



**Terry College of Business
University of Georgia**

Manheim Online

As the train entered the *Chunnel* between the U.K. and France, Ralph Liniado was considering the two critical issues for Manheim Auctions: overseas operations and Manheim Online. While the U.S. and U.K. had a history of using auctions to sell used cars to auto dealers and the infrastructure to do this, much of Europe did not. He was looking into ways to move Manheim into the European market. Alternatively, Manheim Online appeared to be going very well with weekly sales of used automobiles over the Internet running in the millions of dollars. While the European side of his job was going to take a great deal of groundwork, the Manheim Online operation was expanding dramatically. Even though other companies were developing competitive Internet-based services, Manheim enjoys a first mover advantage in this approach of moving used automobiles to dealers who, in turn, sell them to consumers.

After 28 years with Manheim Auctions, Ralph had risen to Vice President of Development for this wholly owned subsidiary of Cox Enterprises, a large privately owned corporation with headquarters in Atlanta, Georgia. In addition to Manheim Auctions, which specializes in the wholesale auctioning of used automobiles to car dealers with operations in both the U.S. and the U.K., Cox Enterprises has four other divisions or subsidiaries: Cox Newspapers, Cox Communications, Cox Broadcasting, and Cox Interactive Media.

Manheim Auctions is the largest wholesale automobile auction company in the world with 18,000 employees located at 65 sites in the U.S. and 8 in the U.K., up from a total of less than 30 sites in 1990. In 1997, Manheim moved almost 6 million automobiles through its auction sites, selling more than 3.75 million cars (about 40 percent of cars at an auction are not sold). These sales generated around \$30 billion. In the words of Liniado:

We are in the business of auctioning, reconditioning and processing used vehicles. We get a fee for putting them through the auction and for certain administrative functions; we get a fee for actually selling the car; and we get a fee for reconditioning the car at various levels. That's where our revenue streams come from.

Since it is part of a privately held corporation, Manheim's revenue figures are not available. However, it is known that in 1996, Manheim had approximately \$855 million in revenue from its various processing, reconditioning, and auctioning operations. Manheim also does not release figures on its share of the market, but according to the National Auto Auction Association (NAAA), 16 million cars will be offered for auction in 1998, implying that Manheim has nearly 40 percent of the U.S. auction market.

Prepared by Professors Patrick G. McKeown and Richard T. Watson as the basis for class discussion rather than to illustrate either effective or ineffective handling of a management situation.

Copyright © 1998 by Patrick G. McKeown and Richard T. Watson

The supporting Web site for this case is www.cba.uga.edu/~rwatson/manheim

While its operations are very capital-intensive due to the cost of the auction and reconditioning facilities, there is no inventory—Manheim does not take title to any of the auctioned automobiles; titles remain with the company consigning the vehicles to Manheim to be auctioned. A consignor is typically the leasing arm of an automobile manufacturer or a financial organization, a rental car company, or an automobile dealer—any company that wishes to dispose of used car inventory. While the auction portion is the most visible part of its operations, the reconditioning operation is also very important. In fact, Manheim is the largest non-factory painter of automobiles in the world. It is also the largest detailer of automobiles in the U.S. These *back-end* operations account for nearly one-third of Manheim's revenue. There is no doubt that Manheim is a profitable unit of Cox Enterprises.

The used automobile business in the U.S.

Starting with the influx of well-made Japanese automobiles into the U.S. and European markets in the early 1970s, the quality of automobiles has, in general, improved significantly. As noted by Buddy Ray, Executive VP of Intellimedia Commerce (the company that has done much of the Internet work for Manheim):

It used to be that when an automobile reached 50,000 miles, you had to have the engine rebuilt. Today, cars don't even need a tune-up until they have gone 100,000 miles. As a result, a used car with 30 or 40,000 miles on it still has a great deal of useful life left in it.

The improved quality of new cars means that there is a greater market for such cars. In addition, the increased popularity of leasing as a way of acquiring new cars has resulted in a different type of used auto on the market: the *program car*. Program cars include those coming off a closed-end lease (so-called *off-lease cars*), fleet cars, or those that have been driven by automobile company executives. These cars often have a portion of the original warranty intact and have fairly low mileage (leased cars carry a penalty for going over a set number of miles per year). They are much different from the five- or six-year old car that has been sold or traded by a consumer and placed on the traditional used car lot.

