



**LUND UNIVERSITY**  
School of Economics and Management

# **v-Business model in virtual world**

## Second Life case study

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### **Résumé**

Virtual worlds are online communities in which individuals are able to interact with each other in real time. Growing rapidly since 1996, the population of these virtual worlds has become several millions. The advent and prosperity of virtual worlds reveal challenges worth exploring on business, society, politics, communication, education, technology, ethics, etc. The focus of this study is one of those issues—business.

This thesis is devoted to the study of the developing virtual business (v-Business) in the fast-growing virtual worlds; more precisely, its business model, which is essential for companies to survive. It explores two questions: First, what are the business model components that constitute a v-Business model? Second, what are the relationships among the business model components? In order to allow more depth of understanding of the properties and characteristics of virtual business models, the study concentrates on a single virtual world which is Second Life, as the context of v-Business investigations. Our study bases itself on the information recollected using online interviews and observations. Various existing theories on business models and virtual communities were also used. Consequently, a v-Business model is composed of five business model components which are market, value proposition, activities, resources, and revenue model. For the relationships among these components, revenue model component affects all the components as a whole; resources component builds activities component; activities component delivers value proposition component and value proposition component provides benefits to customers.

### **Key words**

Virtual world, v-Business/virtual business, business model, virtual community, Second Life

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Lund University, June 2008

Vorapong Serbmongkolchai

Xiao Chen

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# **1. Introduction**

New technologies mean new economies; new economies mean new economy principles and business models (Noam 2007). The fast growth of virtual worlds leads to the emerging of v-Business. In a virtual world, players have the opportunities to hold, create, sell and purchase virtual stuff with virtual currencies which can be traded into real world currencies, so the v-Business is very different from earth ones. As the line between the real world and the virtual one keeps getting harder to draw (Calypso 2007) while economic and social activity gradually migrates from earth to cyberspace (Castronova 2003), v-Business begins to have large effect to the world economy.

Currently there are two totally different opinions about the future of v-Business: some researchers and companies deeply believe that there is a large economic potential in virtual worlds— “Just as the World Wide Web of the 1990s quickly spawned whole new industries, the virtual world offers a microcosm of vast potential for business, commerce, marketing, and learning in this decade” (Zimmer 2007, p. 40); by contrast, others state that such economics “will follow the pattern of classic boom cycles: innovation, expansion, over-expansion, implosion, bust” (Noam 2007, p. 109).

The attractive possibilities and hot controversies on v-Business make the topic interesting to us. Our research is to investigate the model of the virtual business, by studying the previous theories, interviewing relative people, and observing the current business phenomena in the virtual world.

## **1.1. Background**

### **1.1.1. Virtual world**

Virtual worlds are online communities in which individuals interact in simulated environments (Chesney et al 2007). Virtual worlds operate over the Internet in which anyone around the world can access. Lastowka & Hunter (2004, p. 4) described virtual worlds as “places where millions of people come to play, trade, create, and socialize“. Virtual worlds are also called "digital worlds," "simulated worlds" and "MMORPGs (Massively Multiplayer Online Role Playing Games)". More details on virtual worlds will be discussed later in virtual world chapter.

### **1.1.2. v-Business**

v-Business or virtual business is a new term which refers to a business in a context of virtual world. This can be defined as an operation to provide products or services in order to generating revenue as an objective of making profit (Rappa 2008).

### **1.1.3. Business model and its components**

Considering different aspects of v-Business, business models are perhaps the most discussed and least understood one (Rappa 2008). The concept of business model has been adopted in many

businesses for many years. Hedman & Kalling (2002) stated that business model captures the aspects of strategic management which is helpful to determine any drivers or obstacles to economic value such as factor markets, resources, knowledge and competencies, activities and organization, offerings, customers and competition. Among the numerous definition of business model, there are two key aspects for the concept which are how a company generates revenue and how a company manages the relationships of different stakeholders and market (Li 2007). Business model components are building blocks that make up a business model. Each component is taken from the broad integration of the different strategy perspectives (Hedman & Kalling 2002). More detail on business model and its components will be discussed later in business model chapter.

## **1.2. Problem**

“Even though there are so many people around the world who are active in these virtual worlds, scholars have only recently begun to understand the dynamics of these communities” (MacInnes & Hu 2007, p. 131). Some researchers have investigated the research opportunities on different aspects of virtual worlds. According to the research of Gregor (2006) on structural nature of theory, Bray & Konsynski (2007) conclude that several intriguing questions can inform both existing theory and generate wholly new theories on business, information systems, and political science in virtual worlds. Hendaoui et al (2008) state that new theories and concepts for virtual world need to be built in order to explore the frontiers between reality and virtuality; they point out seven fields of issues that researchers and managers will have to face in the near future: Business Issues, Social and Political Issues, Communication and Collaborative Work Issues, Educational and Learning issues, Technological Issues, Mapping between the Real World and the Virtual World, Ethical and Legal Issues. Business model is one of v-Business issues discussed by Hendaoui et al (2008). The increasing in demand for virtual products and services in virtual world has contributed to new types of businesses in the area of content creation, retail, conference and event hosting, real estate and financial services (Salomon 2007).

Li (2007), Laudon & Traver (2002) and Rayport & Jaworski (2001) suggest that a business model is essential for companies to thrive and survive. Thus, business owners need to understand the concept of business model to ensure the success. According to our literature review, there is no empirical research about the business model in the context of virtual world. Thus, it becomes more and more important to provide a better understanding of the relationships among the business model components that constitute a business model in virtual world which is different from traditional business and e-Business.

## **1.3. Research question**

To investigate the model of v-Business, we focus on the following two questions:

- What are the business model components that constitute a v-Business model?

- What are relationships among the v-Business model components?

This research attempts to address these questions.

#### **1.4. Purpose**

We investigate the emerging virtual business phenomena. The purpose of the research is to describe and explain a v-Business model in a virtual world by adopting current business model theories in two major aspects, it makes two scientific contributions to the study of the developing v-Business: (1) the management strategies of how a company generate revenue to sustain itself, from the generation of product or services (inputs) into profits (outputs), (2) the roles and relationships among various business actors, products, services, information, costs and revenues. These aspects are described in each of the business model components. We also discuss the differences between virtual business model and real-world business model.

#### **1.5. Delimitation**

The research problem is on virtual business model, the content of virtual business should be clarified from the beginning. As described by Hagel & Singer (1999), there are three kinds of businesses beneath the surface of most today's companies: (1) the customer relationship business, (2) the product innovation business, and (3) the infrastructure management business; each of these three businesses plays different roles, has different characteristics, follows different economic, hires different employees, requires different strategies, organizational structure and process, and uses different business models. Business in a virtual world involves all these three categories of businesses: designing and producing products, real estate, marketing, advertisement, customer service, promotion and communication, seeking candidates and even hiring people in-world (Sivan 2008a: Hendaoui et al 2008). The research area of this study does not include the organizational infrastructure within a company—the infrastructure management business, which includes division of labor, culture, norms and values, politics, and patterns of communication and coordination. According to Hedman & Kalling (2002), these aspects are described separately in the organizational theory. Meanwhile, this study focuses on the business phenomena inside virtual worlds, not the business models of virtual worlds themselves—those virtual worlds, such as Second Life, are introduced and observed as the context of virtual business events.

## 2. Business model

### 2.1. Definition of business model

Many definitions of business model have been discussed by various authors. Table 2.1 shows the variation of definitions within relevant literatures.

**Table 2.1** Business model definitions

<b>Authors</b>	<b>Definition</b>
Timmers (1998)	An architecture for the product, service and information flows, including a description of the various business actors and their roles; a description of the potential benefits for the various business actors; and description of sources of revenues.
Jutla, Bodorik et al. (1999)	The business model determines processes and transactions.
Tapscott et al. (2000)	A business model is about the invention of new value propositions that transform the rules of competition, and mobilize people and resources to unprecedented levels of performance.
Applegate (2001)	A description of a complex business that enables study of its structure, the relationships among structural elements, and how it will respond to the real world.
Hawkins (2001)	A description of the commercial relationship between a business enterprise and the products and/or services it provides in the market. More specifically, it is a way of structuring various cost and revenue streams such that a business becomes viable, usually in the sense of being able to sustain itself on the basis of the income it generates
Weill and Vitale (2001)	A description of the roles and relationships among a firm's consumers, customers, allies and suppliers that identifies the major flows of product, information and money, and the major benefits to participants.
Petrovic et al. (2001); Auer and Follack (2002)	A description of the logic of a 'business system' for creating value that lies behind the actual processes.

Magretta (2002)	A story that explains how an enterprise works.
Osterwalder and Pigneur (2002)	A description of the value a company offers to one or several segments of customers and the architecture of the firm and its network of partners for creating, marketing and delivering this value and relationship capital, in order to generate profitable and sustainable revenue streams.
Mansfield and Fourie (2004)	A business model most commonly describes the linkage between a firm's resources and functions and its environment. It is a contingency model that finds an optimal mode of operation for a specific situation in a specific market.
Rappa (2004)	A business model is the method of doing business by which a company can sustain itself – that is, generate revenue. The business model spells out how a company makes money by specifying where it is positioned in the value chain.
Yip (2004)	A business model embraces the target customer, the nature of the business and how revenues (and hopefully profits) are generated.

Source: Vassilopoulou et al. (2003); Li (2007, p.135). Note: Li (2007, p.135) developed the table of Vassilopoulou et al. (2003, p.4); he puts the definitions in the order of years, and adds the definitions by Mansfield & Fourie (2004), Rappa (2004), and Yip (2004).

To summarize, according to the various definition of business models from the table, a business model is a framework for doing a business in which a company can sustain itself, that is how a company generates revenue. It describes roles and relationships among a various business actors, products, services, information, costs, and revenues.

## **2.2. Business model component**

In order to understand a business model, business model components need to be explored (Li 2007). Business model components are building blocks that integrated into a business model that could be used to understand the drivers behind value creation in a business (Afuah & Tucci 2001 cited in Hedman & Kalling 2002). Each component is taken from the broad integration of the different strategy perspectives (Hedman & Kalling 2002) and is fundamentally based around the benefits that matter most to customers (Rayport & Jaworski 2001). Each component is

considered sequentially, Rayport & Jaworski (2001) suggest that the senior management team should iterate, reexamining each component because it considers the critical decisions. There are many business model components discussed by various authors, but the key business components are (1) market, (2) value proposition, (3) activities, (4), resources, and (5) revenue model (Laudon & Traver 2002; Osterwalder 2004 cited in Li 2007; Hedman & Kalling 2002; Rayport & Jaworski 2001)

### **2.2.1. Market**

Every business has a market which composed of customers that buy the products and competitors (Hedman & Kalling 2002). A firm needs to define a market segment to focus on. Market segment or marketpace is “an area of actual or potential commercial value in which a company intends to operate” (Laudon & Traver 2002, p. 61). Market attractiveness can be measured by market size and growth rates, “the overall dollar size of the market and percentage growth rates of the market segments” (Rayport & Jaworski 2001, p. 72).

Next, the business model should describe the target customer segments and their characteristics in order to direct the offering to which makes it easy to determine the effects on the offering and other components of the business model (Hedman & Kalling 2002). There are two ways to describe customer segments, (1) according to their characteristics, for example, geographical location, interest, age, race, and income, and (2) unmet or insufficiently met customer needs, for example, customers are currently either not being served or not being served well by existing competitors (Hedman & Kalling 2002; Rayport & Jaworski 2001).

Finally, a firm needs to define its competitors in a market. It is best where the market contains weak or nonexistent competitors where competition is “either not evident, performing poorly, or does not have sufficient resources to win the market” (Rayport & Jaworski 2001, p. 72).

### **2.2.2. Value proposition**

A company needs to know and understand the reason why a customer chooses its products or services instead of another company, and benefits the company provides that other companies do not and cannot (Laudon & Traver 2002). Providing a description and understanding a function of the product, service and information that will be provided in a market is absolutely central in understanding the underlying logic of the existence of any business or firm, because it defines the reason of the firm to the value that offered to a customer (Hedman & Kalling 2002; Rayport & Jaworski 2001). Rayport & Jaworski (2001) specify two types for the scope of product which is similar to the concept of bundling and unbundling (Normann 2001 cited in Hedman & Kalling 2002):

- Category-specific dominance. Focus exclusively on only one product category.

- Cross-category dominance. Extend a product offering from a single category to additional product categories that have similar characteristics to the main category as an attempt to achieve cross-category dominance.

Whether a company chooses category-specific dominance offering or cross-category dominance, the important issue is the benefits that a company offers to the customers. A recommendation by many marketing and business strategy textbooks for a company to make a decision for selecting customer benefits can be divided into two groups, a single benefit and a cluster of benefits which has different advantages and disadvantages (Rayport & Jaworski 2001). To focus on single benefit can reduce the confusion of the target customers, partner and employees while focusing on multiple benefits can attract more target customer in the long run because customers prefer multiple benefits (Rayport & Jaworski 2001). The examples of customer benefits include low price, convenience, product and service quality, broad range of products, complementary gifts, customer service, ease of access, low shipping cost and fast delivery.

### **2.2.3. Activities**

After we defined market and value proposition, we need activities to deliver them. Understanding unique activities which tied to the market and value proposition can lead to a competitive advantage (Rayport & Jaworski 2001). Hedman & Kalling (2002) specifies properties of activities that should be understood:

- Activities. Activities can be described by using value chain (Porter 1985 cited in Hedman & Kalling 2002). “Value chain describes the sequential processes by which inputs such as raw materials are converted into products and delivered to customers” (Porter 1985 cited in Hedman & Kalling 2002, p.66). Value chain includes primary activities such as inbound logistics, manufacturing, outbound logistics, marketing and sales, and customer service, as well as supportive activities such as procurement, technology development, human resource management and the management of firm infrastructure.
- The flow of activities and links between activities. The relations and flows among activities describe above must be understood as well because these activities need interaction and iteration, or reciprocity based on the knowledge exchange (Normann & Wikstrom 1994 cited in Hedman & Kalling 2002)
- Boundaries and relations to external stakeholders. A company needs to understand the relation with customers and suppliers and possible alliance partners. It is important to manage these relations, especially if the company has outsourced critical activities to external suppliers. Or if the company has partnership which could help a company to lock-in customer relationships and prevent competitors from accessing a customer base or valuable resources which are necessary to achieve competitive advantage in a particular sector (Rayport & Jaworski 2001).

- Drivers of costs and differentiation. Activities are the building blocks of low-cost or product differentiation strategies. A company needs to understand which activities are needed according to its strategy. The example of activities that drive low-cost strategy relates with scale economies, learning, capacity utilization and timing. The example of activities that are the drivers of product differentiation relates with technologies used, quality of inputs and relations with suppliers

Another way to define activities is by using the customer decision process (Rayport & Jaworski 2001). The author provides three stages in which a company needs to identify its activities for each stage:

- Prepurchase stage. A customer identifies a problem or need, searches for information and offerings, and evaluates the alternatives. This stage involves activities that attract the customers to make a purchase such as advertising and marketing.
- Purchase stage. The customer decides to purchase and goes through the process of purchasing. This stage involves with activities that provide convenience for customers to complete the purchasing process.
- Postpurchase stage. This stage involves the customer satisfaction, the consideration of becoming a loyal customer, and the decision to choose to dispose of the goods.

#### **2.2.4. Resources**

A company needs to understand the fundamental resources that underlie activities and offering as well as interrelations among them (Hedman & Kalling 2001). The resource system shows how a company must align its internal systems (and partners) to deliver the benefits of the activities, offering and value proposition (Rayport & Jaworski 2001). Resources can be classified to several types which include physical assets, financial, human and organizational, tangible and intangible, and capabilities (Hedman & Kalling 2002). Rayport & Jaworski (2001) view capabilities as high-level resources where they are supported by a cluster of other resources. By focusing on capabilities, Rayport & Jaworski (2001) provide five steps to specify a resource system as the following:

- Identify core benefits in the value cluster. This step has been identified in the construction of value proposition.
- Identify capabilities that relate to each benefit. This step is the process is to identify the capabilities that are required to deliver a core benefit in the first step.
- Link resources to each capability. This step concerns with identifying the resources that are needed to deliver each capability.



- Identify to what degree the firm can deliver each capability. This step is to identify the possibilities that the company can deliver the capabilities.
- Identify partners who can complete capabilities. The final step is to identify key actors who can fill out the resource system.

To assess the quality of resources, Rayport & Jaworski (2001) and Hedman & Kalling (2002) provides criteria which include:

- The uniqueness of the resources.
- The strength of relationship among capabilities, activities and offering.
- The complementary among resources.
- The difficulty to imitate resources.
- The valuable of resources.

### 2.2.5. Revenue model

“A firm’s revenue model describes how a company will earn revenue, generate profits, and produce a superior return on invested capital”, (Laudon & Traver 2002, p.59). Many different revenue models that have been developed, but most companies rely on only one, or some combination (Laudon & Traver 2002). Revenue models for traditional business, where business activities occur in the real world can be separated according to industry descriptions as shown in table 2.2 (Hedman & Kalling 2002).

**Table 2.2** Revenue model for traditional business

<b>Revenue model for traditional business</b>	
Aerospace & Defense	Insurance
Automotive	Media
Banking	Mining
Chemicals	Oil & Gas
Consumer Products	Pharmaceuticals
Engineering & Construction	Public Sector
Healthcare	Retail

Education & Research	Telecommunications
High Tech	Utilities

Source: Adapted from Hedman & Kalling (2002, p.227)

For the context of Internet, there are also many revenue models have been developed. The major revenue models are brokerage model, advertising model, infomediary model, merchant model, manufacturing model, affiliate model, community model, subscription model and utility model (Rappa 2008).

### **Brokerage model**

This model can be called transaction model (Laudon & Traver 2002; Rayport & Jaworski 2001). Company brings buyers and sellers together and charges a fee or commissions for each transaction it enables (Rappa 2008). This model plays a frequent role in business-to-business (B2B), business-to-consumer (B2C), or consumer-to-consumer (C2C) markets (Rappa 2008).

### **Advertising model**

The web advertising model is an extension of the media model in the traditional revenue model (Rappa 2008). A web site that offers content (e.g. news, information), services (e.g. email, web board, blogs, instant messaging) or products provides a place for advertisement and receives fees from advertisers (Laudon & Traver 2002; Rappa 2008). This model is suitable for a web site that could attract a high volume of customers.

### **Infomediary model**

This model focuses on providing data about consumer and their consumption habits which are valuable to target marketing campaigns for other companies when the data is carefully analyzed (Rappa 2008).

### **Merchant model**

Merchant model or sales model focuses on selling (wholesale or retail), information or services to customers (Laudon & Traver 2002; Rappa 2008).

### **Manufacturing model**

The manufacturer model makes uses on the power of the web to allow a manufacturer (e.g., a company that creates a product or service) to reach buyers directly and thereby compress the distribution channel by excluding wholesalers and retailers (Rappa 2008).

### **Affiliate model**

Affiliate model offering financial incentives (a referral fee or percentage of revenue) to affiliated partner sites from the sales of products, service or information. It is a pay-for-performance model; merchant does not lose money if affiliated partner does not generate sales. Various forms include, banner exchange, pay-per-click, and revenue sharing programs (Rappa 2008).

### **Community model**

According to Rappa (2008), the community model is based on user loyalty where users in the community have a high investment in both time and emotion. Revenue can be based on the sale of ancillary products and services or voluntary contributions. Community model can act as advertising model or subscription model where revenue comes from advertising and subscriptions for premium services. For example, Open Source community where programmers collaboratively develop software, generates revenues from systems integration, product support, tutorials and user documentation instead of licensing fees. Another example is social networking service where users can connect to each other by their common interest, generates revenues from advertising or subscriptions for premium services.

### **Subscription model**

Subscription model bases on getting revenue from a subscription fee for accessing to the service or content where users are charged daily, monthly or annual (Laudon & Traver 2002; Rappa 2008). The content or services offered must be high quality that is rarely available elsewhere (Laudon & Traver 2002).

## **2.3. Summary**

This chapter first presents different definitions of business model, and conclude that a business model is a framework for doing a business in which a company can sustain itself; it describes roles and relationships among a various business actors, products, services, information, costs, and revenues. Thereafter, based on previous academic theories, we introduce the key components of business model: (1) market, which focuses on the market attractiveness, target customer segment and competitors, (2) value proposition, which focuses on products or services, and benefits to customers (3) activities that are needed to deliver benefits to customers, (4), resources that underlie activities and value proposition, and (5) revenue model which describes how a company will earn revenue. These five components are the building blocks of a business model; it can help us to understand the drivers behind value creation in virtual business.

### **3. Virtual Community**

#### **3.1. Definition of virtual community**

As described by Rheingold (1993), virtual communities are groups of people who interact via Internet; they aggregate into a critical mass to chat, argue, engage in intellectual discourse, conduct commerce, exchange information, share emotional experiences, make plans, brainstorm, fall in love, find friends, play games, and so on— similar to what people always do in real life, but leaving their bodies behind screens. Virtual communities are maintained through computer-mediated technologies, which are introduced, commented upon, support and shaped by members of that community (Farquhar & Rowley 2006; Murphy 1997). Several thousand virtual communities are accessible over the Internet where there are integration of content and communication with an emphasis on member-generated content and normally require members to register (often for free) before allowing access to discussion forums, or conferences which are maintained by virtual community hosts (Farquhar & Rowley 2006; Hagel & Armstrong 1997). These hosts mediate the postings within each conference, and responsible for regulating members' behavior so that it adheres to rules that are acceptable to the community.

#### **3.2. Characteristics of virtual community**

There are five major characteristics of the virtual communities discussed by Hagel & Armstrong (1997) which are (1) distinctive focus, (2) capacity to integrate content and communication, (3) appreciation of member-generated content, (4) access to competing publishers and vendors, and (5) commercial orientation. The first characteristic is 'distinctive focus'. Virtual communities published content and member-generated information about a particular subject, for example hobbies, interests, professions, geographic, topical, industry specific or functional expertise which can bring members together (Farquhar & Rowley 2006; Hagel & Armstrong 1997). Members know what resources to expect in the community, and community organizers know what resources they need to supply to meet members' demands. Members of a particular virtual community have a high possibility to purchase goods and services related to that interest, so the community acts as a medium between members and suppliers, marketers and advertisers.

The second characteristic is 'capacity to integrate content and communication'. Virtual communities can integrate a wide variety of relevant published content and a rich communications environment together instead of one-way communication such as books and magazines that have content but not communication, or two-way communication such as telephone that have no ways of accessing and storing content. Virtual communities facilitate the integration of content and communication through discussion forums, chat rooms and e-mail which can help members to understand and evaluate the community content by having contact with its publisher and communicating with each member. The result is a wealth of information of considerable depth, range, reliability and timeliness that is an excellent resource for members,

and also encouraging them to increase their probability of purchasing (Hagel & Armstrong 1997; Kippenberger 2000).

The third characteristic is ‘appreciation of member-generated content’. “By creating and sharing their own community content, members bring together and organize a vast amount of comparative insights, experiences, perspectives and collective expertise that could not possible be matched by any individual expert. This capability of sharing information makes suppliers feel most vulnerable, taking as it does the aggregated purchasing power in a virtual community and changing it into collective behavior that can swiftly determine a provider’s success of failure” (Kippenberger 2000, p. 22). This characteristic is particularly empowering a virtual community.

The fourth characteristic is ‘access to competing publishers and vendors’. Virtual communities allow members to have access to a broader range of suppliers and products, and negotiate with them unlike traditional environment where individuals have a limited number of suppliers to choose from. Technology enables the community organizer to act as an agent for members, quickly and efficiently searching out the best offers available to the members (Hagel & Armstrong 1997).

The final characteristic is ‘commercial orientation’. Increasingly, virtual communities are organized as commercial enterprises, in order to make profit and enhance power by providing members with valuable resources and environments (Hagel & Armstrong 1997). Commercial interests are a part of individual level needs, and it is common to find virtual communities which focused on individual and organizational needs, communities of buyers and sellers, such as eBay and Amazon (Barnes 2007). These individual and business oriented communities consist of a critical mass of members whose needs are mainly commercial in nature and who use the communities principally for networking and/or building business relationships. Although it requires significant resources and a time to collect a critical mass of members, the chance to earn an attractive return motivate organizers and encourage competition leading to further innovation to the ultimate benefit of community members.

### **3.3. Types of virtual community**

Armstrong & Hagel (1995, 1996 cited in Barnes 2007) categorized the virtual communities into four types based on the types of consumer needs. Virtual communities could be transaction oriented, interest oriented, fantasy oriented, or relationship oriented. Transaction-oriented communities primarily focus on the buying and selling of products and services, and deliver information that is related to fulfilling those transactions such as product reviews from other members. There is no or little social relationship for this type of virtual communities; the focus is on interaction between members in order to accomplish the business transaction. Example of the community is Amazon, where there are reviews on the products by other members. Although

communities of transactions could be organized by anyone, the organizers are usually the vendors themselves.

The second type of community is a community of interest. The communities are characterized based on high significant amount of user-generated content. Members have significantly higher degrees of social interactions than in a community of transactions and the topics of the interactions are usually their common interest. Examples of the communities include MySpace, YouTube and FaceBook, which are social networking web site where members share content and interact through blogging, chats, forums and so on. These communities usually have chat rooms, forums and discussion groups for those extensive member interactions (Armstrong & Hagel 1995, 1996 cited in Barnes 2007; Barnes 2007).

The third type of community is a fantasy-oriented community where members can create new fantasy environments, personalities, stories and role-play in which they can interact to each other by sending messages or chatting. These communities can be referred to Multi-User Dungeons or MUDs). Examples of the communities include many of the fantasy, gaming communities and virtual world such as Runescape.com, Tricksteronline.com, There.com, SecondLife.com, and WorldofWarCraft.com (Armstrong & Hagel 1995, 1996 cited in Barnes 2007; Barnes 2007).

The fourth type of community is the community of relationships. The communities are built around certain life experiences of members that are usually very intense and critical which lead to the establishment of personal relationships between members. Examples of the communities include the cancer forum, a community for cancer patients and their close friends and family, and communities that focus on religion, divorce and other topics (Armstrong & Hagel 1995, 1996 cited in Barnes 2007).

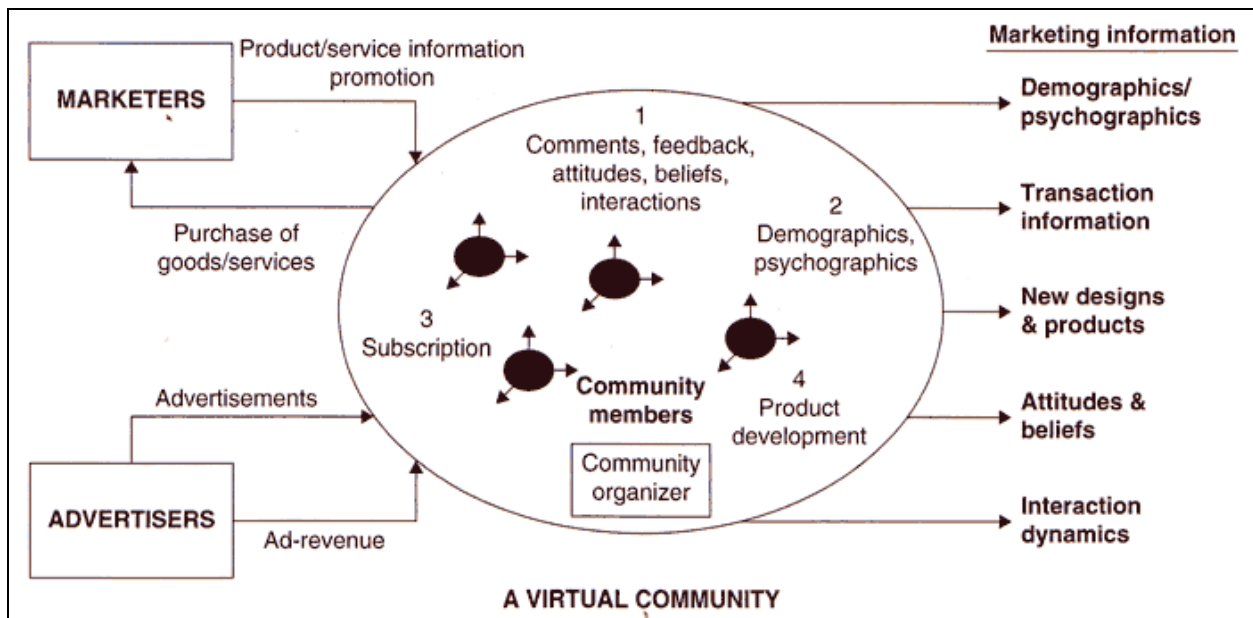
Many virtual communities could have several overlap characteristics of the above orientations. For example, communities such as Geocities, MySpace, and others allow members with similar interests to build their own web site which can transact business with each other, play out their fantasies and build relationships through interactions. These are communities or portals which organize several smaller, focused, virtual communities centered on common interests and relationships (Barnes 2007).

### **3.4. Relationships and value creation**

This section describes the nature of relationships and value creation among various actors which is the heart of the creation and development of virtual communities (Farquhar & Rowley 2006). The value is created differently for different stakeholders, for example, members, community organizers, marketers and advertisers because they will all seek different benefits from the participation in the community. These stakeholders must be able to take value from the community for it to continue.

Figure 3.1 provides a conceptual model of how value is created in a community through stakeholders (Kannan et al. 1998, p.37; Barnes 2007, p.83). The value creation starts with member’s input to the community in the form of comments, response to questions, feedback, elaborating their attitudes and beliefs, and informational needs. This useful information is retrieved and used by other members of the community and it can also be provided by a community organizer. In the communities, the members would also be willing to pay subscription fees to become members of the community if the information they receive from the community is valuable enough. The subscription fees may be viewed as a charge that members need to be in part of an exclusive community or for accessing rare content in the communities.

**Figure 3.1:** Relationships and value creation in virtual communities



Source: Kannan et al (1998, p. 37); Barnes (2007, p. 83). Note: Barnes (2007, p. 83) developed the figure of Kannan et al (1998, p.37) by adding three factors: (1) naming the effect of a virtual community to Marketers—“Purchase of goods/services”; (2) the fourth input of members to a virtual community—“Product development”; (3) One flow from a virtual community to Marketing Information—“New designs & products”.

Such valuable information would bring together members of specific demographics and interest which presents opportunities for marketers and advertisers to transact a business by providing products and services information or promotion that are of interest to members other than communication and information exchange (Kannan et al. 1998; Barnes 2007; Farquhar & Rowley 2006). Alternatively, virtual communities may negotiate with suppliers for better deals for the members which have long been performed by membership organizations such as trade unions. Members in the communities may be formed in a group to negotiate a good price with

suppliers. Virtual communities would also get advertising revenues from advertisers which is currently a major source of revenue.

In addition to business transaction and advertising revenues, there are also other opportunities for value creation in the communities. The marketing information about demographics and psychographics of members, their attitudes and beliefs about products, services and issues, their behavior data about business transactions within communities, and information on their interactions and interaction dynamics which is generated within communities; it is valuable to marketers and advertisers. If members do not object, the communities could sell the information to marketers and advertisers. Some research communities, for example, Linux OS kernel, Apache server software, OpenSource and Perl which are working on software projects also add value by designing and creating new software products and extensions. These communities are non-profit communities where members could get value from the community from each other's contribution (Barnes 2007).

The ways in which the value is created in virtual communities are different according to the owners and community organizer (Barnes 2007). Transaction-oriented communities are generally organized, controlled and maintained by marketers and the value is created mainly through business transactions rather than advertising revenues. The marketing information such as demographics and psychographics of members which is generated in the communities may also reside with the marketers who may or may not sell the information. In many cases, marketers who own virtual communities can use the information to improve other related business functions, such as better customer service, mass customization in service and delivery, marketing research feedback, and so on. If the community is controlled and owned by members, the main focus of the communities is the benefits to the members and the value is created in the form of content exchange and/or through subscription fees.

### **3.5. Virtual World**

“The rapid growth of Internet usage has enabled many new online communities to develop, a particularly interesting phenomenon that has arisen through Internet communities is the virtual world” (MacInnes & Hu 2007, p. 130).

#### **3.5.1. Definition of virtual world**

Virtual worlds belong to the fantasy-oriented category of virtual communities (Barnes 2007). Virtual worlds are online communities in which participants interact in simulated environments (Chesney et al 2007). Virtual worlds operate over the Internet in which anyone around the world can access.

The population of virtual worlds has grown rapidly since 1996; currently, several million people have accounts in virtual worlds. There are many virtual worlds on the Internet, for example, The



Sims Online, Everquest, Lineage, Ultima Online, the tropical beaches of Tiki (There.com's There), the fantasy world of Norrath (Sony's Everquest), the interstellar expanses of the Milky Way (Electronic Art's Earth & Beyond), and even a galaxy far far away (Sony's Star Wars Galaxies) (Lastowka & Hunter 2004). The virtual worlds are designed to face different clusters of customers—from kids to middle-aged or even older people, different levels of players—from novices to old hands, different internet environment—from dial-up to broadband, different computers—Mac or PCs.

In virtual worlds, each resident is represented by digital character called avatar which can interact or communicate with each other for entertainment or business purposes on virtual islands, in virtual cities, or across virtual landscapes (Bray & Konsynski 2007). Avatars are supportive of rich customization and are designed primarily for social interaction (Lastowka & Hunter 2004). Currently, the avatars in virtual worlds communicate with each other either through textual chat windows or “speech bubbles” which float over their heads or see each other through webcam. Avatars express themselves through appearance as well which residents can customize the face, clothes, and body shape of the avatar and communicate with others through body language.

### **3.5.2. Virtual property**

Virtual worlds allow individuals to build their own properties, such as clothes, buildings, cars, and so on from scratch by using embedded building tools (Bray & Konsynski 2007). Those virtual properties include tagging which labels virtual properties in specific ways, such as allowing anyone to make a copy, just the original designer to make a copy, or no copies can be made. Often virtual worlds include “sandbox” which is the space where residents can create free items and those items can be obtained by other interested residents.

Virtual properties can be sold or traded with other residents. “In addition to an initial purchase price, most virtual worlds charge a reoccurring, monthly fee for virtual properties, and virtual properties exist only as long as the virtual world continues to exist” (Bray & Konsynski 2007, p.22). When a resident stop paying the reoccurring fee or permanently leave the virtual world, his or her virtual property is repossessed by the operators of the virtual world.

### **3.5.3. Virtual currency**

“Virtual worlds include virtual currencies that allow participants to buy and sell goods and services” (Bray & Konsynski 2007, p. 18). Cyworld (<http://www.cyworld.com>), for instance, includes a virtual currency called "dotori" which is literally translated to mean acorns—one acorn costs 100 Korean won, approximately \$0.10 (U.S.); virtual participants are encouraged to use their acorns to purchase virtual items like clothing, decorations, musical instruments, songs and other entertainment goods for their avatars, but most of those items are time-limited and will automatically disappear once the time has expired (Bray & Konsynski 2007). There are two types of virtual currencies, float and fix. For example, Second Life has a float currency known as the Linden dollar (L\$) where its value are varied between 260 to 280 L\$ per one U.S. dollar,

while other virtual worlds, currencies do not float, but are traded at fixed rates, such as the virtual currency of Entropia Universe (the Project Entropia Dollar or PED).

#### **3.5.4. Virtual business in a virtual world**

Most people think of virtual worlds as just games (Zimmer 2007). However, beyond the entertainment and game-play features, virtual worlds are evolving toward a society in which social and economic interactions are the main drivers. In virtual worlds, residents can run global business in real-time (Bray & Konsynski 2007). “Hundreds of millions of dollars in revenue are flowing into the coffers of Sony, Electronic Arts, and the other companies who own virtual worlds. There are also reports that Intel and McDonalds have paid millions of dollars to place their products in front of the eyes of avatars” (Lastowka & Hunter 2004, p. 8).

One of the best examples of this evolution is Second Life (<http://www.secondlife.com>), a virtual world in which people can “communicate, collaborate, and buy and sell not only virtual goods & services but also real products through their customized virtual spaces and avatars” (Hendaoui et al. 2008, p. 88). The business opportunities inside virtual worlds have inspired both organizations and individuals. For example, Nissan has set up a car dealership inside Second Life (Calypso 2007); MTV has created an immersive version of its Laguna Beach reality-television show for the virtual world of There.com (Zimmer 2007); banks have been established in virtual worlds, such as Meta Bank in Second Life, where clients can deposit and withdraw virtual funds; some real-world universities are establishing inlands and offering classes in digital worlds (Bray & Konsynski 2007); common players are running shops, clubs and recreation sites, or working as real estate brokers, designers and programmers, in order to make money in virtual worlds (Sivan 2008a). Virtual worlds can be used to support current business in real world for a whole range of innovative service or styles of delivery. For example, education and training; meetings and collaborations; recruiting and customer service; market research and product testing (Noam 2007).

It should be noted that the virtual worlds that we discussed so far are not MMORPGs such as Everquest (<http://www.everquest.com>) or World of Warcraft (<http://www.worldofwarcraft.com>). “While MMORPSs are also virtual worlds, their focus is more on creating an entertaining, fantasy-based virtual world where participants adventure together. Second Life, Entropia Universe, Cyworld, and other virtual worlds are somewhat different in their focus to create computer-mediated, shared experiences where participants can interact together, but there is no expressly developed plot or storyline” (Bray & Konsynski 2007, p. 19). Instead, the residents themselves determine what they want to do according to their individual goals, and how they each want to shape their virtual worlds.

### **3.6. Summary**

In this chapter, in the first part we described about virtual communities. We have shown five major characteristics of virtual communities which are (1) distinctive focus, (2) capacity to integrate content and communication, (3) emphasis on member-generated content, (4) access to competing publishers and suppliers, and (5) commercial orientation. We have discussed about types of virtual communities that exist nowadays which include transaction oriented, interest oriented, fantasy oriented, and relationship oriented. Next, we have shown the nature of relationships among various actors as well as how the values are created for different stakeholders, for example, members, community organizers, marketers and advertisers.

The second part is the focus of this study, we mentioned about virtual world which is one type of virtual communities, fantasy oriented. We described the general characteristics, what people can do in virtual worlds, what features are provided, how does the business in virtual world look like and we also give examples of businesses that are currently run in the virtual worlds.

## **4. Second Life**

### **4.1. Introduction**

Open since 2003 by San Francisco-based Linden Lab, Second Life is a 3D virtual world. Since the opening, it has grown explosively and today is inhabited by millions of Residents from around the world (Second Life 2008q). Since 2003, Second Life grew from a community of 15,000 to more than 13,200,000 participants by May 2008 and thousands of new residents join each day. (Bray & Konsynski 2007; Second Life 2008d, Second Life 2008p).

### **4.2. The world of Second Life**

In the world of Second Life, each resident is represented by avatars in which they create and design by themselves (Second Life 2008b). Avatars can be personalized to wide range of animations by using tools which allows residents to change anything they like, from the tip of your nose to the tint of your skin (Cheal 2007; Second Life 2008b). Avatars are freely to move, explore the world (by teleporting directly to other places), communicate with others and create things. Second Life provides the Second Life URL (SLURL) in order to link people from website to Second Life. People can teleport to anywhere in Second Life by clicking SLURL link at the website. There are many places to visit such as dance clubs, shopping malls, space stations, vampire castles and movie theatres and there are also lots of events where they can attend fashion shows, join wedding ceremony, art openings or just play games. They can form groups ranging from neighborhood associations to fans of particular things according to their interests, for example, discussions, sports, commercial, entertainment, games, pageants, education, arts and culture, and charity/support groups (Second Life 2008l; Second Life 2008h).

In Second Life, residents are surrounded by creations of others, everything in Second Life is resident-created, for example, they can make virtual clothes according to their personal tastes, or build all styles of houses on their inlands. As a result of that, reveal beliefs and desires about current culture are well mirrored in Second Life (Cheal 2007). Residents can create anything they can imagine with built-in tools. They build things live, in real-time, right in Second Life without separate tools or applications (Second Life 2008c). Residents can use scripting language, Linden Script Language (LSL) to enhances the creations which allowing they to add behaviors to the objects they build, for example, build a butterfly then write a short chunk of code that lets it follow around as they walk. According to Linden Lab's terms of service, those digital creations are protected by intellectual property rights in the original content they create in the Second Life world, including avatar characters, clothing, scripts, textures, objects and designs which can be sold and traded with other residents and even give it away for free (Second Life 2008j).

Residents can purchase a land in Second Life, which allows them to open a business, display, store their virtual creations, as well as host events and build their own virtual paradise (Second

Life 2008p; Second Life 2008n). Linden Lab creates new land every month to keep up with the increasing of demand. Land began as 64 acres in 2003 is now over 65,000 acres and growing rapidly (Second Life 2008p). Land selling is one of Second Life's sources of income which similar to a real estate business in real world, except that it requires maintenance fee to preserve it (Alves & Roque 2007). The basic account of Second Life is free, including access to events, shopping, building, scripting- everything residents can do in Second Life, but to be able to purchase a land, a resident need to get a premium Second Life account, starting at \$9.95 a month based on the size of land. Premium account can also get extended support options, including the ability to submit a support ticket and engage in a text chat session with support teams (Second Life 2008m).

### **4.3. Economy**

Second Life has its own currency called Linden dollars, millions of Linden dollars were spent every month for the goods and services that residents create and provide. Linden dollars can be bought and sold on the LindeX exchange which is the official Linden dollar exchange of the Second Life world, or other unaffiliated third party sites for real currency (Second Life 2008f). Currently, one US dollar can be converted to 260 to 280 Linden dollars (Second Life 2008k).

### **4.4. Business Opportunities**

There are many business opportunities in Second Life. For example, these are business occupations in Second Life which residents founded and currently run: party and wedding planner, pet manufacturer, tattooist, nightclub owner, automotive manufacturer, fashion designer, aerospace engineer, custom avatar designer, jewelry maker, architect, XML coder, freelance scripiter, game developer, fine artist, machinima set designer, tour guide, dancer, musician, custom animation creator, theme park developer, real estate speculator, vacation resort owner, advertiser, bodyguard, magazine, publisher, private detective, writer, gamer, landscaper, publicist, special effects designer , gunsmith and hug maker (Second Life 2008a).

Moreover, organizations can create a public or secure private space for communication, collaboration and community engagement (Second Life 2008i), for example

- Hold in-person meetings without leaving the office using real-time 3D collaboration,
- Construct product simulations enabling customers from all over the world to test out new designs and concepts
- Conduct employee training
- Meet with global partners at virtual headquarters
- Receive product feedback from clients

- As a non-profit, engage and raise funds
- Build community around a brand

Nowadays, companies, traditional media, government, and universities and academic institutions are immersing themselves in Second Life. Car companies provide 3D models of their real cars to Second Life residents; these virtual cars are drivable and sometimes even customizable (Hendaoui et al. 2008, p. 88). Sun Microsystems moved to Second Life for project managing which allows its managers to meet in this virtual space with representatives from areas around the world (Biba 2006). Dutch production company Endemol recently presented a monthlong Second Life version of its own reality show, *Big Brother* (Zimmer 2007). In her research, Cheal (2007, p. 204) found that “Second Life is not simply the latest online fad, but part of a continuum of instructional technology tools that corresponds to twentieth and twenty-first century developments in educational theory”. With real-world businesses moving to virtual worlds, real-world governments are now also becoming interested in virtual worlds (Bray & Konsynski 2007). The governments of the Maldives and Sweden have opened official embassies in Second Life (Hendaoui et al. 2008).

## **5. Research Method**

### **5.1. Research Strategy**

Kvale (1996) explains the dichotomization of quantitative versus qualitative research methodologies: as quality refers to the character of something while quantity refers to the amount of something, qualitative method is suitable to identify the components of a subject, and quantitative method is usually designed to determine the amounts of the components; the utility of qualitative and quantitative methods depends on their power to bear upon the research questions asked. Our research questions are what components the virtual business model has and what are the relationships of these components, therefore, we chose to use qualitative method.

#### **Single Case Study**

This study is a qualitative study based on a single case study approach that investigates v-Business model in Second Life environment. Yin (2003) presents three conditions that decide which strategy to use during a research. (1) The control an investigator has over actual behavioral events: on one hand, Yin (2003) states that case study is a good choice when the investigator has little control over events or cannot manipulate relevant behaviors; on the other hand, in our research, we had no effect or control to virtual business events during their whole processes, we investigated the phenomenon without disturbing relative individuals or companies. (2) The focus on contemporary as opposed to historical phenomena: case study is preferred in examining contemporary events within its real-life (Yin 2003); our thesis targets to virtual business that is emerging recently and developing currently. (3) The type of research questions: according to Yin (2003), case study is the preferred research method to “how” question; our research questions are what components the model has, and what are the relationships among these components—the first question is not “how” question, but the second one is on how a company generates revenue in the aspect of each component, and how these components are related to each other; As a result, from this aspect case study is also a suitable strategy. Moreover, the unique strength of case study is its ability to integrate a full variety of evidence, including interviews, artifacts, documents, and observations (Yin 2003); as we used interview and observation as our main methods for data collection (see 5.2), case study can let us make a good use of our data. Therefore, we chose case study as our main research methodology.

We choose Second Life as the single case to study, it is one of the most common virtual worlds where the characteristics is most appropriate for the v-Business, the result can be applied to virtual worlds with similar characteristics. Among the four types of designs for case studies—single-case (holistic) designs, single-case (embedded) designs, multiple-case (holistic) designs, and multiple-case (embedded) designs—the single-case design is justifiable when the case represents a critical test of existing theory, a rare or unique circumstance, a representative or

typical case, or the case serves a revelatory or longitudinal purpose (Yin 2003). Second Life, as our case, is representative and typical because of the following reasons:

## **1. Representative Business Environment**

Sivan (2008b) states the characteristics of virtual worlds, a combination of four factors (“3D3C”):

- **3D world**  
Controllable environment, one can both, zoom, change camera, etc. As described by Zimmer (2007, p. 44), “Immersive virtual worlds including Second Life have moved from the flat 2D social networks onto a platform where content is experiential, 360-degree, and almost completely generated by the inhabitants”.
- **Community**  
The virtual world is with real people, people can create groups, there is a system that allows communities to blossom.
- **Creation**  
There is a way to build content, services, and stuff.
- **Commerce**  
There is an ability to connect real economic value (real money).

Sivan (2008b) also presents different virtual worlds based on these characteristics. The score ranges from one to five stars (from low to high). Second Life contains all of these factors. Although it is not good enough in a technical perspective (three stars on 3D level), it cannot give the players the best views of a virtual world like which some other games could, e.g. WOW (World Of Warcraft; five stars on 3D level). However, this is not a major concern in a business perspective because Second Life provides 3D world environment “where content is experiential, 360-degree, and almost completely generated by the inhabitants which is enough to do a business” (Zimmer 2007, p. 44). In Second Life people can do much more than just killing monsters or exchanging arms. It has five stars on creation level: “Unlike most prior virtual worlds in which content was designed and managed by software specialists, Second Life developers have added an important feature which enables users to build and personalize their avatars, private virtual spaces (lands), and objects (houses and clothes), through a powerful and easy-to-use interface” (Hendaoui et al. 2008, p. 88), and all the residents retain intellectual property rights over everything they create. Second Life also has five stars on community level: “In addition to text-based chatting and instant messaging, developers also recently added voice communication capabilities that are opening interesting opportunities for learning and training applications” (Hendaoui et al. 2008, p. 88). On commerce level, Second Life has five stars as well: because it has a unit of currency, the Linden Dollar, users are able to transform their real-world ideas into virtual products which can be sold out (Calypso 2007, p. 60). Based on those



factors, Second Life offers a vast potential for creating productions, marketing, advertising and branding, managing virtual organizations, even hiring and training employees. Therefore, Second Life is a typical and representative virtual business context for relevant studies.

## 2. Popular among Companies

“Where there is real-world money being exchanged in virtual worlds, real-world businesses are close behind” (Bray & Konsynski, 2007, p. 18). Second Life now is attracting significant interest from business and service industry sectors throughout the world. “In November 2006, real-world public relations firms Edelman and Electric Sheep Company announced a competition for the best business plan for a virtually-run business in Second Life” (Bray & Konsynski, 2007, p. 18). Big name brands such as IBM, Dell, ING, Philips Electronics, Telstra, Toyota, Reuters, BBC, Amazon and the Australian Broadcasting Corporation have entered this immersive environment (Salomon 2007). “IBM, for instance, has acquired more than 20 Second Life “islands,” and several thousand of its employees have created avatars in Second Life; According to its CEO, his company will invest US\$10 million to develop the 3D Internet, which he considers to be the “next phase of the Internet’s revolution” (Hendaoui et al. 2008, p. 89).

## 3. Popular among Players

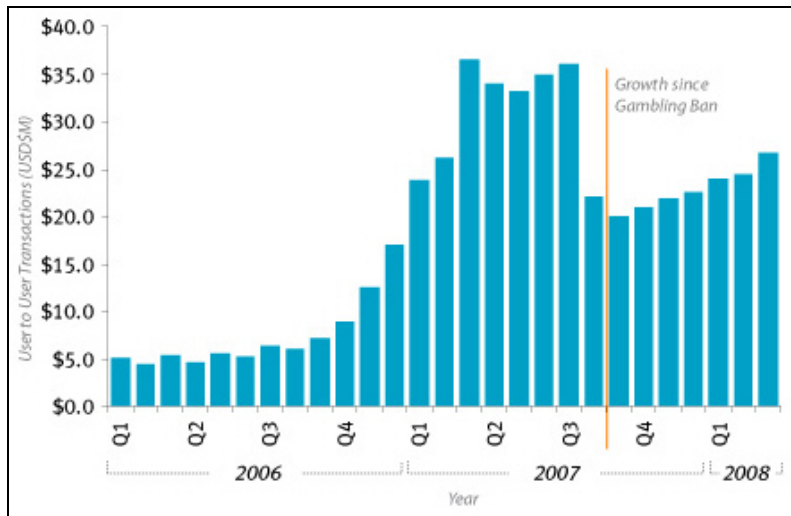
Every month Second Life publishes a summary of all the previous month’s economic statistics. Table 5.1 shows a number of Second Life users according to time periods. Second Life currently has over 13 million residents registered, about half a million users visit Second Life regularly (Second Life 2008d), and millions of dollars are spent by users each month (Second Life 2008e) as shown in table 5.2.

**Figure 5.1** Second Life users by periods

<b>Population</b>	
Residents Logged-In During Last 7 Days	278,196
Residents Logged-In During Last 14 Days	428,514
Residents Logged-In During Last 30 Days	683,742
Residents Logged-In During Last 60 Days	1,102,867
Total Residents <sup>1</sup>	13,123,262

Source: Second Life (2008d)

**Figure 5.2** User Transactions in Second Life



Source: Second Life (2008e)

A recent Dutch study found that Second Lifers are dedicating a significant chunk of their time to this virtual world: 57 percent spend more than 18 hours a week in their Second Life while 33 percent spend more than 30 hours a week (Sivan 2008a). They can not only enjoy funny virtual life, but also do business there. More and more people are trying to make money in Second Life (Sivan 2008a). However, not everyone can succeed; the following table shows some examples of businesses in Second Life, including both successful and unsuccessful ones.

**Table 5.1** Examples of businesses in Second Life

Organization	Industry	Title & Source	Description
Anshe Chung Studios	Virtual Real-estate	Second Life's First Millionaire (Hendaoui et al. 2008)	Anshe Chung Studios is a company that emerged from inside a virtual world. It has made approximately one million real US dollars speculating on virtual real estate. Behind this avatar lies a real-world company located in China, employing several dozen artists and engineers. (Hendaoui et al. 2008).
Canimal Zephyr	Fashion	Product developers in virtual world (Sivan 2008a)	“Maya Hofner is a full time fashion designer in Second Life. Her creations for women and for men are considered highly prestigious in Second Life” (Sivan 2008a, p. 22).
American Apparel	Fashion	How Viable Is Virtual Commerce? (Zimmer 2007)	In mid-2006, American Apparel opened a store in Second Life offering virtual clothes. But immediately came pressure from consumers and commentators to integrate the virtual store with real-world purchases. It was forced to provide real-

			clothing discounts to virtual-clothing purchasers: most of its virtual clothes sell only for less than \$1—about 270 Linden dollars (Zimmer 2007).
Ginko Financial	Banking	The Dismal Economics of Virtual Worlds (Noam 2007)	In August 2007, a genuine run on a bank located in Second Life, and that bank's collapse. Depositors rushed to withdraw their funds from the bank, their predicament drew delighted attention (Noam 2007).

Source: Hendaoui et al (2008); Sivan (2008a), Zimmer (2007); Noam (2007)

Its popularity among enterprises and individuals makes Second Life be able to provide plenty of business events with regard to different industries to investigate, thus serve revelatory and longitudinal research scope to us.

In conclusion, single case study method using Second Life as the case is suitable to our investigation.

## 5.2. Data Collection

### Interview

The qualitative research interview is a construction site of knowledge and lead to scientific explanations to the interview results (Kvale 1996). It can help us to understand the virtual worlds from the subjects' point of view and to make use of participants' experiences to analyze virtual business phenomena. As a result, we use interview as one of our qualitative research methods.

There are three types of interviews: structured interviews, unstructured interviews, and semi-structured interviews (Kvale 1996). In our research, Semi-structured interview is used as a main source to explain the nature of v-Business in Second Life. Such method gives us and interviewees flexibility in asking and answering questions, thus lead to the freedom to explore the phenomena in more details. The order of questions could be changed or the additional questions could be asked to get further detail during the conversation if interviewees bring up any issues that we had not prepared questions for (Oates 2006). The interviewees are able to speak with more detail on the issues or questions we raise, and introduce issues of their own that they think relevant to the themes of the study. We focused on two main groups of the target participants who are currently involved in a v-Business in Second Life which include: (1) freelancers, (2) business owners of small and medium-sized companies, shops, studios, clubs, etc. The main objective of interview is to get a better understanding how a business in Second Life generates revenue and how a management strategies are used, in which we grounded an interview based on current business model theories. The interview questions mainly covered the aspect of business model components (see Appendix A).

The interview is an Internet-based interview not a face-to-face interview because the business activities happen in Second Life where users from around the world are participated. For the procedure of participant selection, we went into Second Life to find freelancers and business owners that currently do their business there. We searched them by using search function in Second Life. In classified section of the search menu, we can find lists of places that provide products and services. We went to those places and asked them to participate in the research. We interviewed participants via chat software which is embedded in Second Life client software. Another way to find participants is by accessing to forums, blogs or online communities about Second Life. All the interviewees have at least one-year experiences in doing business in Second Life. We sent email to the members to ask them for research participation. In this case email or instant messaging software such as MSN messenger and QQ are used when participants preferred rather than interviewing in Second Life. Before interviewing, we introduced them the researchers, briefing the purpose of the research, what will be involved, and asked whether they would like to participate or not. After interviewing, all the original chatting records were stored into our computers' hard disks, edited (see Appendix B), and categorized by interview questions (shown in Chapter 6).

### **Observation**

“Observational evidence can provide additional information about the topic being studied (Yin 2003, p 93)”. We have conducted systematic observation (Oates 2006) where we prepared in advance the particular type of events we want to observe. The duration of the observation is two weeks with an average of four hours per day. Observation took place in Second Life where we used our avatars to observe. We focus on business model components aspect to support our data from interview. This is our checklist for observation which is categorized according to business model components.

- **Market.** We observed market attractiveness by visiting islands and counting how often products or services exist in Second Life. Next, we observed whether there are any ways to find a group of residents according to their characteristics, for example, geographical location, interest, age, race, and income, and according to unmet or insufficiently met residents needs. We also observed whether which ways residents can search who are currently doing a particular business in Second Life (to determine competitors).
- **Value proposition.** We went to islands and observed whether products and services are provided in a single or multiple categories. We also observed the benefits of products and services by reading their description.
- **Activities.** We observed which ways are available for residents to advertise their products and services in Second Life by searching through menu in user interface and visiting islands to see how business owners do advertising. We also observed how business

owners provide customer service such as satisfaction guarantee by seeing description of products or services.

- Resources. We observed how much financial capital is needed to set up a business which includes a land and store price, price of outsourcing activities to external suppliers, and advertisement by using search function provided in Second Life software to find business owners and teleport to their places to find the price.
- Revenue model. We visited islands and websites that are related to Second Life to see what are the possible ways exist for business owners to generate revenue.

To record the data from observation, we use word editor software to make field notes and we capture images in Second Life by using screen capture tool provided in Second Life software.

### **5.3. Analysis**

Before analyzing data, we prepared data into a form which is ready for analysis which include transcription of interviews, observation report and documents. For data analysis, we adopted qualitative data analysis approach suggested by Oates (2006):

- Identify key themes. The theme is relevant to our research questions which are (1) What are the business model components that constitute a v-Business model? (2) What are the relationships among the business model components?
- Categorize the themes based on existing theories. We divided the themes into categories according to business model components (Laudon & Traver 2002; Osterwalder 2004 cited in Li 2007; Hedman & Kalling 2002; Rayport & Jaworski 2001) which are (1) market, (2) value proposition, (3) activities, (4), resources, and (5) revenue model.
- Refine the categories; we broke down categories into smaller sub-categories.
  - Market component was broken down into market attractiveness, target customer segment, and competitors (See 2.2.1).
  - Value proposition component was broken down into the characteristics of the products or services, internal and external factors of the firms that affect the choice of products or services, and the choice and characteristics of customer benefits (See 2.2.2).
  - To identify activities, we separate activities into three stages according to (Rayport & Jaworski 2001) which are prepurchase stage, purchase stage, and postpurchase stage (See 2.2.3).

- Resources component was broken down into several types which include physical assets, financial, human and organizational, and tangible and intangible (See 2.2.4).
- Revenue model component was broken down into brokerage model, advertising model, infomediary model, merchant model, manufacturing model, affiliate model, community model, subscription model and utility model (Rappa 2008), and traditional revenue model discussed in 2.2.5.
- Next, working through the data for each category. Interpret and explain the result based on linking between theories and collected data to find some pattern matching or common phenomenon (Oates 2006). If there is more than one possibility to interpret the result, then we complement the result with other sources to find whether which interpretation is more plausible. From this step we could answer the first question of research question.
- Look for inter-connections between categories to see if some pattern is presented. From this step we could answer question two of research questions.
- When we didn't get enough data to explain some phenomenon, we went back to the field to look for further data or asked further questions to participants that supports or contradicts our explanation. We also look for alternative explanations or problems with our proposed explanation.

#### **5.4. Validity and Reliability**

Yin (2003) states that the opportunity to use many different sources of evidence is a major strength of case study data collection. He calls it "triangulation"—the opportunity to collect multiple measures of the same phenomenon. That can lead to a higher validity and reliability. Accordingly, this study provides the triangulation to corroborate findings and enhance the validity and reliability (Oates 2006; Yin 2003). There are many kinds of triangulation: method triangulation, strategy triangulation, time triangulation, space triangulation, investigator triangulation, and theoretical triangulation (Oates 2006). For this study, some kinds of triangulation are adopted such as method triangulation, by using more than one data generation methods which are interview and observation to establish the construct validity and reliability of the evidence. We also used theoretical triangulation by drawing on more than one theoretical perspective from many authors; for example, in 2.1, we concluded the definition of business models by comparing twelve definitions by different authors.

About the quality of participants, we checked whether they really exist in Second Life and currently do business there. We checked their existence by using people search function according to their avatar's name. To check whether they are currently doing business in Second Life, we look at properties of products or lands whether they are really own them. To minimize

the errors and biases in the study, not only companies in good conditions, but also failure ones are considered. Meanwhile, although academic literatures directly related to v-Business are limited while there is lots of relative information on different websites, we use academic ones as our references and references that are written from reliable authors. For website references, for example Second Life website, we used it to describe things or events that occurred within Second Life only, not used as a theoretical argument. While quoting academic references, we also tried to find the original literatures, compared the original and secondary versions, and selected the further-developed ones to use, with notes on the improvements (e.g. Table 2.1).

## **5.5. Ethics**

Throughout all phases of the research process, researchers should be sensitive to ethical considerations (Creswell 2007). As interviews and observations were used, the moral implications of an interview inquiry and field observations need to be considered. Kvale (1996) presents the ethical issues at the seven stages of interviews, Israel & Hay (2006) describe the methods of “avoiding harm, doing good” to participants in social researches. Accordingly, we followed the principles below:

First, thematizing: on this first stage of study, Kvale (1996) states that the purpose of the study should not only have scientific value, but also be able to improve the human situation investigated. The purpose of our research satisfies this requirement—to investigate business issues related to virtual worlds, and provide reference to business activities in Second Life (The result of the research is useful to organizations and individuals that are extending or planning to extend business in virtual worlds). Second, designing: while designing the interviews and selecting observation subjects, the possible consequences of the study for the subjects should be considered, we did not ask questions on business confidentialities, and the observations were not disturb subjects' any activities in the virtual world. Third, study situation: referring to the guidelines provided by Singer & Vinson (2002), the purpose of this research was explained to the participants totally at the beginning of interviewing, we also obtained all the subjects' agreements to participate in the project —as we used chatting software to interview, we kept all the original chatting records; Confidentiality issue is the most important in this stage, according to the books of Singer & Vinson (2002) and Israel & Hay (2006), the ideal protection of anonymity involves not collecting any data that can be used to identify participants, not even names; and in the reports, confidentiality and anonymity can be protected by aggregating the data. We asked the subjects whether anonymity need to be used for them, such as whether they would like their real names, IDs in Second Life, or company/ studio names to be written in our thesis. Fourth, transcription: here the issue of confidentiality was considered again, and the interviewees' statements and actions were loyally recorded. Fifth, analysis: as the subjects have the right to say how their statements and behaviors are interpreted (Kvale 1996), we asked them whether they would like to read our transcription and analysis after interviews/ observations, if so, we showed those parts and asked for their advice. Sixth, verification: “It is the researchers'

ethical responsibility to report knowledge that is as secured and verified as possible (Kvale 1996, p. 111)”. We were strict in selecting subjects during interviews and observations, and careful in recording and transcription. Seventh, reporting: at this stage, we considered the consequences of the report to the subjects and the group or institution they belong to (Kvale 1996). As this research on business model has little possibility of harm, confidentiality issue is the most important. Considering this, we do not put the names of the participants or their companies into the thesis.

## **5.6. Bias**

Bias refers to “systematic error that deriving from a conscious or unconscious tendency on the part of a researcher to produce data, and/or to interpret them, in a way that inclines towards erroneous conclusions which are in line with his or her commitments” (Hammersley & Gomm 1997). Norris (1997) provides potential sources of bias, for example, the sampling of time, places, events, people, issues, availability and reliability of sources, and researcher preferences. In this research, the theories we used come from many sources as discussed in 5.4 in order to remove opinions that come from only one author. For the sampling of participants, we interviewed people that we do not know before and the quality of them is discussed in 5.4. For the selection of case study, we also discussed the reason why we select Second Life as a case study in 5.1. Not only the good things of v-Business are mentioned, we also provided problems that are threats to v-Business. Moreover, this research was reviewed by our peers in order to remove some biases that we did not notice.



## **6. Empirical finding**

In this section we show interview and observation results categorized according to each component of the business model and questions of Interview Guide (Appendix A). We also show the empirical findings on obstacles to the business.

### **6.1. Participant presentation**

#### **Participant 1**

The researcher found the participant in a forum of Second Life on the Internet. The researcher went to Second Life and search for the existence of the participant. The participant owns two islands in the Second Life and currently doing business there. Then the researcher made a contact via the forum to describe the research and asked for participation. The researcher gave three choices for the participation which include Second Life chat software, MSN Messenger and email. The participant preferred MSN Messenger. The interview was in Thai, the transcription in appendix B is the translation by the researcher.

#### **Participant 2**

The researcher found the participant from a blog on the Internet where the participant wrote some blogs about his business in Second Life. The researcher went to Second Life and search for the existence of the participant. Then the researcher made a contact via email to describe the research and asked for participation. The researcher gave three choices for the participation which include Second Life chat software, MSN Messenger and email. The participant preferred email.

#### **Participant 3**

The researcher found the participant in the forum of Second Life on the Internet. The researcher went to Second Life and search for the existence of the participant. The participant have opened a shop there for 1 year. Then the researcher made a contact via the forum to describe the research and asked for participation. The researcher gave three choices for the participation which include Second Life chat software, MSN Messenger and email. The participant preferred MSN Messenger. The interview was in Thai, the transcription in appendix B is the translation by the researcher.

#### **Participant 4**

The interview was through QQ, a popular chatting application in China. The researcher began to know the participant from some journal news published on the Internet. The researcher first read the quoted news from websites on virtual worlds, then the researcher searched on the homepages of the journals to check the authenticities and correctness of the news. The researcher visited the

website of the company founded by the participant. By sending an email to the mail-box found on the website, the researcher connected with the participant. The interviewee did not answer all of the questions. The interview was in Chinese, the transcription in appendix B is the translation by the researcher.

### Participant 5

The researcher found the participant in Second Life while she was selling a land. The researcher sent an instant message to describe the research and asked for participation. The interview is conducted through chat software in Second Life.

## 6.2. Result

### 6.2.1. Market

**Table 6.1** Findings on market aspect

<b>Market</b>	
<p>What are their businesses in Second Life? (market attractiveness)</p>	<p><b>Participant 1:</b> He has been “building things and getting money from that” for 2 years, his product is avatar; he also does 3D designing and scripting as a freelance; besides, as an owner of two islands, he plans and develops them.</p> <p><b>Participant 2:</b> He has been selling “particle effects” for 1 year. He also described how he started his business: “I am a programmer by training. After some casual experimentation with particles, I discovered that people liked what I had built. Some suggested I try selling them. I experimentally put a small number on sale, and found that they indeed sold well. At that point I decided to set up a real (virtual) business. I could have built other things, but you go with what works - in this case, particles.”</p> <p><b>Participant 3:</b> She has been selling “many products for women”— “clothes, bags, accessories, socks, shoes, etc.” for 1 year.</p> <p><b>Participant 4:</b> He founded a company in Hangzhou, China, in June 2007. Based on “not only Second Life, all the virtual worlds”, the firm (1) offers “business consultation, market surveys, brand advertising plan, extending activities and consumer experience projects”; (2) real estate—“design, house building, product production, avatar design, etc.”; (3) “virtual exhibitions, virtual video produce, project maintenance, customer support, etc.”</p> <p>He also described how he started his business: “My first income was about real estate. I found a piece of ‘land’, 6000 Linden dollars”...“after buying it, I tried my best to exploit it. I made use of my technology which is not bad, to built many pretty houses, the greenings and landscapes made by me were not bad as well.</p>

	<p>Soon that piece of 'land' increased ...I earned 2000.”</p> <p><b>Participant 5:</b> She has been doing real estate for 2 year. She also earns money from stock market. She has earned “lots of money from the business”.</p> <p><b>Observation:</b> Most products available are clothes, avatars (including skins, faces, bodies, hairstyles, etc), and avatar’s accessories such as glasses, rings, wristwatches, scarf, jewelry, etc. We also found some places that sell real products instead of virtual products, for example, Bantam Dell Island sells real books where there is a link to its website for the books’ information and Sony BGM sells music. The purchase of the products is made at website not in Second Life. About services, there are many services available such as 3D designing, building, land developing and scripting available in the market. Next big market is about real estate. There are also consultation services on v-Business such as advertising, marketing or any business issues in Second Life. Comparing with the first two markets, this market is much smaller.</p>
<p>Target customer segment</p>	<p><b>Participant 1:</b> Teenager, because “most avatars I designed are robots and monsters. I’m better at designing these things. Other merchants sell things based on their interests. Like I love gundam, then I build and sell gundam. People do what they like, that’s it”.</p> <p><b>Participant 2:</b> “Two segments: 1) those who like to wear effects for personal enhancement, 2) property owners who want to enhance their site”</p> <p><b>Participant 3:</b> Women, “because women like to dress up”.</p> <p><b>Participant 4:</b> (1) main target customer segment are “companies which will enter virtual worlds”—“to introduce a great number of domestic brands into virtual worlds, to lead them carry out a kind of Experiential Marketing” (Note: Gilmore &amp; Pine (1999) define experiential marketing as a brand marketing method, it provides consumers memorable events or experiences that exhilarate their senses and make them feel as part of the events.), (2) individuals.</p> <p><b>Participant 5:</b> Business people, “because they want land to sell their stuff”.</p> <p><b>Observation:</b> The firms can choose target customer segment based on group. Group is a small community in Second Life which is created by residents where the member of the group shares the same demographics, such as race, age, and interest. Mostly, the enrollment fee of the groups is free, but some groups require some payment in order to belong to the group. Residents can search for groups by selecting the “groups” tab of the Second Life search menu and type any keywords in the search box as shown in figure 6.1. Residents can see a group description, group owner, members and role, and enrollment fee.</p> <p>The unmet or insufficiently met customer needs target group can be found at the</p>

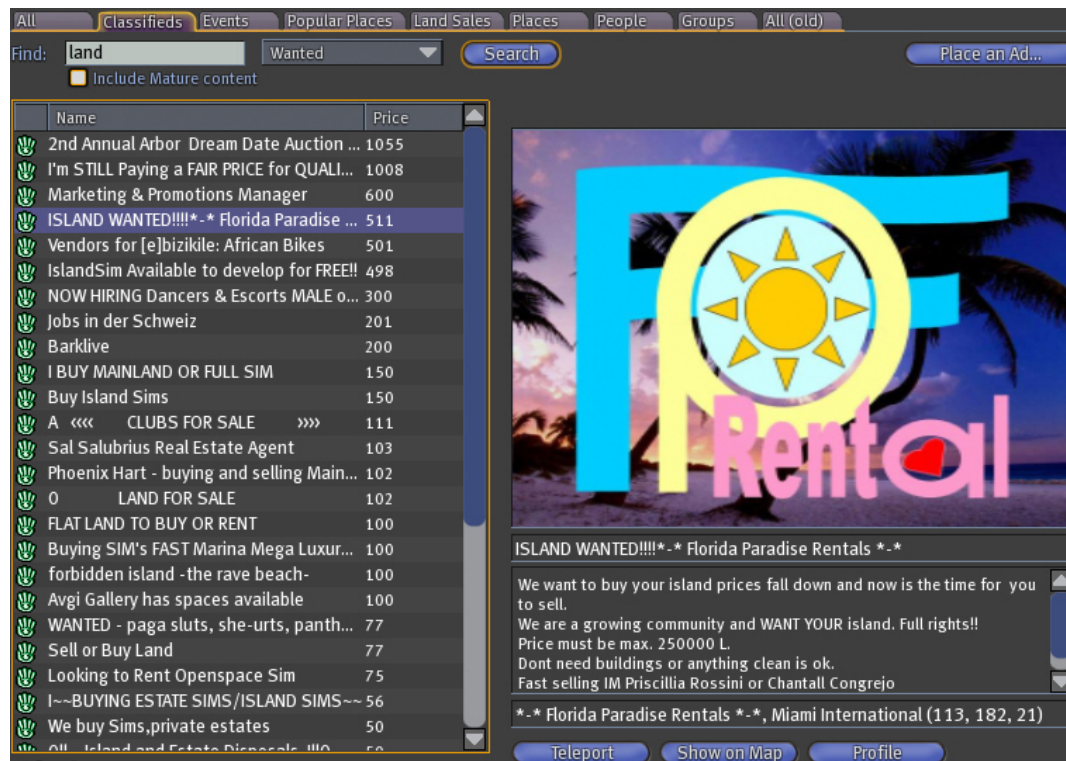
	<p>“wanted” category of the “classified” tab of the search menu as shown in figure 6.2 where residents post description of any products or services they want.</p>
<p>Competitors</p>	<p><b>Participant 1:</b> “I searched for shops that sell avatars in Second Life and also in slexchange (<a href="http://www.slexchange.com">http://www.slexchange.com</a>) and look what they sell, what are advantages or disadvantages. I need to build my avatars better than those to win the market.”</p> <p><b>Participant 2:</b> “I did not investigate the market extensively, only enough to determine that there really were very few particle shops, and that it would be straightforward to compete with them. Now I basically ignore them completely to ensure that I build unique products.”</p> <p><b>Participant 3:</b> “I was searching for shops and found that there were few shops selling women punk clothes and stuff which is good for me to compete in this market.”</p> <p><b>Participant 4:</b> His company is the only one that “provides business plans for those companies which will enter virtual worlds” in China. “But in other countries there are not few” such kind of companies.</p> <p><b>Participant 5:</b> -</p> <p><b>Observation:</b> Resident can go to “classified” tab of Second Life search menu to check out current business owners that provides the products or services as shown in figure 6.3.</p>

**Figure 6.1** Groups in Second Life



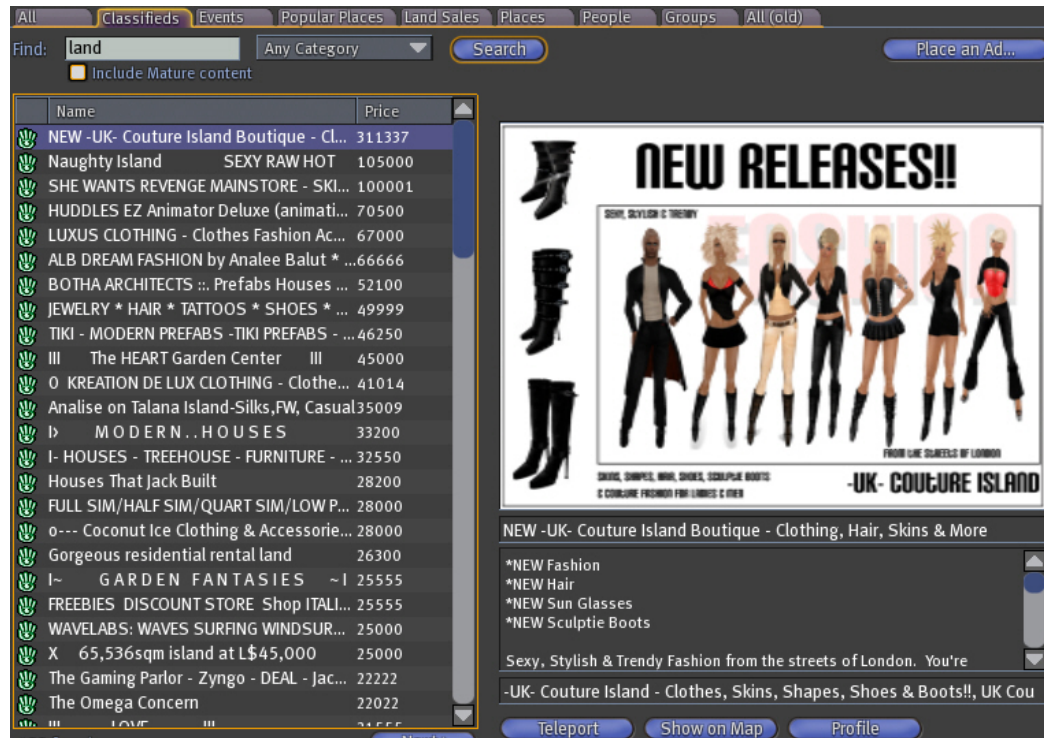
Source: Second Life search menu (accessed 11 May 2008).

**Figure 6.2** Wanted products and services in Second Life



Source: Second Life search menu (accessed 11 May 2008).

**Figure 6.3** Competitors in Second Life



Source: Second Life search menu (accessed 11 May 2008).

### 6.2.2. Value proposition

**Table 6.2** Findings on value proposition aspect

Value proposition	
Product category	<p><b>Participant 1:</b> He does not sell products other than avatar, because “I want my brand to refer to avatars only”, it is “easy for customers to remember if you focus on one kind of product”.</p> <p><b>Participant 2:</b> He provides multiple product categories—“I have over 150 different products - some are combos of other products. Have multiple usage categories (e.g. romantic, dance, weather, etc.).”</p> <p><b>Participant 3:</b> She sells more than one category of product because she can sell more. “People are more likely to buy a set of products like shoes and socks together”.</p> <p><b>Participant 4:</b> His firm provides three kinds of services: business consultation, real estate, relative exhibitions and maintenances.</p> <p><b>Participant 5:</b> She has one product category which is land.</p>

	<p><b>Observation:</b> It is difficult to find shops that focus on only one category of products or services, most shops in Second Life provide multiple product categories.</p>
<p>Customer benefits</p>	<p><b>Participant 1:</b> “Product quality” is the only benefit of his products, “fast delivery is not the case because customers would get products instantly when they paid”. Low price shipping benefits also has less impact because “the prices are not much different between merchants and most products are really cheap. People are willing to buy in a higher price if it has a good quality”.</p> <p>He focuses on product designing because he thinks that the design is “the most important thing for all products here”. He uses customization—“I don’t design all products, some products I got request from customers” and unique design— “try not to copy others”.</p> <p>Advantages of his products: “more beautiful products compared to others”, disadvantages is “a little bit more expensive”.</p> <p><b>Participant 2:</b> “Quality. Because there are lots of shoddy vendors and I chose to distinguish my biz by being high quality”. Advantage of his products is “I make the user interaction as simple as possible”.</p> <p><b>Participant 3:</b> (1) She only focuses on product quality, “because there’re many freebies. I have to design different from those otherwise customer won’t buy.” The advantage of his product is “unique design”. Disadvantage—“Few people like punk style”, so there is problem of “limited customers”. (2) New products are also important to the business; the owners can copy their products forever, but “If we don’t build new products, the popularity will be dropped”—“Sold a lot at first, then dropped”, “Same as real life”.</p> <p><b>Participant 4:</b> -</p> <p><b>Participant 5:</b> She only focuses on “beauty” of her lands, because “beauty is the best thing people want here”.</p> <p><b>Observation:</b> Customers get products instantly when they pay. There are many free products available. Most products are not much different in price and really cheap compared to products in real world. Residents can access to the shop by using search function to find places or going to classified page.</p>

### 6.2.3. Activities

**Table 6.3** Findings on activities aspect

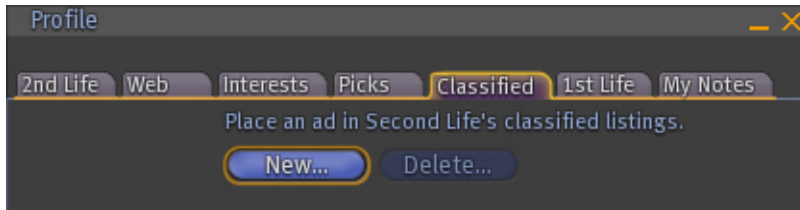
Activities	
<p>How to attract customers? (prepurchase stage)</p>	<p><b>Participant 1:</b> He paid for “advertising in SL, just L\$666 per week”; in the past, he spent more money on advertisement (“I used to pay for L\$6,666 per week”), now he uses less because his brand is “already known by many people”.</p> <p><b>Participant 2:</b> (1) “Some explicit advertising, but mostly word of mouth”; (2) by “blogging”.</p> <p><b>Participant 3:</b> (1) She placed advertisements at SLExchange website (<a href="http://www.slexchange.com">http://www.slexchange.com</a>). “There’s fee when the products are sold, but not much”. (2) “In SL, I don’t advertise, but I have to update product details”, because her “products will be shown when others search for those keywords” (“Keywords that people would type when they want something”). “Mostly when others are interested in someone’s item, they would ask the owners where they bought it.”, therefore, she put “many keywords that are related to the products”, such as “type of products, style, characteristics”. If many merchants have the same keywords, SL ranks them “according to the traffic”; “Some merchants increase traffic by providing camping places or xploders (See observation for description)” or “provides free products”.</p> <p><b>Participant 4:</b> -</p> <p><b>Participant 5:</b> She placed advertisements via classified and SLExchange website.</p> <p><b>Observation:</b> Residents can place an advertisement by using classified function in the profile menu as shown in figure 6.4. Classified will be shown in the “classified” section of the search function in Second Life. Moreover the classified will be shown at “classified” section at the Second Life website as shown in figure 6.5 where it provides a classified description and SLURL to teleport from the website. Residents are required to pay for the advertisement. If residents are willing to pay more, the advertisement will be shown higher in the list when other residents search for the keywords that relates with the advertisement.</p> <p>Second Life ranks the products according to the traffic volume of the place if keywords used are the same. Traffic is a number for each parcel (land) which is based on the amount of residents who visited, and the time spent on that parcel out of their total time in Second Life that day (Second Life 2008s). It's calculated using a complex algorithm. Many companies provide products for free in order to increase traffic to the places. Traffic is very important for any businesses in Second Life in order to increase the number of customer visiting their places. The place with high volume of traffic would have a higher rank in a list when residents</p>



	<p>search for the place that provides products or services they want according to keywords, as shown in figure 6.6. Second Life also put the top twenty places that have the highest traffic as shown in figure 6.7.</p> <p>Companies can increase traffic to the place by providing camping place or xploder. Camping place is the place that offer free money to other residents, for example, there are many camping chairs available where residents who sit on those chairs would get money, for example three Linden dollars per ten minutes. Xploder is similar to camping place, xploder is a money bag that is available around the land in which resident would get money for free if they found it. Another way to increase traffic is to set up an event or other activity to attract more customers such as competition, game or promotion. Residents can see the events in the search menu as shown in figure 6.8.</p> <p>Residents can also place an advertisement on a third party website such as Onrez (<a href="http://shop.onrez.com">http://shop.onrez.com</a>) and SL Exchange (<a href="http://www.slexchange.com">http://www.slexchange.com</a>) as shown in figure 6.9 and 6.10 respectively. “SL Exchange is the premier Second Life-integrated commerce website featuring real-time shopping, real estate listings, and full-fledged currency exchange. Services include the marketplace, an auction block, real estate listings, and a currency exchange” (SL Exchange 2008a). Similarly, OnRez provides services such as shopping, forums and blogs. OnRez also provide services for users of other virtual worlds not only Second Life (OnRez 2008a). People can also promote their products through those forums or blogs.</p>
<p>Sales channel/ how to deliver the product (purchase stage)</p>	<p><b>Participant 1:</b> “Customers would get products instantly when they paid”. The products will be appeared in their avatars’ inventory.</p> <p><b>Participant 2:</b> Sales channels: (1) “In-world store”; (2) “third party sales websites (Onrez, SLExchange).”</p> <p>How to deliver products: (1) “Normal in-world delivery; pick up area for custom products”; (2) “third-party website delivery via scripts.”</p> <p><b>Participant 3:</b> Customer would get products in their avatars’ inventory when they pay.</p> <p><b>Participant 4:</b> Through observation we found that his company has both in-world and out-world offices.</p> <p><b>Participant 5:</b> -</p> <p><b>Observation:</b> Customer would get products in their avatars’ inventory when they pay. For services such as scripting, event planning or land developing, it depends on the negotiation between buyers and sellers.</p> <p>Some stores accept MetaCard (<a href="http://www.firstmeta.com/main">http://www.firstmeta.com/main</a>) which is a credit</p>

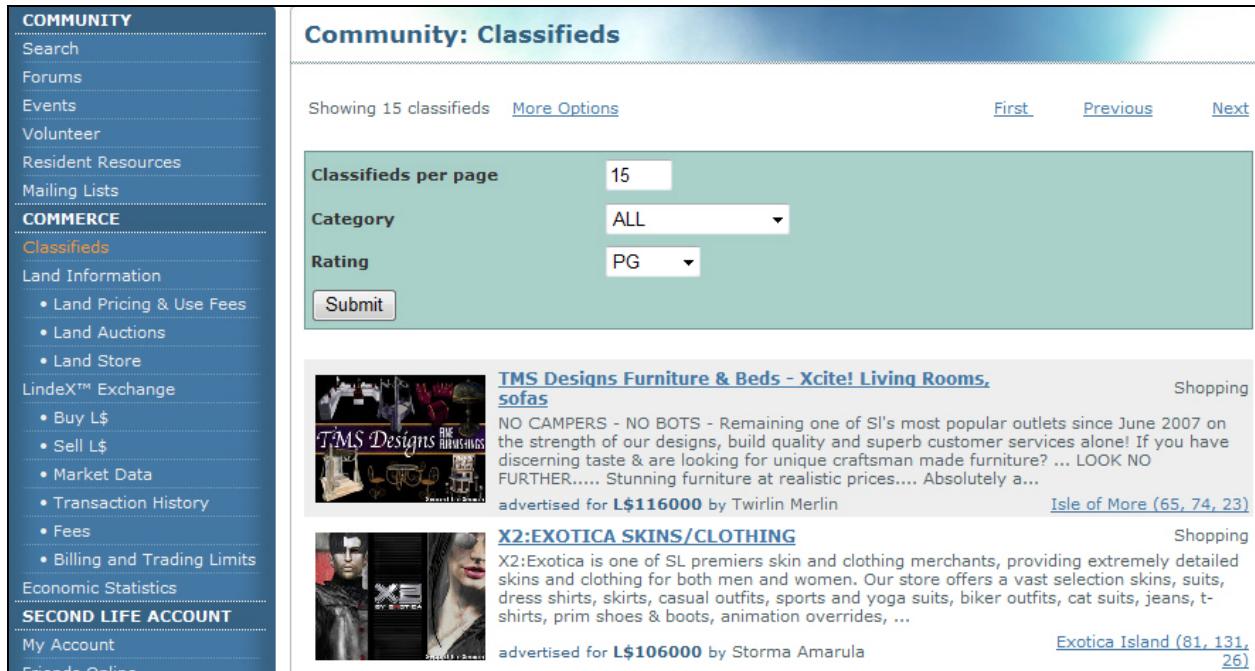
	<p>card for Second Life as shown in figure 6.11. The MetaCard is a L\$ credit card that allows customers to charge their Second Life purchases. Buy now and pay for it later. At the end of each billing cycle, customers will receive a statement showing how much they have charged to MetaCard and the minimum payment required. The customer would get MetaPoints to exchange for rewards later. (First Meta 2008b).</p> <p>Moreover, it is difficult to contact the owner of the products if the customers want to ask any questions. Most places have only products in the shops without the presence of the owners or contact information such as email or telephone number. The only way to contact the owner is to look at products' properties to see the name of the owner, then wait the owners to log in to Second Life and send instant message to ask them.</p>
<p>Customer service &amp; customer satisfaction (postpurchase stage)</p>	<p><b>Participant 1:</b> “I provide a refund if they don’t satisfy my products or there’re any bugs”, he also needs to know customer satisfaction to improve his products.</p> <p><b>Participant 2:</b> (1) Customer service—“Follow up on any questions, refunds if problems or dissatisfied with products”; (2) he needs customer satisfaction because “you cannot fix problems unless you know they exist”.</p> <p><b>Participant 3:</b> (1) She offered customer services—“If there’s problem with my products, I’ll give them new item”, but before that “You need to confirm that they really bought the product” by “Looking at purchase history”. (2) He also needs to know customer satisfaction because “I can know what they want or if there’re any problems with my products”.</p> <p><b>Participant 4:</b> -</p> <p><b>Participant 5:</b> (1) Customer service—“if there’re any problems with my land, I’ll fix it”, “but I’ll not refund if they don’t satisfy, difficult for me to manage”, so “I told customers every time before they buy”, “they have to make sure they like it”. (2) Customer satisfaction—“I always ask their opinions after they bought to make my land better”.</p> <p><b>Observation:</b> Most shops provide a refund if there are any problems with products.</p>

**Figure 6.4** Classified in Second Life



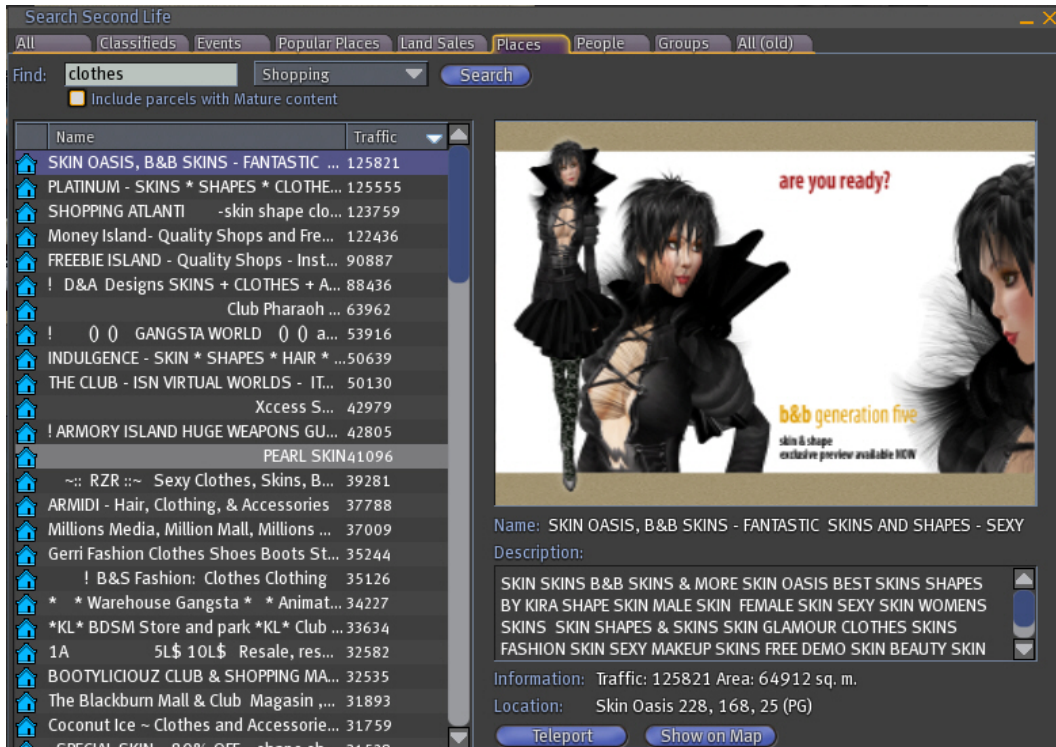
Source: Second Life search menu (accessed 12 May 2008).

**Figure 6.5** Classified on Second Life web site



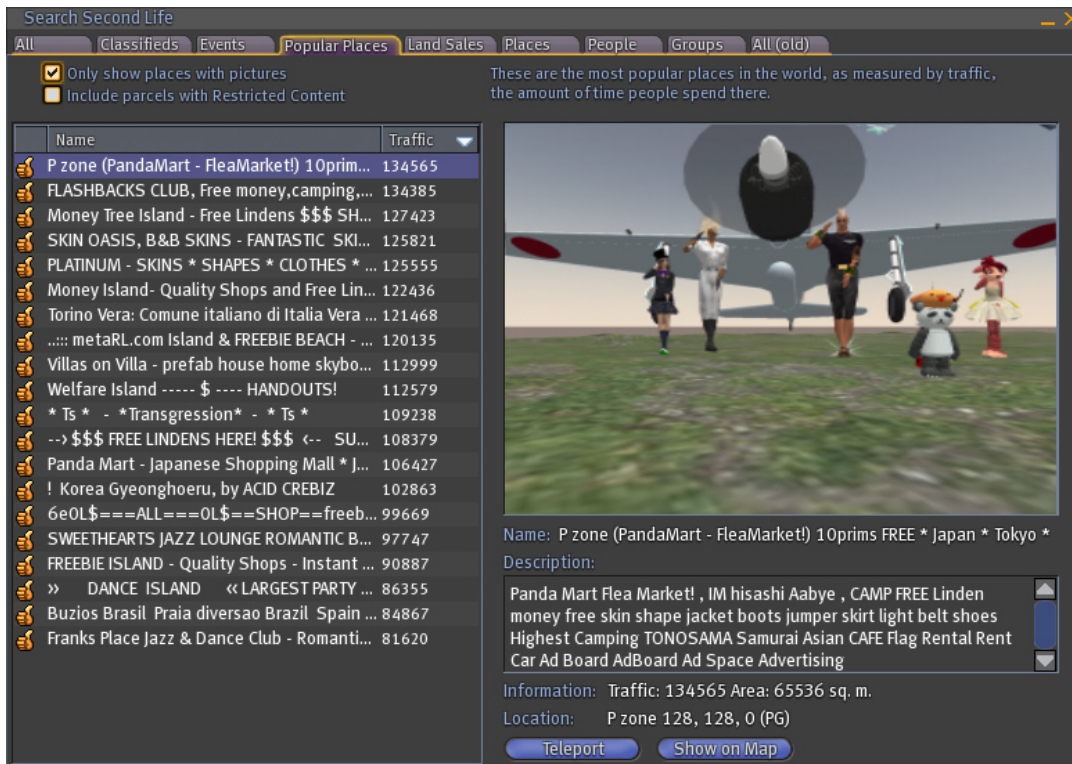
Source: Second Life (2008r)

**Figure 6.6** Ranking of places are ordered by traffic volume



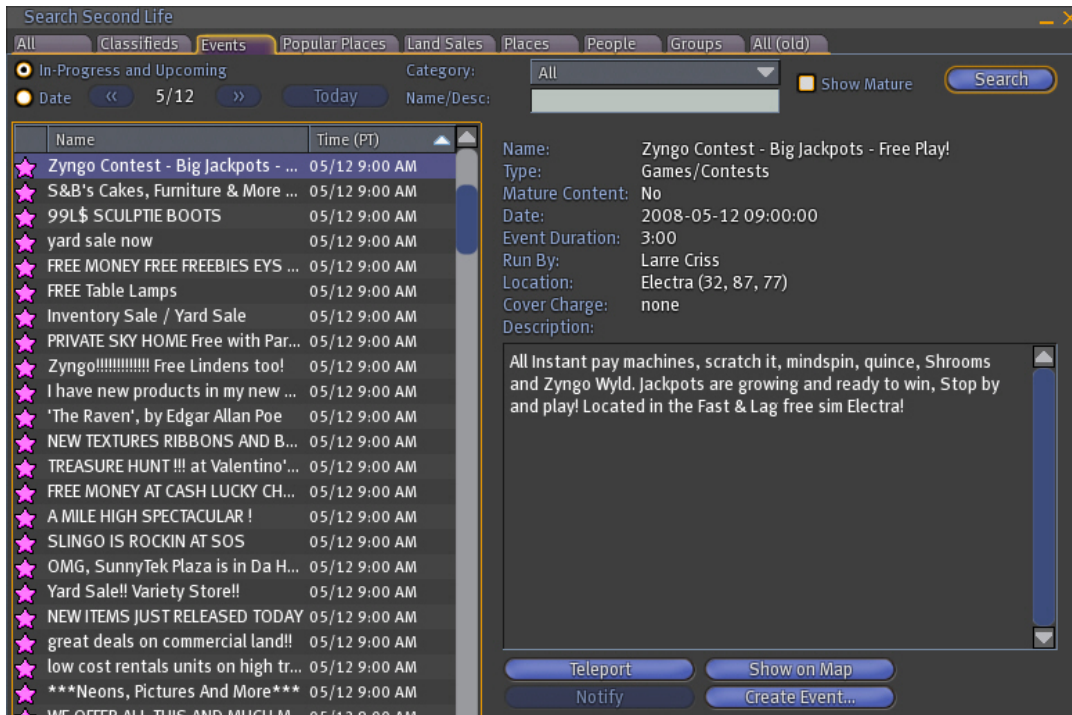
Source: Second Life search menu (accessed 12 May 2008).

Figure 6.7 Popular places in Second Life



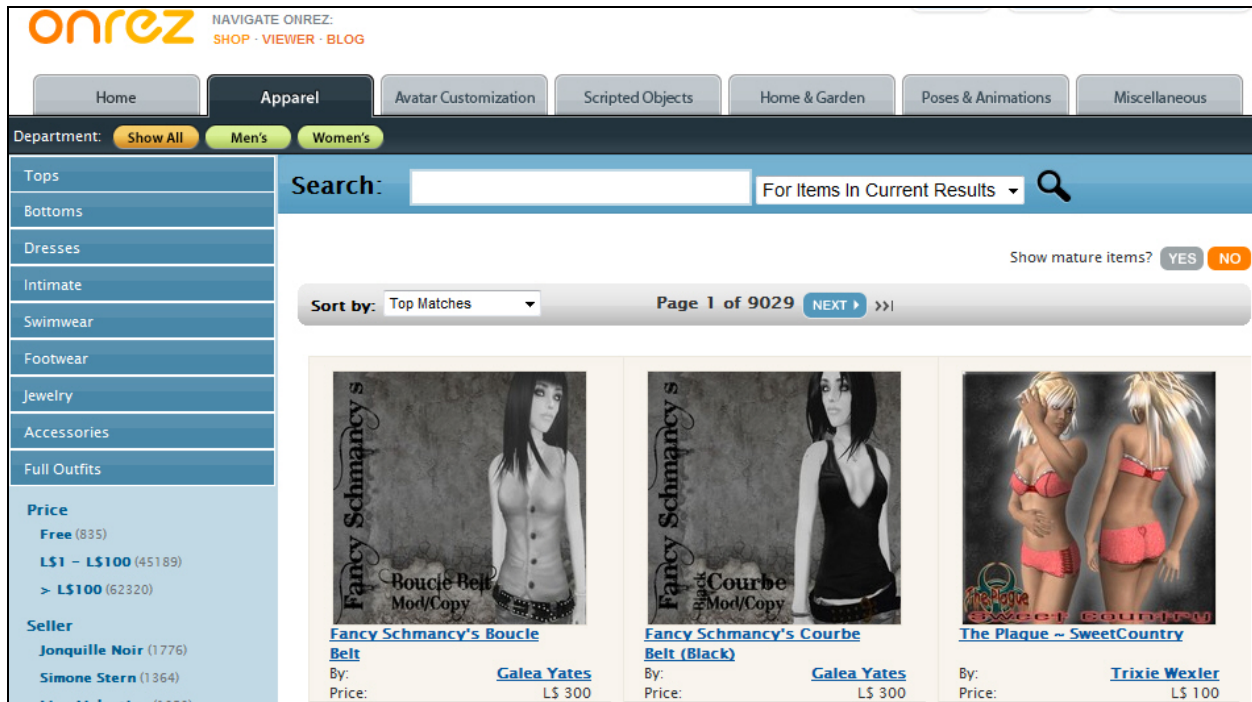
Source: Second Life search menu (accessed 12 May 2008).

**Figure 6.8** Events in Second Life



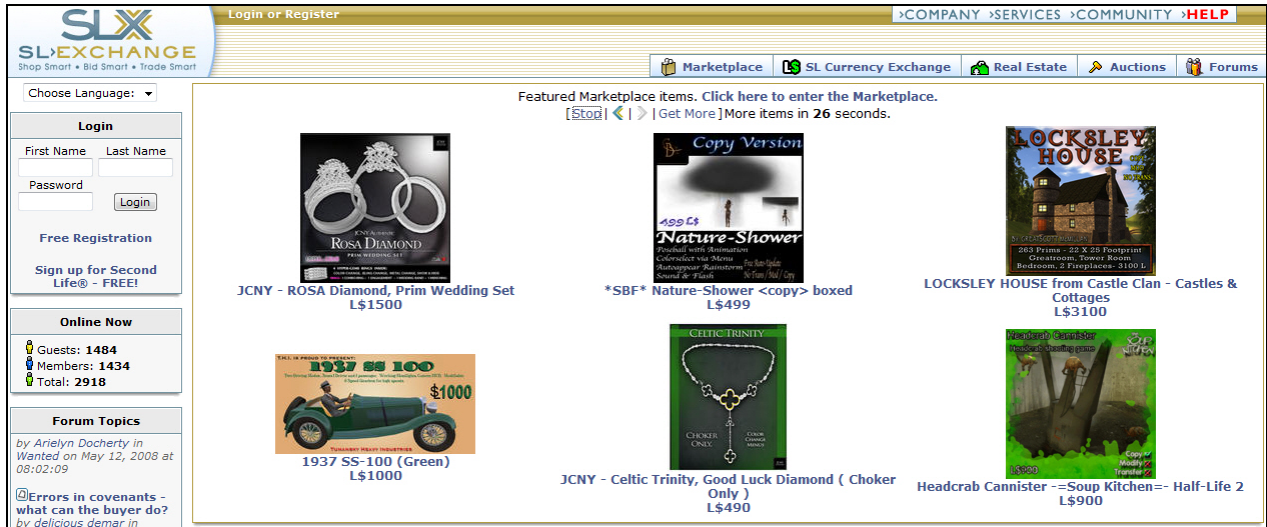
Source: Second Life search menu (accessed 12 May 2008).

**Figure 6.9** OnRez



Source: OnRez (2008b)

**Figure 6.10** SL Exchange



Source: SL Exchange (2008b)

**Figure 6.11** MetaCard



Source: First Meta (2008a)

## 6.2.4. Resources


**Table 6.4** Findings on resources aspect

Resources	
Key capabilities which lead to better delivery of	<b>Participant 1:</b> (1) He said “you don’t have to invest at the beginning”, “you can invest after you start earning some money”, “just buy a land then you can do anything on your land”. (2) Low cost to set up business. “If you’re selling, you can

<p>the benefits;</p> <p>Resources needed to build the competencies or capabilities</p>	<p>get money repeatedly, because you can copy your products to sell as much as possible”.</p> <p><b>Participant 2:</b> Key capabilities for better delivery of the benefits: “Simplicity of operation; visual beauty; products people have asked for (in other words, things known to be desired as opposed to wild guesses)”.</p> <p>Resources to build the competencies or capabilities: (1) “time to practice, explore, test and interact with residents to learn what they need”; (2) “scripting references”; (3) “software programming skills”; (4) “artistic ‘eye’”.</p> <p><b>Participant 3:</b> (1) There is no need to invest a lot or use employees or physical assets to do a business, “Registration is free”, “If you want to sell products, you can rent a land”, but “If you want to do a big business, you need to upgrade the account to buy land, have to pay fee every month”. (2) Relative skills are necessary, “Have to practice how to build products, coding scripts”. (3) Hardware and Internet—“You need a good performance computer and fast Internet connection too”. (4) The owner can copy his own products, “we built things once and can be sold forever”. But if someone else buys the products, he or she should not copy them, it is “Violation”—just like the real world, “buy CD and copy it, illegal”—the products are protected by copyright. “If someone clones products using cheating script, the person will be banned”; “If the person copy but not use cheating scripts, it’s ok, but will be condemned by others”.</p> <p>Necessary capabilities: (1) competencies—“People like the design, neat and quality products”. (2) “Location, places with more traffic would bring more customers” (3) “Knowledge on designing and programming”.</p> <p><b>Participant 4:</b> Specialists on “architecture, production design, 3D modeling, video production, advertisement plan, program development, etc.” “They can totally understand and realize how to extend enterprises’ brands in virtual worlds, and how to provide perfect experiences to consumers.”</p> <p><b>Participant 5:</b> (1) Key capabilities: “The ability of companies who design and develop the land”. (2) Resources build the capabilities: budget—“I only use money to buy land and hire land developer”.</p> <p><b>Observation:</b> For a price to buy a land, we found that 512 square meters of land required to pay around 1,500 L\$ per month, for the whole island (65,536 square meters) costs 58,500 L\$ per month (Second Life 2008w). For classified fee, the first rank classified at shopping category required to pay around 450,000 L\$ per week and for service category is around 10,000 L\$ per week.</p> <p>Computer system with good performance and high speed Internet connection is needed in order to handle loads of graphic. We accessed to Second Life website and found information about minimum requirements and recommended</p>
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	requirements of computer and Internet connection of Macintosh, Windows, and Linux operating systems as shown in figure 6.12, 6.13, and 6.14 respectively.
Partners	<p><b>Participant 1:</b> He was trying to “know more people and build relationships with them”, in order to “extend my business by asking them to sell my products at their islands” and “exchange the experience”. To him it is important to have partners because he “can get more customers”.</p> <p><b>Participant 2:</b> No partners, he said that “I do custom items on request, sometimes to repeat buyers, but they are not really partners.”</p> <p><b>Participant 3:</b> She hired others to code scripts for her, because, as she said, “I can’t do it”, “I can only build”.</p> <p><b>Participant 4:</b> “Now there are nine persons working for our company”.</p> <p><b>Participant 5:</b> She hired others to develop her lands.</p> <p><b>Observation:</b> -</p>


