Harvard Business School
Case Selections (Reprint)

哈佛商学案例精选集
（英文影印版）

实务系列
From the Field

B-to-B电子商务

INSIDE B-to-B Commerce on the Web

中国人民大学出版社

Harvard Business School
Case Selections (Reprint)

哈佛商学案例精选集
（英文影印版）

实务系列
From the Field

B-to-B电子商务

INSIDE
B-to-B Commerce on the Web

中国人民大学出版社

图书在版编目（CIP）数据

B-to-B电子商务/D. 纳拉扬达斯等编写
北京：中国人民大学出版社，2002
（哈佛商学案例精选集. 实务系列）

ISBN 7-300-04180-9/F·1297
Ⅰ. B…
Ⅱ. 纳…
Ⅲ. 电子商务-英文
Ⅳ. F713.36

中国版本图书馆CIP数据核字（2002）第076084号

哈佛商学案例精选集（英文影印版）
实务系列
Inside B-to-B Commerce on the Web
B-to-B电子商务
D. Narayandas　　D. 纳拉扬达斯 等　编写

出版发行：中国人民大学出版社
（北京中关村大街31号　邮编100080）
邮购部：62515351　门市部：62514148
总编室：62511242　出版部：62511239
本社网址：www.crup.com.cn
人大教研网：www.ttrnet.com
经　　销：新华书店
印　　刷：涿州市星河印刷厂

开本：890×1240毫米 1/16　印张：11.75 插页2
2002年10月第1版　2002年10月第1次印刷
字数：412 000

定价：35.00元
（图书出现印装问题，本社负责调换）

From the Field

INSIDE B-TO-B COMMERCE ON THE WEB

Harvard Business School Publishing

SERIES INTRODUCTION

Welcome to this entry in the *From the Field* series of case collections from HBS Publishing. We have three main objectives for this series:

To enrich readers' understanding of business by presenting coherent collections of field-based research published by Harvard Business School. Understanding business involves much more than earnings reports and news headlines. It means understanding how managers perceive and analyze the complex challenges their companies face and the strategies and tactics they devise in response. For nearly a century HBS has been researching the world of managers from *inside* companies and delivering their stories to facilitate superior teaching and learning. You won't find easy answers or quick fixes in these cases, but you will discover balanced, detailed pictures of industries, markets, and technologies, and the intelligent professionals who – like you – are trying to cope with them.

To focus on the latest HBS work on tumultuous, fast-growth industries. Today's companies are fast-moving targets. We keep our *From the Field* collections current by concentrating only on newer case studies. And the series is focused on rapidly evolving industries with business practices that no one could have foreseen even a decade ago.

To guide readers to Web-based sources of information that can supply good supplemental information. Using the best Web resources you can find out "what happened next" in the companies that our case studies examine – and, if you dig in the right places, *why* it happened. We get you started by steering you to sites where you can learn more. As the *From the Field* series develops we will enrich and refine our Web guidance, partly based on suggestions we receive from readers such as you.

Harvard Business School Publishing has additional resources – including more case studies – on all the topics covered in the *From the Field* series. To research other products, to learn about other titles in this series, or to order additional copies of this reader, call 1-800-545-7685 or visit our Web site at www.hbsp.harvard.edu.

The Editors

INTRODUCTION TO THIS COLLECTION

Each item in this collection has been chosen because it reveals particular components of the business-to-business e-commerce story. Each of the seven items is introduced with a summary. Following each item is a set of "Questions and Ideas to Consider" that we hope will drive you to the Internet for more research!

We open the collection with two cases on established companies that face opportunities as well as risks in expanding to the Internet. The CEO of Arrow Electronics is concerned about how e-commerce might change the financial equation between his company and his customers. Rosenbluth Travel approaches e-commerce largely by applying the strengths it has brought to its traditional business activities.

The next two cases examine companies created exclusively for e-commerce, MarketSoft and DigitalThink. But the cases do not dwell on the technicalities of doing business on the Web. Instead, they examine the importance of key flesh-and-blood stakeholders – customers in the case of MarketSoft and salespeople in the case of DigitalThink.

In the final section of this collection we look at the new business-to-business e-marketplaces. A *Harvard Business Review* article on "E-Hubs" skillfully clarifies the often confusing world of exchanges, auctions, and aggregators. Then two cases examine companies that have staked an early claim in the e-Hubs space, FreeMarkets and VerticalNet.

