or the field they are currently in, to explain their own Service Design. Thus, there are several features of Service Design:

**People Centered:** The concept of people centered is extended from the concept of user-centered. User-centered philosophy suggests that during the design process the end users’ needs, wants and limitations should be considered as paramount. Extend from this, the people-centered concept suggests that all stakeholders, instead of only end users, should be involved into the design process as a paramount component. User always refers to the person who uses a product or service, and consumes it. But for a service system, there are variety of stakeholders, who work for the service provider or as one of suppliers of the service provider, they are involved in the creating, providing process of the service system, but at the same time they are also using the service system, thus they can be considered as secondary users of the service system.

**Co-creative:** As the production and consumption of a service happen at the same time, users are the producers and consumers. No matter in the service development process or the service performing process, all stakeholders should be involved for exploring needs and creating better, more people centric system.

**Multi-disciplinary:** Service Design is a multi-disciplinary process. That means that Service Design integrates and links various fields of expertise. (Moritz, 2005, p. 48)
On-going: What is unique about services is that they live. (Moritz, 2005, p. 47) Not like products, service cannot be produced and then stored to sell. The production and consumption of a service happens at the same time. The service strategy is created before the service is actually delivered into the market, but the design process is still running to improve and optimize the service after the service system start to run.

Holistic: The use of designers to oversee the design outputs in channels – with an understanding of the whole process of developing a service system – rarely happened until the emergence of Service Design.

Open-ended: Because the service design manages the holistic of service, it has to leave the design outcome open-ended. Service is a system and the same time it is a platform.
3.2 Types of Service Development

There are three types of service development: Service Innovation, Service Improvements and Service Transformation.

3.2.1 Service Innovation

Service Innovation refers to developing Service Strategy based on the opportunity discovered. It could be profitable or non-profit service system. Live-Work claims that service innovations can be driven by new markets, business models, technology, or organizational change. (Live-Work: What we do)

Fitwits

Fitwits is a collaborative research project designed by Carnegie Mellon University School of Design and UPMC Saint Margaret Family Health Centers. (Fitwits, 2011)

Fitwits is a system uses games and character-driven narratives to help transform unhealthy lifestyles into healthy ones. Fitwits is designed to operate in the scope of schools, physician offices, community centers and homes. Accordingly, the people Fitwits will service include children, parents, teachers, school administrators, physicians, and community leaders. (Fitwits, 2011) These people are helped to work together towards healthy changes personal, family, organizational, and policy levels.

The core of the solution is to use tools and games to break down the barriers to provide a more effective platform for the discussion about childhood obesity between doctors and families. Fitwits is an “ecological model”, wherein a strong emphasis is placed on the confluence of family, community, and society in public health interventions. (Fitwits, 2011)
Fitwits games, cards and guides are three main categories of Fitwits products.

Cards refer to 42 matching cards and 56 trivia cards. The games operated around two group of cartoon characters called Fitwits and Nitwits that resemble food items and snacks, and whose names are derived from the food or some feature there of. The Fitwits epitomize healthy foods and promote desirable lifestyle choices, such as physical activities and active hobbies. Each character card has an illustration of a Fitwit or Nitwit, simple fat and sugar scale for the food represented by the personas, and provides easily understood Fitwits ratings. Some cards include a simple recipe that recipes reinforce use of the hand guide to measure portions. (Fitwits, 2011)

Game challenge campaign “I am Fitwits” was set in Fall 2010; it successfully effected the change of healthy behavior through the system of incentives, rewards, and competition. From the start of the game campaign, several new initiatives in the school and surrounding community have taken off, which can be seen as the growth of the service, it's like a successful call for other components in the community to became stakeholders and became actors in the service system. Since they found this successful integration in which the end users of the service can be satisfied and the participators get benefits from some certain aspects.

Fitwits Zone is another campaign with a scope of three miles from the game center. It is designed to set in local community centers and schools. During the campaign, games are conducted in such environment/places where individual, family, community can be gathered together, to form impressions, make decision, and “try-on” new health behaviors. (Fitwits, 2011)
The role of Fitwits Zone is a place for engaging families in healthy lifestyle activities for a longer period of time. It’s interesting to view the Fitwits Zone as a platform on which the service can ecologically grow in a community population, by sharing and passing the experience.

