

Matsushita Electric Industrial Co. Ltd.

Panasonic Computer Co.

Though we are a major company in the field of electric home appliances, in the field of personal computers we are a weak company facing many difficulties. Fortunately, the patronage of so many customers has made the "Let's Note" a popular product. This success makes us value our users even more.

(Mr. Chicago, NiftyServe FPANAPC #8 Conference Room,  
September 14, 1997)

### **1. The success of a notebook computer in which users participated in development**

In the summer of 1996, one sub-notebook computer<sup>1</sup> created a stir in the market. This was the "Let's Note"<sup>2</sup> model sold by consumer electronics giant Matsushita Electric. This notebook computer was the company's first popular product in its PC business. Yet, two months after its release, the computer had disappeared from store shelves. Growing numbers of customers wondered if production had been suspended early, but a new model appeared in October. The new model solidified the product's position as the leader in the lightweight notebook computer market.

After repeated new model changes at a rate of roughly once every three months, the company gave the "Let's Note" its first full model change in June 1997. The new "Let's Note"<sup>3</sup> was released. The people in charge of the product at Matsushita Electric stated, "The first generation "Let's Note" was a success because it incorporated the views of shop personnel. The new "Let's Note" has fully incorporated the views of the users."<sup>4</sup>

The boost provided by users was a major factor in the success of the "Let's Note". Matsushita Electric got immediate feedback on user dissatisfaction and requests, and these were reflected in measures to solve problems and next-term product development. The company always viewed with great interest the active

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Masataka Morita prepared this case with assistance of Prof. Jiro Kokuryo of the Graduate School of Business Administration, Keio University as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. Copyright © 1997 by Keio Business School. English version was made in March 1999.

<sup>1</sup> Referred to as portable or lightweight notebook PCs

<sup>2</sup> The official model name is the AL-N1T512

<sup>3</sup> The official model name is the AL-N2T515

<sup>4</sup> FPANAPC (1997), "Let's Note Navigator", Softbank

exchange of information between "Let's Note users". On electronic bulletin boards accessed by modem, PC users taught each other how to use the equipment and solved each other's problems. This was an extremely helpful tool for the manufacturer. An issue the company must deal with in the future is how to deal with growing user outspokenness.

## **2. Personal Computer Industry**

Shipments of personal computers in Japan in FY 1996 totaled 7.19 million units valued at 1.7500 trillion yen. Of these, sub-notebook computers accounted for a total of 580,000 units valued at 130 billion yen. Other portable non-sub-notebook computers accounted for 1.97 million units valued at 530 billion yen.<sup>5</sup> Overseas, the personal computer market in the U.S. in 1995 was 23 million units valued at \$US 53 billion, while that in Europe was 15 million units valued at \$US 29 billion.<sup>6</sup>

A look at world market share by manufacturer for the third quarter of FY 1996 shows that the leader was Compaq with a 10.3% share, followed by IBM at 8.6%, Apple at 5.4%, after which came Packard-Bell, NEC, Toshiba, and other companies. Toshiba's global market share was 4.4%, but most of their products were portable models.<sup>7</sup>

A look at domestic Japanese share by manufacturer for FY 1996 shows that NEC was the leader with a 33.1% share, followed by Fujitsu with 21.1%, IBM Japan with 11.5%, Apple at 10.4%, and Toshiba at 5.1%.<sup>8</sup> Incidentally, Matsushita Electric's market share was so small that its percentage was barely measurable.<sup>9</sup>

Until 1993, the Japanese PC market was dominated by one giant, followed by a group of smaller companies. NEC and its PC-98 series maintained a market share perpetually above 50%. As the market share for the PC-98 series grew, the companies that produced and sold application software placed the greatest priority to developing software for the series. The synergistic effect between the hardware and the software served to further boost the market share of these products.

When Microsoft Windows 3.1 operating software debuted in Japan in 1993, the machines running on DOS V--termed the world standard--became

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<sup>5</sup> Japan Electronics Industry Development Association survey

<sup>6</sup> Japan Information Processing Development Center (1997), "Information White Paper 1997" Computer Age magazine

<sup>7</sup> [http://www/nando.net/newsroom/ntn/info/103096/info2\\_26112.html](http://www/nando.net/newsroom/ntn/info/103096/info2_26112.html) as of October 22, 1997

<sup>8</sup> Based on survey by Yano Economic Research Institute

preeminent in the domestic market. That's because the application software produced for Windows 3.1 could operate under either PC-98 or DOS V regardless of the model. Later, in 1996, NEC's share plunged to 40%, and eventually fell to 33%.