Did You Know?

HBS Publishing has many other recent cases on e-commerce. Here is just a small sampling of cases published in 2000:

- Fair Market: Managing Business Development 800-212
- Net.Genesis, Inc 500-009
- CVS: The Web Strategy 500-008
- HPS Consumer Products Business Organization 500-021
- InSite Marketing Technology (A) and (B) 800-279 and 800-280
- Priceline.com: Name Your Own Price 500-070
- Quicken Insurance: The Race to Click and Close 800-295

To get information on these and other HBS Publishing materials, visit our Web site: www.hbsp.harvard.edu. In the search field, enter "electronic commerce." You might be surprised by how much you'll find!

RESEARCHING COMPANIES ON THE WEB

As you read the cases in this collection we are sure you will want to conduct research using a variety of Internet sources. Obviously, it always makes sense to visit the Web sites of companies profiled in these cases, since that is often the handiest way to gather basic information about current lines of business, marketing campaigns, and recent financial performance. But there is a wealth of information available on other sites, too. Below we list a number of Web sites that provide information about public companies, much of which is available free of charge.

Business-information sites we've come to like:

- Hoovers.com for basic company profiles, including lists of key subsidiaries, executives, and competitors.

- The "News and Media" section of hotbot.com, a regularly updated archive of items from many news sources.

- Kompass.com for information on foreign companies.

- For information on and discussions of technology companies, magazines run some of the most useful sites, including redherring.com and thestandard.com.

- Quicken.com, Smartmoney.com, Dowjones.com, and the "Business and Finance" section of Yahoo.com, for clear, readable presentations of key financial performance data and access to useful screening tools.

- CBS Marketwatch.com or – by paid subscription – wsj.com, for breaking financial news.

A final note about currency: At certain points we will tell you what we found at particular Web sites while we were putting this collection together. We apologize for any out-of-date directions and "dead links" you may find, but such is the transitory nature of certain information on the Web.

CONTENTS

ARROW ELECTRONICS

(D. Narayandas / #9-598-022 / 21 p)

Summary

Deals with the issue of cross-selling and managing a portfolio of products and services in business markets. Arrow/Schweber (A/S), a subsidiary of electronic parts distributor Arrow Electronics, has a portfolio of products that differ in the amount of value added by A/S. A/S uses value-added items such as programmable logic chips as "loss leaders" in order to acquire and retain a customer. It makes money when it sells the so-called "commodity" or low value-added products to the same customer. An Internet-based distributor is now offering Arrow a chance to sell commodity products through its e-commerce site. This new channel can threaten Arrow's overall business model if a large portion of its existing customers switch their purchases of the commodity products to this new distribution channel. Arrow needs to decide how it should respond to this challenge.

HARVARD | BUSINESS | SCHOOL

9-598-022
REV: JULY 12, 2001

DAS NARAYANDAS

Arrow Electronics, Inc.

Jan Salsgiver, president of the Arrow/Schweber (A/S) group, a subsidiary of Arrow Electronics, reviewed the Express Parts Internet Distribution Service proposal with colleagues Skip Streber, A/S senior vice president for sales, and Arrow CEO Steve Kaufman (see **Exhibit 1**). Express had developed an Internet-based trading system that would enable distributors to post inventories and prices to a bulletin board giving customers large and small an opportunity to shop for prices.

The opportunity to quickly gain new customers had to be traded off against potential effects on Arrow's relationships with current customers, who might exploit Express's bulletin board to cherry pick products from different channels. Arrow's relationships with its suppliers might also be affected. If they came to view Express as a legitimate option, its suppliers might dis-intermediate Arrow from their distribution channels.[1] "As a distributor," explained Salsgiver,

> we need to know three things: how we create value for our customers for the prices we charge; how this value is different from what our suppliers can provide to our customers; and whether firms like Express can offer the same value or more for lower prices. We have a successful business model that is based on a portfolio of products and services that we offer our customers. Our customers come back to us because they get the most value from us for the prices they pay. If Express is going to change this equation, then we need to adapt our business model to accommodate the changes.

Salsgiver realized that before she could make a decision on the Express proposal she needed to answer a number of questions, among them: How many of A/S's customers were likely to switch some of their purchases to Express? How would this affect A/S's sales and profitability? How would A/S's suppliers react to Express? Finally, was Express a threat to or an opportunity for A/S?

Arrow Electronics

It was common for semiconductor and electronic component manufacturers such as Intel and Motorola (hereafter referred to as suppliers) to deal directly with large original equipment manufacturers (OEMs). Typically, sales to these customers accounted for 65% to 75% of the suppliers' sales. Suppliers franchised small numbers of distributors such as Arrow Electronics to

[1]Dis-intermediation was the removal of a channel member (or intermediary) from a distribution channel.

Professor Das Narayandas prepared this case with the assistance of Research Associate Sara Frug. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management. This case is based in part on a case developed by Stephen P. Kaufman, CEO of Arrow Electronics, for in-house executive training. Some proprietary data have been disguised.

manage sales to the remaining customers that they could not serve directly, whether because of diminutive size or extensive service requirements.

Arrow Electronics was a broad-line distributor of electronic parts, including semiconductors and passive components. Founded in 1935 to sell radio equipment, the company had undergone a number of major changes. Three Harvard Business School graduates who acquired a controlling interest in the company in 1968 had by 1980 grown it to the number two position, largely through acquisitions. A hotel fire in December 1980 that claimed the lives of five of the company's top six officers and eight other Arrow executives was followed by a shaky regrouping that coincided with an economic recession. Under the leadership of Stephen Kaufman, who became president in 1982 and CEO in 1986, Arrow once more began to climb, reaching the number one position among electronics distributors by 1992.

Consolidation throughout the distribution world resulted in a small number of large companies to capturing the top tier of the market by 1997. Arrow's closest competitor in 1996, Avnet Inc., trailed it by more than 20% in sales although it had grown by 14% compared to Arrow's 10% during that year. Of the next group of competitors the largest, which included foreign entrants Rabb Karcher and Future Electronics as well as longtime rivals Pioneer-Standard, Wyle, and Marshall Industries, was one quarter the size of Arrow in total sales volume and earned less than Arrow's largest operating group. Turning in a solid performance in a less than solid market, Arrow had earned more than $6.5 billion in sales in 1996 (**Exhibit 2** presents financial information for 1994-1996).

Arrow's North American operations were headquartered in Melville, N.Y (see **Exhibit 1**). Sales and marketing functions were divided among five operating groups, distinguished by product and strategy, individually responsible for asset and materials management and P&L. Three groups, Arrow/Schweber, Anthem Electronics, and Zeus Electronics, sold semiconductors to different customer bases, Zeus to military and aerospace customers, Anthem and A/S to industrial customers. The other two groups were product-driven, Gates/Arrow Distributing selling primarily computer systems, peripherals, and software, Capstone Electronics passive components.

Arrow/Schweber

Arrow/Schweber, the largest of Arrow's working groups, had sales of $2.07 billion in 1996. A/S president Jan Salsgiver, who had taken the helm in 1995, was leading A/S towards higher levels of technological expertise through technical certification of its field sales representatives and dedicated investments in product management.

A/S's local operations were configured in a branch structure. Headed by a general manager, each branch included field sales and inside sales representatives, product managers, and field application engineers, as well as administrative personnel and additional managers as necessitated by size. Six regional VPs oversaw A/S's 39 branch managers.

Products and Suppliers

The Arrow/Schweber line card (i.e., the set of products for which A/S was a franchised distributor) comprised two chip categories: standardized and proprietary. Standardized chips were interchangeable and produced by multiple suppliers, proprietary chips manufactured by a single supplier. Only franchised distributors could sell suppliers' standardized or proprietary products.

In an industry in which the top ten suppliers provided 80% of the products on distributors' line cards, A/S's supplier list was long, numbering 56 suppliers in the spring of 1997 and growing.

Among A/S's largest suppliers was Altera, a manufacturer of proprietary programmable logic devices (PLDs) that required considerable value-added programming. As was typical in the industry, the manufacturer did virtually no programming. Roughly 20% of Altera's products were purchased directly by customers who had in-house programming skills. Altera sold the remaining 80% through two franchised distributors capable of providing the value-added programming required by individual customers.

Another large A/S supplier, Intel, also supplied mostly proprietary semiconductor products, although its most popular line, the x86 chip, did not require the level of value-added programming and engineering support that A/S provided for Altera's PLDs. Texas Instruments and Motorola, the remaining two of A/S's "big four," balanced the line card by selling a 75/25 mix of standardized and proprietary products.

