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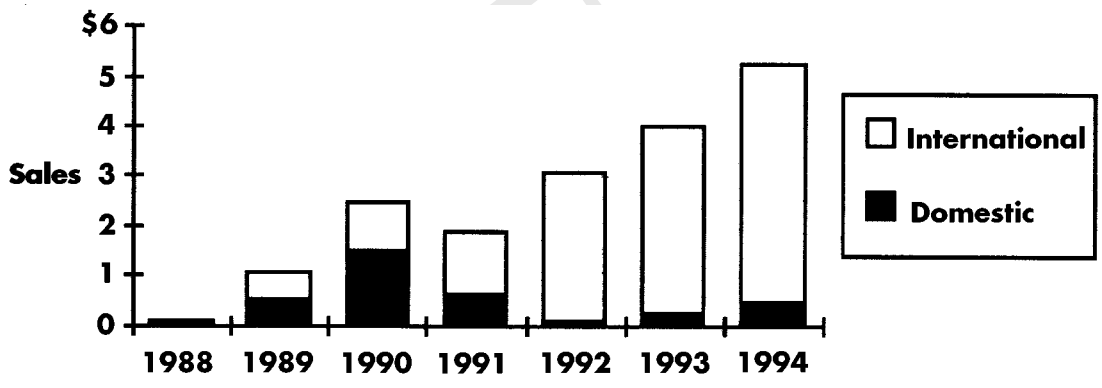
Montague Corporation (A)

Traditionally, bicycles have only been designed for riding and not for storage, yet they are actually in storage for far longer than they are being ridden. The BiFrame is the first and only full-size, high performance, all-terrain bicycle that folds. Ultimately, our folding system could be found on one-fourth of all adult bicycles sold.

David Montague, founder and president of Montague Corporation, was describing the unique design and potential of the Montague BiFrame, a bicycle with a patented system that allowed it to be folded small enough to fit into a large suitcase. To differentiate the BiFrame from its numerous poor quality circus style predecessors, Montague promoted his product as "a bicycle that folds and not a folding bicycle." Although financial statements for this privately held company were not available, Montague stated, "financing the growth so far has not been a problem. Our net profit margin is around 10% and we are cash-rich at our present rate of growth." The foreign and domestic sales figures are shown in **Table A**.

Table A Sales by Year ($ millions)



Montague's products included a line of bicycles that fold, the recently introduced folding TriFrame Tandem bicycle, and related accessories. These were sold through a network of dealers and distributors located in 11 countries. See **Exhibit 1** for the BiFrame and **Exhibit 2** for the TriFrame.

Research Associate James Weber prepared this case as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

Montague Corporation had attracted significant media attention for both their innovative product designs and the global nature of their business. Most recently, *Popular Mechanics* gave the Montague TriFrame Tandem their 1995 Design and Engineering Award. *Business Week*, in an article entitled "Good Bikes Now Come In Small Packages" stated:

> Many cyclists complained that the portable models simply didn't look or ride like "real" bikes. Montague Corporation . . . is one bike builder that's out to change that perception. . . . On an afternoon of biking on asphalt, dirt, and some serious trails in New Jersey's South Mountain Reservation, the (Montague) 949 proved to be a quick and capable machine.[1]

In an article on the globalization of the world economy, *Fortune* stated:

> Montague Corporation designs its unique folding mountain bikes in Cambridge, Massachusetts, makes them in Taiwan, and sells most of them in Europe. Businesses like his, which must send design changes back and forth between three continents sometimes daily, would not be possible without the information technology that is at the heart of the new economy.[2]

Company History

Harry Montague, David Montague's father, was a Washington, D.C. architect and part-time inventor. He designed the original BiFrame and was awarded a 17 year patent in May, 1984. David Montague explained that he and his father were introduced to the ways of the bicycle world when his father decided to have a Washington D.C. area custom bike shop make the bicycle. Harry Montague dropped off the designs at the bike shop, but when he returned some time later to check on its progress he found that the shop owner was in Europe showing the bicycle to some European manufacturers. Apparently the shop owner caused little harm as nothing further came of his efforts.

Although Harry Montague did not intend on going into the bicycle business, he wanted to find out what people thought about his bicycle. He placed an advertisement in a bicycle magazine and had bicycles made to order. Between 1983 and 1988, Montague had about 30 bicycles made at a cost of approximately $1,200 each and he sold them for about the same price that he paid for them. Riders indicated that they liked the folding aspect of the bicycle, but the bicycle itself was not up to contemporary standards.

By the summer of 1987, however, David Montague had become interested in the possibility of creating a profitable business from his father's hobby and decided to spend full-time on it. When the case researchers arrived at the Montague Corporation in the summer of 1994, they were greeted by David Montague, age 31, wearing bermuda shorts and sneakers. He escorted them into a cramped conference room with two fans on the floor to keep the air moving. Montague and his five employees worked out of a small part of a renovated factory in Cambridge, Massachusetts and handled marketing, finance, quality control, new product design and U.S. distributions.

Montague was the company's only officer and also appeared to be its oldest and most experienced employee. He graduated from the University of Michigan with a Bachelor's Degree in Aerospace Engineering in 1985. After working at Boeing for a year, he decided that this huge company, where he felt pigeon-holed, was not for him. Montague then entered a Massachusetts Institute of

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[1]Tom Reed, "Good Bikes Now Come In Small Packages," *Business Week* (September 5, 1994), p. 91.

[2]Alan Farnham, "Global - Or Just Globaloney?" *Fortune* (June 27, 1994), p. 98.

Technology (MIT) program that combined aeronautical engineering and business. In a class on entrepreneurship, he and a fellow student wrote a business plan based on starting a company to manufacture and sell the bicycle that folds. Montague described what happened next:

> After the entrepreneurship class was over, I just kept playing around with the business plan and the idea of making this into a real company. My partner from the class soon dropped out, but during the summer of 1987, my father and I formed a partnership to continue with the project. My father remained in Washington while I rented a place in Cambridge. My original office was so small that when the phone rang we had to turn off the air conditioner so we could hear. When it was very hot, we hoped that the phone did not ring!
>
> Getting started was a gradual process, but by the end of that summer I had deferred my second year at MIT. This was an easy decision for me because I was only 24, I had never made a lot of money and there was no family to support.