In the meantime, Fujitsu launched its "Desk Power" series of DOS V computers. An all-in-one model for the consumer market, Fujitsu sold the machines for less than 200,000 yen apiece. The company quickly boosted market share by more than 10 percentage points to nearly 20%. Compaq and other machines produced by foreign capital-affiliated companies attracted a great deal of initial attention due to their low prices. Their sales appeal diminished after the Japanese manufacturers cut prices and introduced their own low-price machines.

One characteristic of the Japanese market is the high ratio of portable computers--the so-called notebook computers. These products account for more than 40% of the products sold in Japan. In the West, these computers have a supplemental function. Their portability allows users to carry them around and use them at locations away from their home or office. In Japan, however, notebook computers are frequently used on the desktop. They are often belittled as the "space-saving desktop models".

Compared to desktop models, notebook computers have a high ratio of unit price to performance. Also, desktop model parts are sold separately, and some enthusiasts purchase the parts they like to build their own computers to their own specifications. Notebook computers, however, are essentially sold as finished products.

The features of notebook computers highlighted for sales purposes are their small size, lightness, and power-saving capabilities (batteries enable long periods of continuous use). These products have an extremely high market share among corporations, perhaps because they make use of the miniaturization technology that is a hallmark of Japanese firms. Toshiba is reported to have one-fourth of the world's portable market.<sup>10</sup> In many cases, the notebook computers sold by Western companies under their own nameplate are actually acquired from Japanese companies on an OEM basis.

In the personal computer market, Microsoft had a monopolistic hold on the operating system sector, while Intel had similar dominance in the central processing unit sector. The combination of these companies is referred to as

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<sup>9</sup> Nikkei Watcher @ Online, Nihon Keizai Shimbun, March 21, 1997

<sup>10</sup> Nihon Denshi Keisanki (1997), "JECC Computer Notes, 1997 Edition," Nihon Denshi Keisanki

Wintel, and both enjoyed monopolistic-like profits. Success in the personal computer market is governed to a great extent by these companies' sales strategies for new software and new central processing units. The manufacturers of personal computer sets that produce the main units of the personal computers must always keep a close watch on the moves of these two companies.

The price performance ratio for CPUs and other memory devices has rapidly improved, so the specifications for products that sold well changed in small increments every three months. Therefore, it was common for all companies to introduce new models at the rate of once every three months.

The distribution channels for personal computers are divided into those for corporations and those for individual users. Most of the computers sold to corporations are sold in a set with other system products by sales companies affiliated with the manufacturer or by distributors. That's why the general computer manufacturers such as IBM and Fujitsu have traditionally been dominant.

In contrast, most of the personal computers sold to individuals have been sold through mass merchandisers such as those in the Akihabara district of Tokyo. Such new groupings as consumer electronics affiliates and foreign capital-affiliated companies have aggressively penetrated these sales channels in the personal computer field.

In addition, such American-affiliated manufacturers as Dell Computer and Gateway 2000 Japan, have recently established a presence in the Japanese market through direct sales. In principle, Dell and Gateway do not have an inventory of finished products. They finish all their products by assembling unit parts based on the specifications of the customer's order<sup>11</sup>, and ship the product directly to the customer. They bypass intermediate distributors, which enhances their profitability. They also reduce inventory risk by not maintaining an inventory of finished products. This system provides the companies with competitive superiority because it enables them to more accurately respond to customer needs.

### **3. Matsushita Electric's autonomous divisional system**

Matsushita Electric Industrial typifies the Japanese electronics industry. In the year ending March 1997, they boasted revenue of 7.6759 trillion yen.

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<sup>11</sup> One can use the telephone or Internet to order PCs built to the specifications one wishes, for even one unit. In most cases, the specifications for the basic notebook computer models are predetermined. In most cases, one only has the option of selecting memory and hard disc space.

Most people are more aware of their brand names National and Panasonic than the company name of Matsushita, however,

Matsushita Denki Kigu Seisakusho, was founded by Konosuke Matsushita himself in 1918, grew through his visionary business practices. The company skillfully rode out the turbulence during and after the Second World War to become the world's leading manufacturer of consumer electronics products. The ascendance of Konosuke Matsushita, who rose from a position as an apprentice at a bicycle shop to become the predominant force in consumer electronics worldwide, traces that of Hideyoshi Toyotomi. He has been referred to in Japanese as "imataikoh", an expression used to describe a common man who rises from a position of obscurity to be a leader..