Customers

A/S's traditional customer base of mid- and small-sized original equipment manufacturers (OEMs) accounted for 56% of sales in 1996. These customers were too small for the suppliers to serve directly. Suppliers therefore engaged franchised distributors, to which they offered limited return privileges and price protection, to consolidate and satisfy demand from these customers.

Franchised distributors afforded customers the opportunity to order in small quantities and with short lead times, accommodations suppliers were unwilling to provide. With suppliers having chosen not to support credit management for customers, it fell upon distributors to offer this benefit as well. In addition to carrying massive inventories, distributors also performed value-added services for customers who needed, for example, to receive all products needed for a specific manufacturing run in a single shipment or to release products to shipment based on forecast rather than previously entered, firm purchase orders. "This is very important to customers that have adopted JIT procurement systems," Kaufman explained. "These customers want to be very sure that they have everything they need at the right time and in the right quantities. If not, they run the risk of having to stop their production lines." Distributors' up-to-the-minute knowledge of available products could also be extremely valuable to OEMs in designing equipment for manufacture.

Even OEMs large enough to purchase direct often found distributors' value-added services attractive. "When customers get large enough," Salsgiver explained,

> they want to buy only direct from suppliers, who can provide them with the technical support and low prices they want. As time passes, however, these customers begin to reach a stage where they want to hand off materials management as well. Most suppliers are not capable of providing this service and, more important, are not interested in getting into this business. They don't want to take on any activity that does not have the high margins that electronic parts and components usually provide.[2] At this time they can become good distributor customers.

A second and growing new market was the Contract Manufacturer (CM) business, which produced circuit boards and industrial computer systems for OEMs. OEMs would outsource production of prototypes or even entire product runs to CMs, which would procure the components

[2]For example, Intel's gross margin was greater than 55% in 1997 and expected to remain above 50% in 1998 and 1999.

and assemble products. The CM business had grown at 30% per year between 1992 and 1996. During the same period, the percentage of business A/S channeled through CMs grew as well, reaching 20% of total sales by 1996. "Five years ago," observed one A/S field sales representative,

> the only CMs were small mom-and-pop operations used for overflow or testing demand. A few of them have grown to be multi-billion dollar enterprises. However, there still are a large number of mid- and small-sized CMs. CMs tend to be very price sensitive. They selectively use our value-added services such as programming and supply chain management in addition to our quick delivery service. But they don't need our engineering services at all.

A/S served two other major customer segments. Customers that purchased Intel x86 chips exclusively to manufacture PC clones accounted for 11% of A/S's business. The principal value A/S offered these customers, which were differentiated from traditional OEM customers in that they purchased in a purely commoditized fashion, was credit, which was unavailable to them through suppliers or other financial institutions.

The final segment comprised customers that purchased entire systems or assemblies. "These," Streber explained, "are computer product sub-assemblies that are used as components inside industrial equipment such as elevators or medical equipment. For example, the heart of a blood gas analyzer is an Intel-based PC that we supply. These customers tend to order in smaller quantities and need highly customized solutions."

A/S' Relationship with Suppliers

To a far greater extent than in most other industries, electronic component manufacturers relied on distributors to generate demand. This tendency, according to Salsgiver, was a function of the nature of the electronics business. "Suppliers have two needs from us," she explained.

> They need us to win business in their standardized products to help them grow and gain both profit and market share. They also need us to represent their new technologies and proprietary products to our customers. It's obviously critical for both of our future success to help customers design our suppliers' new proprietary devices into their products.

"Our relationships with our suppliers have two unique components," continued Salsgiver,

> First, suppliers franchise select distributors to sell their products and provide financial incentives such as price protection and limited return privileges to only these franchised distributors. More pointedly, suppliers refuse to honor warranties of products purchased through channels other than the ones they have designated.
>
> Second, many suppliers ship their proprietary and standardized products to us at list price or marginally below it. For example, one of our suppliers sets our book cost at a constant 5% below their list price. When we get a request for a price quote from a customer, we call the supplier back and give them the details of the customer and the opportunity. The supplier then decides how much of an additional discount they will provide us on this request. In this manner, they know exactly what we are doing and they are also able to control prices. The level of discount provided varies depending on whether it is our *design win* or a *jump ball* [see below].

Design Win

A/S, like other electronics distributors, generated demand by helping customers engineer end products to which its suppliers' chips were integral. Suppliers tracked which distributors did design work by assigning numbers to specific distributor-customer partnerships. "When we start working on an opportunity and invest resources in a customer's project," explained Streber,

> we will call our supplier and give them all the details. The supplier then assigns a design number that recognizes the work we have done. This is called "design registration." When the order materializes and the customer shops across distributors for price, the supplier offers a much higher discount to the distributor credited with the design registration as compared to any other distributor. Unless another distributor is willing to take a hit they will not be able to serve this customer, since only the distributor with the design registration will be able to earn an acceptable margin at the suggested resale price.

Jump Ball

Customers that purchased on the basis of manufacturer reputation or price and did not involve a distributor in design work were termed "jump balls" in the business. For these customers, suppliers offered all distributors the same margin, which was significantly less than that which would be offered in the case of a design win. Jump balls also occurred when a customer switched from direct purchasing to distribution. "In these cases," Salsgiver explained, "the suppliers have already created the demand for the products by doing the design work themselves, so they see the distributor's value only in credit and fulfillment and they compensate minimally for these services."

Managing the Relationship with Suppliers

"Our suppliers are able to control our destiny in many ways," observed Kaufman.

> In the case of jump balls, our suppliers inform the customer about the various distributors they can buy from. Suppliers usually don't exclude a distributor from the list. But they do control the order of names. This is an important factor. Being the first name on that list increases the chance of getting the sale. It is the supplier's way of rewarding one distributor over another.
>
> Another way suppliers manage demand flow is in the order in which they inform the distributors about an opportunity. Getting to know about an opportunity even a few minutes or hours before anyone else can give our sales reps all the time they need to secure the sale.
>
> Finally, suppliers can manage the flow of orders by managing the time they take in responding to a distributor's request for prices. The norm is that the supplier needs to get back within 24 hours of a request. If you have a good relationship or if the supplier wants to reward you, you might get a response a lot faster. If you are not in the good graces of the supplier, you could be the victim of an overloaded sales rep who was so busy that it took all of 24 hours for them to process your request.
>
> This does not mean that we have no power. Usually, for the standardized products we carry lines from different suppliers that have identical specifications, and therefore are substitutable. When a customer needs standardized products, we can go back to each supplier and literally shop the volume around to see who will give us the best margins. Typically these are high-volume products and therefore an important part of the suppliers' portfolio. A

supplier that is anxious to fill its production lines can "buy an order." This leads to higher margins for us.

Here is when, depending on how we have been treated, we can return favors. If suppliers use jump balls to keep distributors in check, we are able to use design wins and competitive standardized products to counter-balance their power.

"Suppliers want A/S and other distributors to get technology into the hands of the right customers," added Salsgiver.

In this business, demand points are not always known. An operation in someone's garage this year could be the multi-billion dollar giant five years from now. Our suppliers want us to identify these growth opportunities and lock them in before anyone else does. Our job at A/S is to know our customers well enough to create demand for our suppliers' products. We maintain a separate account development group that calls on small companies looking for opportunities of the future. This is our ace of spades when it comes to managing our relationships with our suppliers.

Arrow's Selling Effort

"It is important to understand how products are viewed by our suppliers and our customers." Salsgiver explained, "When we deal with our suppliers it is the world of standardized and proprietary products. When we deal with customers, it becomes a world of book and ship, and value-added products."

Book and Ship (BAS)

A/S had developed a real-time, on-line computer system that tracked costs, prices, and movements of 300,000 inventoried part numbers and order patterns (A/S processed more than 10,000 transactions per day) and sales history for each of the company's 50,000 customers. Using terminals connected to this system, A/S's 300 branch-based sales and marketing representatives (SMRs) handled daily phone calls from customers checking delivery, availability, and price levels.

For customers who requested a quote directly, an SMR might try to secure the business and arrange to ship the product. This was termed a book and ship (BAS) transaction. SMRs exercised pricing authority, obtaining discount levels from suppliers and quoting prices to their assigned customers on the basis of their knowledge of customers' buying patterns, local market trends, current cost levels, and inventory on hand.

A/S commonly referred to BAS products as commodity products because of the nature of value added by A/S. A/S' gross margins on BAS products ran above the company average, in the range of 20% to 25%.

Value Added (VA)

Alternatively, an order might be originated by field engineering and facilitated by a field sales representative (FSR), the typical design win situation. In this case a customer's purchasing agent would speak to an SMR only to finalize the details of the transaction. Such transactions represented the culmination of tremendous effort and expenditure of substantial resources. A/S's approximately