![Fitwits Web Site](image)

Figure 6: Fitwits Web Site

### 3.2.2 Service Evolution

There are two type of Service Evolution, one is the service provider improves partial of the service by adding new features or optimizing some parts of current system, the other one is the service provider turns their service system radically into another service market.
FedEx Tracking System

FedEx introduced the concept that information about a package is as valuable as the shipment itself. FedEx launched fedex.com as the first transportation website to offer online package status tracking. Customers immediately grasped the value and convenience of using the website and began adopting the channel. In 1995 fedex.com managed approximately 9,000 tracking requests a day and today it processes over 6 million daily tracking requests. (FedEx)

In January 2009 FedEx launched new online tracking system that can provide customers more clarity results and takes care of their personal preferences. The new tracking system available in 26 languages, includes a shipment progression graphic enabling users to get tracking information. Users can view tracking results based on different time zones. Tracking number can also be saved, eliminating the need to re-enter data for subsequent tracks. The new system also classified customers into categories for focusing more specifically on their preferences.

General consumers and small businesses and recipients are primary users the system served. Transportation professionals need sophisticated tracking tools with robust shipment search capabilities, data filtering, and automatic information refreshes. Accordingly a subsystem called My FedEx was developed to provide users with a consolidated view of inbound, outbound and third party shipments. Small business managers / multi-taskers group can handle multiple business functions rely on FedEx Desktop to monitor shipment status quickly and easily from their computer desktop. Mobile Professionals are constantly on the go, they can get the same level of shipment
information on their mobile device as on their computer, by using FedEx Mobile. With FedEx Mobile customers can also create shipping labels, check rates, and find nearest FedEx store or drop-off location.

**UPS Logistics**

In 2010 United Parcel Service (UPS) replaced its memorable slogan “What can Brown do for you?” with the slogan, “We [Heart] Logistics.” Print, television and digital-media ads in the U.S., China, Mexico and the United Kingdom started running on the September. (Leviz, 2010) And UPS claim “logistics” is not only the foundation of UPS’s new global advertising campaign, but also a referring of its extensive portfolio of solutions collectively. The campaign reflects the company’s radical evolution from simply a package delivery service to a full logistics provider. (Strategic Sourceror, 2010)

Based on an explanation of modern logistics concept, UPS is generating an evolution for its service to promote values from a perspective of logistics to customers. UPS describes the modern logistics concept as:” Logistics is a strategic way to add value to your business. It makes running your business easier. It lets you serve your customers better. And it can help you grow. The new logistics is about using the movement of goods as a competitive advantage. It’s a whole new way of thinking. And it’s a powerful force for growing your business. The new logistics levels playing fields. It lets you act locally or globally. “ (United parcel Service of america, Inc.)

UPS promote its “We love logistics” campaign from four core values: “Grow your business”, “Serve customers better”, “save time and money”, and “be more sustainable”. (United
Parcel Service of America, Inc.) And develop products and services as Touch Points based on the values.

<table>
<thead>
<tr>
<th>“Grow your business”</th>
<th>“Serve Customers Better”</th>
<th>“Save Time and Money”</th>
<th>“Be More Sustainable”</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPS Paperless Invoice</td>
<td>UPS Returns</td>
<td>UPS WorldShip</td>
<td>UPS carbon neutral</td>
</tr>
<tr>
<td>Global Freight Services</td>
<td>UPS carbon neutral</td>
<td>Billing</td>
<td>UPS Billing Center</td>
</tr>
<tr>
<td>International Shipping</td>
<td>UPS CampusShip</td>
<td>The UPS Store</td>
<td>UPS Smart Pickup</td>
</tr>
<tr>
<td>UPS Trade Direct</td>
<td>UPS Developer Kit</td>
<td>Tracking Services</td>
<td>Eco Responsible</td>
</tr>
<tr>
<td>UPS WorldShip</td>
<td>Post Sales Service</td>
<td>Shipment Processing</td>
<td>Sustainability Report</td>
</tr>
<tr>
<td>Worldwide Expedited Service</td>
<td>UPS Express Services</td>
<td>UPS Returns</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: UPS "We love logistics" campaign related products and services

UPS Reorganized its Touch Points and created several secondary brands. So the Touch Points design for service evolution is about reorganizing before creating.
UPS did a good job of designing and organizing Touch Points from a holistic view and made each set of Touch Points match with its value to each customer group. The success is based on the clarification of values of service, and the clear target market positioning.