Montague never did go back for his second year at MIT. He spent his first year in business doing market research and product development. Working by phone and by fax between Cambridge and Washington, Montague and his father designed prototypes and had them built by a custom bike manufacturing shop in New Hampshire. It took a full year to complete the design of their first bicycle, the Montague BiFrame M-1000. Montague continued:

> We started by writing the business plan, talking with banks, venture capitalists, accountants, public relations firms, and networking as much as possible to try to figure out how to build a bicycle. We knew absolutely nothing about this industry and neither my father nor I nor any of my employees had any experience in running a business prior to this company, but I believed that we could be successful with this product.

Montague obtained some management expertise in those early years by using an advisory team. This team consisted of two individuals with business experience who assisted Montague with the business plan and a long term strategy. One advisory team member, Ray Seakan, was the founder of the Citadel Bicycle Lock Corporation and had extensive industry knowledge. In addition to the advisory team, Montague also obtained financial advice on a part-time basis from an individual who ran a service called CFO on Wheels. Montague continued:

> We found a large east coast distributor who was very interested in our bicycles, but not willing to risk purchasing them. To gain access to the distributor's dealers, we purchased 600 of the bicycles in August of 1988 from our Taiwanese manufacturer and allowed the distributor to pay us after they were sold. Ultimately, these bicycles were sold through some 75 northeast dealers. We then used our relationship with this distributor to convince distributors in other parts of the U.S. to risk buying our bicycles that fold.
>
> Initially, we thought we wanted venture capital to finance the bicycles and early on we had an offer from a company to provide $1 million. We also felt, however, that once we gave away the equity we would never get it back so we decided to finance the bicycles ourselves. The start-up costs for the company were not high. My family and I invested approximately $300,000 in the company and retain 100% ownership, but it is nice to know that the venture capital money is out there for that day when we really do need it.

The Bicycle Industry

The first bicycles were built in Europe in the early 1800s, however, there was evidence that Leonardo da Vinci had designed one some three centuries earlier. The modern diamond frame bicycles were developed in the early 1900s and although there had been incremental improvements in quality, materials and components, there had been no major design changes since that time.

Adult bicycles were classified into three groups: lightweight or racing style bicycles, mountain or all-terrain bicycles (MTBs), and other bicycles such as competition models and tandems. Until recent years, racer style bicycles had dominated the market. By 1994 however, mountain bicycles, which were introduced in the early 1980s, made up the majority of adult bicycle sales.

Bicycle manufacturing companies consisted of assembly plants that attached groups of components to bicycle frames. These components, such as brakes and derailleurs, were largely produced by a few Japanese component manufacturers that supplied nearly all bicycle assembly plants. U.S. bicycle companies typically designed the bicycle frame, specified which components to mount to it, and then outsourced its production to an overseas manufacturer, usually located in Taiwan, China, or Korea. The manufacturer purchased the component group specified by the U.S. company from a Japanese supplier and attached these components to the frame. The completed bicycle was then sold under the U.S. company's brand name.

Bicycles were sold through two types of retail outlets: largely independent specialty bike shops and mass merchandising chains such as Sears and Wal-Mart. The bike shops typically sold higher quality adult bicycles, bicycle accessories, and services, while the mass merchandisers sold lower quality adult bicycles and children's bicycles. In the U.S., there were approximately 8,000 specialty bike shops. These shops sold about 25% of the unit volume of adult bikes and 50% of the dollar volume.

Montague explained that there was a gap between the bike shops and the mass merchandising chains in the U.S. and that bicycle brands do not cross between the two. Further, it was generally not possible to buy a $250 bicycle. The mass market chains competed on price and these bicycles had an average price of around $100. At the bike shops, a higher quality bicycle and better service was offered to the customer. Bike shop prices started at about $300, averaged close to $400, and could go as high as several thousand dollars per bicycle. In Europe and Japan there was a similar division between the bike shops and the chains, although the division was not quite as strong as the U.S. because the mass merchandising chains were not yet as developed in these countries.

Montague also stated that gross profit margins were fairly standard throughout the industry for both bicycle distributors like Montague Corporation and for the bike shop dealers. Domestic bicycle distributors earned a gross profit margin of about 25% on bicycles; dealers earned 35%. These margins were based on the dealer selling the bicycle at the manufacturer's list price. Montague's margin on sales to international distributors varied widely depending on the distributor, the country, the services they provided, and import duties and exchange rates. Margins on accessories were higher, and could be as much as 50% for the dealers.

Folding Bicycles

Folding bicycles had been around for at least the past century. During this time a multitude of designs had appeared and hundreds of patents had been issued. According to Montague, however, none of these folding bicycles had been successful. Folding bicycles tended to be one of two types: small wheeled and full-size. The small wheel variety neither looked like nor rode like a conventional bicycle. Montague explained:

> Folding bicycles are the novelty end of the bicycle market. Even today they are mostly circus-looking bikes with small wheels and telescoping sections for seats and

handlebars. They do not ride like a standard bicycle and performance is vastly inferior. Small wheel folding bikes also tend to have non-standard parts that are both expensive and hard to find. These contraptions do fold into a small space, but the user gives up quite a bit for that convenience.

Montague further explained that the full-size folding bicycles had their problems as well. These designs usually folded the bicycle at the midpoint of its fully assembled state. This meant that two key structural sections of the frame, the top tube and the down tube, had to be broken and reconnected with a hinge. The positions of the hinges forced them to bear a large portion of the stress generated when the bicycle was ridden. This design caused the bicycle to shake and vibrate over rough terrain. Few full-size folding bicycles were ever made and none, other than the Montague, were being produced in the early 1990s.

Bicycles That Fold

Montague believed that his product had overcome the traditional problems of folding bicycles. The BiFrame was designed as a standard bicycle which had the added feature that it could fold. Montague continued:

> Montague Corporation does not make a folding bicycle, we make a bicycle that folds. The difference is significant. The look and ride of a Montague BiFrame is indistinguishable from that of other quality non-folding bicycles. The genius of our product is the specially designed frame.
>
> When you look at a standard bicycle and envision how to fold it, the natural tendency has been to fold it in the middle. My father realized that many riders remove the front wheel when not using their bicycle to prevent it from being stolen. With the front wheel removed, the middle of the bicycle is now under the seat and the BiFrame takes advantage of this by folding around the vertical seat tube.