Matsushita has been referred to by some as the God of Business. His unique operating precepts, called the Konosuke Philosophy, guided the development of the company. Even after his death, his statement of principles that begins, "Completely fulfill the duty of the person who manufactures," and the seven creeds that begin with, "First, the spirit of production patriotism" are still recited in chorus every day without fail.

This distinctive business philosophy is famous for its immense impact on the company, but his distinctive style of business organization, or the autonomous divisional system, is his legacy equal in impact to his philosophy. Matsushita introduced this system in 1933, early in his company's life, to maintain the vitality and mobility of the town workshop. The foundation of this system is independent calculations of profit and loss, and self-responsibility. In this system, the divisions carry out business with a free hand using the business resources that have been provided for specified business areas. The company grew dramatically as a result of his idea of delegating business responsibility..

Though Matsushita Electric was a big company, their production system was created with a basic structure that resembled a grouping of many town workshops. During Japan's period of rapid economic growth, Matsushita's business organization rapidly swelled as it set up other units in business and took capital stakes in other ventures. The basic framework that was in essence an aggregation of independent units absorbed these different elements rather easily. The glue that held the company together at that time was the presence of the founder himself and his business philosophy in which he had completely indoctrinated the organization.

#### **4. The unstable computer business**

In 1964, Konosuke Matsushita announced that the company would withdraw from the effort to develop a business computer. Opinions regarding

this decision are divided into two camps. The first camp views this decision in a positive light. They hold that decision was a major factor in Matsushita Electric's growth because it enabled the company to strategically invest funds into the consumer electronics business, a growth sector at that time, without valuable capital being siphoned off by the competition to develop a computer.

The opposing camp, however, holds that by distancing itself from the computer business, a core business of the information age, the company hindered its business growth in the period beginning in the 80s.

Matsushita later tried several times to make a full-scale entry into the computer business, but all the efforts ended in failure. They formed business ties with Fujitsu, IBM, and American start-ups fueled by venture capital. Most of the other companies, however, entered into these agreements merely to purchase Matsushita's specialty of manufacturing goods of high quality at low cost. Konosuke's "water tap philosophy" of achieving abundance in society by supplying it with an unlimited amount of low-cost products in a large volume over a wide area was not suited to a knowledge-intensive system product such as the computer.

The autonomous divisional system also stifled the development of system products. There were major disputes over whether such products as radio/cassette players should be handled by the radio division or the recording equipment division. The story is told as an injunction that this resulted in the two divisions releasing two different lines of radio/cassette players on the market. In other words, when products are developed that encompass the territory of different business divisions, the application of the autonomous division system either plunges the company into internal squabbles or opportunity losses.

Yet, the problems with the radio/cassette player were the least of their worries. Matsushita released two incompatible word processors for the consumer market. One was produced with the involvement of the core part of Matsushita Electric, while the other was a product independently developed by the Kyushu Matsushita Electric subsidiary. This confused both the sales outlets and the consumers, and was a serious obstacle for future sales development. It was utterly incomprehensible for both sales channels and the consumers that two word processors with the same Panasonic brand could not read documents written on the other.

The situation becomes more complicated with the system products that are coupled with the company's information systems. What would happen if each division conducted divergent product development and sales activities when the products of several divisions must be bundled and sold as a system

that also includes software? The market is honest, and Matsushita's system business had to pay the price.

There is no question that the autonomous division system produced competitive superiority when single consumer electronics products were being manufactured and sold. In an age of system products, however, the lack of congruence in the thinking of the division shackled the progress of the entire company.

### **5. Backs to the wall, the "town workshops" created their own products**

As we previously noted, Matsushita Electric supplied IBM Japan with OEM merchandise for a time. It manufactured the IBM's PS/55 series computers under contract. During its peak, this product generated 13 billion yen in sales annually for Matsushita. As the importance of strategic value rose within the industry, IBM shifted production to its own production centers. In 1994, Matsushita's sales from outsourced production fell to seven billion yen. The survival of the special project office, in which production had been under the direct supervision of the company president, was hanging by a thread.<sup>12</sup>

In the Matsushita Electric Group, divisions in trouble had to come up with their own ideas for survival. Those divisions posting losses were liquidated internally, and the personnel were forced to approach other units with head bowed and ask them for jobs. The idea of finding some way to avoid this misery had traditionally been very strong. Moreover, the areas of responsibility for each division had been clearly demarcated. Therefore, the divisions with waning businesses had no option apart from discovering the areas left uncovered by other divisions and offering new products there.