Figure 7: UPS "We love logistics" logo
Figure 8: UPS Store as one of the Touch Points makes their advertisement facing different groups of customers
3.2.3 Service Transformation

Service Transformation refers to the company that redefines their current products as part of a service proposition, accordingly they refine their products as a service evolution.

For the companies that wish to redefine their current products as parts of a service, they are actually building product-service hybrids, in which product and service are supporting each other. Industrial producers came from the era of industrial production, in which selling service along with products was not usually considered, in this case nowadays they have to face the reality that the customers have been trained to shift their expectation from products themselves to the experiences they get when using the products. So service, which is developed by the industrial producers to support the products, aims largely to increase profitability, growth and customer retention. (Stickdorn & Schneider, 2011) The advantage for an industrial producer or industrial designers is they can transfer the User Centered Design process model easily to the development of service.

OnStar

The OnStar Corporation is a subsidiary of General Motors. OnStar is a service system that provides subscription-based communications, in-vehicle security, hands free calling, turn-by-turn navigation, and remote diagnostics systems.

The core function of the OnStar service is communication between drivers, vehicle, and the service center. (Passengers can use an audio interface to contact OnStar representative for emergency services, vehicle diagnostics and directions, and vehicles will also contact representatives automatically in the event of a collision.) GM advocates tout OnStar as an
essential safety tool that can be compared to seatbelts and airbags. OnStar service include aiding police in tracking down stolen vehicles; notifying drivers of potentially dangerous mechanical problems; sending email of vehicles’ diagnostics to users monthly; as well as actively connecting with the OnStar service center for roadside assistance and crash response.

The OnStar module is embedded in the rear-view mirror of some GM vehicles. OnStar FMV became available on July 24, 2011; it’s a replacement rear-view mirror with a built-in OnStar module for non-GM vehicles. The OnStar device as a product is the most important Touch Point of the service because when the service is in use all the interactions between users and the service system have to go through the device. In this case the OnStar device is the carrier of the service.

OnStar is a service developed by General Motors and first bundled with GM vehicles to improve the safety and the experience of driving a GM vehicle. When product producers, such as General Motors, redefine their current products as part of a service proposition, and refine their products as a service evolution, they will embed the service into products. So the value and quality of the service is embodied by the experience of using their products.

<table>
<thead>
<tr>
<th>Emergency</th>
<th>Security</th>
<th>Navigation</th>
<th>Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic Crash Response</td>
<td>Stolen Vehicle Assistance</td>
<td>Turn-by-Turn navigation</td>
<td>Hands-Free Calling</td>
</tr>
</tbody>
</table>
Table 2: OnStar Function Details

<table>
<thead>
<tr>
<th>Emergency Services</th>
<th>Roadside Assistance</th>
<th>eNav</th>
<th>OnStar RemoteLink Mobile App</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remote Services</td>
<td></td>
<td></td>
<td>Diagnostics</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OnStar Vehicle Diagnostics</td>
</tr>
</tbody>
</table>

Figure 9: OnStar Web Site
The candy-colored iMac led the charge for Apple’s comeback in 2000, after that the company started to think how to make more people buy Macintoshes. They decided to catch up to the revolution that music lovers, who were big source of iMac sales, were rushing to digital by attaching speakers to their computers and ripping CDs. So Apple licensed the SoundJam MP music player and hired its programmer Jeff Robbin to retooling SoundJam into iTunes. (Kahney, 2006)

“IPod has revolutionized the way you listen to, and carry around your music. Now iPod, together with iTunes, also features the easiest way to manage your music, photos, and videos, for listening and viewing everywhere you go.” iPod is design with a background opportunity gap that the digital music players before iPod were either big and clunky or small and useless.

iPod is considered as a part of Apple’s “digital hub” category. The Mac is a hub, or central connection point, for a host of gadgets. (Kahney, 2006) And Steve Jobs insisted the iPod work seamlessly with iTunes, and that many functions should be automated, especially transferring songs. By this concept Apple was actually starting a system, which centered with Mac, constituted with ultimate external devices and services.