**Figure 6.12** Minimum and recommended requirement of Macintosh operating system

Mac OS	Minimum Requirements	Recommended 
<b>Internet Connection*:</b>	Cable or DSL	Cable or DSL
<b>Operating System:</b>	Mac OS X 10.3.9 or better	Mac OS X 10.4.3 or better
<b>Computer Processor:</b>	1 GHz G4 or better	1.25 GHz G4 or better
<b>Computer Memory:</b>	512 MB or more	1 GB or more
<b>Screen Resolution:</b>	1024x768 pixels	1024x768 pixels or higher
<b>Graphics Card**:</b>	<ul style="list-style-type: none"> <li>• ATI Radeon 9200 and above</li> <li>• <b>OR</b> ATI Radeon X Series</li> <li>• <b>OR</b> NVIDIA GeForce 2, GeForce 4</li> <li>• <b>OR</b> NVIDIA GeForce 5000 Series and above</li> </ul>	<ul style="list-style-type: none"> <li>• ATI: X1600, X1900, X2400, X2600</li> <li>• <b>OR</b> NVIDIA: 6800, 7600, 7800, 8800</li> </ul>

Source: Second Life (2008t)

**Figure 6.13** Minimum and recommended requirement of Linux operating system



Linux	Minimum Requirements	Recommended 
<b>Internet Connection*:</b>	Cable or DSL	Cable or DSL
<b>Operating System:</b>	A reasonably modern 32-bit Linux environment is required. If you are running a 64-bit Linux distribution then you will need its 32-bit compatibility environment installed.	A reasonably modern 32-bit Linux environment is required. If you are running a 64-bit Linux distribution then you will need its 32-bit compatibility environment installed.
<b>Computer Processor:</b>	800 MHz Pentium III or Athlon, or better	1.5 GHz or better
<b>Computer Memory:</b>	512MB or more	1 GB or more
<b>Screen Resolution:</b>	1024x768 pixels	1024x768 pixels or higher
<b>Graphics Card:</b>	<ul style="list-style-type: none"> <li>• NVIDIA GeForce 2, GeForce 4 MX, or better</li> <li>• <b>OR</b> ATI Radeon 8500, 9250, or better</li> </ul>	<b>NVIDIA Graphics cards</b> 6000 Series: <ul style="list-style-type: none"> <li>• 6600, 6700, 6800</li> </ul> 7000 Series: <ul style="list-style-type: none"> <li>• 7600, 7800, 7900</li> </ul> 8000 Series: <ul style="list-style-type: none"> <li>• 8500, 8600, 8800</li> </ul> GeForce Go Series: <ul style="list-style-type: none"> <li>• 7600, 7800, 7900</li> </ul>

Source: Second Life (2008t)

**Figure 6.14** Minimum and recommended requirement of Windows operating system

Windows	Minimum Requirements	Recommended 
<b>Internet Connection*:</b>	Cable or DSL	Cable or DSL
<b>Operating System:</b>	2000, XP, or Vista	XP or Vista
<b>Computer Processor:</b>	800 MHz Pentium III or Athlon, or better	1.5 GHz (XP), 2-GHz (Vista) 32-bit (x86) or better
<b>Computer Memory:</b>	512 MB or more	1 GB or more
<b>Screen Resolution:</b>	1024x768 pixels	1024x768 pixels or higher
<b>Graphics Card for XP/2000**:</b>	<ul style="list-style-type: none"> <li>• NVIDIA GeForce 2, GeForce 4 MX or better</li> <li>• <b>OR</b> ATI Radeon 8500, 9250 or better</li> <li>• <b>OR</b> Intel 945 chipset</li> </ul>	<b>NVIDIA Graphics cards</b> 6000 Series: <ul style="list-style-type: none"> <li>• 6600, 6700, 6800</li> </ul> 7000 Series: <ul style="list-style-type: none"> <li>• 7600, 7800, 7900</li> </ul> 8000 Series: <ul style="list-style-type: none"> <li>• 8500, 8600, 8800</li> </ul> GeForce Go Series: <ul style="list-style-type: none"> <li>• 7600, 7800, 7900</li> </ul> <b>ATI Graphics Cards</b> <ul style="list-style-type: none"> <li>• X800, X900, X1600, X1700, X1800, X1900</li> <li>• x2600, x2900</li> <li>• x3650, x3850</li> </ul>
<b>Graphics Card for Vista (requires latest drivers)**:</b>	<ul style="list-style-type: none"> <li>• NVIDIA GeForce 6600 or better</li> <li>• <b>OR</b> ATI Radeon 9500 or better</li> <li>• <b>OR</b> Intel 945 chipset</li> </ul>	<b>NVIDIA Graphics cards</b> 7000 Series: <ul style="list-style-type: none"> <li>• 7600, 7800, 7900</li> </ul> 8000 Series: <ul style="list-style-type: none"> <li>• 8500, 8600, 8800</li> </ul> GeForce Go Series: <ul style="list-style-type: none"> <li>• 7600, 7800, 7900</li> </ul> <b>ATI Graphics Cards</b> <ul style="list-style-type: none"> <li>• X1600, X1700, X1800, X1900</li> <li>• x2600, x2900</li> <li>• x3650, x3850</li> </ul>

Source: Second Life (2008t)

### 6.2.5. Revenue model

**Table 6.5** Findings on revenue model aspect

Revenue Model	
How do business owners earn revenue?	<p><b>Participant 1:</b> His business based on selling products (avatars). He said that his revenue is “so great for me”, “it can change my life”. He thinks that players “can also do other businesses other than building things, e.g. camping, land owner (can make much money)”.</p> <p><b>Participant 2:</b> His business based on selling products (particle effects).</p> <p><b>Participant 3:</b> Her business based on selling women products. She said that her revenue is “ok for me, I can earn money every month”, “If I have more products, I would get more money. But I don’t have time to build more”. She thinks it is good to buy a land and let others rent, but that is a revenue “for people who have money to invest” because “you have to invest first”— “If you want to buy, you contact Linden and have to pay monthly fee (‘for maintenance’) too”, and “you need to</p>

decorate it” before renting.

**Participant 4:** Real estate is “only a part of our services”, he first used this mode “in order to exam the business opportunity in that game”. Now his firm “mainly provides business plans for companies”.

**Participant 5:** Her business based on selling products (lands). She does not sell other products like avatar or clothes, she said, “you know some people are good at building they can do well, but when I am not good at it, I find my way to do other thing”—real estate. She thinks that “when you are good at programming, 3D or script is suitable for you”.

**Observation:** In Second Life, most businesses are based on selling products and services. Residents can be an affiliated partner, sell products of other vendors which they earn revenue based on pay-for-performance. Vendor provides original, new and bestselling products to an affiliated partner. The products can be copied or not depend on the vendor. Affiliated partner earns a percentage of revenue from the selling of vendor products.

There are many learning centers which provide classes to residents, for example, TUi university and SL Learning Center. The classes are about how to create objects, animation, events, etc. Residents are needed to pay a tuition fee for a course, but some places provide a course for free. The classes take place in Second Life where tutors communicate with students by chatting or talking via Second Life application. There are hospitals, for example, Palomar West hospital and Second Life Health hospital. These hospitals are prototypes which will be built to real hospitals in the future. Information about health care is also available there. We also found an insurance company, The Rock Insurance. It provides financial insurance for residents to protect the deposit and investment from fraud and bankruptcy occurred within Second Life. More information can also be found on website, <http://www.therockinsurance.com>. We also found a media company such as Reuters which provides exchange rate information for the Linden dollar, Second Life news and real-world news as well as discussion areas for various news categories.

Outside Second Life, some websites provide services such as marketplace, auction and currency exchange for the people in Second Life and charges commissions for the transactions. For example, SL Exchange (<http://www.slexchange.com>), Onrez (<http://shop.onrez.com>), and Apez (<http://www.apez.biz>). Some websites provide content or services for free and get revenues from an advertisement such as SLReports (<http://www.slreports.net>) provides news and information about Second Life, and SLBiz2Life (<http://www.slbiz2life.com>) provides service for business owners to submit their businesses into business directory for free. There is a website provides data about Second Life residents which include habits and demographics which are valuable to business owners to target marketing

	campaigns, for example Social Research Foundation ( <a href="http://socialresearchfoundation.org">http://socialresearchfoundation.org</a> ).
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**6.2.6. Problems**

**Table 6.6** Findings on problems

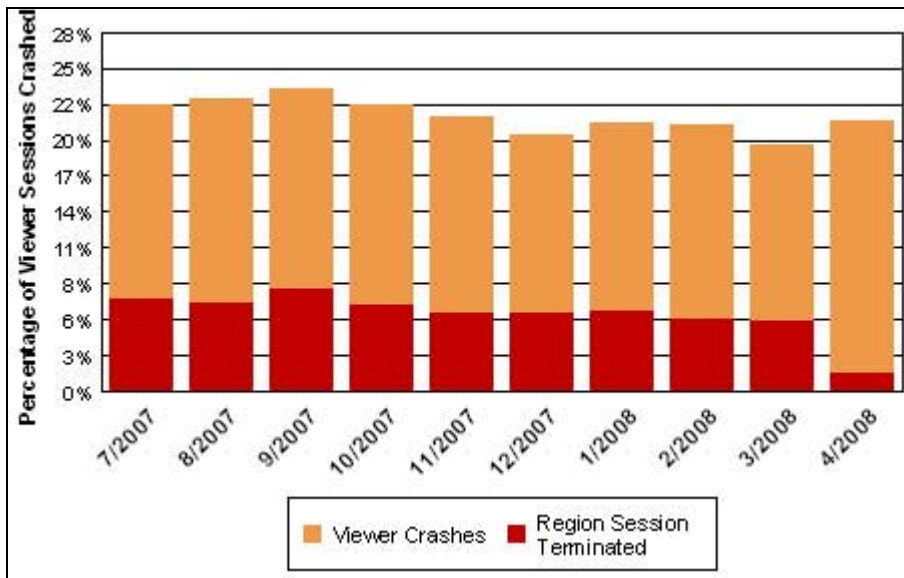
<b>Problems</b>	
Obstacles to their businesses	<p><b>Participant 1:</b> “Obstacles is a lack of innovation, competencies, patient, discipline”—“Innovation and competencies are for building things creatively, patient is for learning, practicing, discipline is for controlling myself to work hard”.</p> <p>“The current brand is not attractive as before”, “the sales has been decreasing”, because “People want new products”. Therefore his plan is: “I got so much money from this brand, so I would start making new brand. Based on my experience”.</p> <p><b>Participant 2:</b> There are two obstacles to his business, (1) “SL reliability causes massive drops in revenue (100% during outages or times when transactions are flaky, and 50% for days afterwards)”; (2) “Time available to make new products I don’t have”.</p> <p><b>Participant 3:</b> (1) “Language, English is not my mother tongue”, (2) The “connection speed” is “very slow when go to place with high traffic”.</p> <p><b>Participant 4:</b> Time—“the market, the customer, the virtual worlds, every part needs time to grow”.</p> <p><b>Participant 5:</b> Time—“it takes quite some time to develop the land. Have to wait”.</p> <p><b>Observation:</b> First problem is about a crashing of Second Life application while we are playing. We found information on Second Life website about the Second Life servers’ stability and compatibility between computer and Second Life application. Figure 6.15 shows the graph of Second Life percentage of viewer session crashed from September 2007 to April 2008 (Second Life 2008u). There are two reasons for sessions crashed which are viewer crashes and region sessions terminated. Viewer crashes caused by unsupported computer hardware, for example, old graphics card drivers. Region sessions terminated happened when Second Life servers went down, for example, database crashed or power outage.</p> <p>Next problem we met is slow frame rate while playing. We found information on Second Life web site about poor computer performance and slow Internet</p>

connection of users. Figure 6.16 shows the graph of Second Life average viewer frame rates per second (FPS) from September 2007 to April 2008 (Second Life 2008u). "FPS is the most direct measurement of the end-user's experience of responsiveness of the system. Lower FPS systems appear laggy to the end-users as they control their avatar. It's common for two users in the same Region to each have drastically different viewer FPS due to PC hardware, network and configuration settings differences" (Second Life 2008u). The graphics card of a computer is the most influential factor in determining the frame rate. Green bar at the top represents the portion from the 51st to the 75th percentile or users. Yellow bar at the middle represents the portion from the 26th to the 50th percentile. Red bar at the bottom represents the portion from the 0th to the 25th percentile.

Each place can support the certain amount of residents at a time. When we try to teleport to a place that has a maximum amount of residents, the popup window will be shown that the place currently has a full capacity. Less than a hundred of residents can be in one place at a time.

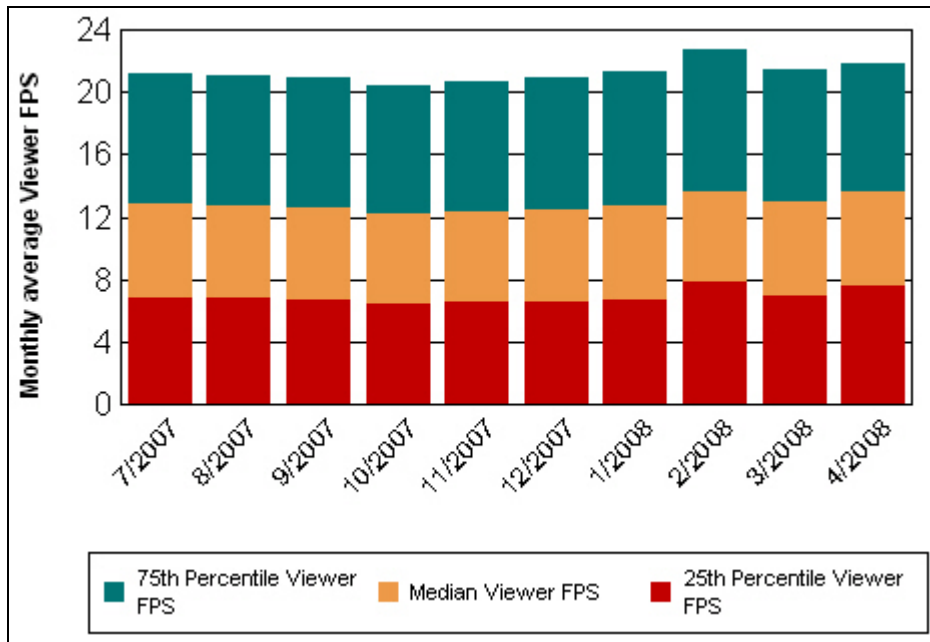
Next problem is griefing. We did not found griefer during observation; we found the information on Second Life website. Griefer is resident in Second Life who intimidates, spams, and harasses others (Second Life 2008v). Griefer build weapon such as gun or bomb which can take damage to others' properties. Griefing is against Second Life's term of service. Residents can protect themselves, use the land/region and estate tools, and use the abuse system to report to Second Life.

**Figure 6.15** Percentage of viewer sessions crashed



Source: Second Life (2008u)

**Figure 6.16** Average viewer frame rates



Source: Second Life (2008u)

### 6.3. Summary

This chapter showed our empirical findings from interviews and observations. Based on the five component of the business model introduced in chapter two, the investigation results are put into five tables. In each table the findings are further categorized by interview questions (Appendix A) which are designed according to theories in 2.2. The last table discloses the virtual business obstacles we found during interviews and observations.

On market aspect, firstly, there are five market segments in Second Life: (1) selling of virtual goods such as virtual clothes (Participant 3), avatars (Participant 1), particle effects (Participant 2); (2) selling of real goods; (3) Service based on virtual worlds, e.g. 3D designing, scripting (Participant 1), and virtual exhibitions (Participant 4); (4) Real estate of virtual lands including selling, develop and renting of lands (Participant 4, 5); (5) Consultation services on v-Business such as Participant 4's company which provides consultation services on advertising, marketing and other business projects in virtual worlds. Secondly, customer segments can be divided into (1) individual customers and (2) real-world companies. Lastly, interviews and observations show that companies and individual business owners in Second Life usually have clear definitions of competitors, they can also use powerful search engines of Second Life to target and observe their competitors.

On value proposition aspect, first of all, most companies or individual business owners have multiple product categories in order to attract more customers and sell out more products, but there are also some business owners who prefer providing single product category (such as Participant 1) aiming to set up unique brand fame. Next, all the interviewees (except Participant 4 who didn't answer the question) said that the quality of products is what they focus most on. Lastly, improving current brands and exploring new products is also critical to business in virtual worlds.

On business activity aspect, firstly, strategies to attract customers: (1) most interviewees choose to make advertisements, either inside or outside Second Life—on relative websites, forums or blogs; once the brand has some fame, the budget on advertising can be decreased; (2) putting as many keywords as possible on the products is another way to be easily searched out by potential customers (mentioned by Participant 3); (3) as Second Life ranks the same kind of products by their traffic, traffic is important to business owners. According to our observation, companies try to increase traffic by providing free products or camping places. Next, sales channel: (1) products are sold from stores in virtual worlds or on outside websites; (2) once the customers pay, they get the goods immediately and automatically, they can also use virtual credit cards to purchase. In the end, after the products have been sold, business owners usually offer customer services, they also need to know customer satisfaction to improve and extend their business.

On resource aspect, (1) skills to design and build products, to develop virtual lands, to do scripting, etc.: to retail of virtual goods, since the business owners mainly sell goods produced by themselves, skills is more important than investment (e.g. Participant 1). (2) investment: in virtual worlds, people can copy their products—such as virtual goods, 3D models, scripts—for countless times, therefore investment can be unnecessary to retail and service fields, but to real estate, it is always necessary because the lands have to be bought and explored first. If the land owners cannot develop by themselves, they also need money to hire other people (Participant 5). Meanwhile, observations reveal that companies also need budget to increase traffic or to get a good location. (3) hardware, software, and Internet. (4) partners: currently, although some of them sell each other's products, or employ people, business owners usually have no formal partners.

On revenue aspect, during our interviews and observations, we find out that there are retail stores, services, real estates, universities, insurance companies, media, and hospitals existing in Second Life.

At last, virtual business in Second Life must face problems such as viewer sessions crashed, low viewer frame rates, server capacity, griefer, and language.

In the next chapter, we use theories in chapter 2 and 3 to analyze the above empirical findings, to get deeper understanding of the five components of v-Business model and their relationships, and to discuss the differences between virtual and real-world business models.

## **7. Analysis**

This section we analyze and discuss the results from previous chapters based on business model theory.

### **7.1. Market**

According to the theory on market component in 2.2.1, market attractiveness can be measured by market size and growth rates (Rayport & Jaworski 2001). There is neither official record of the overall dollar size nor percentage growth rates of the market segments in Second Life. However, according to empirical finding, the biggest business in Second Life based on selling of virtual products which focus on enhancing an appearance of residents, for example, avatar (including skins, faces, bodies, hairstyles, etc.), avatar's accessories (such as glasses, rings, wristwatches, scarf, jewelry, etc.) and clothes. Not only virtual products are sold, we also found some places that sell real products such as books, music, and clothes by bringing customers to their websites to make a purchase, using Second Life as a bridge to real world business, but it is very rare to find shops that sell real products. There are many services available such as 3D designing, building, land developing and scripting available in the market. Another big business is about real estate which includes the selling and renting of lands, houses, apartment, etc. There are also some companies who provide consultation services on advertising, marketing or any business issues in Second Life, but this market is much smaller compared with the virtual products, services, and real estate. As we can see, not many types of virtual products are available because they are limited by virtual experience, residents cannot smell, eat or touch. Thus, the market in virtual world is not broad compared to traditional business.

As stated in 2.2.1 there are two ways to describe customer segment, according to customer's characteristics and unmet or insufficiently met customer needs (Hedman & Kalling 2002; Rayport & Jaworski 2001). Firms can choose target customer segment according to customers' characteristics by targeting on a group where members share the same demographics such as race, age, and interest. For the geographical location characteristic, unlike traditional business, there is no boundary of physical location; residents can teleport to anywhere in the world of Second Life. Firms can target customers who are currently either not being served or not being served well by existing competitors by searching in "wanted" category of the "classified" tab of the search menu where residents post the detail of any products or services they want. Firms can see what is needed most by the residents and choose that group as a target customer segment. Moreover, according to participant 1 and participant 2, firms can choose target customer segment according to their capabilities where the participants choose the target group based on their abilities in designing 3D models and coding scripts. Firms can choose the target customer segment based on type of the customers according to participant 4. Different from individual customers, another kind of customer is the real-world companies, especially big ones. Business owners can help



these enterprises to extend business in virtual worlds by offering them business consultation, market surveys, or virtual offices designs and buildings.

To analyze current competitors, firms can either go to “classified” tab of Second Life search menu or third party website that allows people to buy and sell virtual products to check out current competitors. Firms can teleport to the competitor’s place to evaluate the competitor’s product quality, whether the competitor have sufficient capability to win the market or not.

The same as traditional business, the market is where all the business owners get their benefits and what they are competing for. The market component is defined by revenue model and supported by value proposition, activities and resources components (will be discussed later), to keep the marketspace, attract customers, and win the competitions.

## **7.2. Value proposition**

There are two types for the scope of product as discussed in 2.2.2, category-specific dominance and cross-category dominance (Rayport & Jaworski 2001). Most businesses in Second Life focus on cross-category dominance where similar products or services are sold together because people are more likely to buy a set of products like shoes and socks, or avatar and clothes together which can increase sales volume. There is one interviewee that provides only one product category which is avatar. Although providing more than one product category can increase his sales volume, but to focus on only avatar, he can strengthen his brand name because when the brand name refers to only one product category; it makes customers easier to recognize.

In terms of customer benefits, we found that no matter what the companies provide single or multiple product category, the most important benefit that most firms have to focus on is the quality. Other benefits such as fast delivery and low price which are important to customers in traditional business have less impact in Second Life. Fast delivery and low price shipping benefits are usually critical to traditional business and e-Commerce, but in Second Life they have much less impact. That is because customers would get products instantly when they pay and most products are virtual products which require no physical delivery. About low price benefits, there are many free products available to increase traffic of the place (this issue will be discussed later in “activities” section). Another reason is that most products are not much different in price and most products are really cheap compared to products in real world. Thus, the benefit that distinguishes the companies most is the quality of the product. Residents are willing to buy in a higher price if it has a good quality. Quality benefits include unique design, beauty, and simple user interaction (some products are embedded with scripts, such as cars and blinking glasses which could be difficult for customers to use).

To provide a broad range of the products that we discussed earlier also benefit the customers in terms of convenience, customers do not need to go to many places to buy different kinds of products. The ease to access the shops is also a benefit to the customers. It would be easier for

the customers to access the shops if the companies provide the entrance from both inside Second Life (through classified) and outside Second Life (through website via SLURL). Like traditional business and e-Commerce, customer service is also important to virtual business which includes follow up the questions from customers, satisfaction guarantee, and refund for damaged products. Customer service will be discussed again later in the activities section.

According to the empirical findings and analysis above, in order to keep and extend the market in virtual worlds, business owners have to come up with enough customer benefit; the benefit includes the scope of product, high quality, convenience, ease to access the shops and customer service, all of which are belong to value proposition component. Consequently, the value proposition component is needed to provide benefits to customers.

### **7.3. Activities**

We begin with describing on customer decision process that was discussed in 2.2.3 which composed of three stages, prepurchase, purchase, and postpurchase stage. Prepurchase stage involves with activities that attract customers to purchase products or services which can be done from both inside and outside a virtual world. Unlike the real world, in Second Life, when customers want something, they would search products/services in classified or places section. In classified section, places are ranked according to money that firms paid for advertisement, but in places section, places are ranked by traffic volume. Thus, the places with high traffic volume have an advantage over the others because they can attract more customers with no cost. The relevant of advertisement is important; firms have to put as much keywords as possible which are related to the products which leads to high probability for customers to find them, for example, type of products, style, characteristics. For the firms with low traffic volume or firms that just set up business in Second Life, it is needed to put more money in both classified and activities such as providing free products, events, competition, xploders, and camping places to increase traffic volume in order to be known by customers. Popular places section which contains top twenty of the highest traffic volume places is another channel to increase customers. Since search function makes customers easy to find a big list of merchants with the same products and services, important factor that influence the decision of customer to purchase when they evaluate the alternatives is the value proposition that we discussed earlier. Advertisements are important to both real-world and virtual-world business. Outside the virtual space, firms can also place an advertisement on a third party website such as Onrez (<http://shop.onrez.com>) and SL Exchange (<http://www.slexchange.com>). Firms can also promote their product through forums or blogs that related to Second Life.

Next stage is purchase stage which involves with activities that provide convenience for customers to complete the purchasing process (Rayport & Jaworski 2001). There are two sales channels available, Second Life stores and third party website. Different from real-world business, delivery method or delivery time is irrelevant because customers would get product

instantly when they pay regardless of places they bought (stores in Second Life or third party website). Merchant would also get benefit from MetaCard because it would help customer to increase their spending ability—this is similar to the credit cards in the real world. Since customers can get the products automatically and immediately after they paid, there is no need to hire salesmen for virtual stores, neither the owners need to stay in their stores, but it also lead to a problem—according to the observation, it is difficult to contact the owner of the products if the customers want to ask any questions. To solve this issue, companies have to provide contact information and an example or demonstration of products in which customer could interact with them. Along with clearly instruction of how to use it, these would help customer easier to make a decision to purchase the products.

Final stage is postpurchase stage. Similar to real-world business, virtual business attaches importance to customer service and customer satisfaction as well. Most companies in Second Life provide a refund if customers are not satisfied or there are problems with the products, for example any script errors on the products. However the problem on the purchase stage still exists here; if the customers have questions or problems regarding the products after purchasing, it is difficult for them to contact the shop owners. This problem can lead to the disposal of products and the customers would not become loyal customers. About customer satisfaction, it is useful for companies to know customer satisfaction in order to understand the current problems of products and the need of the customers which contribute to better products and services offered to the customers. Companies can know the customer satisfaction by asking or sending customer survey to the customer about their opinion about the products or services. The name of the customers could be found by searching at purchase history.

Activity contains all the three necessary steps to deliver value propositions; meanwhile, business activities need both human and material resources (will be discussed in 7.4) to run. Thus this component should support value component and be built on resource components.

## **7.4. Resources**

We will follow five steps to specify a resource system as mentioned in 2.2.4. We would start with identifying capabilities that relate to the customer benefits that we discussed in 7.2 which are quality, low price, ease of access, customer service and broad range of products. The capabilities that are needed to the good quality of the products and be able to provide broad range of products are the skill to design a 3D model and skill to code a Linden Script Language. About low price benefit, the owners can set up the price as low as they want because the cost to build the products is zero (except the first prototype of the product which include labor cost such as designing and coding). The owners of the products can copy the product as much as they want. The capability that is needed to ease of access is the skill to build a website as another channel for customers to access. The abilities to increase traffic volume and make the website popular are also needed as well. For customer service, companies need to provide multiple contact points, for

example, email, telephone, instant messengers and also the presence of the salesperson at a shop to answer any questions from customers.

Next, we would identify resources that are needed to deliver the capabilities. Persons who specialize in architecture, 3D modeling, Linden Script programming are needed to provide the quality of the product. People who specialize in website development are needed to provide another channel for customers to access and to make the website popular. Persons who specialize in products or services are needed to provide information to the customers. Financial capital is needed to rent or buy a land or store, advertise products, and increase the volume of traffic to the place by providing camping place, xploder, or event and competition. Location is also important to get more customers if the store is in the land with high traffic volume. Other resources include computer system with good performance and high speed Internet connection in order to handle loads of graphic in Second Life.

Final step is to identify partners who can complete capabilities or fill out the resource system. Empirical results show that current partner relationships in virtual business are quite simple comparing with traditional business. Companies can sell products of other merchants to increase the range of products and can ask other merchants to sell their products as well in order to improve the accessibility of the customers and to increase the sales volume. The companies can outsource the activities to external suppliers if they do not want to hire employees. The examples of activities include designing and building products, land development and event planning. There are many companies which provide these kinds of services available in Second Life.

As we can see from above, a resource system supports capabilities that relate to all the customer benefits; it supplies those capabilities to create value with the mean of business activities.

## **7.5. Revenue model**

Revenue model (as discussed in 2.2.5) exist both inside and outside Second Life. Inside Second Life, there is a mix between traditional and e-Commerce revenue models. A major revenue model in Second Life is a combination of merchant model and manufacturing model because business owners usually build products on their own, unlike traditional business or e-Commerce where business owners sell products produced by factories (merchant model) or factories selling their products by themselves (manufacturing model). Another revenue model is affiliate model which is based on pay-for-performance. We also found some other traditional revenues in the Second Life—education and research, insurance, healthcare, and media revenue model, as shown in empirical finding chapter (6.2.5). Because people (in the form of avatars) never fall ill, become old, or get hungry, virtual hospital and healthcare centers are to offer information, not to cure illness, and there is no food, chemicals or pharmaceuticals revenue model. Because virtual worlds need not energy such as coal, gas or oil, there is no mining or oil & gas revenue models.

Revenue model outside Second Life based on e-Commerce revenue model which is in a form of website that is related to Second Life. The revenue model includes brokerage, advertising, and infomediary model which are mentioned in the empirical finding chapter.

This component decides how a company runs the business and gets profits, so it is the basis of the whole v-Business model and makes control of all the other components.

## **7.6. Problems**

There are many problems that we found during observation and interview which are threats to anyone who are currently doing business in Second Life. Most important issues are related to reliability of software caused by both Second Life and residents. Unlike general website, Second Life contains loads of 3D content, so a good performance of computer system and high speed Internet connection are required in order to handle it (both residents' computer and Second Life's servers). However, from the statistics as shown in figure 6.15 and figure 6.16 showed that Second Life servers are not stable enough and most residents still use low performance computer system. From figure 6.15, average twenty percent of all sessions were crashed at a time which is high and from figure 6.16, fifty percent of users have frame rates from 0-12 FPS which is low that makes residents difficult to interact and communicate to each other.

Next problem is server capacity. No matter what a place could attract lots of residents to visit, but the number of residents in one place at a time is limited by Second Life servers' capacity. There is no certain number of residents provided, but according to observation, less than a hundred of residents can be in one place at a time which is very low compared with a website that could handle thousands of users at a time. This problem decreases revenue from potential customers that could not access to the place. The only way for business owners is to buy more islands which definitely increase the cost. Another problem is high learning curve, it requires quite some time until residents get familiar with the navigation control and building tools in Second Life. It is not simple as a website where users just move the cursors around the page and click buttons; it depends mostly on how intuitive the residents are. Next problem is grieving which is a crime in Second Life, but we did not found griefer during observation; we found this information on Second Life website. Language is also a problem because residents come from every part of the world.

## **8. Conclusion**

In this chapter we provide an answer for our research questions and also discuss about future research.

### **8.1. What are the business model components that constitute a v-Business model?**

#### **8.1.1. Market**

- Market attractiveness. The biggest market based on virtual products that focus on enhancing an appearance of residents. Other big markets include service (designing and scripting) and real estate. Smaller market is business consultation services and real products market.
- Target customer segment. Firms can target customers based on customers' characteristics, unmet or insufficiently met customers needs, firms' capabilities, and type of customers.
- Competitors. Firms can search (from both in virtual world and third party websites) and visit to competitor's place to evaluate whether the competitor has sufficient capability to win a market or not.

#### **8.1.2. Value proposition**

- Product category. Most businesses focus on cross-category dominance to increase sales volume while category-specific dominance can strengthen brand name.
- Customer benefits. The most important benefit is quality of products and services which includes unique design, beauty, and simple user interaction. Fast delivery and low price benefits have less impact in virtual world.

#### **8.1.3. Activities**

- Prepurchase stage. Advertising can be done on both inside and outside virtual world (websites, blogs, etc). Important factors to attract customers include traffic volume, and keywords of advertisement, and factor that influence the decision of customer to purchase when they evaluate the alternatives is value proposition.
- Purchase stage. Two sales channel available, inside virtual world and third party websites. Delivery method or delivery time is irrelevant. Customer can increase their spending ability if merchants accept credit card. To provide contact information, an example or demonstration of products, and clearly instruction would help customer easier to make a decision to purchase products.

- Postpurchase stage. Customer services include refunding if customers don't satisfy or there are problems with the products. Customer satisfaction can be done by asking or sending customer survey to the customer which is important in order to provide better products and services.

#### **8.1.4. Resources**

- Capabilities that relate to the customer benefits include skill to design a 3D model, code a script, build website, increase traffic volume, and to be able to provide multiple contact points and salesperson at a shop.
- Resources that are needed to deliver the capabilities include persons who specialize in architecture, 3D modeling, programming, products or services, and website development. Financial capital is needed own a land, advertise products, and increase the volume of traffic. Location is also important to attract more customers. Other resources include computer system with good performance and high speed Internet connection.
- Partner can help firms to increase the range of products, improve customer accessibility, and increase the sales volume. The firms can outsource the activities to external suppliers.

#### **8.1.5. Revenue model**

- Inside virtual worlds, there is a mix between traditional and e-Commerce revenue models. A major revenue model is a combination of merchant model and manufacturing model. Other revenue models include affiliate, education and research, insurance, healthcare, and media.
- Revenue model outside Second Life based on e-Commerce revenue model which is in a form of website that is related to Second Life. The revenue model includes brokerage, advertising, and infomediary model.

#### **8.1.6. Problems**

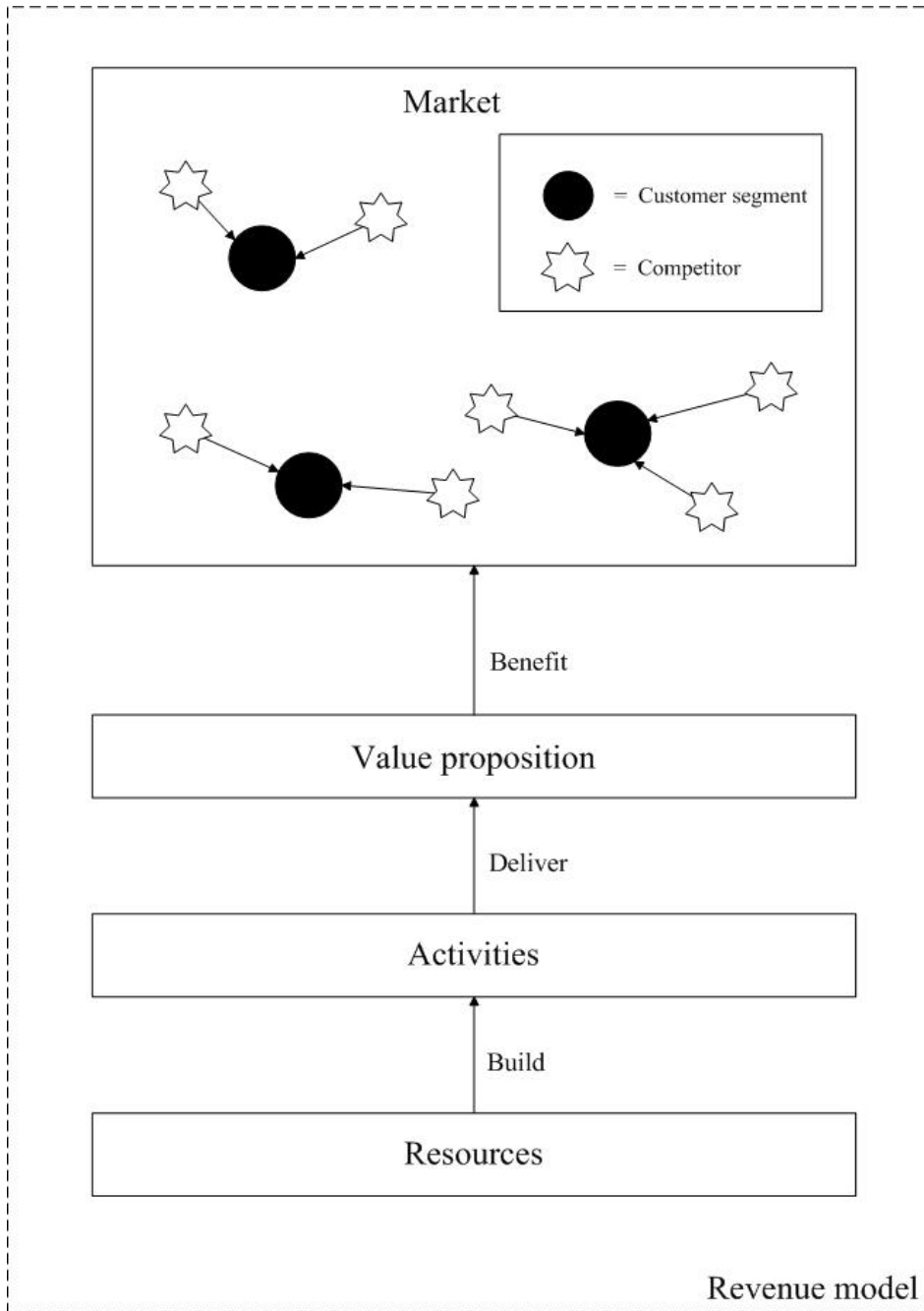
- Most important issue is reliability of software. Other problems include server capacity, high learning curve, griefing, and language.

## **8.2. What are relationships among the business model components?**

As shown in figure 8.1, the v-Business model starts with revenue model component, that component affects all the components as a whole; that is because it describes the way how a company earns revenue (Laudon & Traver 2002). Resources component is needed to build activities component; activities component is needed to deliver value proposition component;

value proposition component is needed to provide benefits to customers. There are many customer segments in a market, and competitors are competing for each customer segment.

**Figure 8.1** v-Business model components



### 8.3. Further study



Current theories present five components of business models: market, value proposition, activities, resources, and revenue model (Laudon & Traver 2002; Osterwalder 2004 cited in Li 2007; Hedman & Kalling 2002; Rayport & Jaworski 2001). This study outlines the v-Business model accordingly, using Second Life as the business context. Further researches could focus on the analysis, design, development, implementation, and controlling of one of these components, in the background of more than one virtual worlds. For example, marketing and advertising in virtual worlds, trust building in v-Business model, etc. That can lead to deeper understanding and more detailed business strategies.

Big companies that use virtual worlds as a bridge to their current real world business are drawing much attention of both managers and researchers. Their business models and strategies in virtual worlds are worth investigating. But this thesis mainly focuses on companies rising from Second Life. Future studies can concentrate on big brands that are trying to benefit from virtual worlds—by extending to existing ones or developing their own games.

Business models are continuing to evolve, with the development of technology (Rappa 2008). While virtual worlds developing, new v-Business models can be expected in the future. Therefore, other fields of research are v-Business model innovation, potential new models and commercial opportunities worth exploring.

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# Appendix

## A: Interview Guide

### 1. Introduction question

What is your business in Second Life?

How long have you set up your business in second Life?

### 2. Business model question

#### 2.1. Market

- What is your target customer segment? Why did you choose to focus on?
- How do you identify your competitors?

#### 2.2. Value proposition

- Do you provide one or multiple product category (e.g. supplement products)? Why?
- What are advantages and disadvantages of your products or services?
- Do you focus on single or multiple benefits (e.g. product quality, fast delivery, low price) to the customers? Why?

#### 2.3. Activities

- How do you attract the customers to purchase your products or services (e.g. advertising)? How can you make customers to trust you?
- What kinds of sales channel do you provide to your customer (e.g. in Second Life, web site, real world)?
- How do you deliver your products to customers?
- Do you provide customer service? How?
- Do you need to know your customer satisfaction? Why?
- Do you have partners (e.g. suppliers)? What are they? How important are the relationships?

#### 2.4. Resources



- What are your key capabilities that lead to better delivery of the benefits compared to your competitors (e.g. innovation, cost, competencies, location, brand name, partners, product range)?
- What are obstacles to your business?
- What are the resources (e.g., human, financial, physical assets) needed to build the competencies or capabilities? Why?

## **2.5. Revenue model**

- How do you generate revenue (e.g. from advertising, transaction fee, subscription, product sales)?

## **B: Interview transcription**

### **Participant 1**

**Researcher:**

Hi. I'm [researcher's name] who asked for the research participation via email.

**Participant 1:**

Hi.

**Participant 1:**

I'm [participant's name]

**Researcher:**

Are you free to talk now?

**Participant 1:**

Yes.

**Researcher:**

Thank you. What is your business in Second Life?

**Participant 1:**

I'm a merchant.

**Participant 1:**

Building things and get money from that.

**Researcher:**

How long have you been selling?

**Participant 1:**

2 years.

**Researcher:**

Ok. What kind of products are you selling?

[The participant was offline for 10 minutes]

**Participant 1:**

Sorry, I have problem with network.

**Researcher:**

That's fine.

**Participant 1:**

What did you ask?

**Researcher:**

What kind of products are you selling?

**Participant 1:**

I'm selling avatar.

**Participant 1:**

and I'm freelance.

**Participant 1:**

I do 3D designing and scripting.

**Researcher:**

You built the products by yourself?

**Participant 1:**

Yes.

**Researcher:**

Also developing the island?

**Participant 1:**

Yes.

**Researcher:**

You are the owner of [name of the island] island?

**Participant 1:**

Yes.

**Participant 1:**

I owned 2 islands.

**Participant 1:**

But I want to delete and rebuild it.

**Researcher:**

Why?

**Participant 1:**

Because I want to build a new brand, it's my new project.

**Participant 1:**

Current islands used to be city, but not successful.

**Participant 1:**

So I deleted and rebuilt it.

**Researcher:**

So, you let the others rent your land to set up their shops?

**Participant 1:**

No.

**Participant 1:**

I only sold my products and gave my friends some area to sell their stuff.

**Researcher:**

What is your target customer segment?

**Participant 1:**

Teenage.