By folding around the seat tube, Montague now had a long post with which to make the hinge, and the design did not require breaking any structural members of the frame. The seat tube for the front portion of the frame was inside the seat tube for the rear portion of the frame. This distributed the riding stresses over the length of both seat tubes and allowed for the construction of a folding bicycle frame that was as strong as a non-folding frame. Montague then added some quick release bolts which enabled the bike to be folded in less than 30 seconds without the use of tools, and a safety lock which automatically locked the bike into its unfolded position. The safety lock eliminated the danger of a user improperly unfolding the bicycle and having the bicycle fold up while being ridden. A Montague BiFrame weighed less than one pound more than a similar non-folding bicycle.

Montague Products

The BiFrame bicycle frame design could be used to make a variety of bicycle types. Montague Corporation sold three models of mountain bikes: the 909 with a list price of $459, the 949 at $699, and the 979 at $1,200. Montague also sold two models of cross bikes, which were mountain-type bikes designed for urban riding: the MX-7 listed at $459 and the MX-9 was $999. A woman's model, with a different folding design, was to be introduced in the next few months at a list price of about $600. These bicycles were priced at retail approximately $75 more than similar non-folding bicycles.

The TriFrame Tandem, introduced in June of 1994, was a two person, full-sized tandem bicycle that folded, much like the BiFrame, into a three foot by three foot by one foot space. Priced at $1,995, the TriFrame was near the lower end of the tandem market, which had prices ranging from $1,000 to $7,000. Montague believed that his TriFrame had entered the market at the right time to take advantage of the growing desire of couples to be able to exercise together. *Newsweek* stated, "onetime boardwalk

curiosities, tandem bicycles are appearing by the hundreds at rallies around the country. Sales have been growing by 20 percent per year since 1990." About Montague Corporation, the article stated, "one company even has the answer to the tandem's most vexing dilemma - where to put the eight-foot-long machines when you're not riding..."[3]

In addition to bicycles, Montague Corporation produced several related accessories. The Montague Folding Pedals were an option that replaced the standard bicycle pedals with folding pedals that decreased the folded width of the bicycle by four inches. To make traveling with the bicycles easier, Montague sold two types of storage cases for their bicycles: a zippered soft nylon case with carrying straps and The Airliner hard case. The Airliner was a heavy-duty case that could be carried or rolled like a large suitcase. It was designed to meet the size requirements of commercial airlines for checked luggage so that the bicycle could accompany a passenger without an additional fee. The Airliner came in two sizes: one listed at $299 for single rider bicycles, and a larger size, for tandem bicycles, listed at $599. Montague stated that the larger Airliner was particularly popular with tandem purchasers, who were buying nearly as many cases as bicycles.

Foreign Sourcing

When starting his company, Montague never considered setting up a manufacturing operation. Rather, he believed, like most of the industry, that it was best to find an overseas supplier and have them build the bicycles to his specifications. Ultimately, Montague chose to go with Fairly Bike Manufacturing Company, the third largest bicycle manufacturer in Taiwan. He explained:

> We considered several issues when looking for a supplier to build our bicycles. One important point for us was quality. Folding bicycles had a terrible reputation and we felt we had to overcome that to be successful. Therefore, our bicycles would have to have as good, or better, quality than non-folding bicycles in the same class.
>
> We looked at some factories in Taiwan and figured that several of the largest might not want to do business with us because we were so small. Nevertheless, we wanted to find one that was reasonably sound and had enough of a technology base that they could learn to do our bicycle, which was harder to build than a non-folding model. We decided to talk with Fairly, so we wandered around at a trade show until we saw someone with a Fairly name tag. He turned out to be the brother of the owner. We hit it off right away and they have been our sole supplier of bicycles ever since.

Montague traveled to Taiwan and spent two months working with Fairly to teach them how to build the BiFrame. Fairly was undertaking some risk in working with the recently founded Montague Corporation because Fairly bought supplies up front, but were paid, hopefully, upon the completion of the order. To share this risk, Fairly required that Montague pay some $20,000 for the necessary jigs to manufacture the bicycles. Despite the risks, Montague believed that he and his father had developed a trust with Fairly and that both sides expected the relationship to be successful.

Fairly had a good reputation, but quality control was still an important issue for Montague Corporation. Part of this was due to Montague's small size. Montague could not afford to have an employee stationed in Taiwan at the manufacturing plant to inspect the bicycles before they were shipped, as was common practice for the larger bicycle companies.

Poor quality could affect many bicycle companies at the same time if a component maker produced a bad derailleur which might then be installed on several companies' bicycles. Poor quality

[3]Debra Rosenberg, "What Has 4 Legs and 2 Wheels?"*Newsweek* (June 6, 1994), p. 73.

could also be specific to the Montague BiFrame. Montague stated that it was sometimes difficult to convince Taiwanese workers of the importance of a particular step in the manufacturing of his bicycles. What might not be important for a non-folding bicycle could become critical on a folding model.

Another issue that complicated sourcing for international markets was that different countries, and even different purchasers, had different preferences and safety standards. Bicycles sold in Germany, for example, needed to have a fender and also a light that was powered by a dynamo and not a battery. These parts were manufactured in Germany and sometimes installed by the German distributor. Compounding this issue was that shipments were made from Taiwan directly to the foreign distributor and Montague never saw the bicycles. Despite these issues, Montague did not believe that his quality problems were significantly worse than those of the industry in general, and he tried to control them by having detailed design specifications and by visiting Fairly about every other month.

Montague explained that choosing a good supplier in the right country had been a critical decision for his company. In the late 1980s, the bicycle manufacturing industry was expanding in Taiwan, China and Korea, yet it was not clear which country would be the best choice. In 1987, a major U.S. consulting company had just set up a Korean manufacturing plant for a large U.S. bicycle company. The consulting company offered to do the same for Montague for a fee of $3 for each bicycle produced over the next ten years. Montague turned them down because he thought the price was too high and he had begun to believe that Taiwan would be the better country.

