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ICIS 1998 Proceedings

International Conference on Information Systems (ICIS)

December 1998

Global Logistics System Asia Co., Ltd.

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1. LEARNING OBJECTIVES

Most people concur that electronic markets constitute a significant innovation that will radically alter markets in the future. However two key questions remain. Who will stand to benefit from electronic markets? How should various existing market players position themselves in regard to initiatives to establish such markets?

This case discusses these two questions by studying the air cargo industry in Hong Kong, where an electronic trading network has recently been launched with considerable success. It analyzes how and why this electronic network became an instant success and it also addresses whether the network will evolve into an electronic market. Furthermore, what stakeholders are in favor of such a move and who will seek to resist it?

2. CASE OVERVIEW

In the beginning of the 1990s, the profit margin emanating from passenger traffic via air was constantly decreasing and the competition among various airlines was fierce. As a response, many airlines turned to new business opportunities to complement declining profits. One answer was the air cargo business, which became an important supplement for many airlines. In Hong Kong, the air cargo transportation industry has developed substantially in the 1990s and it is quite a mature business. Approximately 20% of Hong Kong's external trade passes through Hong Kong's Kai Tak airport as air cargo. This means over HK$1.5 billion worth of cargo is handled through Kai Tak on a daily basis.

Time is the single most important factor in an industry where the distribution of goods moves close to the speed of sound. Any delays in administrative procedures or handling of goods are costly and may even degrade the value of goods (e.g., cut flowers or fruit). In the early 1990s, the average shipment time for airfreight was six days. Of that time, 90% was spent on the ground. Something had to be done to improve this unsatisfactory situation. The need to coordinate, streamline and optimize all the land based activities was clear. This prompted four international airlines to take action. They took the initiative to form Global Logistics System Asia Co., Ltd., more commonly known as Traxon (see URL http://www.traxon.com for Traxon in Europe). The company aim was to address the coordination and communication needs of the growing and complex air cargo industry.

Starting with only a portion of the market, Traxon needed to carefully plan the design and implementation of its system. Two key factors explain Traxon's immediate success. First, their implementation process took advantage of the respective airlines' strongholds. Thus, the locally based Cathay Pacific was in charge of the roll out in Hong Kong, while in Japan, it was Japan airlines. A similar approach was applied in Europe. Furthermore, each local Traxon system had the other shareholder airlines as initial customers, which constituted a significant share of the air cargo market.

The second factor was Traxon's ability to attract a majority of users (both other non-shareholding airlines and freight forwarders). The Traxon service has high network externalities. In short, this means that, in the beginning, the benefits of joining are low and the risks high, but as more adopt, the more attractive and less risky it becomes to join the network. The best analogy is that of having a telephone: If you are the first one to have a telephone, whom are you going to call? But as more people join, the more beneficial it becomes to join the adopters. At the same time, it is attractive to wait to adopt until it can be determined whether the technology will become a standard technology (e.g., the historic fight between Betamax and VHS in setting the standard for VCRs). The dilemma was that the airlines would adopt the system insofar as a majority of the forwarders did. At the same time, the freight forwarders would only adopt if most of the airlines did. The major challenge was how to get this spiral of self-enforcement going in favor of Traxon.

Traxon, therefore, designed its system to accommodate the needs of airlines, forwarders, and air cargo terminals, but also carefully preserved the sensitive distribution of power and responsibilities among them. The people behind Traxon thus decided only to optimize existing procedures and not to add new services. The Traxon system consequently does not carry any information about prices or discounts. This leaves the market opaque for outsiders and preserves the roles and power balances between airlines, freight forwarders, and shippers.

Therefore, after its first years of operation, Traxon was able to enlarge and sustain its position as the dominant electronic trading network provider in Hong Kong's air cargo community. As of January 1998, there were 187 freight forwarding agents connected to the system resulting in more than 8.8 million electronic messages per year (1997). A number of airlines are now taking active part in the cooperative venture, giving Traxon a *de facto* monopoly in the air freight community in Hong Kong. The result is that 94% of the air cargo volume lifted out of Hong Kong is coordinated through Traxon's network.

A next step could be the establishment of an electronic market. However, as we will demonstrate, none of the major stakeholders stands to benefit from such an arrangement, and an electronic market is thus not likely in the near future. The airlines argue that the establishment of an electronic market will drive down profits, because space availability and prices can be checked easily. This will make the market more uniform and the competition fiercer.

The freight forwarders are not interested in creating an electronic market for coordinating air cargo services because they (as brokers) gain from the non-transparency, and they make their profit from coordinating the market. In the future, they are ready to pursue every attempt to delay the arrival of a full-scale electronic market system.

The consumers of air cargo services (the shippers) are the ones who will benefit from an electronic market containing all information about prices, services, and space. They will enjoy lower prices due to higher transparency and increased competition among freight forwarders and airlines. An electronic market will also open the possibility for the shippers to entirely bypass the freight forwarders. It is therefore expected that the shippers would ceaselessly push for more transparency and an open market, and that they will seek to disintermediate the freight forwarders, but this will be an uphill battle given the monopoly of Traxon.

3. TEACHING GUIDE

The teaching of this case is best divided into two parts: presentation and discussion. The presentation is assigned to a group of students in advance. The presentation consists of an overview of the case and some questions the students must address in their presentation.

Suggested assignment questions to be prepared before class:

1. Describe the different stakeholders using Porter's value chain and their interests in the air cargo community, especially in regard to information needs and the implications of getting access to this information.

2. Describe the air cargo industry using Porter's five competitive forces.

3. Describe a future scenario. Will the shippers be connected to the system? Can two Traxon-like systems coexist in the air cargo industry? How will the emergence of Extranets and the Internet affect Traxon in general?

4. What should the other airlines (non-shareholder airlines) have done when Traxon was first introduced?

The presentation is followed by an open and free discussion. The discussion can include a number of topics.

Major topics for class discussions after presentation of assignment questions:

- The air cargo community (Porter's value chain and competitive forces) and its business processes
- The virtual strategic alliance between the freight forwarders and the airlines
- Impact of Traxon on the constellation of competitive forces in the industry
- Factors that are important when introducing an interorganizational system
- Could HAFFA (Hong Kong Association of Freight Forwarding Agents) or some other common industry association have been a facilitator or even a provider of the electronic trading net?
- The prospects of an electronic market in the air cargo industry
- Summary of the case

4. SUPPLEMENTARY READING

Bakos, J. Y. "A Strategic Analysis of Electronic Marketplaces," *MIS Quarterly* (15:3), 1991, pp. 295-310.
Johnston, H. R., and Vitale, M. "Creating Competitive Advantage with Interorganizational Systems," *MIS Quarterly* (12:2), 1988, pp. 153-165.
Porter, M. E. *Competitive Advantage: Creating and Sustaining Superior Performance*, The Free Press, New York, 1985.

Acknowledgments