Even if the OEM team providing product to IBM wanted to sell personal computers under the Panasonic brand, they were completely blocked by the existing demarcations for computer-related business units that sold the "Panacom" and "Woody" desktop models, and the "ProNote" notebook model. Eventually, they were forced to focus on the lightweight sub-notebook PCs, the smallest market in the industry. The size of this market meant that it was not completely blocked by existing demarcations.

Finally, they were able to launch the "ProNote Jet Mini"<sup>13</sup> in June 1995,

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<sup>12</sup> "Organizations Such As These Create Successful Products", Nikkei Business article, May 19, 1997 issue, pp 34-36

<sup>13</sup> The official model name is the CD-11DS32

but the sales results were not encouraging. Their sales target was 20,000 units per year, but they were able to sell only 10,000. It was the lightest model on the market at 1.29 kilograms, and the product was hailed by the PC magazines, but sales did not take off at all.

## **6. Incorporating the opinions of sales outlet personnel**

The unit had confidence in their technology, so they were puzzled why the products weren't selling. The person in charge of development refused to accept these results. He visited Akihabara, where he put some questions to the sales outlet personnel. To his surprise, the answers he received indicated the problems were rather trifling. The people in the shops complained that there were two switches to open and close the screen, so it couldn't be done with one hand. Another complaint was that the cardboard box the computer was shipped in didn't have a handle, so when they gave the product to the customer, they had to go to the trouble to tie a string on the package with a plastic handle. Still half doubting what he had heard, man from Panasonic incorporated their minor requests as improvements into the development of the next generation of products.<sup>14</sup>

The division found that its back was against the wall. They were faced with dissolution if the next model they developed was a money-losing dud. The development team visited the important mass merchandisers with the specifications for the new product in hand. It was February 1996, and only four months remained before the new products were slated to go on sale. The developers were buoyed with confidence in the Pentium 90MHz 8.4 inch liquid crystal panel on the product.

They were met with a chilly response from the professional PC sales personnel at the mass merchandisers. They told the developers that the primary item for the products slated to come on the market that summer would be a Pentium 120 MHz, 10.4 inch TFT liquid crystal panel.

In the PC industry, which had new model changes every three months, it was common practice for sales outlets to begrudge display space to products that did not maintain the specifications for products that sold well. This news stunned the development team.<sup>15</sup>

If they followed the advice of the personnel at the sales channels, their

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<sup>14</sup> "Organizations Such As These Create Successful Products", Nikkei Business article, May 19, 1997 issue, pp 34-36

<sup>15</sup> FPANAPC (1997) previously noted



only choice was to modify the design. But the lead time for design changes was 10 months. At that rate, they would not be able to come up with a new product in time for the sales campaigns that coincided with the payment of summer bonuses. The specifications as they stood at the time meant the product wouldn't sell, but if they changed the specifications, they wouldn't be able to meet the production deadlines. Faced with this dilemma, the production team decided to modify the specifications. They threw themselves headlong into this rush assignment, and worked without any days off.

This was the developers' last stand, and they miraculously pulled it off in time. The first "Let's Note" (Development code: K3) debuted on the market as planned on June 25. The specifications included a Pentium 120 MHz, 10.4 inch TFT liquid crystal panel as promised, and the product's weight of 1.62 kilograms was the lightest in the class. The model became the darling of the sales floor as soon as it went on sale, and they nearly sold out by August. Around this time, the rumor circulated that they already were thinking of suspending production.

## **7. The users' opinions reached the company directly**

Incorporating the opinions of the personnel at the sales outlets was the key to the success of the first "Let's Note" product. The problem, however, laid with after-sale follow-up and new product development. With their three-month model changes, PCs have been compared to fresh food products. Even the slightest let-up can lead to the failure of the enterprise.

At that time, the users of Matsushita computer products had already established the FPANAPC forum for exchanging information on Nifty-Serve, the largest online service in Japan. They also had a special conference room devoted to discussing the "Let's Note". The users who were the first to purchase the product wrote about the advantages and disadvantages of the product's use and performance in that conference room. From the manufacturer's perspective, this was both publicity and user-friendly substitute for a user's manual.

The situation also had its disadvantages, however. Poor quality products and service would be transmitted to everyone immediately. In fact, problems in the strength of the keyboard and the track pad surfaced in the first "Let's Note". The conference room was frequently filled with discussions of these problems.

For its part, however, Matsushita positively evaluated even the bad information. It took upwards of a month for information about poor product quality to percolate up from the sales floor, but they got feedback on problems right away from the bulletin boards. Matsushita's response was understandable

considering that in an industry with new model development measured in three-month units, a delay of just one month could be fatal.

The man in charge of "Let's Note" marketing used to log on every morning at 6:00 a.m. to the conference room to look for any bad news. By 7:30 a.m. every day, he had sent e-mail to about 100 people, including the person in charge of development and the people in charge at the factory.<sup>16</sup> One result was that measures to deal with trouble that developed on the production line with the keyboard were implemented the day after the problems were reported in the conference room.

As the company kept an eye on the information being exchanged in the forums, they launched new "Let's Note" products with minor changes in October 1996 and February 1997. The product had become established as the leading model in the lightweight sub-notebook line.

When the author visited the Matsushita Electric "Let's Note" website on September 29, 1997, they were formally notifying people of the existence of the FPANAPC users' forum on Nifty-Serve:

"The Panasonic PC Users' Forum (FPANAPC) opened on October 5, 1995, on the NiftyServe , and is operated by interested users with a special affection for Matsushita PCs. The forum receives no direct support from the Matsushita Electric Industrial Co. Ltd. Members that have logged many hours of use of the equipment will answer your questions here, however, and will show you new ways to use your PC. We urge you to become one of the gang at FPANAPC, and join us in our enjoyment of the use of the PCs.

(<http://www.pcc.panasonic.co.jp/letsnote/forum/>)

## **8. The integration of the organization**

In January 1997, Matsushita Electric announced that it would reorganize the internal corporate structure for its PC business as of February 1. As part of this reorganization, it would unify production, which had been spread across three divisions, and create a new Personal Computer Division. Also, the sales structure would be integrated into a new in-house subsidiary company called the Panasonic Computer Co. (PCC).

The objective of this reorganization was to integrate responsibilities that had been spread out across 11 divisions, including the consumer electronics division, the information division, and the information systems divisions, to

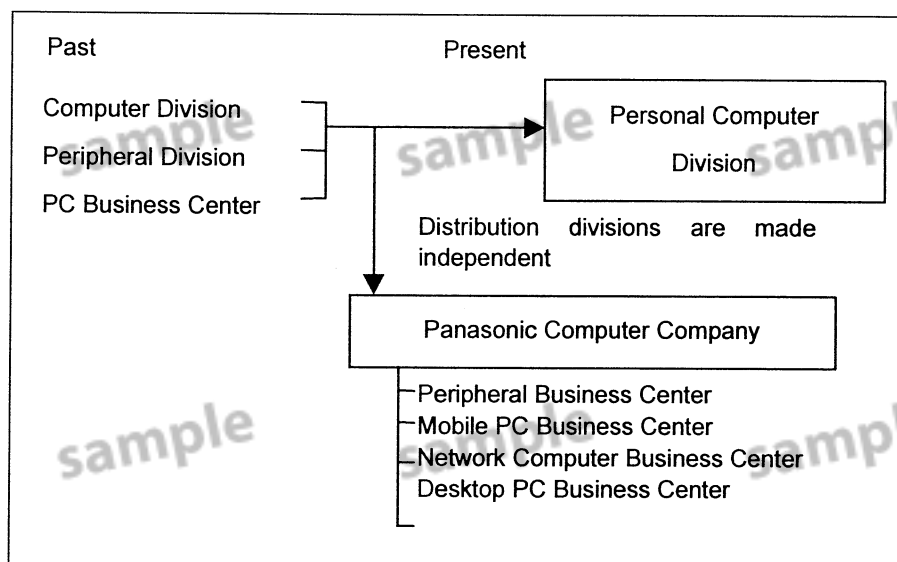
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<sup>16</sup> "Organizations Such As These Create Successful Products", Nikkei Business article, May 19, 1997 issue, pp 34-36

respond to the needs of the sales outlets and companies. This would enable the company to respond with sufficient latitude to commercial practices in the industry.<sup>17</sup>

Figure 1-1

Organization Structure for Matsushita's PC Business



(Data: Nikkei Marketing Journal, February 27, p. 5)

The personal computer division has a total of 1,400 employees, and specializes in development and production. PCC is headquartered in Tokyo, and is engaged in product planning, sales, and marketing. The company was launched with roughly 100 employees, and it has announced that it projects the total number of employees to rise to 200. PCC has set ambitious sales targets. The sales target is 40 billion yen for the first year and 100 billion yen for the second year.<sup>18</sup>