Prior to selecting Fairly, Montague had begun to work with a Chinese supplier. The supplier had stated that if Montague taught them how to build the BiFrame, they would build it only for Montague Corporation and no one else. They were willing to sign any agreement to this effect. Upon visiting this supplier's plant in China, however, Montague observed boxes on the factory floor which indicated that the supplier was in fact stealing the designs of their other customers. This led Montague to eliminate this company as a possible supplier.

Montague described the importance of the supplier's country:

> We were fortunate that we chose a Taiwanese company and not one in China because we sell a large portion of our bicycles in Europe. Twenty years ago, Japan was the big manufacturer of bicycles, but as their cost of labor increased, manufacturing began to move on to Taiwan in the mid 1980s and then to China around 1991. The EEC had a 17% import duty on all bicycles entering Europe, but those from China and a few other developing countries faced no import duty so China looked good.
>
> The large European bicycle manufacturers, however, could not compete with the low priced Chinese imports, so they convinced the EEC to drop the favored nation status of China and also add an additional 40% tariff on Chinese bikes. The duties for Chinese bicycles shipped into the EEC went from zero to 57% overnight. Subsequently, bicycle companies pulled back into Taiwan, although China remains a major producer for non-European markets as their labor costs are much lower. It would have been a disaster for us had we used a Chinese supplier.
>
> Taiwan also turned out to be a better choice for us because they now have a fully developed bicycle industry infrastructure which makes manufacturing much easier. If Fairly receives a bad batch of handlebars, they can receive replacement handlebars the next day. In other countries, this would take much longer.

Montague's bicycle orders to Fairly had been consistently increasing over the last few years and they now made up approximately 10% of Fairly's business. Montague continued:

> Fairly's ability to be competitive effects our ability to be competitive. When they are doing well and producing a high volume, their overhead is split by more bicycles

and we get larger economies of scale. On the flip side, because our bikes are harder to build than those for their other customers, they tend to not want to produce our bikes when they are doing well. They delay us first, we believe. However, they have lost some big customers recently and, as a result, we are more important to them and they deliver on time.

The Patent

Montague Corporation held the rights to the BiFrame patent, which covered the idea of a bicycle frame that folded about the seat tube. Although no patent offered complete protection against competitors copying the design, Montague believed that his patent was well written and enforceable. This was tested in 1987 when Montague Corporation notified Bridgestone Cycles, a subsidiary of Bridgestone Tires and one of the world's largest bicycle manufacturers, that their Grand Tech folding bicycle infringed on the Montague patent. The Grand Tech folded about the seat tube, but its look and design was significantly different from the BiFrame. Bridgestone Cycles decided to recognize the patent and agreed to pay Montague Corporation a five percent royalty for each folding bicycle that they sold in the U.S., including those that had already been sold. Montague stated that although Bridgestone paid the 5%, it was not a lot of money because Bridgestone soon decided to stop selling the bicycle.

Montague Corporation also had patents in both Europe and Japan. Montague believed that, in general, patents were honored and enforced in these countries. He did not believe, however, that this was true in most other countries of the world, and there was some danger that another manufacturer could copy the design and attempt to market a similar folding bicycle.

The Market

Montague estimated that in 1993 there were 11 million bicycles sold in the U.S. market, 15 million in Europe, and another 8 million in Japan. He further estimated that there were 30 million bicycles sold in China, but these were a different style of bicycle than those sold in other markets. The size of the worldwide market was expected to remain stable or perhaps grow slightly for the next few years. Montague estimated that there were roughly $25 million worth of folding bicycles currently sold worldwide. Many of these bicycles were sold in Japan, where a higher value was placed on storage space and, consequently, this market had been more accepting of the poorer performance of many folding bicycle designs.

The Montague BiFrame was designed for bicycle enthusiasts who had a limited storage area. The average age of their buyers was 45, compared with the mid-twenties for all dealer sales. To date, this had been a niche market of people such as private pilots, boaters, and recreation vehicle (RV) users who wanted to take their bicycles with them when they traveled, largely for recreation or exercise reasons. It also included people who wanted to take their bicycles on commercial plane trips, but did not want to pay the extra fee for taking a full size bicycle onto the plane. City riders who lived in apartments and had to carry their bicycles up stairs, on elevators, or even through revolving doors were another segment. Lastly were commuters who might only want to ride their bicycles one way, to or from work, and travel in a car the other way, or get a ride from a coworker if it was raining. In this situation, it was not necessary to have a bicycle rack mounted onto the car, and the bicycle could be left in the trunk of the car overnight with less fear of theft. Montague believed that initial sales were to people who were specifically looking for a folding bicycle, but that increasingly purchasers would be those who saw foldability as a useful additional feature.

U.S. Sales

In the early years, Montague Corporation sold the BiFrame bicycles through individual U.S. dealers. Then, in 1990, U.S. sales nearly tripled when they started selling to the Schwinn Bicycle

Company. These sales quickly declined, however, as Schwinn experienced financial difficulties and focused on other product lines. In October of 1992, Schwinn went bankrupt and Montague's U.S. sales dropped to zero overnight. Montague explained:

> With Schwinn, things were easy for us. Schwinn would forecast their U.S. demand, purchase the bicycles FOB Taiwan, pay the factory directly, and send us our commission. They brought the bicycles into their warehouses and distributed them to their dealers. Who would have guessed that a company like Schwinn that had been around forever would go bankrupt? We really had a problem. In our home market we had put all of our eggs into one basket, handed control of the basket to an outside party, and the basket was dropped.

At that time, international sales through the distributors was going well, so Montague decided to be his own U.S. distributor. Montague made his own forecast based on existing relationships with U.S. dealers, ordered the bicycles and shipped them to a nearby public warehouse. He continued:

> We had advertised in several magazines which focused on bicycle riding, small planes, and RV users, but we did not have an extensive dealer network. When potential customers could not find the BiFrame at a their local dealer they would call us. We answered the phone very professionally, answered their questions, gave them the name of the nearest dealer and sent them some good literature.
>
> The customers would then go to the dealer and the dealer would say something like "Montague? No we don't carry that stuff, well maybe we have one in the back." Then the dealer might find one of our bicycles and say "this is a folding bicycle, why do you want that?"

Montague faced a number of problems in selling through U.S. dealers. One was that he had to finance the U.S. inventory until it was purchased by a dealer. Montague felt that he would be able to finance U.S. sales internally so long as the volume was small. This was because the bulk of his sales were in international markets where he used letters of credit and financing was not necessary. Eventually, he believed, he might have to seek outside financing if U.S. sales continued to grow.