With new car prices over US\$20,000 for many vehicles, it is becoming an accepted fact that purchasing a good used car is a mark of shrewdness, not a statement of one's financial failings. On the other hand, used car profit margins are higher for the dealer. In general, a car dealer who sells both new and used cars makes more than \$300 on a used car but little more than \$100 on a new one, according to the National Automobile Dealers Association. It is also estimated that the typical new car dealership makes only six percent of its profits from new car sales versus nearly 80 percent in 1985. As a result, the used car market is estimated to be US\$324 billion in 1996, compared to US\$315 billion for new car sales. In terms of numbers, 14.7 million new cars were sold in the U.S. in 1995 versus 18.5 million used cars.¹ As a result of this trend toward used car sales, several big operations have opened recently in the U.S. including CarMax (a spin-off from electronics giant Circuit City) and USNation auto superstores created by Wayne Huzeinga, the founder of Blockbuster Videos.

¹ Jaffa, Sam, "Detroit: Selling cars from afar," *Director*, November 1996, p. 28.

The role of auctions in used cars sales

Auctions are important in the sale of used cars because, in addition to providing dealers with a ready source of automobiles, problems often associated with transactions between individuals or even dealerships are eliminated by the auction company. That is, auctions provide a valuable service in protecting the buyer and often the seller in automobile transactions by handling the transfer of money and title and taking care of other administrative chores. Dealers attend auctions knowing that transactions are safe. If they discover a problem with a car before leaving the auction site, the sale can be nullified.

Dealers are notified of a forthcoming auction of used cars at their nearest auction site and the type and possible makes of the cars to be auctioned. For example, the auction may be for program cars only or for all types of used cars. Dealers interested in acquiring used cars for their lot will typically either go to the sale themselves or send a knowledgeable representative. At a new car dealership, the used car manager is typically the one that handles this responsibility, while at a used car dealership the owner may attend the auction.

An auction is also a very social event with a culture of its own. Dealers and representatives interact before and during the bidding process as they wait for a car in which they are interested to “go on the block.” As Liniado describes the auction process:

It is a very social, interactive kind of thing, where dealers not only compete against one another, but they talk to one another. That's how they learn the market. It's kind of like being on the floor of the New York Stock Exchange. It's the same thing.

Cars are available for inspection before the sale commences, but once the bidding starts, the auction line moves at a rapid rate with almost three cars being sold every minute. With the capability to run simultaneously multiple auction lines at a single site, it is possible to wholesale hundreds of cars in a single day. The bidding process starts for each automobile with an initial *floor price*. Auctioneers then call out bids until the final price is reached. Occasionally, no one will be interested in a car at the floor price, and the automobile will remain unsold during this session. In this case, it may be brought back at a subsequent auction date, possibly with a lower floor price, or returned to the consignor for disposition. Approximately 60 percent of cars consigned to Manheim are sold through the auction process.

Once a final bid is accepted, the car then becomes the property of the dealer who must then make arrangements to pay the auction company and to transport the car. If only a few cars are purchased, the dealer may use staff to drive the vehicles to the used car lot; on the other hand, commercial transport companies are also available. In any case, unless the dealer is purchasing a special order vehicle for a customer, these purchased cars will be placed on the lot with the anticipation of a sale at a profit.

The dealer has more costs than the wholesale price of a vehicle. The final price to a customer must cover the costs of financing the wholesale purchase of the vehicle, travel to and from the auction for all persons attending the auction, and transport of the automobile back to their dealership. In addition to these costs, there is also the

opportunity cost associated with having one or more employees away from the dealership for at least one day a month.

Electronic auctions

The advent of the widespread use of satellite television brought the first attempts at electronic auctions—that is, auctions where the purchaser is not physically at the auction but is participating through an electronic medium. Such a system can significantly reduce travel cost by allowing the dealer to purchase used cars without leaving the dealership.

Aucnet, arguably the first electronic auction system, was developed in Japan for the domestic wholesale market. In Japan, there are very restrictive rules regarding private automobile sales. As a result, almost all used cars are purchased from dealers. This, in turn, makes the automobile auction a very important element of the used car supply chain.