In an interview with a newspaper reporter, the president of the Panasonic Computer Company, Director Teruo Nakano, stressed that the team that incorporated the opinions of the marketplace and overcame inefficiencies within the organization was behind the success of the "Let's Note". He said that this was the situation that spurred the launch the new organization.<sup>19</sup>

Nakano also frankly admitted that there were problems in the past with their practices. "We are a company that likes to do things our own way, but you

<sup>17</sup> Data: Nikkei Marketing Journal, February 3, 1997, p.8

<sup>18</sup> Nikkei Industrial Journal?, February 3, 1997, p. 8

<sup>19</sup> Nikkei Marketing Journal, February 27, 1997, p. 5

can't just talk about it. We actively work with partners and scout for personnel from other companies. There are some aspects of the PC business that aren't compatible with the way Matsushita has done things in the past. I want to make this company that matches with the industry".<sup>20</sup>

## **9. Tasks for the future**

In June 1997, Matsushita Electric launched on the market a new "Let's Note" <sup>21</sup>(Development Code: K4) that resulted from a full model change. It goes without saying that the opinions expressed in the FPANAPC forum were incorporated into this new model. The company invited 15 of the most dedicated users to represent the forum, and permitted these members to participate in the development from the planning stage. These members played an important role by bringing in new product ideas from the users' perspective.

The market's response to the new product has been favorable, and sales continue to be brisk. The company has sold more than 50,00 units in about one year in a sub-notebook market that is estimated to be about 600,000 units annually.

The A4-size notebook PC, the "Let's Note Ace"<sup>22</sup>, that was launched at the same time in June did not post favorable sales. This product did not appear on any of the rankings of the most popular products as reported by several sources in the mass media. Also, few of the computer magazines covered the product--rather different from their response to the "Let's Note" product.

On FPANAPC, there was an active exchange of information among users, many of whom posted opinions that were applied to the development of the next model. In July, the "Let's Note Navigator" was published. This is a manual for using the product, and was edited by the enthusiasts on the forum. It is one example of how promising the transmission of knowledge among users can be, beyond the online bulletin board. As I noted previously, however, one characteristic of the electronic bulletin board is the speed at which negative information is disseminated.

In fact, two important problems regarding the K4 model were reported in the conference room. One problem was the inaccuracy of the display for the remaining battery charge, and the other was the generation of error messages when the telecommunications software was in use. The battery problem was

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<sup>20</sup> Nikkei Industrial Journal, February 13, p. 9

<sup>21</sup> The official model name is the AL-N2T515

<sup>22</sup> The official model name is the AL-N3T516. This is not a sub-notebook model, but a regular notebook model.

identified as a manufacturing defect and was reported by Mr. Chicago. Mr. Chicago was a Matsushita Electric employee on the "Let's Note" team. His report was viewed as an official announcement from the manufacturer. He sent notes carefully describing procedures for exchanging defective products and the people to contact for advice and help (including e-mail addresses).

Most of the members applauded this act and they expressed their increased faith in the manufacturer. Some, however, thought that it was improper for a person from the manufacturer to make a formal announcement in a forum run by users. There were also some members who vented their pent-up dissatisfaction with the company through this incident.

The problem still remained with the telecommunications error problem, and a solution was not provided. Most members were in sympathy with this mechanism through which the manufacturer and the users had jointly fostered the product. Other members, however, felt that there was a danger that the user forum would become the equivalent of a company-kept union, and would no longer conform to the forum's original objectives.

Mr. Chicago had a lot of personal charm, and he was able to skillfully diffuse this first appearance of trouble, but no one knew whether that same technique would continue to work in the future.

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Matsushita Electric faces several major tasks. What should the company do to translate its success in the sub-notebook market to the PC market as a whole, including that for notebook PCs and desktop PCs? The user forums have grown in importance, so what should the company do to maintain their good relationship with the forum members and foster a sense of shared endeavor and benefit without excessively relying on each other.

There are also the issues of the frequency of model changes and studying the relationship with the sales channels.

Matsushita has attained a new level in the computer sector through its success in the "Let's Note" product, but its next move is expected to be a major determining factor in the company's future development.

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#References:

FPANAPC (1997), *Let's Note Navigator*, Softbank

"Organizations Such As These Create Successful Products", Nikkei Business article, May 19, 1997 issue, pp. 34-36

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