A second problem was that dealers would carry several brands of bicycles, but would push volume in only one or two of the brands because the supplier would give them a volume discount. Unless a customer showed a strong preference for a dealer's low volume brand, the dealer would likely try to sell the high volume brand.

Another problem was that dealers were used to talking about their bicycles, but not demonstrating them because it was assumed that a customer knew how to operate a standard bicycle. Although an experienced person could quickly and easily fold a Montague BiFrame, the folding process was not self evident. Thus, if the dealer's employees, many of whom were young, part-time workers, were not adept at folding the bicycle, the customer would not be impressed by the bike even if a demonstration was attempted.

One of the BiFrame's strengths, the fact that it looked and rode like a standard bicycle, also hurt its sales at the dealerships. A dealer typically displayed bicycles in a row. When a BiFrame was lined up with other bicycles, there was nothing to tell the consumer that it was a bicycle that folded. Montague had had little success in getting the dealers to pull the BiFrame out of the line of standard bicycles and perhaps display the bicycle in its folded position. Montague continued:

> We knew we had to make some changes when we started to hear back from the customers that had called us. They said, "I was impressed with the original advertisement I saw in the magazine, I was impressed by the professional people I

> talked with at your company, and I am very excited about your idea, but when I went to the dealer they tried to talk me out of buying your bike."
>
> It is important to remember who you are talking with when a customer calls. How often does a potential customer see an advertisement for a product and then call the manufacturer for more information? These people were serious buyers. Now, when a potential customer calls us, we treat them as before, but rather than immediately turning them over to the local dealer, we try to sell directly to them over the phone. We started this two months ago and we already see an increase in sales. We will, however, send a caller to their local dealer once that dealer has shown an ability to sell our bicycles.

To take advantage of the consumer excitement about the BiFrame, Montague had recently begun to retarget his advertising to focus more on the end user and less on the retailer. He believed that it was necessary for the user to pull the bicycle through the dealers by specifically asking for the BiFrame because it had become obvious that the dealers were not willing to push the bicycle to the potential customer.

Montague had 12 independent sales representatives throughout the U.S. who tried to get bicycle dealers to buy the BiFrame bicycles. Montague described the difficulty of attracting dealers:

> We do mailings to dealers, attend dealer trade shows and a number of other things, but many dealers are very much mom and pop outfits, rather than savvy retailers. Nearly all of the dealers have heard of us and have seen our bicycle at a show, but fewer understand us or have seen the BiFrame demonstrated. The independent reps go to the shows and visit the dealers to demonstrate the bicycle, but even getting the reps to do their job is difficult. The reps have other products that are easier to demonstrate than the BiFrame.

One large northeast dealer who carried the Montague line and one other folding bicycle indicated that although he might only sell 50 folding bicycles in a year, it was a good product for him to carry. The dealer stated that most small bicycle shops do not carry a folding line so that potential customers for those bikes come from farther away than his other customers. This allowed him to attract, and potentially keep, new customers for both the folding bicycles and his higher margin accessories.

International Sales

For the last three years, over 90% of Montague Corporation's revenues had come from outside of the U.S. Montague products were sold in 11 countries, and each country was covered by an independent distributor with exclusive rights in their country. Two countries, Germany and Japan, accounted for over 80% of the international sales.

In Germany, Montague had used the same distributor, Centurion Renner, since 1989. Centurion purchased bicycles from Montague and then sold them to German dealers under the Montague name. This was a standard arrangement for U.S. bicycle companies selling through foreign distributors. In addition to Montague bicycles, Centurion also sold their own brand of bicycles under the Centurion name.

The situation in Japan was completely different than Germany or any other country. Montague sold two brands of bicycles in Japan: Montague and Grand Teton. The differences between the Montague and the Grand Teton, which sold through mass merchandising chains, were minimal and mostly related to labeling. The standard Montague line was sold to the independent bike shops through a bicycle distributor. Montague's relationship with the distributor was much like that with his other international distributors. Montague sold the Grand Teton to a trading company, who then sold the

bicycles to a distributor. Finally, the distributor sold to the mass merchandising chains. Montague explained:

> We hardly know our mass merchandising distributor in Japan because we work through a trading company that is about the tenth largest corporation in the world. They are our customer and all communication is through them. They finance the inventory of the actual distributor, but they know nothing about bicycles and the distributor speaks no English, so we have never spoken with them.
>
> It is a very interesting relationship that is working very well, but we are blind. We have no idea what the distributor is doing with the bicycles, and if they were to shut us off or buy from a competitor we would never see it coming. We recently began to talk about having the distributor do some final assembly in Japan and from that we may learn more about them.

Letters of Credit A key factor in Montague's success in foreign markets, and overall as a company, was the use of bank letters of credit (LCs), which were used for all international transactions. A letter of credit was essentially the use of a bank's credit in place of the buyer's credit. The LC guaranteed payment to the seller when the seller performed the obligations described in the letter; namely shipped bicycles of a certain number, description, and by a certain date, along with the correct documentation. LCs enabled Montague to sell bicycles without the need to maintain or finance an inventory, or pay in advance to have bicycles manufactured and sent to the distributors. See **Exhibit 3** for an outline of a typical LC transaction.

With an LC, there were six parties involved: Montague (the seller), Fairly (the supplier), a distributor (the buyer), and each of their banks. The use of an LC was advantageous to each of these parties except perhaps the buyer, who had to tie up financing earlier than would be the case in a transaction without an LC. The advantage to Montague was the ability to grow his company without seeking outside financing, while the advantage for Fairly was the near certainty of a timely payment. The banks processed an LC to earn fees, of which Montague's share on a typical $50,000 transaction was approximately $500.

Montague explained that the risks involved with an LC were minimal. The bank of the buyer (the LC issuing bank) did not issue an LC unless the buyer had sufficient funds in their account from which the bank could withdraw the money, or unless the amount of the LC was within the company's line of credit with them. The banks of Montague and Fairly did not pay until they received the funds. Because the LC was irrevocable once the buyer's bank issued it, Montague and Fairly were guaranteed payment, unless the buyer's bank went out of business. Lastly, the buyer did not actually pay until the bicycles were shipped.