iPod can be seen as one product Touch Point of the music service provided by Apple. By the opening of iTunes Store in 2003, the system was expended into the music download market and involved more stakeholders in it. The scope of service was also expended to TV shows, movies, books, podcasts, and games. In 2007, the company removed the word “Computer” from its name as its traditional focus on personal computers shifted towards
consumer electronics. Apple has transferred its role from a computer producer into a service provider who is building a system that contains several interrelated service modules, along with varieties of Touch Points.
3.3 The process/models/methodologies of service development

Complete Service Development processes are usually created for complete service innovation projects. For projects of Service Improvement and Service Transformation it is necessary to use the models in alternate way or to use some parts of the whole process.

In the same way that a geographical map gives an overview of an area (all villages and towns need to be explored to produce the map) it is necessary to explore the different parts that make up the whole of Service Design. (Moritz, 2005)

3.3.1 Brigit Mager's Service Design methodology:

Service Design Methodology was developed by Brigit Mager based on her extensive research and experience with Service Design projects. It contains nine segments that cover analysis, innovation, strategy, specific development, testing, environment analysis, and client typology. (Moritz, 2005) It can be considered a framework, however, it was found that this model is a useful overview but that it is tailored more for insiders in Service Design than general practitioners and decision makers. The nine segments have been used to develop an initial list of tasks that are important in Service Design. This methodology gives a compact overview of the different stages that Service Design covers without relying on a time-based process. The model is generic and does not mandate how different stages link into each other and which areas iterate. It therefore provides a very useful overview of specific stages but is not self-explanatory or easy to understand. (Moritz, 2005)
3.3.2 IDEO design process:

IDEO service design process is divided in three main segments. The first segment covers observing and understanding people, business and technology. All insights lead into the development of a strategic framework.

The second segment includes the principle of iteration. Idea development and prototyping help to develop a final concept. This is then translated into product, service and space solutions. This process was very helpful to gain understanding in what type of tasks need to be accomplished in the course of a Service Design project. However, rather than an overall framework it provides a working process tailored specifically to IDEO. (Moritz, 2005)
3.3.3 AT-ONE:

AT-ONE is an approach to assist project teams during the early phases of the service design process. It focuses upon the differences between products and services, and has a clear user-experience focus. AT-ONE has been developed during the past four years as part of a research initiative to improve service innovation. (Clatworthy, 2011)

The way to practice AT-ONE is to run a series of workshops, combined or separately. Each workshop should focus on one of the letters of A (Actor plan), T (Touchpoints plan), O (Offering plan), N (Needs plan), E (Experience plan). The AT-ONE model view each workshop as one specific aspect to view and explore the same design challenge, to build the structure of the service system from each different component. It does not introduce radically new tools to the development process. Instead, it combines best practice from business, design and research. Each workshop has three phases, and is based upon commonly used creative processes (Clatworthy, 2011):

- Start: establishment of a common knowledge platform for all participants (1/5th of workshop)

- Divergence: exploration and generation of ideas and solutions

- Convergence: synthesis, prioritization and decision-making

A: Actors plan. The Actors section view users as co-creators of value. Among the past ten years the cognition of how value is created has shifted from traditional silos of expertise to that value is created more and more in networks of collaboration. Alternate to value chain, value networks recently experienced a rapid development especially in the area of the
service industry. The key is to see the potential that lies in the reconfiguration of roles and relationships among the constellation of actors, to facilitate the creation of value in new forms and by new players. (Clatworthy, AT-ONE: Becoming AT-ONE With Your Customers, 2011) The characteristic of the section is, instead of a company-centered mapping of actors, we should generate a map in which the customer is at the center of network to consider new actor set that has an improved customer value.

T: touchpoints plan. Service design is about choosing the most relevant touchpoints for service delivery and designing a consistent customer experience across these many touchpoints. (Clatworthy, AT-ONE: Becoming AT-ONE With Your Customers, 2011) This section reorganizes touchpoints and coordinates the user experience by introducing new and more effective touchpoints, and reduces weak touchpoints. The touchpoints plan is a metaphor of the Customer Journey as a chain of touchpoints, the chain will break at the weakest link, so each ring of the link has to be appropriate and efficient in satisfying customer experience.