Started in 1985, the Aucnet system has used a variety of means to connect electronically the buyer with the auction, including laser discs, satellite television, and telephone lines for voice and data. Currently, the system uses satellite links to broadcast car images to dealers who are members of Aucnet. Text-based data transmission from dealers to the Aucnet host computer is handled via telephone lines. Dealers receive a catalog, which previews the cars to be sold, in advance of the auction. When the auction begins, a dealer may increase the current bid amount on a car by approximately US\$30 by pressing a button on a joystick attached to a personal computer. When the highest bid has been received, the buyer usually pays Aucnet a fee to transport the car from the seller's location (where the car has remained throughout the auction) to the buyer's lot.²

Currently, Aucnet is the largest of 144 auto auctions in Japan with around 6 percent of the market in 1995. A key element of its success is the Aucnet inspection system. To assure eventual consumers that they are purchasing vehicles without problems, Aucnet requires sellers to have their vehicles inspected by an Aucnet mechanic before granting permission to sell at an Aucnet auction. The mechanics rate each car between 1 and 10, and this information is provided to the dealers prior to the sale. This inspection system is a very important part of the Aucnet system since it assures the quality of the vehicle that the dealer is purchasing.

In 1989, Aucnet began to consider ways to enter the lucrative U.S. used car auction market. However, an early test of its system in the U.S. with General Motors ended in failure. Since that time, it has continued to try, without a great deal of success, to penetrate this market. One of the problems it has encountered is a lack of infrastructure. In Japan, sellers are willing to store cars that Aucnet is selling for them; however, this is not the case in the U.S. Instead, the sellers want to turn the vehicles over to the auction company to process and store prior to the sale. Since Aucnet does not have the necessary facilities in the U.S. to do this, its success has been quite limited.

² Ho Geun Lee, "Do Electronic Marketplaces lower the price of goods?" *Communications of ACM*, January, 1998, pp. 73-74.

Manheim's auction vision

In response to Aucnet's efforts to penetrate the U.S. used car auction market and those of other countries, in 1995 Manheim purchased the rights to a system created by John Bailey of the U.K. to sell cars electronically to U.S. Chrysler dealers. Named Auction Vision, the system used a satellite link to a television studio that looked much like that used by a telethon to raise money for charities. However, in this case, instead of accepting calls from viewers wishing to pledge money to the charity, the bank of operators took calls from dealers wishing to bid on the auto currently pictured on the TV screen. Once the call was made, the operator would continue to act as a surrogate buyer as long as the dealer continued to bid on that car or on a series of cars. Just as with the real auction, the vehicles were displayed on the screen at a rapid rate to generate the same level of excitement as at an auction lot.

Auction Vision used a television studio owned by Cox Enterprises to broadcast the auctions. Auctioned vehicles were located at Manheim Auction sites where they had been processed for the normal auction process. Digital photographs and adequate descriptions of the cars were used in the Auction Vision system. Chrysler dealers were advised of forthcoming sales by presale videotapes and closed circuit television broadcasts. Since the used automobiles were already at a traditional auction site, there were no infrastructure problems. Manheim was simply moving its live auction to television with telephone operators relaying the dealer bids at the auction and photographs taking the place of the actual automobiles.

While Auction Vision was very successful, it also required a lot of work to produce. The studio had to be set up with lights, cameras, sound system, and so on. The telephone operators had to be in place, the satellite link enabled, and a multitude of other details taken care of before the auction could take place. Since it was a *synchronous system*, that is, everybody had to be in place at the same time, auctions had to be run three times a day to handle the different U.S. time zones. In early 1996, with these problems on his mind, Liniado was talking with his 14 year old son, Scott, about the Internet when he realized that the Internet might be a better approach than Auction Vision for the electronic sale of used cars.

The development of Manheim Online

Liniado discussed his idea of an Internet-based electronic used car sales system with his boss, Darryl Ceccoli, the President of Manheim Auctions. Ceccoli liked it so much that he gave Liniado the go ahead to approach Intellimedia Commerce, Inc. (ICI), an Atlanta-based Internet development company, regarding developing such a system. Based on preliminary discussions, ICI quickly developed a prototype Web site that would enable dealers to purchase automobiles directly from a Manheim Auction site.

With this prototype in hand, Liniado and Ceccoli went to the Cox corporate officers and Board of Directors for support in creating a working system. The board was very supportive and basically said to them:

Don't let us hear you say that you did not have everything you needed to make this work!