The most likely problem to occur, which had happened once to Montague, was that the buyer would order the bicycles and then never send the LC. Although not a direct risk to Montague, such an occurrence could jeopardize Montague's relationship with Fairly. Due to component lead times, Fairly had begun to order parts when the order for bicycles was placed. The LC was typically issued much later. Bicycles were never shipped without the LC, but it was possible for Fairly to have built bicycles when Montague did not have a buyer. To minimize the occurrence of this problem, Montague asked first-time buyers to open the LC when the order was placed, rather than just prior to shipment which was the norm.

There were two characteristics of Montague's business that made the use of LCs possible. The first, and most important, was that Montague had a proprietary technology. This helped prevent the buyer from bypassing Montague and going directly to Fairly. Montague stated, "We play the role of a facilitator between the buyer and the supplier. If we allowed it, it would be easy for the buyer to work directly with the manufacturer and save some money." The second characteristic of Montague's business

was that they were not a manufacturer. Being a manufacturer would not prevent Montague from using LCs, but it would necessitate outside financing for parts and work-in-progress inventories.

Other Sales

In 1992, Montague Corporation started selling the BiFrame bicycles to BMW AG, who then sold the bicycles through BMW auto dealerships in Germany. This idea originated with Centurion, who believed that the BMW name was well respected in Germany and that Montague would be helped by having the BiFrame associated with it.

BMW placed orders through Montague Corporation and provided a letter of credit. Fairly then shipped the completed BMW bicycles to Centurion. Because of market differences in Germany, Centurion added lights and fenders and made some final adjustments on the bicycles when they arrived from Taiwan. This type of work was typically completed by the bicycle dealers, but BMW did not have bicycle technicians at their auto dealerships. Centurion located their final assembly plant in what was East Germany due to pressures from the German government which wanted to promote economic development in that region. The bicycles were stored for BMW at Centurion's plant until shipped to the individual auto dealers. Montague Corporation coordinated the final assembly process by facilitating communication between Fairly, Centurion, and BMW. Montague noted that there were some interesting differences in the Taiwanese and German cultures:

> BMW expected first rate quality, and we worked back and forth with them on several design changes that they required. When a Fairly management team visited the East German plant, the first thing they commented on was how slow the German workers were. In Taiwan everything was done very quickly, but the East Germans knew that they were working for BMW and it had to be perfect.

Montague's relationship with BMW went very well and by 1994 BMW had sold over 10,000 bicycles in Germany; more than Centurion had sold. This led BMW and Montague to expand the program into other countries, including the U.S. BMW sold the bicycle as an accessory to their automobiles at a list price of $595. Montague believed that expensive car buyers in particular would like the idea of putting the bicycle in the trunk rather than attaching a bicycle rack to their cars.

Montague took steps to protect the bicycle dealers from having to compete with BMW dealers. The BMW bicycle was clearly marked as BMW, and not Montague. Further, the auto dealers would not sell any bicycle accessories or provide any bicycle service. The auto dealers were also required to give bicycle purchasers a voucher for a free bicycle tune-up at the local bicycle dealer that had been set up as the authorized service center for the BMW bicycles. The bicycle dealers liked the vouchers because it brought high income consumers into their bicycle shops.

The BMW program in the U.S. started in the spring of 1994 and BMW estimated they would need 600 bicycles for the first year. They started selling the bicycles on April 4th and by April 25th they had sold their year's supply. Montague was concerned about this because he was not sure of the effect this would have on customers who were told that the bicycles were on back order, and that they were unlikely to get one soon.

The back order problem made clear several issues in the bicycle industry: order lead times, the seasonal nature of bicycle sales, and the consumer's desire for a current model year bicycle. When a distributor placed an order for bicycles, it was necessary to allow for a lead time of several months. The exact lead time varied throughout the year because most bicycles were purchased in the spring and early summer so that was when all the dealers wanted deliveries from the factory. Thus, when BMW ran out of bicycles in April, the earliest they were likely to be able to receive more was August. There was no assurance that the customers who were not able to purchase a bicycle in April when they purchased their new cars would come back to buy one at the end of the summer.

Complicating this problem was that bicycle purchasers, like auto purchasers, did not want last year's models. Slight changes were made each year in the design of bicycles and the components, and a knowledgeable buyer would know the bicycle was a year old. If BMW was to place a large order in April, any bicycles remaining in August might not sell because it was past the selling season, and might not sell the following spring because they were last year's model. All bicycle dealers had to contend with lead times, seasonality, and model years, but these problems were magnified for BMW dealers and for Montague bicycles because their product was new to the market.

Montague realized that selling the BiFrame through traditional bicycle dealers, whether in the U.S. or overseas, was difficult because it required a fundamentally different selling technique on the part of the dealers. Consequently, in addition to BMW, Montague was considering other non-traditional methods for selling the bicycle, such as through catalogues and pilot shops at airports.

Montague had also spoken with Samsonite, a large manufacturer of luggage, because the BiFrame was good for travelers and the Samsonite name was well respected in the travel business. No agreement had yet been reached, but two possible options existed for Montague. The BiFrame could be sold in Samsonite stores along with other travel products, or it could be sold in bicycle shops under the Samsonite name. In considering this or any non-traditional method of selling the bicycle, Montague wanted to avoid directly competing with the existing bicycle dealers.

Doing Business Overseas

International business had been a part of Montague Corporation since the company started. With a foreign supplier and the majority of sales obtained from outside of the U.S., Montague had a hard time envisioning his company being confined to the U.S., particularly during the recent economic recession. Montague further explained:

> The U.S. market has been large enough to support many companies and it has been possible for U.S. companies to ignore foreign markets. Most foreign companies, however, had smaller domestic markets and were therefore more likely to go international. This gave them experience in the international market and eventually led them to the U.S. Now that the foreign companies are here, all U.S. companies are forced to compete with them. This gives U.S. companies an added incentive to become international themselves.

Montague admitted, however, that there were difficulties in operating in foreign markets that were not as prevalent in the U.S. market:

> We do a lot of communicating with our supplier and our distributors by fax and this makes every day a deadline. If Taiwan sends us a fax at the end of their Thursday and asks about something in Germany and we immediately send a fax to Germany who immediately sends us a reply, we can then fax the answer to Taiwan and they will have it when they start work Friday morning. If, however, we delay our initial fax to Germany by just a few hours, Taiwan will not receive an answer until their Monday morning. Because of the time difference, simple communications can drag out for several days.