O: Offerings plan. The certain method of this section is called “the brand megaphone”, which creates a service personality that can describe the brand anthropopathy, to further discover the brand DNA which is now closely related with the offered service in the level of functional, emotional and self-expression. The description of the personality also provides a basis for designing the touchpoints as well as coordinating behaviors at each touchpoint.

N: Needs plan. The section is about using a customer-centered approach to discover customers’ needs. The design team used wide range of methods, such as interviews, observation, participatory design sessions to collect user perspective and present them
with personas. The main questions this research attempts to address are those of whose needs the organization should focus upon, how well do you as an organization understand your customers’ needs and to what extent are you as organization satisfying them. (Clatworthy, AT-ONE: Becoming AT-ONE With Your Customers, 2011) To understand and involve customers to this level is trying to ensure the downstream success of the service. (Clatworthy, AT-ONE: Becoming AT-ONE With Your Customers, 2011)

E: Experience plan. According to the importance of experience in a service, the aspect of this section is to use experiences as a starting point for Service Design. The team designs the ideal service experiences at the start, then reverse engineers the offering, touchpoints, and even organization to reliably produce the desired experience.

3.3.4 Marc Stickdorn’s Four Steps Process (Stickdorn & Schneider, 2011):

Marc Stickdorn describes the Service Design process as four basic phases: Exploration, Creation, Reflection, and Implementation. The four steps process is an attempt to articulate a time based Service Design process outline structure. The theoretical structure should not be seen as a linear how-to guide process. First of all it’s not linear even though it is time based, because when using the structure in practice it might be necessary to step back to any previous phase or even start over from the beginning, thus the process is iterative. Besides the process is not a how-to guide, because of the differences from project to project, the process in each service design process is various. One of the most crucial variables is the type of the service development, complete service design process is usually be described on a basis of complete service innovation project. Service improvement projects
and service transformation projects are structurally similar but they will emphasis some certain parts during the process.

**Exploration**

Tasks:

1. Understand the culture and goals of the company providing a service

2. Gain a clear understanding of the situation from the perspective of current and potential customers of a certain service.

3. Visualize the findings and as far as possible the underlying structure of the previously intangible services.

**Creation**

The task of the Creation phase is to generate and develop solutions based on the identified problems and in-depth insights generated in the exploratory stage; the identification of customers’ needs, motivations, expectations, the service providers’ processes and constraints, and the illustration of the Customer Journey, consisting of a sequence of touchpoints. (Stickdorn & Schneider, 2011)

Iterative not only happens during the process of the presented four stages, but also within each stage, within each workshop, within each brainstorming session.

**Reflection**

The phase of Reflection is about testing and retesting. The main action in this phase is prototype, and main challenge for this is the intangibility of service.
The task is to help customers to generate a good mental picture of the future service concept. It is important to prototype service concepts in reality or circumstances close to reality. Service design thinking uses different staging and role-play approaches from theatre to play through certain service situations and helps incorporate the emotionally important aspects of personal interactions with the service proposition. (Stickdorn & Schneider, 2011)

**Implementation**

The implementation of new service concepts by necessity demands a process of change. There should be several basic principles of change management that need to be considered at this point. First of all the change should be based on a consistent service concept formulated and tested during the previous stages. A clear communication of this concept is essential and needs to include the emotional aspects of a service – the desire customer experience. And the employees also should be involve into the service implementation since it’s essential that the employees understand the concept and support it, thus their motivation and engagement is crucial for a sustainable service implementation. The iterative four steps of exploration, creation, reflection and implementation are a very basic approach to structure such a complex design process. (Stickdorn & Schneider, 2011)

**3.3.5 The Double Diamond model**

The Double Diamond is a good model to explain the four steps process.

British Design Council developed the Double Diamond diagram through an in-house research in 2005 as a simple graphical way of describing the design process. The diagram
divided a complete design process into four distinct phases, Discover, Define, Develop and Deliver, it maps the divergent and convergent stages of the design process, showing the different modes of thinking that designers use. (Design Council, 2005)

![Double Diamond model](image)

**Figure 11: Double Diamond model**

**Discover**

The first quarter of the double diamond model, the Discover phase takes a divergent shape. This phase contains an initial idea or inspiration process with the purpose of generates as much ideas, opportunities and possibilities.