With this declaration of support, Liniado went back to ICI, requesting it to create a working version of the prototype. It was decided early in the process to make this a purchase system rather than an online bidding system. The primary reason for this decision was the unfair time advantage gained by a dealer with a high-speed Internet connection located just across town compared to a dealer across the country using a 28.8 kbps modem to connect to the Internet. While ICI felt that this timing problem could be solved eventually, Manheim wanted a system up and running quickly. It opted for a purchase system that would allow dealers to buy program cars at a set wholesale price determined by the owning consignor. With this system, any dealer who was certified³ to participate in a Manheim auction and connected to the Internet could purchase a program car by accessing the Manheim Web site.

Another important decision made by Manheim in setting up this purchase system was to offer only program cars over the Web. The rationale was that this variety of used car is virtually a *commodity* (i.e., a mass-produced unspecialized product). For example, a 1996 Lexus LS400 4 door sedan program car with 20,000 miles is not that much different from another LS400 4 door sedan program car with say, 25,000 miles, and dealers have a very good idea what they are getting. This is especially true, given Manheim's detailing and reconditioning services combined with its reputation for guaranteeing the cars that it sells.

An unusual feature of the development of Manheim Online was the *lack* of involvement by its Information Technology (IT) department. Instead of going to IT with his idea, Liniado chose to use an outside developer (ICI) with whom Cox had previously done work to create both the prototype and the final working version of the system. While ICI had to interact with the IT people at Manheim to create a system that would access the data on Manheim's AS400 midrange computer, the system was developed outside of Manheim

The Manheim Online purchase system

The resulting Manheim Online purchase system can be broken into two parts: (1) the processing of cars to be included on the Manheim Online web site; and (2) the purchase of the automobile by a dealer.

The processing part of the system operates as follows: companies deliver program cars to a Manheim auction site. There, they are processed as usual and digitally imaged. Once they are ready for sale, the digital images plus other information (mileage, color, defects, and so on) about each car are entered into a database on Manheim's central AS400. Periodically, a company representative at the auction site selects a number of its automobiles from those at that site to be added to the *cyberlot*—the term coined by Ralph Liniado—to distinguish those cars that are available for purchase from Manheim Online. The representative also decides on a price based on what similar cars have been selling for at the traditional auctions at this site. Every 30 minutes, all new Cyberlot selections are automatically added to a database of cars that will be available on the Web and a Web page automatically created for each of them. The cars are now ready to be

³ Certified dealers were those who had provided evidence of having a dealership with an established financial record.

purchased. If the car does not sell on the Cyberlot prior to the next traditional auction, it is then made available for sale by auction.

When a certified dealer accesses Manheim Online, after entering a user ID and password, the dealer is shown a list of auction locations for which there are cyberlots (Exhibit 1). After selecting an auction location, the dealer can then specify criteria for vehicles of potential interest (Exhibit 2). Based on these criteria, a database query is created by the Web server and sent to the AS400, which returns a list of matching vehicles to the Web server for display as a Web (Exhibit 3). Details on any problems (dents, scratches, etc.) are also presented on the Web page (Exhibit 4). Buying a displayed vehicle is as simple as clicking the Buy button. After deciding to buy a car from the Web site, to consummate the sale the dealer must send appropriate information to Manheim by fax. If necessary, Manheim will arrange transportation to the dealer's location. The dealer knows that Manheim stands behind the vehicles it sells and is confident of receiving a car that will match the pictures and description displayed on the Manheim Web page. This entire process is diagrammed in.

Manheim Online is unusual among Web sites in that certified dealers must pay a small subscription fee of US\$20-\$40 per month in addition to the cost of an Internet Service Provider (typically \$20 per month). Since virtually all other sites on the Web are free, the fact that 5,000 dealers are willing to pay an access fee speaks volumes about Manheim Online's value. While this a small amount for the dealer to pay to have access, Manheim Online is already generating around \$150,000 a month in revenue and, with a potential market of over 80,000 dealers, monthly revenue to Manheim could approach US\$2 million a month. This could occur with little, if any increase in the cost of running the site that, according to Liniado, cost several million dollars to set up and over a \$1 million a year to maintain.