Another issue for Montague with operating an international business was the travelling. He continued:

> At Montague Corporation, we are overseeing a foreign supplier and foreign distributors from a small office in Cambridge. No one benefits by visiting us here, so we must do all the travelling, and Europe and Taiwan are not next door.

While demanding, this travel is not all bad. We learn a lot about our supplier and distributors by visiting them that we would not learn if they came here. I am a firm believer in actually meeting with potential distributors before doing business with them, forget the consultants, forget the middlemen, go straight to the source.

Fortune, in the article on global business commented:

It's David Montague's world. Montague, the global bicycle entrepreneur, wouldn't run his business any other way. True, he does have to get up now at 5 a.m. to talk to Germany. But manufacturing and selling in different markets, he thinks, makes his business - and his workers' jobs - safer. He's not dependent on any one economy.

Measured not just in money but also in tastes and sights and adventures, his life is richer than if he had stayed rooted to a single spot. He likes taking the gondola to the airport (in Venice) and flying over the Alps at night. Shopping the world for the smartest talent and cheapest prices, he also eats better than he would in Newton, Massachusetts. Recalling lunch in Venice, he says, "Boy, do they know pasta." Now having savored the global economy, he figures he could run his business from any city, anywhere - even Missoula.[4]

The Future

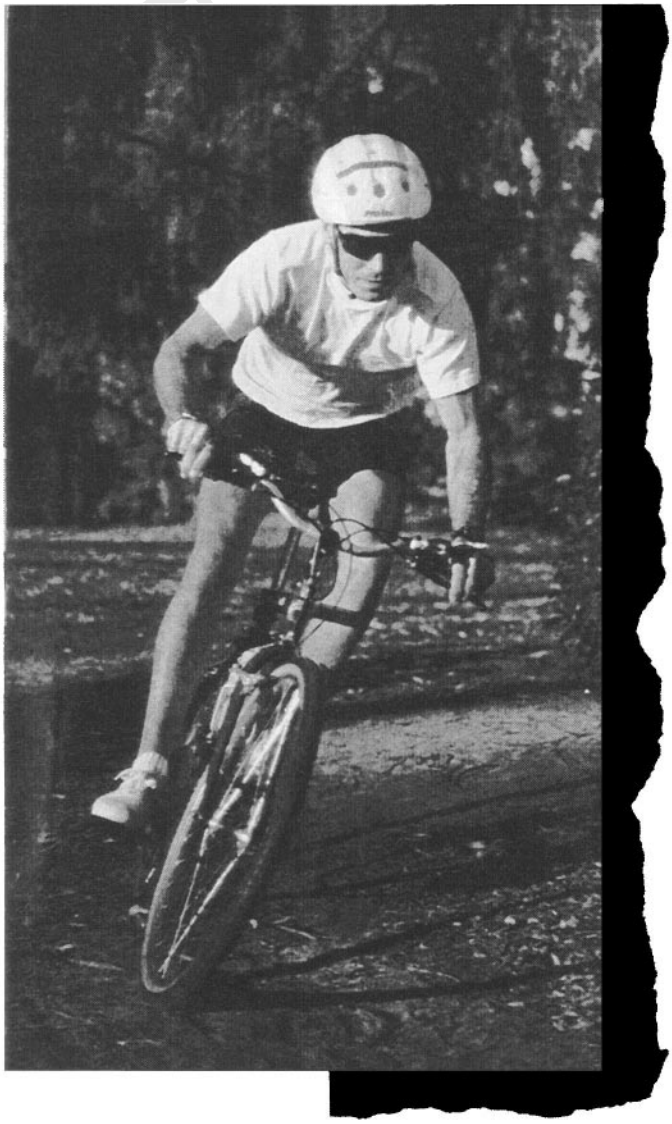
Over the next few years Montague intended to expand his U.S. operations to broaden his customer base and to make domestic sales a higher percentage of overall sales. He explained:

Our recent changes in the U.S. market are going well. Normally, sales in May and June are about the same. This year, our June sales were four times our May sales. Managing this is going to be a lot of work. When we start sending out 400 pieces of mail each week to people who called us we will want to follow up with them and we will have to develop a system to track all this. The benefits, however, of being our own distributor in the U.S. are enormous. We now receive feedback from the dealers and the end users that we missed when using distributors.

In strengthening our U.S. position, we do not want to lose control over the international market. That is where we make the most money with the least financing requirements. We have a long way to go and I don't expect to revolutionize the bicycle world overnight, but I believe this product has a lot of potential.

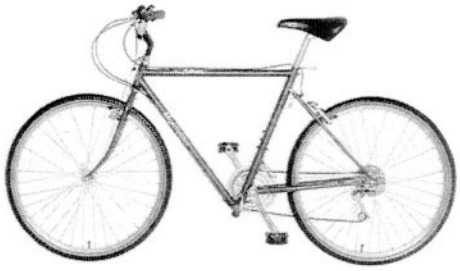
[4]Alan Farnham, "Global - Or Just Globaloney?"*Fortune* (June 27, 1994), p. 100.

Exhibit 1 The BiFrame



Model	BiFrame M-1000
Frame	70 degree head angle; equivalent 72.5 degree seat angle; 11" bottom bracket height; 17.5" chainstays
Top Tube	Tange MTB double-butted chromoly
Down Tube	Tange MTB double-butted chromoly
Inner Seat Tube	Tange MTB double-butted chromoly
Outer Seat Tube	True Temper chromoly
Rear Stays	4130 chromoly
Front Fork	4130 chromoly; Unicrown style
Rims	Araya 7X alloy
Hubs	Alloy w/sealed Mechanisms; quick release front axle
Tires	26" x 1.50" All-Terrain w/dual purpose center ridge
Pedals	MTB beartrap type; toe clip adaptable
Crankset	SR SXC forged alloy arms w/28/38/48 OvalTech triple chainrings
Freewheel	SunTour 13/15/17/20/24/30
Bottom Bracket	Sealed mechanism
Front Derailleurs	SunTour XCE 4050
Rear Derailleurs	SunTour XCE 4050 w/ AccuShift
Handlebar	alloy
Stem	forged alloy with painted finish
Brakes	Dia-Compe 983 alloy cantilevers front and rear
Saddle	Viscount B-1
Seatpost	300mm alloy w/micro adjust
Accessories	twin water bottle braze-ons; quick release seatpost clamp
Sizes	18.5", 20.5"