**Define**

The phase of Define is illustrated with a convergent shape, which indicates the summarize and conclude the outcomes from the Discover phase and clarify key opportunities and further directions.
**Develop**

Develop is another divergent phase in which design-led solutions are developed, iterated and tested within a certain environment. Key activities include multi-disciplinary working, visual management, development methods, and testing.

**Deliver**

The final convergent phase is Deliver, in which the resulting product or service is finalized and launched in the relevant market.

### 3.3.6 Hollins and Shinkins model (Han):

Han Qin introduced Hollins and Shinkins’ New Service Development model in her thesis. Hollins and Shinkins’ model was first developed and presented in 1991 on the basis of Total Quality Management. Total Design has been used on product development since it is proposed in 1991 although the model is initially proposed to work on both product and service development. Many concepts are developed on the reference of the British Standard Guide to managing the design of service (BS 7000-3) that Hollins contributed. The model mentioned in the thesis combines Hollins version and a Service Design process model developed by Gill Wildman from Plot.
Figure 12: Hollins and Shinkins Model
3.3.7 Live Well Collaborative Design Process:

Live Well Collaborative is an innovation, leading edge model for corporations and universities, specializing in research and development for the 50+ market. Located at the University of Cincinnati and serving a wide variety of corporations, Live Well Collaboration defines its mission as to develop products and services that delight the 50+ consumers. (Live Well Collaboration)

Live Well Collaborative design process begins with the phase 0, to identify the opportunities, target consumers, and expected results. Then form a multi-disciplinary according to the skills and expertise that are needed to accomplish the project. Phase 1 is about understanding opportunities, using a set of qualitative research techniques to translate the opportunities into criteria for the expected design outcomes. In phase 2, the team creates concept ideas based on the criteria and the insights they obtained from the previous research. The outcome of this phase is one or two directions toward the final deliverable. Phase 3 “Test and Detail” is about testing the concepts through primary and secondary consumer research, obtaining clients’ feedback, as well as working out technical details such as potential sales and profit of the product or service plan, and finally present
the deliverable outcome to the client. Phase 1, 2 and 3 are iterative (figure). Based on the result of testing the concept with customers, the team may go back to the ideate phase to optimize the concepts or even to the phase of understanding to rethink or evaluate the opportunities.

![Diagram showing the iteration among the three phases]

Figure 14: The iteration among the three phases

After the reviewing of design processes, it is found that even though different frameworks have different amount of steps, each step has different name, tasks and tools, but fundamentally they all share the same mindset. (Stickdorn & Schneider, 2011) If use Marc Stickdorn’s four steps process as a template, each framework can be destructed and fitted into the four fundamental steps. Accordingly, my research uses Marc Stickdorn’s design process as a basis to further discover of the role of interaction and principles for designing Touch Points.
<table>
<thead>
<tr>
<th>Marc Stickdorn's four steps process</th>
<th>IDEO Design Process</th>
<th>The Double Diamond model</th>
<th>Hollins and Shinkins model</th>
<th>Live Well Collaborative Design Process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exploration</strong></td>
<td>Understand and Observe (Segment 1)</td>
<td>Discover (divergent); Define (convergent)</td>
<td>Identify Services (Phase 1)</td>
<td>Identify (Phase 0) &amp; Understand (Phase 1)</td>
</tr>
<tr>
<td><strong>Creation</strong></td>
<td>Visualize and Refine (Segment 2)</td>
<td>Develop (divergent)</td>
<td>Develop Insights (Phase 2); Generate Ideas (Phase 3)</td>
<td>Ideate (Phase 2)</td>
</tr>
<tr>
<td><strong>Reflection</strong></td>
<td>Visualize and Refine (Segment 2)</td>
<td>Develop (convergent)</td>
<td>Evaluate and Refine (Phase 6)</td>
<td>Test &amp; Detail (Phase 3)</td>
</tr>
<tr>
<td><strong>Implementation</strong></td>
<td>Implement final concept (Segment 3)</td>
<td>Deliver (convergent)</td>
<td>Implement and Deliver (Phase 5)</td>
<td>Final Deliverable (Phase 3)</td>
</tr>
</tbody>
</table>

Table 3: A summarization of the design frameworks
Chapter 4

4.1 Conclusion

4.1.1 The role of Interaction in Service Design

Look back to previous chapters, a well designed service is the one that can effectively lead its customers go through their journey to reach the goal along with obtaining the expected experience. Multiple Touch Points are the “guides” of the Customer Journey; they are the medium of delivering the service. The campaign of designing a service system is people centered, co-creative, multi-disciplinary, on-going, holistic, and open ended. All of these lead to the philosophy of Interaction.