The Manheim extranet

Internet technology (the communication protocols and software such as e-mail, FTP clients and Web browsers) and Internet infrastructure (a national information infrastructure and competitive local Internet access providers) have created a low cost platform for linking computers. In addition to the global network of networks that is commonly referred to as the *Internet*, many organizations are creating internal versions of the Internet called *intranets*. These structures enable organizations to take advantage of low cost Internet technology to communicate with and deliver information to employees. An *extranet* is a collaborative network that uses Internet technology to link businesses with their suppliers, customers, or other firms that share common goals. Another way of thinking about an extranet is that it uses Internet technology to link partners in a value chain.

Manheim Online is an extranet since it uses Internet technology to link Manheim with its customers, the automobile dealers. Note that it does not link Manheim to the ultimate car-buying public since the public must buy from the dealers who buy from Manheim. In addition to purchasing high quality used program cars for a used car lot without the expense of traveling to an auction and time away from the dealership, the Manheim extranet offers a new way of selling used cars. Instead of purchasing a sufficient number of used cars to meet the perceived demand and tying up a capital in an inventory of cars, a dealer can greatly reduce risk by waiting until a particular customer's needs are

identified before ordering a car from a Manheim cyberlot. In essence, the customer can order a program car through a dealer and have it delivered the next day. With Manheim's guarantee, the dealer has no money at risk in the transaction.

Other Manheim online services

In addition to providing ready access to high quality used cars over the Internet; Manheim Online provides access to the Manheim Market Report and Auto Connect. In each case, Manheim is trying to leverage its knowledge of the automobile market to provide services to its customers.

The **Manheim Market Report** (MMR) is a complete analysis of the past month's sales at all Manheim auction sites. Previously delivered once a month on disk to subscribing dealers, the MMR is now available on the Web with the most recent sales results (Exhibit 6). For example, if a dealer wants to know the average auction sale price of a 1996 Jeep Cherokee, she can query the MMR. The MMR also reports average wholesale and retail prices for autos by type, and it is possible to see the results of every auction sale or even to view all of the transactions at all auctions for a given type of vehicle. In Liniado's words:

Just like the auction is the New York Stock exchange of used cars, the MMR is the Dow Jones report of used car sales.

While Manheim has always collected and disseminated information on its sales to dealers, with the online version of the MMR, it has increased its presence as an information business.

In addition to the MMR, Manheim now makes a new service available through its public (non-subscription) site. **AutoConnect** allows a person to input a geographic location and details on the type of used car desired. AutoConnect will locate the nearest dealer with such a vehicle. Automobiles that are not in Manheim's database as a result of its auction business are added to the AutoConnect site by a division of Automobile Data Processing Inc. This service is free to the customer and to the other auction companies and dealers because it is paid for by advertising on Manheim Online. As stated by Chip Perry, President of AutoConnect:

AutoConnect's primary mission is to help dealers sell their higher margin pre-owned cars in a highly efficient way that doesn't erode traditional dealer-consumer relationships.

Manheim hopes that AutoConnect will become the largest pre-owned automotive Web site. Its main competitors are Auto-By-Tel and Microsoft's CarPoint. Auto-by-Tel pioneered online car sales in the new car market, where it has created a national network of over 2,000 dealers, each of which has signed an exclusive contract for a geographic area. When Auto-By-Tel receives a purchase request either by telephone or over the Internet, it notifies one of its dealers who has 24 to 48 hours to contact the would-be car buyer with a firm, low price. Dealers report up to a 30 percent boost in business with as much as a 75 percent saving on the cost of a sale compared to traditional floor traffic. Auto-By-Tel reports sending 40,000 purchase requests to dealers each month from its Web site. It has also moved into the used car side of the business with a similar approach.

Microsoft's CarPoint includes new and used-car listings, car reviews, and pricing. Visitors can also arrange to buy a car. In April 1997, a Microsoft ad in *Automotive News* offered to put a dealer's used-car inventory on CarPoint for six months for less than the cost of one ad in the dealer's local newspaper. A year later, it was estimated that car dealers were selling about \$80 million worth of cars a month via CarPoint.

Adding value to reduce competition

Creating AutoConnect is a major project for Manheim, but one it believes will provide an important advantage over current or future competitors. AutoConnect is only one of several information technology related services that Manheim now offers. Other services include a desktop software package called Tracker Plus, which provides desktop functionality to independent dealers; a service called Leasing Plus that aids the automobile and financial companies by handling lease-end operations, and the capability for competing auctions to set up Cyberlots on the Manheim Online site. In each case, Manheim is seeking to add value to its operations as a way of discouraging competitors from entering the cybermarket to which they have staked a large claim.

Tracker Plus is a software package that enables the independent auto dealer (a dealer not franchised to sell new cars) to perform a wide array of operations from a personal computer including connecting to Manheim Online and accessing credit bureaus. In the near future, online auction registration will also be possible.

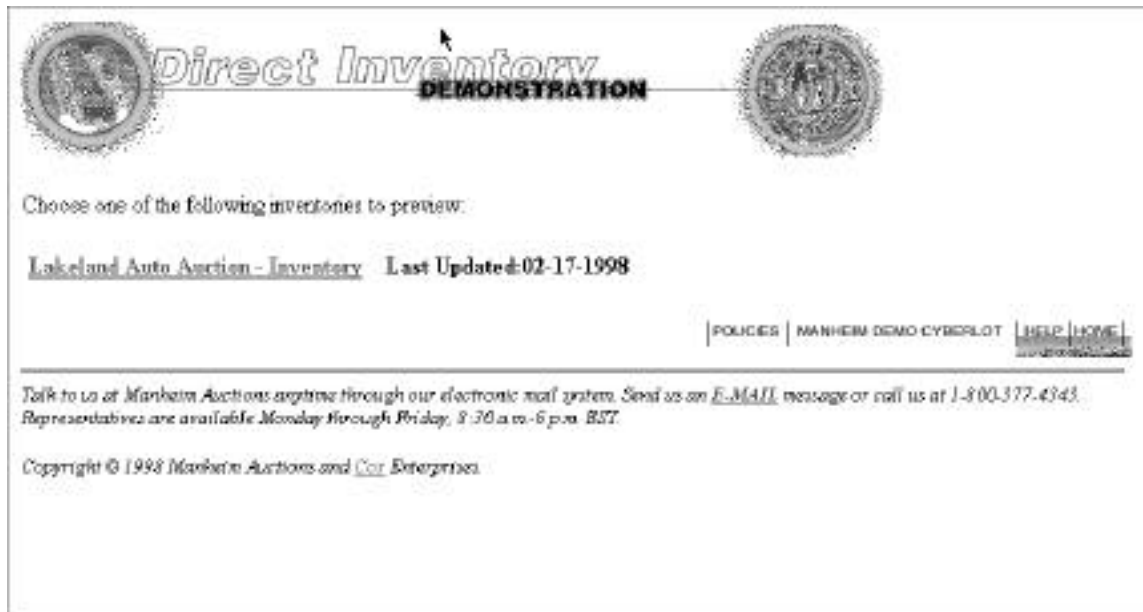
Leasing Plus is a service offered by Manheim in which it contacts a person leasing the vehicle 90 days prior to the end of the lease. If the lessee plans to return the vehicle, Manheim will pick it up, put it through its standard auction preparation service, and then continue with the services necessary to sell the vehicle at auction. This service relieves the company that owns the vehicle of any responsibilities for the vehicle at the end of the lease.

While it may seem counter-intuitive for Manheim to allow competing auctions to set up Cyberlots and link them to Manheim Online, in actuality this fits with Manheim's *added value* philosophy. Since the other auctions are not going to let Manheim be the only program car purchase system on the Internet, Manheim has decided it might as well be the provider of this service rather than letting someone else do it.

Extending the core business without cannibalizing it

As his train exited the Chunnel, Ralph Liniado had not made any firm decisions about the future of Manheim Online—things were moving too fast to do that in this environment. His philosophy was one of doing everything possible to continue to add value to Manheim Online as a way of discouraging competition. At the same time, his goal remained the same—to extend the core auction business through the Internet without cannibalizing it.

Exhibit 1: Selecting a Cyberlot



Direct Inventory DEMONSTRATION

Choose one of the following inventories to preview:

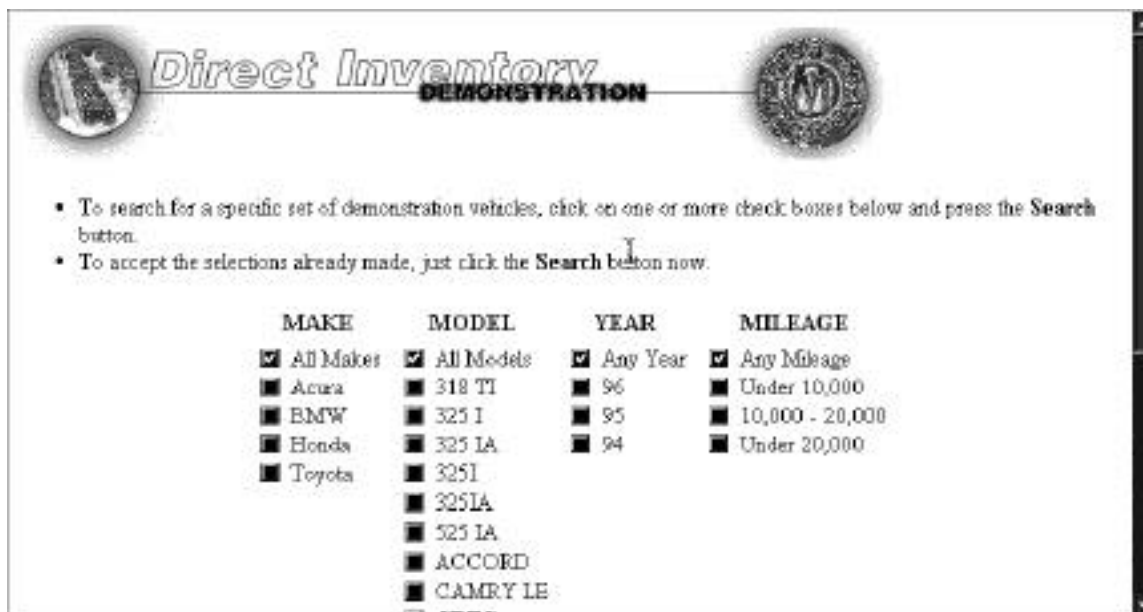
Lakeland Auto Auction - Inventory Last Updated: 02-17-1998

[POLICES](#) | [MANHEIM DEMO CYBERLOT](#) | [HELP](#) | [HOME](#)

Talk to us at Manheim Auctions anytime through our electronic mail system. Send us an [E-MAIL](#) message or call us at 1-800-377-4343. Representatives are available Monday through Friday, 9:30 a.m.-6 p.m. EST.

Copyright © 1998 Manheim Auctions and [Car Enterprises](#).

Exhibit 2: Setting search criteria for a car



Direct Inventory DEMONSTRATION

- To search for a specific set of demonstration vehicles, click on one or more check boxes below and press the **Search** button.
- To accept the selections already made, just click the **Search** button now.

MAKE	MODEL	YEAR	MILEAGE
<input checked="" type="checkbox"/> All Makes	<input checked="" type="checkbox"/> All Models	<input checked="" type="checkbox"/> Any Year	<input checked="" type="checkbox"/> Any Mileage
<input type="checkbox"/> Acura	<input type="checkbox"/> 318 TI	<input type="checkbox"/> 96	<input type="checkbox"/> Under 10,000
<input type="checkbox"/> BMW	<input type="checkbox"/> 325 I	<input type="checkbox"/> 95	<input type="checkbox"/> 10,000 - 20,000
<input type="checkbox"/> Honda	<input type="checkbox"/> 325 LA	<input type="checkbox"/> 94	<input type="checkbox"/> Under 20,000
<input type="checkbox"/> Toyota	<input type="checkbox"/> 325I		
	<input type="checkbox"/> 325LA		
	<input type="checkbox"/> 525 LA		
	<input type="checkbox"/> ACCORD		
	<input type="checkbox"/> CAMRY LE		

Exhibit 3: List of matching cars

View	Order	Run#	Description	Color	Miles	Sale Price
		1	95 BMW 325I	ALPINWHT / TAN	43,279	\$19,500
		2	95 BMW 325LA	BOSTON / SND	37,628	\$20,100
		3	95 BMW 325I	ARCTIC / BLK	22,837	\$21,800
		4	95 BMW 325LA	JET BLK / TAN	38,557	\$20,100
		5	95 BMW 325 LA	MONTREAL /	22,161	\$21,800
		6	95 BMW 325 LA	CALYPSO / GRY	25,346	\$21,300
		7	95 BMW 525 LA	OXFORD / TAN	37,630	\$22,400
		8	95 BMW 325 I	ALPWHITE / TAN	54,973	\$17,500
		9	94 BMW 325 I	ALPWHITE / TAN	47,363	\$16,900
		10	95 BMW 525 LA	CALYPSO / TAN	26,774	\$23,600
		11	95 BMW 525 LA	OXFORD G / TAN	29,612	\$23,600
		12	96 BMW 318 TI	RED / GRY	9,194	\$17,200
		13	95 BMW 525 LA	OXFORD / TAN	27,319	\$23,600
		14	95 BMW 525 LA	OXFORD G / TAN	23,287	\$24,100
		15	96 Toyota TACOMA LK	WHT/045 /	21,892	\$12,500
		16	96 Toyota TACOMA LK	GRY/196 /	16,018	\$11,000
		17	96 Toyota CAMRY LE	BLK/202 / TAN	36,892	\$14,100

Exhibit 4: Image of a car

95 BMW 325I
 Run # 1
 WBACB432XSFM21278
 Prev. Next
 Vehicle Vehicle

ALPINWHT, TAN interior
 43,279 Miles
 6G, AT, LI, SR, CP
 OC, DL, ES, EW, AC, PS, PB

Buy
\$19,500

Announcements DMV NOT PASSED \$0
Damage SCRATCH ON BUMPER; SCRATCH & DING L/REAR DOOR;
Unpictured Damage LEATHER WORN, DING ON L/REAR DOOR
Options TIRES POOR
Location Lakeland Auto Auction

DEMO DEMO DEMO DEMO DEMO DEMO DEMO DEMO DEMO DEMO

[SEARCH](#) | [SEARCH LIST](#) | [REPORT](#) | [MANHEIM DEMO CYBERLOT](#) | [HELP](#) | [HOME](#)

Exhibit 5: The Manheim Online system

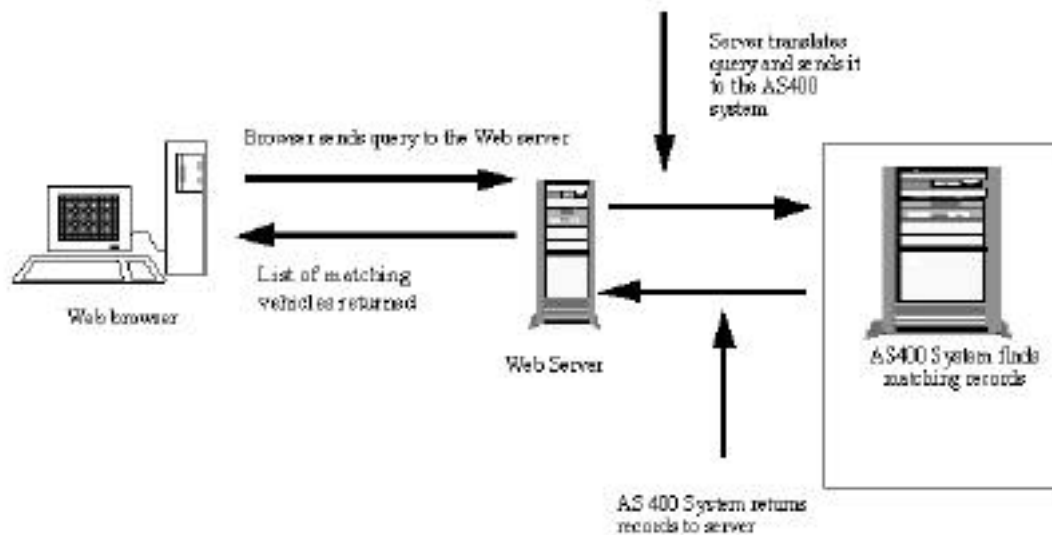


Exhibit 6: The Manheim Market Report

Year: Make: Model: Style:

Market Analysis | All Auction Sales | Sales by Auction | Statistics | Reports

Region: Seasonal Adj: Avg Mileage:

Market Analysis	April 14	Feb.	Jan.	Oct. April '97	April '97
Avg Price	\$1,060	\$1,219	\$955	\$1,194	\$1,490
Avg Miles	88,269	83,140	86,011	80,661	79,897

Projected Values	April '98		May '98		April '99
Condition	Above	Avg	Below	Avg	Avg
Wholesale	\$1,475	\$1,025	\$600	\$1,000	\$750
Retail	\$2,100	\$1,600	\$1,150	\$1,575	\$1,300

90,FORD,ESCORT,4D HATCHBACK LX