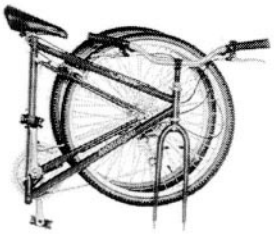
THE MONTAGUE® BIFRAME



HIGH PERFORMANCE

FINALLY

COMES

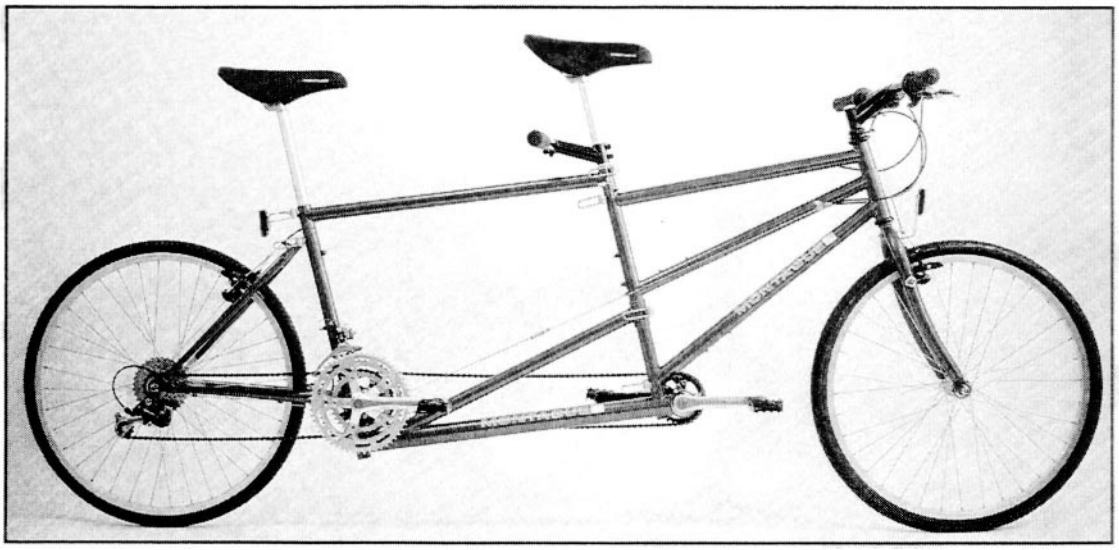


IN A SMALL PACKAGE

Exhibit 2 The TriFrame

MONTAGUE USA

The Montague TriFrame™



As busy couples strive for more time together, they are turning to cycling. Couples riding single bikes often become frustrated by differences in cycling speed and stamina. Tandem bicycles solve these differences in rider skills. But until now, there was no solution to the one problem with tandems: they were just too large to store and transport. The Montague TriFrame™ Tandem Bicycle That Folds is the solution.

The TriFrame™ is built with the Montague Patented "Concentrus™" folding system, consisting of two concentric seat tubes that pivot, one inside the other. Unfolded, the Montague TriFrame™ offers a high performance ride comparable to that of other high-end non-folding tandems. With the flick of a few quick release levers, the TriFrame™ folds in under two minutes from over 7 feet long to approximately 3' x 3' x 1' - no tools required. It fits in the trunk of most small cars, in a closet, in a small airplane, in an RV, and on trains and buses.

"Anyone who has tried to put an ordinary tandem on the roof of their car will appreciate the benefits of the unique folding feature."

The TriFrame™ design does not require frame dis-assembly to fold the bike, it does not break any structural members with flimsy hinges nor does it use any other weak methods often seen on folding bikes. The Montague folding system maintains the strength and torsional rigidity that a tandem requires.

For urban couples who want to exercise together but don't have room for an ordinary 7-foot long tandem, the Montague TriFrame™ is the perfect choice. The TriFrame™ not only stores in your closet at home but also fits in the trunk of your car to get out of the city.

Exhibit 3 Typical Letter of Credit Transaction

For an order from Montague's German distributor, Centurion Renner, the following steps would occur in the two to three months prior to shipping:

1. Montague Corp. agrees to supply bicycles to Centurion and receives a purchase order from them. Fairly agrees to make the bicycles and begins to order parts.

2. Centurion applies for a Letter of Credit (LC) at their bank and their bank sends the LC to Montague's bank.

3. Montague's bank sends an Advice of Transfer to Fairly's bank which indicates that the LC has been opened. Fairly assembles the bicycles and ships them to Centurion.

Shipment of the bicycles initiates the following series of transactions involving the LC. The days are an approximation of a typical shipment.

Day 0 Bicycles ship from Fairly in Taiwan.

Day 2 Fairly receives the Bill of Lading back from the shipper. Fairly prepares documents (Bill of Lading, Packing List, Certificate of Origin, and their invoice) and sends them to their bank.

Day 3 Fairly's bank receives and processes the documents and sends them on**Day 5** to Montague's bank. Documents were typically sent by DHL or similar express delivery service. Although delivery should only take a couple of days, it typically takes longer for the banks to record receipt.

Day 10 Montague's bank receives documents.

Day 12 Montague's bank notifies Montague of receipt. Montague sends their invoice to the bank.

Day 14 Montague's bank receives Montague invoice. The bank removes Fairly's invoice from the document package and replaces it with Montague's invoice. Montague's bank then sends documents to Centurion's bank on **Day 16,** advising them that the documents are in order and payment for the bicycles should be forwarded.

Day 21 Centurion's bank receives the documents, reviews them, and forwards payment by wire from Centurion's account to Montague's bank on**Day 26**.

Day 26 Payment received by Montague's bank. The bank divides the funds, deposits Montague's portion into Montague's account (**Day 28**) and wires Fairly's portion to Fairly's bank (**Day 30**).

Day 32 Payment received by Fairly.

Day 35 Bicycles arrive in Germany and are picked up by Centurion.