Interaction Design, as a design field, refers to the practice of designing interactive digital products, environments, systems, and services. (Cooper, Reimann, & Cronin, 2007)

Interaction as a philosophy refers to a kind of action that occurs as two or more objects have an effect upon one another. (Wikipedia, 2012) To design the interaction is to deal with the interactive actions by managing and planning the interrelated individuals in a system. As service design players recognized today, concrete actions in a service system are interactive, and the design for a service system is to optimize the interaction, the philosophy of Interaction should be the methodology of Service Design. Since the Multiple Touch Points could be categories of Products, People, Third-party, and Environment, the interaction accordingly takes form of digital, physical, or human-human interaction.

4.1.2 Principles of designing Multiple Touch Points

People Centered
Extending from the concept of User Centered, the concept of People Centered suggests that all stakeholders, include both end users and secondary users such as employees who work for the service operator, should be considered in the design process. The people Centered concept is also one of the principles of overall service design. As the medium of delivering services, Multiple Touch Points should also reinforce the crucial role of stakeholders.

**Coherence**

The web design team needs to be in synchronization with product development, which needs to coordinate with marketing and sales. The designers need to coordinate with third-party suppliers. Even though they contribute to same service providers, Touch Points may be created and operated by different people, different departments or even different companies. So to keep the coherence of Touch Points becomes important in order to keep the varies Touch Points synchronous and tell customers the same thing.

**Flow Smoothly**

To lead or support customers through a complete journey; make each Touch Point a step in the journey, keep the customers’ interest and provide enough of a hint for them to go to the next step, Touch Points have to connect with each other smoothly to form a sequence.

**Differentiate**

“Are the Touch Points differentiating you from competitors and helping retain the customers?” (Richardson, 2010) Since Touch Points are the only way customers recognize the service, on a holistic level, Customer Journeys are similar in several highly optimized
service systems within the same industry, such as UPS and FedEx, then it becomes important to provide differentiated experience by creating unique Touch Points.

4.1.3 The role of other design fields in the emergence of Service Design

Service Design was first mentioned by marketing people. After that people entered this field from variety of disciplines. Reviewing the service design methodologies, and the evolution of design, as an emerging field, service design is standing on the shoulders of other design fields and incorporating expertise from a variety of disciplines. User-centered design approach, a variety of qualitative and quantitative research and data gathering approaches, and visualization techniques such as sketching, imaging and prototyping are all been used in Service Design projects. The iterative model also provides a frame for testing the result from each step during the design process by collaborating with users.

Because of the complexity of integration, the service design is multi-disciplinary and always conducted by a multi-disciplinary team. Members from each discipline have their specific role in a Service Design campaign. Industrial Designers play an important role in designing product–service hybrid systems, meanwhile, in other types of systems Industrial Designer could also contribute their expertise in consumer research, concept creation and development. Besides, product design is always linked to a manufacturing process, which is important for a service system no mater whether it is a service-product hybrid system.
Bibliography


http://www.designcouncil.org.uk


http://news.van.fedex.com/visibility


Hollins, B., & Hollins, G. *Over the horizon: planning products today for success tomorrow*. John Wiley & Sons Ltd.


http://online.wsj.com/article/SB100014240527487046212045754878400032479922.html

http://www.livewellcollaborative.org/index.html


Miettinen, S. Product Design: Developing Products With Service Applications. In M. Stickdorn, & J. Schneider, *This is Service Design Thinking* (pp. 56-67).


Stickdorn, M., & Schneider, J. (Eds.). (2011). *This is service design thinking: basics--tools--cases.* Amsterdam, Netherlands: BIS Publishers.


http://www.servicedesigntools.org/tools/8


United parcel Service of america, Inc. (n.d.). *The New Logistics.* Retrieved from UPS:

Wikipedia. (2012). *Interaction.* Retrieved from Wikipedia, the free encyclopedia: