Chapter- 4

Brief Outline of Existing Business Models of E-commerce.
CHAPTER 4.

CURRENT BUSINESS MODELS

While the systematic approach of the e-business leads to a huge number of potential business models, we observe in practice only a small number of these being implemented. And for the study, we limit ourselves within the boundary of Business to Consumer transactions i.e. B2C only. The classification made here are broad and general, but these models are most popularly found in the net. However many other examples of all of these can be found on the Internet today. But some are still in the experimental phase and some so small in size and scope that its inclusion will only lead to more clutter and volume.

In fact these classifications are mainly for theoretical or academic benefits, because there is no watertight compartment between one another. For example, amazon.com the most renowned online booksellers, is not an example of pure play of E-shops, because, it has to depend on other organizations for inventory, (which leads to B2B transactions), it also has a community environment i.e. readers communicating with each other by means of book reviews readers’ opinion etc, (leading to virtual community).
E-shops

This is Web marketing of a company or a shop. In the first instance it is done to promote the company and its goods or services. Any company that creates a Web site just to have a Web presence can be considered to have created a very basic e-shop (even though the Web site may be quite sophisticated and artful in terms of the user interface). The possibility of ordering and possibly paying is increasingly added to this very basic e-shop, often combined with traditional marketing channels. Benefits sought for the company are increased demand, a low-cost route to global presence, and cost reduction in promotion and sales (Timmers, 2000). Benefits for the customer can be lower prices compared to the traditional offering, wider choice, better information and convenience in selecting, buying and delivery, including 24-hour availability. Where repeat visits to the e-shop are made, one-to-one marketing can increase those benefits for both seller and buyer. Seller revenues are from reduced cost, increased sales and possibly advertising.

Some business-to-consumer electronic shops are, selling, for example flowers (e.g. Fleurop, http://www.fleurop.com) or airline tickets (TISS, http://www.tiss.com; Travelocity, http://www.travelocity.com). An example of a business-to-business e-shop is Merck's (http://www.merck-ltd.co.uk), for laboratory equipment and products. It offers browsing through the company product catalogue for non-
registered users, and extends this to online ordering and payment for existing (offline-registered and validated) Merck customers. In India the most popular are www. shopping.rediff.com www. fabmart.com etc. (In the later part of the thesis we have taken the detailed study of Fabmart.com)

So here we shall refer to a small British firm which has an exclusive retails outlet as well as an online shop to serve the customers. This case also points out how the SMEs are growing their existing business on Internet.

**Sweet Seductions:**

Sweet Seductions is a high-quality confectionery shop in Leamington Spa - situated in the West Midlands area of the UK. The owner manages the shop and seasonally employs between three and fifteen staff. Sweet Seductions has been retailing chocolate and other confectionery both directly to the public and via mail order since 1993.

Sweet Seductions' Web pages (http://www.sweet-seductions.co.uk), which enable trade over the Internet through secure payments technology and electronic mail, were released live on the Internet in December 1995. The company runs the Web-based trade in parallel with its mail-order activities.

In terms of the categories of impacts, the case facilitates the following:

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• *Communication*. The Web allows users to view pictures of products available via the business and to read descriptions of the products. It also allows customers to fill a 'virtual shopping basket' with goods as they browse, which they can order using a credit card for payment. The orders are communicated to Sweet Seductions via secure e-mail link. Once a customer has placed an e-mail order with Sweet Seductions, the company undertakes a standard set of procedures. The company finds that e-mail is efficient, timely and convenient for communication with Web-based customers and the Web site provider. The owner/manager of the shop is able to use e-mail to communicate directly with his customers to enhance the quality of the service provided and to encourage repeat orders.

• *Information retrieval*. Sweet Seductions' customers can use the Web to retrieve company history and product information. The company has its own mailing list and participates in chocolate-related newsgroups. These distribution channels help create repeat visits.

• *Knowledge management*. Via the Web, Sweet Seductions provides a number of knowledge-based documents for customer business contacts and mailing lists. The industry is likely to be impacted through improved communication with competitors, suppliers and customers, enabling the company to keep in touch with what is going on both within the UK, as well as the rest of the world.
• **Productivity/use of knowledge.** The company believes that it offers customers a better quality of service by providing them with an alternative-purchasing channel. However, many of the sales via the Web are to new clients. During 1996, Sweet Seductions has seen its market grow, both in monetary and geographic terms. Shop staffs now spend an increased amount of time in front of a computer terminal for some tasks. However, once electronic orders have been collected and printed, these join the mail-order system for processing and delivery. Therefore, no additional task impacts are created through Web-based orders.

• **Environment.** The initial costs of creating the Web site were relatively low. The shop already had much of the hardware to enable online transactions to be processed.

**E-procurement**

This is electronic tendering and procurement of goods and services. Large companies or public authorities may implement some form of e-procurement on the Web. An example is Japan Airlines (http://www.jal.com). Benefits sought include having a wider choice of suppliers, which is expected to lead to lower cost, better quality, improved delivery, reduced cost of procurement (e.g. tendering specifications are downloaded by suppliers rather than mailed by post). Electronic negotiation and contracting and possibly collaborative work in specification can further enhance time and cost savings and
convenience. For suppliers, the benefits are in more tendering opportunities, possibly on a global scale, lower cost of submitting a tender, and possibly tendering in parts that may be better suited for smaller enterprises, or collaborative tendering (if the e-procurement site supports forms of collaboration). The main source of income is reduction of cost (of tender processing, and getting more cost-effective offers).

There are many examples if we move to B2B e-commerce but here in this thesis we are not going to deal with B2B e-commerce. But we take the case of ITC an Indian company that mainly deals in tobacco but now it has got itself diversified to other divisions too. This case study not only illustrates the point that e-procurement is helping ITC but it also proves Internet can has the capability to make better life even in remote villages of India.

**ITC: Indian Tobacco Company:**

It is our natural feeling that e-commerce always needs a very sophisticated and high computer literacy to survive. But ITC the tobacco company has thrown all these assumptions to the wind with their latest e-choupal venture. They have initiated a digital revolution in the remote villages where electricity and telephone lines are yet to be ubiquitous.
In these villages, farmers grow soybeans, wheat and coffee in small plots of land, as they have for last thousands of years. Here the farmers have not only new to the world of computers but often also to the world of books and literacy in general. But the farmers in these villages are conducting e-business through an initiative called e-choupal, created by ITC, one of India's largest consumer product and agribusiness companies. 

This e-choupal is very much like an Internet kiosk; a village gathering place and e-commerce hub all rolled into one. In fact the word Choupal "village gathering place" in Hindi. The e-choupals are run by an operator called the sanchalak, who is himself a farmer recruited by ITC as the mediator between the computer terminal and the farmers.

Low Tech, High Impact

Setting up and managing these e-choupals required ITC to think out of the box. It designed a hardware solution that includes a desktop computer with power backup through batteries charged with solar panels. ITC also convinced 175 local telephone exchanges to upgrade their equipment to support data transmissions, initially at ITC's expense. To overcome limited bandwidth, they cached static content locally so that only dynamic content needed to be streamed. And to overcome illiteracy, ITC made the transactional capabilities of the site available to farmers through the registered sanchalaks.
The result of this initiative is simply awe striking. Within two years of its launch in June 2000, e-choupal services reached 600,000 farmers in 6,000 villages through 1,000 kiosks. ITC, which exports $140 million worth of agricultural commodities, sourced $15 million worth of soybeans from e-choupals in the last year. By purchasing directly from farmers, ITC can source better quality produce that generates high prices in the international market. By avoiding intermediaries for conducting the transactions, ITC saves $5 per ton on soybean procurement. The sanchalaks get a commission for every transaction they process, which translates into healthy earnings for them.

The benefit generated from this e-choupal is not single folded. The farmers also gain from better prices and lower transaction costs. Traditionally, farmers had to wait as long as two days or even more sometimes to dispose of their produce at local auctions. They also had to pay for bagging, loading and unloading their produce in the local market. In the e-choupal system, farmers take only a sample of their produce to a local kiosk and get a spot quote from the sanchalak. If the farmers accept the quote, they can drive their produce directly to ITC's collection centers and get paid within a couple of hours. The average farmer saves between $8 and $10 per ton of soybeans. Farmers also benefit from improved information and price discovery. Previously the middleman misled them. With help from their
sanchalak, they can access real-time information on crop prices, weather and scientific farming practices online.

ITC's long-term plan is to develop the e-choupal into a one-stop shop for farmers to take care of many different business needs. S. Sivakumar, CEO of ITC's international business division, told that the company has modeled the e-choupal on a concept hypothecated by Professor Mohan Swahney of Kellogs it is called a “metamarket”. In the long run ITC ultimately wants the e-choupal to be an e-commerce hub for the village—a single point of contact among farmers and a wide range of suppliers of agricultural inputs and consumer products. In fact already, seed producers such as Monsanto and fertilizer manufacturers like Nagarjuna Fertilizers and Chemicals take orders and market their products through the e-choupal sites. Future plans include services like small business loans and insurance for the farmers and may be even for the common villagers.

However in the mean time, ITC has maintained a role for the traditional commission brokers, who are now called samayojaks ("coordinators"). The samayojaks manage physical flows in the supply chain, such as logistics, and they collect pricing data from local auctions and maintain records.
Back to Basic Best Practices

The e-choupal initiative offers the following important lessons for any e-business initiative.

Leverage existing assets and relationships: ITC's tobacco and agribusiness divisions own a distribution and collection system which has an unparalleled reach into rural India. It also keeps strong relationships with farmers and intermediaries in the agricultural supply chain. These assets and relationships allow ITC to create a unique and defensible online franchise.

A symbiotic value proposition: The e-choupal venture benefits ITC by reducing procurement costs, improving quality of produce procured and creating a lucrative information franchise. For farmers, it reduces transaction costs, gets them better prices and empowers them with information. And the sanchalaks get the opportunity to run their own business.

Adapt solutions to the business context: ITC creatively overcame the lack of computing and communications infrastructure by creating appropriate technology solutions, including a human interface to overcome literacy and Internet access limitations.

Re-intermediate, don't Dis-intermediate: Instead of eliminating the middlemen, ITC redefined their role by decoupling information flows from physical flows in the supply chain. In this way, ITC mitigated
any channel conflict.

**Co-opt customers in designing solutions:** ITC recognized that getting farmers to adopt technology would pose a huge challenge. By recruiting the sanchalaks from within the villages, ITC was able to get buy-in from the farmers. ITC also made the sanchalaks take a public oath of office, recognizing that a social contract was far more effective than a formal contract.

**Think big, but start small:** ITC's long-term vision for e-choupal is grand. But the company started with a modest and focused value proposition—helping farmers get better prices for their crops. This phased approach allows ITC to gain credibility through early successes and to learn from its mistakes.

Clearly, the e-choupal initiative is a long way from becoming e-business nirvana for rural India. Telecommunications infrastructure costs are significant, adoption is slow, the network is unreliable, and the sanchalaks have limited experience managing a business. There is no guarantee that ITC will achieve its ambitious goal of expanding the e-choupal network to cover 100,000 villages and 10 million farmers in five years. Nevertheless, what it has achieved so far paints a tantalizing picture of the possibilities of e-business for rural India. And it offers valuable insights into using creativity and pragmatism to overcome barriers in implementing e-business.
**E-mails**

An electronic mall, in its basic form, consists of a collection of e-shops, usually enhanced by a common umbrella, for example of a well-known brand. It might be enriched by a common—guaranteed—payment method. An example is Electronic Mall Bodensee (http://www.emb.ch), giving entry to individual e-shops. When they specialize in a certain market segment, such malls become more of an industry marketplace, like Industry.Net (http://www.industry.net/), which can add further value by virtual community features (FAQ, discussion forums, closed user groups etc.). The e-mail operator may not have an interest in an individual business that is being hosted. Instead, the operator may seek benefits in enhanced sales of the supporting technologies (e.g. IBM with World Avenue). Alternatively, benefits are sought in services (e.g. Barclays with BarclaySquare), or in advertising space and/or brand reinforcement or in collective benefits for the e-shops that are hosted such as increased traffic, with the expectation that visiting one shop on the e-mail will lead to visits to 'neighbouring' shops.

Benefits for the customer (real or hoped for) are the benefits for each individual e-shop, with the additional convenience of easy access to other e-shops and ease of use through common user interface elements. When a brand name is used to host the e-mail, this is expected to
enhance the trust and confidence of customers, and therefore increase readiness to buy.

Benefits for the e-mail members (the e-shops) are lower cost and complexity of being on the Web, with sophisticated hosting facilities such as electronic payments, and additional traffic generated from other e-shops on the mall, or from the attraction of the hosting brand.

Revenues are from membership fees (which can include a contribution to software/hardware and set-up cost as well as a service fee), advertising and possibly a fee on transactions (if the mall provider processes payments).

There are some indications that the e-mail model has certain flaws in its current implementation and in the current state of the market. IBM World Avenue, for example, has ceased operation. One of the reasons may be that the 'neighbour' concept does not translate into physical distance in cyberspace, where each location is only one click away. Therefore, not much additional convenience in finding shops is delivered. Furthermore, the sophisticated user (i.e. the majority of those on the Web today!) is able to handle a variety of seller-buyer user interfaces and therefore may be less attached to a uniform user interface. On the other hand, there are also indications that an increasing number of companies wish to outsource their Web operations, which may increase the opportunity for e-malls or third-
party marketplaces. This possibly reflects a shift from early adopters to mass-market use of the Internet among businesses.

**E-auctions**

Electronic auctions (on the Internet) offer an electronic implementation of bidding mechanisms also known from traditional auctions. This can be accompanied by multimedia presentation of the goods. Usually they are not restricted to this single function. They may also offer integration of the bidding process with contracting, payments and delivery. The sources of income for the auction provider are in selling the technology platform, in transaction fees and in advertising. Benefits for suppliers and buyers are increased efficiency and time savings, no need for physical transport until the deal has been established, and global sourcing. Because of the lower cost, it becomes feasible to offer small quantities of low value, e.g. surplus goods for sale. Sources of income for suppliers are in reduced surplus stock, better utilization of production capacity, and lower sales overheads. Sources of income for buyers are in reduced purchasing overhead cost and reduced cost of goods or services purchased.

Here we take a brief look at the example of ebay.com.

Ebay.com was started by Pierre Omidyar, an engineer at General Magic, but he got the idea from his fiancée an avid Pez collector and trader. Ebay first started with the name Auction Web, in September
1995. In 1996 Auction Web changed its name to eBay.com. There was a tremendous growth and by the middle of 1997, eBay was boasting nearly 800,000 auctions each day. Conceptually, the online auction was similar to that of physical auctions, in a nutshell: Items were listed and viewed, bids were entered, and items were purchased and delivered. Since only very expensive rare items were typically sold at physical auctions, an online auction filled the void for all other goods. Functioning as an Internet-based garage sale, consumers participated in eBay's online trading community for four main reasons: It was fun, you met people with similar interests, you got a great deal (most of the time), and you found valuable collectibles. Goods were sold through an auction that lasted several days. Many bids were usually garnered for each item. Each day, more than 2 million new auctions were conducted and over 200,000 new items were listed.

Before bidders could bid and sellers could list items for sale, each had to register with eBay, indicating some personal contact and credit card information, and acknowledging acceptance of disclaimer and disclosure rules. Like the off-line world, a bid invoked a legally binding contract.

To list an item for sale, a seller had to choose which category to list it under. Categories included antiques, collectibles, sports memorabilia, dolls, jewelry, pottery, toys, and so forth. Each category was divided into more specific subcategories. For example, the computer category was
subdivided into hardware and software; the hardware subcategory was divided into areas such as modems, printers, monitors, and so on. Once selected, the seller indicated the duration of the auction (three days minimum), lowest bid acceptable, purchase description and photo (if available), payment (currency specified), and delivery terms.

During the auction period, ebay updated bidders about the status of their bid—whether they were high or had been outbid. To avoid having to monitor an auction continuously, bidders could invoke the “bid proxy.” Here, bidders specified up front the maximum they would pay for an item; eBay then monitored the auction and adjusted the bid as needed without exceeding the maximum level. Upon auction closing, eBay sent e-mail messages to seller and bidders notifying them of the results and reminding the high bidder of the need to contact the seller within three business days to claim the item.

This is how ebay.com works. In this thesis we shall take a more detailed look on this case in the later chapters.

**Virtual Communities**

The ultimate value of virtual communities comes from the members (customers or partners), who add their information on to a basic environment provided by company operating the virtual community. Membership fees as well as advertising generate revenues. A virtual community can also be an important add-on to other marketing
operations in order to build customer loyalty and receive customer feedback (Hagel and Armstrong, 1997).

Virtual communities are already abundant within specific market sectors, for example in books such as Amazon.com, in apparel/garments (http://www.apparelex.com/bbs/index.htm), in the steel industry (http://www.indconnect.com/steelweb/), in nanotechnology (http://www.nanothinc.com/), and many others. Firefly provides an interesting case of virtual community building, adding value to the community by building customer profiles (http://www.firefly.net/). Virtual communities are also becoming an additional function to enhance the attractiveness and opportunities for new services of several of the other business models listed here (e.g. e-mails, collaborative platforms, or third-party marketplaces).

The power of virtual community and its impact on business is more elaborately discussed in the case study of ivillage.com.

Here we take the example of well.com a pure play example of virtual community.

**The Well.Com**

Although The WELL, LLC. perhaps the earliest and certainly one of the best-known virtual communities, has undergone significant change since its founding in the pre-Internet era, it continues to thrive. Describing itself as "a cluster of electronic villages on the Internet, inhabited by people from all over the world," The WELL is unusual in
being supported completely by member fees (ten to fifteen dollars per month) and carrying no advertising or links. In 1999 The WELL was purchased by Salon.com, an Internet content provider covering news, technology, entertainment, books, parenting, sex, travel, and health. The WELL describes its operations as follows:

The WELL has more than 260 featured subject areas called Conferences which range from the technical and specific to the abstract and surreal. Each Conference has a distinct flavor and crowd, and regulars check-in frequently—in some cases every day—to offer expertise, play word games, indulge in gossip and banter, or to debate and pursue ideas. Hosts of each Conference stimulate new discussions and help orient newcomers. Unlike real-time chat, The WELL makes it easy for users to converse wherever and whenever they choose, easily returning to the conversation hours, days, or even weeks after they last checked-in.

Members of The WELL also create their own private conferences, to which others are admitted by invitation only. Despite having only seven thousand paying members at the time of the purchase by Salon.com, The WELL's status as a pioneering virtual community has led to it being extensively researched, analyzed, and occasionally lamented. The organization once ventured into the provision of computer services, including Internet access, and the development of Internet conferencing software, but it spun off those businesses in 1996 and returned to its
roots as "a members-only online discussion community which continues the tradition of intelligent conversation." As a relatively small part of a well-known content provider, The WELL will probably survive. But in a world of free Internet access, free chat rooms, and free membership in interest-focused virtual communities, the number of people who will pay to join an unscreened and unmoderated conference is probably quite small.

**Summary of the Virtual-Community Model**

**Strategic Objective and Value Proposition**

The virtual-community model offers members the opportunity to interact electronically with like-minded individuals and to both create and consume content relevant to a topic of personal or professional interest. In effect, the sponsoring firm has created an "attention aggregator" amidst the fast-paced and constantly changing marketspace. The fact that membership is usually free adds to the value perceived by members. Advertisers and merchants can gain access to a group of active Internet users known to be interested in a given area, and therefore predisposed to certain goods and services. Lower customer-acquisition costs are likely to justify spending on advertising fees and sales commissions.

The sponsoring firm may view its virtual community as a standalone profit-seeking activity (e.g., Parent Soup), as one part of a business
that's composed of several other activities (e.g., Amazon.com), or as an adjunct to place-based business. Amazon.com sees the virtual community as a way of bringing additional traffic to its Web site and, over the long term, increasing revenue. Place-based firms, such as Taco Bell, sponsor virtual communities to increase customer involvement and loyalty.

**Sources of Revenue**

A sponsoring firm can gain revenue from:

- membership fees (The WELL),
- direct sales of goods and services (The Motley Fool),
- advertising (PlanetOut and many other sites),
- clickthroughs (Parent Soup and many other sites), and
- sales commissions (Fishing.com and many other sites).

A firm sponsoring a virtual community as an adjunct to its other activities may receive no direct revenue at all from the virtual community. Rather, the firm receives less tangible benefits, such as customer loyalty and increased knowledge about its customer base.

**Critical Success Factors**

The critical success factors for a virtual community include:
• Finding and retaining a critical mass of members

• Building and maintaining loyalty with an appropriate mix of content and features

• Maintaining privacy and security for member information

• Balancing commercial potential and members' interests

• Leveraging member profile information with advertisers and merchants

• Engendering a feeling of trust in the community by its members

**Core Competencies**

The core competencies for this model include:

• Building a lasting sense of community

• Sourcing or creating attractive content at an economically attractive price

• Discovering member needs and understanding the value members attach to meeting those needs

**Who Owns What?**

Virtual communities vary in their level of ownership of customer data, with some knowing many demographic and behavioral details about individual members and others knowing little about individual members.
but having a broad profile of member segments. In general, virtual communities own the customer relationship but not the customer data or transaction.

**Collaboration Platforms**

These provide a set of tools and an information environment for collaboration between enterprises. This can focus on specific functions, such as collaborative design and engineering, or on project support to a virtual team, for example a team of consultants. Business opportunities are in managing the platform (membership/usage fees) and in selling the specialist tools (e.g. for design, workflow, document management). Examples are in the products and projects spun off from the Global Engineering Network concept (Rethfeld, 1994), such as Deutsche Telekom/Globana's Industrial Cooperation System (GEN/ICS), the ESPRIT project GENIAL, and in experimental projects for 3D collaborative design and simulation.

This again happens to be a main form of B2B mode of operation but here we take up the case study of ABACUS, which has a very interesting shared infrastructure model.

**Airline Computer Reservation System**

Before 1986 the Asia-Pacific region had no dominant CRS. United and American had attempted to enter the region with their APOLLO and
SABRE systems, but they had not achieved significant penetration. In 1986 United Airlines bought some Pacific routes from PanAm and began marketing the APOLLO system strongly in Asia. In response, local Asian airlines such as Singapore Airlines and Cathay Pacific Airways, Ltd. aggressively promoted their single-owner systems by increasing functionality and reducing prices. However, these actions did not reduce the threat from APOLLO, which offered the ability to book on multiple airlines via a single user interface. Travel agents in the Asia-Pacific region, like those in the United States years earlier, preferred APOLLO's approach to the alternative of separately accessing different systems via expensive multi-hardware investments. In addition, the significant competitive experience of APOLLO in the United States gave United an edge over the local Asian carriers.

According to Neo Boon Siong of the Nanyang Technological University in Singapore, "The combination of increasing competition and rapidly evolving technologies led to an enrichment of functionality in U.S.-based CRSs to the point where they were recognizably superior to other CRSs. . . . Asian carriers faced challenges including the move towards deregulation in many countries and increasing direct competition with U.S. carriers. Without a strong CRS of their own Asian carriers faced the threat of conceding worldwide dominance to the U.S. carriers."

In 1987 five Asian airlines—Singapore Airlines, Cathay Pacific, Japan Airlines Company, Ltd. (JAL), Qantas, and Thai Airlines—formed a
steering committee to spearhead the development of a new CRS to serve the interests of the carriers in the Asia-Pacific region. Many Asian airlines are national carriers, owned in part or wholly by their home country's government and linked with national centers that promote travel and investment in their country. These relationships created a complex set of stakeholders in the negotiations to set up an Asian CRS. For example, by December 1987 there was already disagreement over where the CRS would be located. Soon afterward, JAL and Qantas pulled out and the Thai government suspended involvement. Established in 1988 by the two remaining partners, Singapore Airlines and Cathay Pacific, the joint reservation system ABACUS is now used by over ninety-three hundred travel agencies in eighteen countries across Asia and has enjoyed annual growth of 30 percent in each of the last three years. In addition to airline schedules and fares, cruise schedules and prices, and other travel information, ABACUS provides access to more than fifty car rental companies and over forty thousand hotel properties worldwide. ABACUS has a 90 percent market share in these eighteen countries, placing it in the dominant position in Asia. Although the addition of new partners was often challenging, requiring detailed negotiations, by October 1990 ABACUS had signed up ten participating carriers, and by 1992 it broke even financially. By 1994, there were twelve partners: All Nippon Airways (ANA), Cathay Pacific Airways, China Airlines, EVA, Garuda Indonesia, Dragonair, Malaysia
Air, Philippine Airlines, Royal Brunei Airlines, SilkAir, Singapore Airlines, and Thai Airlines. JAL and Qantas were not partners, having developed their own reservation systems.

Once established and dominant, ABACUS moved aggressively to optimize its technical infrastructure. In 1998 ABACUS formed a joint venture with Sabre (www.sabre.com), a U.S. based global CRS, known for technology leadership that grew out of the American Airlines SABRE system. ABACUS announced at the time, "The new ABACUS system combines the regional strength of ABACUS with the technology of the SABRE Group." The alliance represents another major accomplishment for ABACUS and its founders, who have been successful with ABACUS in many ways:

- Domination by an American CRS in Asia was prevented
- ABACUS became a successful business in its own right
- ABACUS is sufficiently dominant to partner with one of the CRSs that it was established to protect against

ABACUS is now owned by ABACUS International Pty. Ltd., a Singapore-based provider of travel information and airline reservation services. ABACUS International Holdings, which has a 65 percent stake in ABACUS International P/L, is jointly owned by the twelve Asian airlines. The other 35 percent of ABACUS International P/L is owned by

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Sabre Group. ABACUS thus achieved a sufficiently powerful market position that it could form an equity-based alliance with Sabre to gain advantage from the technology base of an organization that it once feared.

Why did ABACUS succeed in Asia when attempts at a shared system failed in the United States? One explanation may be that the lack of success of a shared-infrastructure service in the United States, and the resulting massive expenditure on the development of individual systems, was a motivational learning experience for the Asian airlines, encouraging them to set aside their competitive instincts in favor of cooperation. In addition, airline reservation technology had become considerably more mature during the decade or more that passed between the U.S. task force report and the founding of ABACUS. An investment in ABACUS in 1988 looked much less technically risky than the investment in the proposed U.S. joint system in 1976.

The decision by the airlines to cooperate rather than compete was probably motivated by a combination of greed and fear. An American CRS that controlled the electronic channel to the travel agent could relegate the Asian airlines to secondary positions. The American CRS operator would know more about travel bookings and trends than any of the Asian airlines, placing the airline that owned the CRS in a powerful position in competitive battles in Asia. In the short term, there
were also significant economies of scale available by consolidating travel reservations into a single, unbiased, and efficient system.

The ABACUS Web site (www.abacus.com.sg) describes the organization's grand vision for the future. ABACUS wants to serve a wider community and be less dependent on airlines for revenue. ABACUS also wants to become a repository of travel and tourism data, and to mine those data, turning them into useful information for travel agents and others. ABACUS will enable travel consultants, travelers, information service providers, and end consumers to use technology to facilitate the best travel arrangements. ABACUS certainly faces challenges in the future, with some airlines going direct to customer via their own Web sites. ABACUS may choose to more aggressively pursue their direct customer relationship by bypassing the travel agent, as illustrated by traveler 2. Nevertheless, the organization has achieved a great deal through the use of the shared-infrastructure business model.

**A Torturous Process to Decide What to Share**

Even though there was strong motivation for the Asian airlines to cooperate, there were many details and issues of vested interests to negotiate. The location of the headquarters, data centers, and associated investments was one of the first issues to resolve, with each of the national governments wishing to attract the initial investment to its own country. There were large start-up costs to bear, and some airlines took a wait-and-see attitude before committing to the new
system. Many issues arose regarding compatibility with existing systems used by travel agents in the various partner countries. Still more decisions were required about the fee structure, the ownership of data (particularly booking and passenger load details), and finally the distribution of profits. The overarching principle was that there would be no bias to any partner, and control would be distributed among the partners. After lengthy negotiations, a stable structure was reached, which involved sharing both equity and management control.

In ABACUS, as with any shared infrastructure, some of the most difficult decisions were about what to share and what to compete on. The ABACUS partners created a level playing field in a number of critical areas that were traditionally bases for competition, including:

- **Information**: Information on aggregate demand, bookings, load factors, paid travel, industry trends, transfers, and other data contained in the CRS is shared with all partners.
- **Objectivity**: The airlines agreed to represent their products objectively, attempting to eliminate any bias.
- **Access**: ABACUS provides a single point of access through which the airlines' common customers—the travel agents—access the airlines' offerings, effectively creating an electronic market where multiple buyers and multiple sellers meet.
- **Investment and return**: Investments and dividends are shared among the partners. The investment in infrastructure, particularly IT
infrastructure, is significant. Sharing the infrastructure cost spreads the cost and reduces the development risk for any one airline.

- **Control:** Management control and development of future strategy are shared among the partners via management boards and other mechanisms.

Partners in the shared-infrastructure business model also have to agree on where they will compete. For example, the ABACUS partners continue to compete on these factors:

- **Schedules and pricing:** Each airline determines its own schedule and pricing, and the CRS has rules about how schedule and price changes are entered in the system.

- **Brand:** The relationship to the customer and brand are fundamental to competition among the airlines. The existence of an unbiased CRS may explain the pioneering efforts of the airlines with loyalty programs and more recently with direct-to-customer Web sites. Given that the CRS channel to the customer is cooperative and thus carries no bias (or differentiation), other ways of differentiating are required.

- **Service:** Airlines compete strongly on customer service, particularly after booking, including all direct-to-airline contacts such as check-in, baggage, connections, and changing travel plans after commencement. The details of what is shared and what is the basis for competition often predict the success or failure of a shared-infrastructure business.
model. Sharing too little removes the need for the model. Sharing too much reduces the partners' abilities to differentiate and compete.

**Third-party Marketplaces**

This is an emerging model that is suitable if companies wish to leave Web marketing to a third party. Often, therefore, the third-party marketplace is an additional, online channel to other existing channels, including physical outlets. They all have in common that they offer at least a user interface to the suppliers' product catalogues. Several or all of the additional features, such as branding, payment, logistics, ordering and, ultimately, the full-scale implementation of secure transactions are added to third-party marketplaces. An example in business-to-consumer electronic commerce is providing common marketing around a special one-off event profiled by well-known brand names, such as the 1997 e-Christmas experiment. ISPs may be interested in this model for business-to-business, using their Web builder expertise. However, it may equally appeal to banks or other value-chain service providers. Revenues can be generated on the basis of a one-off membership fee, service fees or a percentage of transaction values. Examples of third-party marketplace providers in MRO products are Citius and Tradezone (http://tradezone.onyx.net/). An interesting third-party marketplace in retail is the Internet Megastore project, which is being piloted in food/groceries and furniture retail chains and as an enhancement of physical shopping malls. The chain or mall
manager sets up an online version of the set of shops, with support for online ordering and payment where appropriate. Each shop owner can enhance the basic Web site and product offer with his or her own promotions and brand enhancement. The concept accommodates the virtual as well as the physical world, for example delivery and additional services are still assumed to be happening in the physical stores. It thus strengthens local presence and geographic concentration, which can especially benefit small retailers. An example implementation in local communities such as small cities is LocalEurope.com.

**Value-chain Integrators**

These focus on integrating multiple steps of the value chain, with potential to exploit the information now between those steps as further added value. Revenues come from consultancy fees or possibly transaction fees. An example value chain integrator is TRANS2000 in the area of multi-modal transport. Marshall offers its customers added value from transaction information, which is provided through extranet solutions like PartnerNet and MarshallNet. Some of the third-party marketplace providers are moving in the direction of value-chain integration.

**Value-chain Service Providers**

These specialize in a specific function for the value chain, such as electronic payments or logistics, with the intention of making that into their
distinct competitive advantage. Banks, for example, have been positioning themselves in this way for a long time and may now find fresh opportunities using the open Internet network. New approaches are also emerging in production/stock management, where the specialized expertise needed to analyze and fine-tune production is offered by new intermediaries. A fee- or percentage-based scheme is the basis of revenues.

We here take the case of FedEx, briefly just to explain the point of Value Chain Service Provider. The working of FedEx comes primarily under B2B e-commerce which we are not going to take in details here in this thesis, our focus remains primarily on B2C transactions only. But the FedEx case being a very interesting one we take this opportunity to take discuss it.

**FedEx:**
Federal Express (Goldhoff and Skoog, 1996) is best known for its worldwide express shipping of packages. It has operations in 211 countries, with more than 500 cargo aircraft, and employs 122000 people, delivering more than 2.5 million packages every working day.

**Products and Services**
FedEx started to offer Internet services in 1995, namely allowing customers to obtain the status of their shipments with the help of a reference number that the customer types into the Web front end of the online tracking system. FedEx InternetShip now offers additional
customer services, including onscreen preparation of air-shipment documents and printing by the customer, storage of address books at the FedEx server and management of shipping history information. InternetShip functions to:

- enhance customer service and save cost for the customer in preparing shipments;
- save cost for FedEx in answering customer calls;
- generate additional shipments from its hook into online sales sites (see e.g. Virtual Vineyards).

FedEx Virtual Order is an expansion from shipping into helping businesses to get online. A business (merchant) gets software to set up an online catalogue that resides on a FedEx secure server. This user interface hooks into a FedEx order-handling system, which registers online customer orders and assigns confirmation numbers, passes the order to software at the merchant, who packs the order, possibly with automatic inventory updating. The merchant software generates shipping labels for shipment by FedEx. The online tracking system allows both customer and merchant to track orders online. Virtual Order creates two sources of revenues, as it:

- Extends FedEx business into order-handling services;
- Generates additional shipping business.

FedEx Learning Lab is a service that is dedicated to helping companies maximize their use of distribution as a strategic weapon. FedEx
provides training about logistics in general. The Learning Lab can contribute to:

- An additional source of revenues, in training and consultancy;
- Building the image of FedEx as *the* logistics company (i.e. more than just worldwide shipments).

**Customers**

FedEx is not very specific about the customers it targets with Virtual Order. Essentially any business with a catalogue that wants to go on to the Internet is being addressed. The only requirement is that the business will ship orders via FedEx. However, the Virtual Order service is currently only being offered in the USA and for US exports. One reason for that may be that the sales process of the Virtual Order service itself is only performed in a limited way via the Internet. As soon as a potential customer has gone through the basic information about the service that is available on the Internet, a sales representative needs to be contacted for further steps (contrary to, for example, Amazon.com Associates, where the full sales process is being done online). Possibly FedEx cannot offer that type of sales support internationally.

**Competition**

FedEx competitors are primarily other express package companies like UPS, DHL and TNT, which have essentially the same profile, as well as more locally oriented fast-delivery companies which might compete on
speed and customer service and the postal services in general (who usually already have a specialized package-shipping business unit). InternetShip exploits shipping as a generic global business service, and as such is in competition with similar facilities from UPS and others. The same holds for Virtual Order when positioned as an easier way to integrate a generic, critical worldwide business service. However, Virtual Order's catalogue facility competes with many others offering such front-end services (e.g. CitiusNet, Tradezone, as well as large platform providers such as Microsoft with Merchant Server etc). Finally, the Learning Lab, if intended as a commercial service, competes with many others who provide such logistics consultancy and training to corporate clients as well as to small companies (in Europe, for example, Logica or CMG).

Although FedEx does not yet offer VirtualOrder outside the USA, it might be well placed to do so. Its direct competitor in the shipping business, UPS, demonstrated that international shipping companies might have a key asset, namely their knowledge of the complexities of international shipments with respect to customs and taxation. In the UPS case this became clear from its central and critical role in the business-to-consumer e-Christmas experiment referred to before.

Some of FedEx's large competitors, building on their shipping experience, are starting to go into more integrated logistics back-end services, in particular stock management combined with shipping. For example,
UPS provides this as the basis for shipping the several million titles in Amazon's online bookstore. Other value-chain services such as digital certification are also a logical extension of the shipping business, as being explored for example by UPS and some postal operators such as the UK Royal Mail.

FedEx, and the other large express package companies, are also being challenged by small companies, which combine low investment and tight integration of customer service with a dispatch service for efficient scheduling and knowledge of the individual customer (e.g. usual shipping addresses, most frequently used delivery service) for one-to-one marketing. Such services beat the competition by being faster for local deliveries, with a better-quality response to individual customers delivery needs.

**Marketing Strategy**

FedEx's mission for the WWW is to 'leverage its global brand name while enabling locally relevant activities' (Goldhoff and Skoog, 1996). Its Internet business model is focused on being the best in providing online use of fast and worldwide shipping of packages: a single critical generic global business service. Its entry point for business is InternetShip and it is actively building awareness of this service among online businesses through banner advertising, always in combination with its logo for brand building.
Summary—Marketing Model

FedEx's entry into Internet business-to-business electronic commerce is through offering Internet access to its global logistics service. This can be used either on its own with online preparation of shipping documents and tracking of packages, or it can be integrated into another electronic commerce system. FedEx logistics can therefore be classified as value-chain service provision. Beyond this basic form of electronic commerce, FedEx is also offering Virtual Order, built around its strength in global package shipping, as it tightly integrates its logistics service with Web catalogues provided by suppliers. FedEx Virtual Order can therefore be classified as third-party marketplace provision.

Information Brokerage, Trust and Other Services

A whole range of new information services are emerging, to add value to the huge amounts of data available on the open networks or coming from integrated business operations, such as information search, e.g. Yahoo (http://www.yahoo.com), customer profiling, business opportunities brokerage, investment advice etc. Information and consultancy may have to be paid for either through subscription or on a pay-per-use basis, although advertising schemes are also common. For example, Excite, an information portal, relies 75% on income from advertising.
A special category is trust services, as provided by certification authorities and electronic notaries and other trusted third parties. These services charge subscription fees combined with one-off service fees, with software sales and consultancy as additional sources of revenue.

In the next chapter we shall solely focus on the problems that are harnessing the growth of Internet oriented business.