**Researcher:**

Why did you choose to focus on?

**Participant 1:**

Most avatars I designed are robots and monsters.

**Participant 1:**

I'm better at designing these things.

**Researcher:**

Do you sell products other than avatar?

**Participant 1:**

No.

**Researcher:**

Why?

**Participant 1:**

I want my brand to refer to avatars only.

**Participant 1:**

Easy for customers to remember if you focus on one kind of product.

**Researcher:**

Ok. What about your revenue, is it good? (If you don't want to answer, it's ok).

**Participant 1:**

It's so great for me.

**Participant 1:**

It can change my life.

**Researcher:**

Oh, that's great.

**Participant 1:**

I wanted to be a movie director before.

**Participant 1:**

Since I know SL 2 years ago.

**Participant 1:**

I wanted to be a 3D content designer.

**Participant 1:**

Build models.

**Participant 1:**

Now I focus on SL only, but if there's no SL, I want to be an art director for 3D models.

**Researcher:**

Ok. What about your freelance job?

**Participant 1:**

Not good as selling, I did it because I just want to know more people and build relationships with them.

**Participant 1:**

To do freelance, you only get paid once.

**Participant 1:**

But if you're selling, you can get money repeatedly, because you can copy your products to sell as much as possible.

**Researcher:**

Why do you need to build relationships with them?

**Participant 1:**

I can extend my business by asking them to sell my products at their islands.

**Participant 1:**

Exchange the experience.

**Researcher:**

Ok. How do you attract your customers to purchase your products?

**Participant 1:**

I paid for advertising in SL, just L\$666 per week, very cheap.

**Participant 1:**

I don't advertise much compared to the past because my brand is already known by many people.

**Participant 1:**

I used to pay for L\$6,666 per week

**Researcher:**

What are the benefits of your products that you offer to the customers? (e.g. product quality, fast delivery, low cost) to the customers?

**Participant 1:**

Product quality, fast delivery is not the case because customers would get products instantly when they paid.

**Researcher:**

So, you focus on only designing products?

**Participant 1:**

Yes

**Researcher:**

Why do you focus only on designing?

**Participant 1:**

It's the most important thing for all products here.

**Researcher:**

What about low price?

**Participant 1:**

The prices are not much different between merchants and most products are really cheap.

**Participant 1:**

People are willing to buy in a higher price if it has a good quality.

**Participant 1:**

But I don't design all products, some products I got request from customers.

**Participant 1:**

I designed according to my feeling.

**Participant 1:**

Like he wants orc, I imagined my own orc and did it.

**Participant 1:**

Try not to copy others.

**Participant 1:**

Other merchants sell things based on their interests.

**Researcher:**

What is orc? Is it stand for something?

**Participant 1:**

Like I love gundam, then I build and sell gundam.

**Participant 1:**

Orc are monsters like in Lod of The Rings movie.

**Researcher:**

Oh I see.

**Participant 1:**

Someone love cars, they will sell cars.

**Participant 1:**

But they can also do other businesses other than building things, e.g. Camping, land owner (can make much money).

**Participant 1:**

People do what they like, that's it.

**Researcher:**

Do you buy product only in Second Life?

**Participant 1:**

Yes.

**Researcher:**

Ok, do you have partners? Or any employees?

**Participant 1:**

I build all things on my own, no employee. I learn to build things myself.

**Participant 1:**

I have partners selling my products.

**Researcher:**

Is it important to have partners?

**Participant 1:**

Yes, I can get more customers. But I don't have many.

**Researcher:**

Ok, you have to invest much money to do business?

**Participant 1:**

No, you don't have to invest at the beginning.

**Participant 1:**

You can invest after you start earning some money.

**Participant 1:**

It's not much.

**Participant 1:**

Just buy a land then you can do anything on your land.

**Researcher:**

Ok. What are advantages and disadvantages of your products?

**Participant 1:**

Advantages: more beautiful products compared to others.

Disadvantages: a little bit more expensive.

**Participant 1:**

What you see at the island now, I stopped improving for 4-5 months.

**Participant 1:**

I would start building all new products, new brand soon.

**Participant 1:**

The current brand is not attractive as before.



**Researcher:**

Why?

**Participant 1:**

The sales has been decreasing.

**Researcher:**

Because people want to try new brand?

**Participant 1:**

No.

**Participant 1:**

People want new products.

**Researcher:**

Ok. I see.

**Participant 1:**

Current brand has some weakness.

**Participant 1:**

New brand would be improved from current brand.

**Participant 1:**

When I built current brand, I didn't have knowledge at all. Just did it.

**Participant 1:**

But now I got so much money from this brand, so I would start making new brand. Based on my experience.

**Researcher:**

Do you provide customer service?

**Participant 1:**

I provide a refund if they don't satisfy my products or there're any bugs.

**Researcher:**

Do you need to know your customer satisfaction?

**Participant 1:**

Yes, to improve my products.

**Researcher:**

Ok. What are drivers and obstacles of your business (e.g. innovation, cost, competencies, location, brand name, partners, product range)?

**Participant 1:**

Innovation, competencies.

**Participant 1:**

Patient.

**Participant 1:**

Discipline.

**Participant 1:**

Innovation and competencies are for building things creatively, patient is for learning, practicing, discipline is for controlling myself to work hard.

**Participant 1:**

Obstacles is a lack of innovation, competencies, patient, discipline.

**Researcher:**

Ok finished, thank you very much for answering my questions.

**Participant 1:**

You're welcome.

**Participant 1:**

Good luck.

**Researcher:**

Thank you. Bye.

Follow up question was sent via email

1) Before you set up your business, do you observe current competitors? How and why?

I searched for shops that sell avatars in Second Life and also in slexchange and look what they sell, what are advantages or disadvantages. I need to build my avatars better than those to win the market.

**Participant 2**

1. What is your business in Second Life?

Particle effects.

2. How long have you set up your business in second Life?

1 year.

3. What is your target customer segment? Why did you choose to focus on?

Two segments: 1) those who like to wear effects for personal enhancement, 2) property owners who want to enhance their site.

4. Do you focus on single or multiple benefits (e.g. product quality, fast delivery, low cost) to the customers? Why?

Quality. Because there are lots of shoddy vendors and I chose to distinguish my biz by being high quality.

5. How do you attract the customers to purchase your products or services (e.g. advertising)?

How can you make customers to trust you?

Some explicit advertising, but mostly word of mouth. Also blogging.

6. What kinds of sales channel do you provide to your customer (e.g. in Second Life, web site, real world)?

In-world store (no malls, they don't work); third party sales websites (onrez, slexchange).

7. Do you provide customer service? How?

Follow up on any questions, refunds if problems or dissatisfied with products.

8. Do you need to know your customer satisfaction? Why?

Yes! you cannot fix problems unless you know they exist.

9. Do you provide one or multiple product category (e.g. supplement products)? Why?

I have over 150 different products - some are combos of other products. Have multiple usage categories (e.g. romantic, dance, weather, etc.).

10. What are advantages and disadvantages of your products or services?

I make the user interaction as simple as possible. disadvantages??? i dont make such things!

11. How do you deliver your product to customers?

Normal in-world delivery; pick up area for custom products; third-party website delivery via scripts.

12. What are your key capabilities that lead to better delivery of the benefits compared to competitors (e.g. innovation, cost, competencies, location, brand name, partners, product range)?

Simplicity of operation; visual beauty; products people have asked for (in other words, things known to be desired as opposed to wild guesses).

13. What are obstacles to your business?

SL reliability causes massive drops in revenue (100% during outages or times when transactions are flaky, and 50% for days afterwards); Time available to make new products I don't have.

14. What are the resources (e.g., human, financial, physical assets) needed to build the competencies or capabilities? Why? Are the resources unique (difficult for competitors to imitate)?

Time to practice, explore, test and interact with residents to learn what they need; scripting references; software programming skills; artistic "eye". Competitors must have all elements to succeed, and often they do not.

15. Do you have partners (e.g. suppliers)? How important are the relationship?

Not really. I do custom items on request, sometimes to repeat buyers, but they are not really partners.

Follow up questions were sent via email

1) Why did you choose to do particle effects? Because you are good at scripting or this customer segment is attractive to you or have few competitors in the market or anything else?

I am a programmer by training. After some casual experimentation with particles, I discovered that people liked what I had built. Some suggested I try selling them. I experimentally put a small number on sale, and found that they indeed sold well. At that point I decided to set up a real (virtual) business. I could have built other things, but you go with what works - in this case, particles.

2) Before you set up your business, do you observe current competitors? How and why?

I did not investigate the market extensively, only enough to determine that there really were very few particle shops, and that it would be straightforward to compete with them. Now I basically ignore them completely to ensure that I build unique products.

### **Participant 3**

#### **Researcher:**

Hi. I'm [researcher's name] who sent you email about my research.

#### **Participant 3:**

Hello, [researcher's name].

#### **Participant 3:**

Nice to meet you.

**Researcher:**

Nice to meet you too.

**Researcher:**

Are you free to talk now?

**Participant 3:**

Ok.

**Researcher:**

Thank you. What are you doing in Second Life?

**Participant 3:**

I have products sold there.

**Participant 3:**

I sell clothes, bags, accessories, socks, shoes, etc.

**Participant 3:**

Many products for women.

**Researcher:**

Why don't you focus on one products?

**Participant 3:**

I can sell more. People are more likely to buy a set of products like shoes and socks together.

**Researcher:**

You do it alone?

**Participant 3:**

No. I hired others coding scripts for me

**Participant 3:**

I can't do it.

**Participant 3:**

I can only build.

**Researcher:**

How long have you been selling?

**Participant 3:**

1 year.

**Researcher:**

What is your target customer segment?

**Participant 3:**

Women

**Researcher:**

Why did you choose to focus on?

**Participant 3:**

Because women like to dress up.

**Participant 3:**

You understand what I mean?

**Researcher:**

Yes, I understand

**Researcher:**

Do you focus on single or multiple benefits (e.g. product quality, fast delivery, low cost) to the customers? Why?

**Participant 3:**

Only product quality, because there're many freebies. I have to design different from those otherwise customer won't buy.

**Researcher:**

Ok. What about your revenue, is it good? (If you don't want to answer, it's ok)

**Participant 3:**

It's ok for me, I can earn money every months

**Participant 3:**

I don't have many products.

**Participant 3:**

If I have more products, I would get more money. But I don't have time to build more.

**Researcher:**

Ok. How do you attract customers to buy your products?

**Participant 3:**

I advertise at slexchange

**Participant 3:**

There's fee when the products are sold, but not much.

**Participant 3:**

In SL, I don't advertise, but I have to update product details.

Participant:

My products will be shown when others search for those keywords.

**Participant 3:**

Mostly when others are interested in someone's item, they would ask the owners where they bought it.

**Participant 3:**

They are advertised by customers.

**Researcher:**

Ok. So you have to select keywords which have a high probability for people to search for, right?

**Participant 3:**

Correct

**Participant 3:**

Keywords that people would type when they want something.

**Participant 3:**

Put many keywords that are related to the products.

**Participant 3:**

Type of products, style, characteristics.

**Researcher:**

If many merchants have the same keywords, how SL rank them?

**Participant 3:**

According to the traffic.

**Participant 3:**

Some merchants increase traffic by providing camping places, or xploders.

**Participant 3:**

Or provides free products.

**Researcher:**

Do you provide customer service?

**Participant 3:**

Yes.

**Participant 3:**

If there's problem with my products, I'll give them new item.

**Participant 3:**

You need to confirm that they really bought the product.

**Participant 3:**

Looking at purchase history.

**Participant 3:**

There're many type of customers.

**Participant 3:**

Have to be careful.

**Researcher:**

Do you need to know your customer satisfaction?

**Participant 3:**

Yes, I can know what they want or if there're any problems with my products.

**Researcher:**

If I buy products, can I copy it?

**Participant 3:**

No

**Participant 3:**

Violation

**Participant 3:**

Same with real life.

**Participant 3:**

We buy CD and copy it, illegal.

**Participant 3:**

It has copyright.

**Participant 3:**

If someone clone products using cheating script, the person will be banned.



**Researcher:**

Can owner copy their own products?

**Participant 3:**

If the person copy but not use cheating scripts, it's ok, but will be condemned by others.

**Participant 3:**

Yes

**Participant 3:**

We built things once and can be sold forever.

**Researcher:**

That's good.

**Participant 3:**

If we don't build new products, the popularity will be dropped.

**Participant 3:**

Sold a lot at first, then dropped

**Participant 3:**

Same as real life

**Researcher:**

Ok. Do I need to invest a lot or do I need anything else, for example, employees or physical assets to do a business?

**Participant 3:**

No

**Participant 3:**

Registration is free.

**Participant 3:**

Have to practice how to build products, coding scripts.

**Participant 3:**

If you want to sell products, you can rent a land.

**Participant 3:**

If you want to do a big business, you need to upgrade the account to buy land, have to pay fee every month.

**Participant 3:**

You need a good performance computer and fast internet connection too.

**Researcher:**

Ok. What are the advantages and disadvantages of your products?

**Participant 3:**

Advantage, unique design.

**Participant 3:**

Disadvantage, limited customers.

**Participant 3:**

Few people like punk style.

**Researcher:**

What are necessary capabilities for a business in Second Life (e.g. innovation, cost, competencies, location, brand name, partners, product range)?

**Participant 3:**

Competencies, very necessary.

**Participant 3:**

People like the design, neat and quality products

**Participant 3:**

Location, places with more traffic would bring more customers

**Participant 3:**

Knowledge on designing and programming

**Researcher:**

What about obstacles?

**Participant 3:**

Language, English is not my mother tongue

**Participant 3:**

Connection speed

**Participant 3:**

Very slow when go to place with high traffic.

**Researcher:**

Is it good to buy a land and let others rent?

**Participant 3:**

Yes, but you have to invest first.

**Participant 3:**

It's for people who have money to invest.

**Participant 3:**

If you want to buy, you contact Linden and have to pay monthly fee too.

**Participant 3:**

You can open shop or let others rent, up to you.

**Participant 3:**

But you need to decorate it first.

**Researcher:**

I need to pay monthly fee even I bought it?

**Participant 3:**

Yes, for maintenance.

**Researcher:**

Ok. I'm done. Thank you very much.

**Participant 3:**

Ok.

Follow up question was sent via email

1) Before you set up your business, do you observe current competitors? How and why?

Yes, I was searching for shops and found that there were few shops selling women punk clothes and stuff which is good for me to compete in this market.

**Participant 4**

**Researcher:**

Would you please introduce briefly how you began your business in Second Life?

**Participant 4:**

It's a bit difficult to say...

**Researcher:**

OK. Let me ask more detailed questions. When did you start to play Second Life?

**Participant 4:**

It's the summer of 2006, I heard about it by accident. I was working as a system integration engineer at that time and had been playing online games for seven years before that.

**Researcher:**

Why didn't you just play it as other games?

**Participant 4:**

I heard that there were business opportunities in it from the very beginning. It's like a gold rush.

**Researcher:**

How did you feel when first entering such a virtual world?

**Participant 4:**

First I felt a little lost, just looked around, not knowing what to do. My English wasn't so good, whenever there was something I didn't understand, I used my dictionary. I needed to get familiar with it little by little.

**Researcher:**

Can you describe how you started your business?

**Participant 4:**

My first income was about real estate. I found a piece of "land", 6000 Linden dollars, the "land" is good, and the price is not high.

But I hesitated a lot before making the decision, once that investment failed, all my virtual money would gone. So after buying it, I tried my best to exploit it. I made use of my technology which is not bad, to built many pretty houses, the greenings and landscapes made by me were not bad as well. Soon that piece of "land" increased in value, when it's sold out, the price was 8000 Linden dollars—I earned 2000.

**Researcher:**

But I visited the website of your company, it seems that your company is not about real estate.

(Note: According to its homepage, the participant's company was founded in Hangzhou—a big city in China—on July 24th, 2007.)

**Participant 4:**

That's only a part of our services. That deal was in order to exam the business opportunity in that game, I chose real estate because it is one of the modes that are easiest to operate.

You can refer to the website; my company mainly provides business plans for those companies which will enter virtual worlds. That is to introduce a great number of domestic brands into virtual worlds, to lead them carry out a kind of Experiential Marketing.

**Researcher:**

So your company base on Second Life?

**Participant 4:**

Not only Second Life, all the virtual worlds.

**Researcher:**

So your target customer segment is the companies?

**Participant 4:**

We provide three kinds of services. The first one is for the companies. We offer business consultation, market surveys, brand advertising plan, extending activities and consumer experience projects. We have successfully cooperated with some big brands such as VS and China Petrochemical Corporation.

The second is for individuals: real estate design, house building, product production, avatar design, etc.

Other services include virtual exhibitions, virtual video produce, project maintenance, customer support, etc.

**Researcher:**

What are your key capabilities that lead to better delivery of the benefits compared to your competitors?

**Participant 4:**

Our team, it is made up of graduations from professional universities in the fields of architecture, production design, 3D modeling, video production, advertisement plan, program development, etc. Most of them have bachelor's or higher degrees. They can totally understand and realize how to extend enterprises' brands in virtual worlds, and how to provide perfect experiences to consumers (note: e.g. the company provides virtual products of those companies.). Now there are nine persons working for our company.

**Researcher:**

Is your company the only one that doing such business in China? Are there such ones in foreign countries?

**Participant 4:**

Yes, we are the only one. But in other countries there are not few.

**Researcher:**

What are obstacles for your business in virtual world?

**Participant 4:**

It's time.

**Researcher:**

Can you explain it with more details?

**Participant 4:**

It needs time, the market, the customer, the virtual worlds, every part needs time to grow.

**Researcher:**

I found from the BBS that a lot of people are trying to earning money just by gambling or seating on payable seats.

**Participant 4:**

Yes, but that is only some individual behaviors.

**Researcher:**

How do you attract the customers to purchase your products or services? What are advantages and disadvantages of your products or services?

**Participant 4:**

You can refer to our websites. We have published some articles discussing this industry. Some other information is related to business confidentialities. Sorry I can't tell you more.

**Participant 5**

**Participant 5:**

ok.

**Researcher:**

ok, thank you. What is your business here?

**Participant 5:**

most i do real estate, xploders

**Participant 5:**

stock market

**Participant 5:**

and earn some money from contest

**Researcher:**

Oh, what kind of contest?

**Participant 5:**

it is event at clubs

**Participant 5:**

like a best in red, blue, jeans something like that

**Researcher:**

Ok, i see. You aren't interested in selling other products like avatar or clothes?

**Participant 5:**

i can't build products. i should learn building

**Participant 5:**

you know some people are good at building they can do well, but when i m not good at it, i find my way to do other thing

**Researcher:**

Yes, i'm not good at arts too.

**Participant 5:**

when you are good at programming, 3D or script is suitable for u

**Researcher:**

You can't build products, so how do you develop this land?

**Participant 5:**

i hired someone to do it

**Participant 5:**

you can search people who can work for you

**Researcher:**

Ok. How long do you do real estate?

**Participant 5:**

2 years

**Researcher:**

Ok, you earn lots of money for the business?

**Participant 5:**

yes

**Researcher:**

Ok. What is your target customer?

**Participant 5:**

business people

**Researcher:**

Why?

**Participant 5:**

because they want land to sell their stuff

**Researcher:**

What are the benefits of your land to the customers (e.g. land quality, low price)?

**Participant 5:**

beauty

**Researcher:**

Only one?

**Participant 5:**

yes, beauty is the best thing people want here

**Researcher:**

What are your key capabilities that lead to better delivery of that benefit compared to competitors (e.g. innovation, cost, competencies, location, brand name, partners, product range)?

**Participant 5:**

it's the ability of companies who design and develop the land

**Researcher:**

Ok

**Researcher:**

What are obstacles to your business?

**Participant 5:**

it take quite some time to develop the land. have to wait

**Researcher:**

How do you attract the customers?

**Participant 5:**

advertizing



**Researcher:**

Advertise via classified or other places?

[Participant offlined for 9 minutes]

**Participant 5:**

back

**Participant 5:**

crashed

**Researcher:**

Oh, it crashed frequently?

**Participant 5:**

sometimes

**Researcher:**

Ok. Let's continue. Do you advertise via classified or other places?

**Participant 5:**

classified and slexchange

**Researcher:**

Do you provide customer service such as refund if customer doesn't satisfy or have any problems with the land?

**Participant 5:**

if there're any problems with my land, I'll fix it

**Participant 5:**

but i'll not refund if they don't satisfy, difficult for me to manage

**Participant 5:**

i told customers everytime before they buy

**Participant 5:**

they have to make sure they like it

**Researcher:**

Do you need to know your customer satisfaction?

**Participant 5:**

yes i always ask their opinions after they bought

**Participant 5:**

to make my land better

**Researcher:**

What are the resources (e.g., human, financial, physical assets) needed to build the competencies or capabilities?

**Participant 5:**

i only use money to buy land and hire land developer

**Researcher:**

Ok. I think I'm done. Thank you very much.

**Participant 5:**

yw, bye.